

Volume 2

# Access to public sector information: law, technology & policy



Edited by Brian Fitzgerald



ACCESS TO PUBLIC  
SECTOR  
INFORMATION: LAW,  
TECHNOLOGY &  
POLICY

Volume 2

EDITED BY BRIAN FITZGERALD

BA (Griff), LLB (Hons) (QUT), BCL (Oxon), LLM (Harv), PhD  
(Griff) Professor of Intellectual Property Law and Innovation  
(QUT Faculty of Law), Barrister, Supreme Court of Queensland  
and High Court of Australia



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# FOREWORD

Improved access to and use of public sector information is of major importance for all economies. It has increasingly taken centre stage from being a somewhat peripheral issue often confused with freedom of information. The OECD has undertaken extensive work analysing and providing policy principles for the development and use of public sector information. This information ranges from weather and map information generated by governments through to public sector broadcasting archives, museums and art repositories where the information is held by governments. Free access to public sector information has been a cornerstone of US policy and this has been strengthened with the 2009 release of the US open government directive based on principles of transparency, participation, and collaboration. The 2003 EC Directive on the re-use of public sector information has been designed and implemented to expand and improve use.

The OECD Recommendation on public sector information provides policy guidelines designed to improve access and increase use of public sector information through greater transparency, enhanced competition and more competitive pricing. This was adopted by the OECD Council on 30 April 2008 and is reproduced in Chapter 25 of this book. This work was based on principles for enhanced access and more effective use for public and private sectors to increase total returns on public investments and economic and social benefits through more efficient distribution, enhanced innovation, development of new uses, and market-based competition.

It was based on findings that there were barriers and difficulties in the development and commercial and non-commercial re-use of public sector information and content. Continuing obstacles include: restrictive or unclear rules governing access and conditions of re-use; discouraging, unclear and inconsistent pricing of information when re-use of information is chargeable; complex and lengthy licensing procedures; inefficient distribution to final users; barriers to development of international markets; and the role of public sector organisations as collectors, producers and disseminators of public sector information is not always clear, particularly in competitive market areas.



## FOREWORD

The Recommendation framework is underpinned by a set of general principles that are common to most approaches to improving access to public sector information. These include that the principles, e.g. on openness and re-use, apply to a different extent to different categories of information and content. They take account of: legal requirements and restrictions, including IPRs and trade secrets; privacy, confidentiality, and national security concerns; democracy, human rights, and freedom of information. They encourage greater access and use regardless of IP ownership. And finally strengthening the role of non-public sectors in producing, developing and disseminating information and content may require changes in legislation, organisation and budgets.

The four accession countries to the OECD (Chile, Estonia, Israel and Slovenia) have all formally accepted the Recommendation following review of their PSI policies. In general they have made considerable progress towards making public sector information more widely and transparently available and access more competitive, uniform and well-known.

Taking into account the economic and social importance of this area, and the need for greater transparency and improved mechanisms for enhancing access to and use of public sector Information, the analysis and discussion in this book is a very welcome addition to the growing literature tackling this important subject.

Dr Graham Vickery  
Head, Information Economy Group,  
Information, Computer and Communications Policy Division  
Directorate for Science, Technology and Industry  
OECD Paris  
17 February 2010

# PREFACE

This book has been inspired by my involvement in advocating for and implementing better access to and re-use of public sector information (PSI) in Australia.

From 2004 I have worked closely with my sister Professor Anne Fitzgerald and Mr Neale Hooper of the Queensland Government on a project that has in more recent times been known as the Government Information Licensing Framework (GILF) project. Having been involved in the establishment of the Creative Commons (CC) Licensing project in Australia it became obvious to me that much of the confusion and frustration around copyright licensing of public sector information (PSI) could be resolved through the use of CC licences.

This realisation meshed with the long held aspirations of people to provide better and more efficient access to PSI in the areas of statistical and spatial information

A group of like-minded people emerged. Dr Peter Crossman (Assistant Under Treasurer and Government Statistician, Office of Economic and Statistical Research, Queensland Treasury), Mr Tim Barker (Assistant Government Statistician, Office of Economic and Statistical Research, Queensland Treasury and Queensland Spatial Information Office) and a team of people working with them (Dr John Cook, Jenny Bopp, Carla Simpson, Trish Santin-Dore and David Torpie) joined forces with Anne, Neale and I to make GILF a reality and a leading-edge project that has attracted worldwide attention. We were one of the first groups to connect the broader access to PSI movement with the CC movement.

Over the last three years we have been active in organising and attending conferences on PSI in order to explain our work and to learn from others. In late 2007 through the good will of Chris Corbin the coordinator of the ePSI Plus Network (a European Network funded by the European Commission) we were able to attend an important conference in Bratislava in Slovakia and then to travel to London to meet with leading people in the access to PSI area such as Carol Tullo (Director of the Office of Public Sector Information [OPSI]), Jim Wretham (Head of Information Policy, OPSI) and Michael Nicholson of Locus.

In July 2007 and then in March 2008 we organised two conferences – Summits on Access to PSI.<sup>1</sup> Many of the papers in Volume 1 were presented at those conferences. Carol Tullo and Chris Corbin travelled from the UK to be involved in the March 2008 events and Professor Fiona Stanley (Director, Telethon Institute for Child Health Research) was instrumental in us formulating the Stanley Declaration (extracted on the back cover of Volume 1 of this book) at the July 2008 event. Terry Cutler (Cutler & Co, and CSIRO Board member) who has been an untiring supporter from the start, John Wilbanks (Science Commons), Keitha Booth of the State Services Commission in New Zealand, Paul Uhler of the National Academies in Washington DC, Susan Linacre, Steve Matheson and Wayne Richards of the Australian Bureau of Statistics (ABS), Ben Searle of the Office of Spatial Data Management (OSDM) Michael Easton (ASIBA) John Cook (Queensland Government/QUT) Emily Whitten (AGIMO), Dr Nicholas Gruen (Lateral Economics, Chair of the Government 2.0 Taskforce) and Professor Mary O’Kane (Chief Scientist of NSW) also participated in the Summits on Access to PSI.

Since that time the Australian Bureau of Statistics (ABS)<sup>2</sup> Geoscience Australia (GA)<sup>3</sup> and the Australian Bureau of Meteorology (BOM)<sup>4</sup> have endorsed the application of Creative Commons licences to PSI. Similar examples have emerged in other countries such as Spain<sup>5</sup> and currently the UK is considering the application of CC like licences to its PSI.<sup>6</sup> President Obama moved on the first day of his administration to license copyright material on the [www.whitehouse.gov](http://www.whitehouse.gov) website under a CC licence.<sup>7</sup> How times change. This is an

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- 1 See GILF Resources – Presentations [www.gilf.gov.au/gilf-resources#presentations](http://www.gilf.gov.au/gilf-resources#presentations).
  - 2 ABS, ‘Creative Commons Licensing’ [www.abs.gov.au/websitedbs/D3310114.nsf/4a256353001af3ed4b2562bb00121564/8b2bdbc1d45a10b1-ca25751d000d9b03?opendocument?](http://www.abs.gov.au/websitedbs/D3310114.nsf/4a256353001af3ed4b2562bb00121564/8b2bdbc1d45a10b1-ca25751d000d9b03?opendocument?).
  - 3 [www.ga.gov.au](http://www.ga.gov.au).
  - 4 See the testimony of Dr Minty (BOM) to the EDIC of the Victorian Parliament (8 September 2008): [www.parliament.vic.gov.au/edic/inquiries/access\\_to\\_PSI/transcripts/EDIC\\_080908\\_BOM.pdf](http://www.parliament.vic.gov.au/edic/inquiries/access_to_PSI/transcripts/EDIC_080908_BOM.pdf).
  - 5 Jordi Graells, Joana Soteras and Betlem Verdejo, ‘The Use of Creative Commons Licenses in the Ministry of Justice of the Government of Catalonia’ [communia-project.eu/node/111](http://communia-project.eu/node/111). See also Ministry of the Environment New Zealand, ‘New licence improves access to environmental data’ (2009) [www.mfe.govt.nz/](http://www.mfe.govt.nz/).
  - 6 Power of Information Advisory Taskforce, *Power of Information Advisory Taskforce Report* [powerofinformation.wordpress.com](http://powerofinformation.wordpress.com); ‘OPSI’s new licensing model – taking the licensing of government content to the next level’ [perspectives.opsi.gov.uk/2009/06/opsis-new-licensing-model-taking-the-licensing-of-government-content-to-the-next-level.html](http://perspectives.opsi.gov.uk/2009/06/opsis-new-licensing-model-taking-the-licensing-of-government-content-to-the-next-level.html). See further ‘Licensing and data.gov.uk Launch’ [perspectives.opsi.gov.uk/2010/01/licensing-and-datagovuk-launch.html](http://perspectives.opsi.gov.uk/2010/01/licensing-and-datagovuk-launch.html).

idea whose time has come.

During 2008 and 2009 our team led by Professor Anne Fitzgerald undertook a comprehensive Literature Review on the Policy and Principles<sup>8</sup> relating to PSI a brief summary of which appears in this volume. In 2009 we also saw the release of an influential report by the Economic Development and Infrastructure Committee of the Victorian Parliament titled *Inquiry into Improving Access to Victorian Public Sector Information and Data* (2009)<sup>9</sup> which recommends the use of CC licensing and the establishment of more sensible policy outcomes in this area. We also saw the announcement on the 22 June 2009 of the Government 2.0 Taskforce by the Australian Government (of which I was proud to be a member) and the release of its final report *Engage – Getting on With Government 2.0*.<sup>10</sup>

We would like to thank all of the contributors to this book, all of the people that helped to organise, presented at and attended the various conferences we convened on these topics and most importantly the community of people that have worked with us to put access to PSI on the national and international agenda. Special thanks go to Professor Anne Fitzgerald, Neale Hooper, Niall Collins, Dr Annie Connell, Baden Appleyard, Kylie Pappalardo, Cheryl Foong and Steve Gething for their help in requesting, formatting and reviewing material for this book and to Graham Vickery of the OECD who has provided guidance and a helping hand on a number of occasions.

Nothing can be achieved without collaboration. My greatest joy in all of this has been working with committed and passionate people in government and elsewhere who have been pioneers in implementing new thoughts, policies and approaches in their own domain.

Professor Brian Fitzgerald, QUT Law Faculty  
Brisbane, February 2010

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7 See the [www.whitehouse.gov](http://www.whitehouse.gov) Copyright Policy [www.whitehouse.gov/copyright](http://www.whitehouse.gov/copyright). See also [creativecommons.org/weblog/entry/12267](http://creativecommons.org/weblog/entry/12267).

8 [www.aupsi.org/publications/reports.jsp](http://www.aupsi.org/publications/reports.jsp).

9 [www.parliament.vic.gov.au/edic/inquiries/access\\_to\\_PSI/default.htm](http://www.parliament.vic.gov.au/edic/inquiries/access_to_PSI/default.htm).

10 [gov2.net.au](http://gov2.net.au). See also the Public Sphere 2: Government 2.0 initiative of Senator Kate Lundy at [www.katelundy.com.au/2009/05/29/public-sphere-2-open-government-policy-and-practice/](http://www.katelundy.com.au/2009/05/29/public-sphere-2-open-government-policy-and-practice/).

# CHAPTER EIGHTEEN

## SUBMISSION TO CLRC ON CROWN COPYRIGHT\*

*Brian Fitzgerald*

My submission is that in preparing its report the CLRC should consider the role of ‘open content’ licensing in the management of Crown copyright.

Ten years ago the question would have simply been whether the Crown should or should not have copyright? Many advocating for no Crown copyright would have been seeking open access to information.

Today however we know more about the intricacies of open content licensing. It is arguable that a broader and more robust information commons can be developed by leveraging off your copyright rather than merely ‘giving away’ material.

As has been explained elsewhere:

The powerful insight that Richard Stallman and his advisers at the Free Software Foundation (such as Professor Eben Moglen of Columbia Law School) discovered was that if you want to structure open access to knowledge you must leverage off or use as a platform your intellectual property rights. The genius of Stallman was in understanding and implementing the ethic that if you want to create a community of information or creative commons you need to be able to control the way the information is used once it leaves your hands. The regulation of this downstream activity was achieved by claiming an intellectual property right (copyright in the code) at the source and then structuring its downstream usage through a licence (GNU GPL). This was not a simple ‘giving away’ of information but rather a strategic mechanism for ensuring the information stayed ‘free’ as in speech. It is on this foundation that we now see initiatives like the Creative Commons expanding that idea from open source code to open digital content. The context for this is the underutilisation of significant amounts of digital content. Through concepts such as ‘digital junkyards’ people are allowed to access digital content for the purpose of reutilisation and further innovation. Taking digital content from the commons, as under the open source model, may carry obligations such as attributing the source and owner of

the digital content or sharing back to the commons your derivative product. In this creative commons model intellectual property rights owners manage and control their rights at the source to structure open access downstream:  
A

If the Crown is to have the capacity to strategically manage Crown copyright either in a closed manner for maximum economic reward or in an open fashion for maximum public access then it is my submission that Crown copyright should remain. The copyright becomes the key tool in managing downstream usage – open or closed. A proposal that the Crown does not have any rights to copyright material would in effect reduce the ability of the Crown to structure user rights and otherwise manage information.

Once it is acknowledged that Crown copyright should remain the question then becomes what kind of material should be available for open access and in what way should open content licensing be used to structure that access. To this end in its report the CLRC should engage with and evaluate the significance of open content ‘licensing out’ models in achieving open access. In doing so it should also evaluate how such licensing models could be employed to facilitate open access to Crown copyright.

For a system of open content licensing to prosper in government, policy on information management needs to be clearly articulated in accord with core democratic principles and where necessary legislatively reinforced. In other words if the Crown is to retain copyright its obligation (as fiduciary of the people?) to license out certain kinds of information in an open manner should be articulated, at least at the level of principle. If Crown copyright is to remain the CLRC should consider, at very least, the principles upon which this copyright material should be available for access – (when and on what conditions it should be available). The spectrum seems to run from copyright material that will only ever be commercially available through to copyright material that may be subject to open content licensing that ensures the broadest possible access to that information.

The approach taken in the EU (pp. 40–42 Issues Paper (Feb 2004)) and that contemplated in the UK (pp. 44–45 Issues Paper) appears to reflect the philosophy that government copyright should remain and that what becomes important is the management of that information downstream.

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\* This submission was made to the Copyright Law Review Committee in 2005 during their inquiry into Crown Copyright [www.clrc.gov.au](http://www.clrc.gov.au). This was first published as *Crown Copyright Submission No 17* by Professor Brian Fitzgerald. The original submission is available at: [www.ag.gov.au/agd/WWW/clrHome.nsf/Page/Present\\_Inquiries\\_Crown\\_copyright\\_Submissions\\_2004\\_Sub\\_No\\_17\\_-\\_Professor\\_Brian\\_Fitzgerald](http://www.ag.gov.au/agd/WWW/clrHome.nsf/Page/Present_Inquiries_Crown_copyright_Submissions_2004_Sub_No_17_-_Professor_Brian_Fitzgerald)

# CHAPTER NINETEEN

## GOVERNMENT INFORMATION AND OPEN CONTENT LICENSING: AN ACCESS AND USE STRATEGY\*

### 1. EXECUTIVE SUMMARY

*Queensland Spatial Information Office, Queensland Government*

1.1 This report outlines work undertaken during Stage 2 of the *Government Information Licensing Framework Project*.

1.2 Stage 1 of the project resulted in endorsement by the Queensland Spatial Information Council (QSIC) and the Information Queensland Steering Committee of an open content licensing model, based on Creative Commons (CC).

1.3 Stage 2 of the project was initiated to bring QSIC licensing arrangements up to date, and to create a Draft Government Information Licensing Framework based on an open content licensing model to support data and information transactions between the Queensland Government, other government jurisdictions and the private sector.

1.4 Other jurisdictions in Australia and overseas are moving to more open access and use arrangements to support social and economic development, and are introducing policies and principles and implementing appropriate licences to support this move. Background research during Stage 2 has resulted in the recommendation that the Queensland Government also move to open access and use arrangements, balanced with appropriate protection for private and confidential information collected or held by government.

1.5 The project proved valuable in testing the CC licences against a sample of existing licences used within the Queensland Government. A detailed legal analysis of existing licences was undertaken to identify key characteristics and to map these to CC licence provisions.

1.6 Feedback received through consultation workshops conducted with agencies identified a clear demand for simpler, formal and standardised licences.

1.7 The project included a review of the digital rights management component which embeds an electronic watermark into licensed data.

1.8 Further work to progress the Draft Government Information Licensing Framework will be required, including developing a business case, legal drafting, developing technical systems for the digital rights management and conducting a

pilot project. These activities are proposed to be conducted, subject to funding, during Stage 3. *A Government Information Licensing Framework Project Stage 3: Draft Project Plan* was provided to the Strategic Information and ICT Board on 27 September 2006 for noting.

1.9 There is an opportunity to progress a generic standard for government information licensing in partnership with CC.

1.10 This report is to be provided to QSIC, the Information Queensland Steering Committee, the Office of Economic and Statistical Research Office Management Team and the Strategic Information and ICT Board.

## 2. RECOMMENDATIONS

2.1 That the Queensland Government establish a policy position that, while ensuring that confidential, security classified and private information collected and held by government continues to be appropriately protected, enables greater use and re-use of other publicly available government data and facilitates data-sharing arrangements.

2.2 That the CC open content licensing model be adopted by the Queensland Government to enable greater use of publicly available government data and to support data-sharing arrangements.

2.3 That QSIC and the Office of Economic and Statistical Research continue to work closely with the Department of Justice and Attorney-General to ensure that any privacy provisions developed also support new data use, re-use and sharing policies.

2.4 That the *Government Information Licensing Framework Project Stage 3: Draft Project Plan* for the next phase of this project be endorsed.

2.5 That the Draft Government Information Licensing Framework toolkit, which incorporates the six iCommons (Creative Commons Australia) licences,

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\* This was first published as a report titled *Government Information Licensing Framework Project Stage 2 Report* by the Queensland Spatial Information Office, Queensland Government. The original report is available at: [www.gilf.gov.au/resources-gilf-stage-2-report](http://www.gilf.gov.au/resources-gilf-stage-2-report).

The State of Queensland (the State) and the Queensland Spatial Information Office wish to acknowledge the co-operative contributions by all agencies and bodies at Federal, State and Local Government levels which participated in the extensive consultations undertaken in Stage 2 of this Project, and also by members of the Open Access to Knowledge (OAK) Law Project at the Queensland University of Technology.

The State and the Queensland Spatial Information Office also wish to acknowledge the valuable contributions of the following individuals in Stage 2 (including in the preparation of this Report):



be endorsed for use in pilot projects proposed for Stage 3, which involves Information Queensland, the Department of Natural Resources and Water, the Environmental Protection Agency, the Department of Primary Industries and Fisheries, the Office of Economic and Statistical Research of Queensland Treasury and the Queensland Spatial Information Council, enabling testing of the CC licences for multi-agency and whole-of-Government arrangements.

2.6 That an application be made through the ICT Innovation Fund and Microsoft Program Committee in the Department of Public Works for further funding, to enable the technical development of a Government Information Licensing Management System, consistent with the Draft Government Information Licensing Framework toolkit.

2.7 That a limited number of standard templates be developed to support information-licensing transactions relating to confidential or private information or information with commercial value and for which the CC model is not appropriate.

### 3. PROJECT BACKGROUND AND PURPOSE

3.1 Information Queensland and QSIC sponsored this project to update licensing arrangements used within the Queensland Government and the wider spatial industry.<sup>1</sup>

3.2 Stage 2 has followed on from Stage 1 of the project, which identified that the CC open content licensing model could be used to meet approximately 85% of Queensland Government licensing arrangements. Stage 1 resulted in the endorsement by QSIC and the Information Queensland Steering Committee of an open content licensing model, based on CC.

3.3 The *Government Information Licensing Framework Project* Stage 2 was established to create a framework for the Queensland Government to support data and information access and use between Queensland Government agencies, between the Queensland Government and other government jurisdictions, between the Queensland Government and the private sector, and to the community. The framework will confirm the Queensland Government as a single business entity and establish standardised terms, conditions and rules for information transactions to support strategic information access and use in the delivery of government priorities.

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1 QSIC comprises representatives from the Australian Spatial Information Business Association, the Spatial Sciences Institute, State Government Agencies, the Local Government Association of Queensland, and the Australian Spatial Information Education and Research Association, as well as the Assistant Under Treasurer and Government Statistician, Queensland Treasury.

3.4 Information Queensland is reliant on specific deliverables from the project and has funded the legal component. Information Queensland aims to provide mapping layers, statistical information, and derivative data products to the public via an information web portal and using web service technology, and requires an online licensing solution to enable authorised users easy and timely access to data. The licensing solution is to be based on a whole-of-Government policy position and legal framework and include implementation guidelines.

3.5 QSIC is the peak body for spatial information in the Queensland Government and has been operating effectively since 1992 to develop and maintain Queensland's spatial information infrastructure to support the state's economic and social development. QSIC liaises with industry and all levels of government and coordinates several working groups focusing on education, global navigation satellite systems, spatial imagery, health communities, addressing and spatial presentation.

3.6 Other initiatives, including the state-wide Water Information Management Project and State of Environment Reporting, rely on access to and use of data held by custodians in other agencies and jurisdictions.

3.7 The National Data Network, coordinated by the Australian Bureau of Statistics partnered by the Queensland Government Statistician and the Office of Economic and Statistical Research, requires an online data and information licensing solution and the Office of Economic and Statistical Research through this QSIC project has offered to provide the results of this project to the National Data Network to benefit its community of researchers and authorised users of administrative statistics.<sup>2</sup>

3.8 To assist business transactions within the spatial industry, QSIC's Business Environment is based on a 'supply chain methodology', which describes the environment, principles and agreements for the spatial industry. The 'supply chain methodology' tracks the use of data from capture, to data management and access, value-adding of data or data integration, to distribution and business integration.

3.9 Four types of licences were developed by QSIC to support the QSIC Business Environment and these are available from the QSIC website – Business, End User, Online User Clickthrough, and a memorandum of understanding.

3.10 While the licences from the QSIC Business Environment have been successfully used within the industry for a number of years, they are now considered dated and in need of review. Some of the problems identified by QSIC include:

- They are considered long and difficult to use.
- They were originally written for writing data to disc that was distributed as a CD copy, and not for the online environment.

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2 [www.nationaldatanetwork.org/ndn/ndnhome.nsf/Home/Home](http://www.nationaldatanetwork.org/ndn/ndnhome.nsf/Home/Home).

- They aim to restrict use rather than support wider use.
- There are many derivative licences – or licences that have been adapted from the standard licences and which are now not considered to be a ‘standard QSIC licence’. The practice of adapting standard licences to create customised licences requires individual legal advice and input for many routine transactions – adding to delays in delivering data and services to authorised users.
- There is some variation in the legal frameworks used and agencies can consider themselves as individual business entities, rather than distribution points for the single business and legal entity that is the Queensland Government.<sup>3</sup>

3.11 A survey of existing licensing practices adopted by Queensland Government agencies conducted in Stage 1 of this project indicated variations in licensing practices. Significantly, almost two-thirds of government business units (63%) release data without any licence in place. Of these:

- 63% use workflow processes
- 21% use Information Standards
- 21% use copyright statements
- 26% aggregate data for confidentiality and privacy
- 21% apply caveats and disclaimers
- 5% use memorandums of understanding
- 10% rely on ‘relationships’.

Of the 37% of government business units who do use licences:

- 63% use dated arrangements (e.g. Queensland Spatial Information Strategy (QSI) licences)
- 27% use deeds of confidentiality
- 36% use adapted current licensing (the Department of Natural Resources and Water, AEShareNet etc)
- 9% apply copyright statements

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3 The licences contain generic components – Common Terms and Conditions, Distribution and Value Adding Agreements, and Schedules, as well as specific purpose appendices which contain specific Terms and Conditions – data distribution, value adding and data integration, and end use.

The Business Licences set out the principal rights of the licensees in the value adding and resale of spatial information and cater for all types of data use and data users. Three licences are contained in a single licence template. The template may be used by an organisation to appoint licensees in the roles of Reseller, Value Adding Reseller, or Open Value Adding Reseller.

A Reseller is any organisation or person that is licensed and supplied with data for the purposes of selling the data to end users under licence. A Reseller may not modify or add value to the data.

- 27% use memorandums of understanding for cross-agency data access.

3.12 With the variety of licences, transaction types and licensing processes on offer, it can be complex for businesses, community members and individuals to deal with the Queensland

Government. It can also be difficult for Queensland Government departments to deal with each other and it can be more difficult for agencies to get information from another Queensland Government agency than it is for an external party to access the data and information. This has created confusion for clients and data custodians and has meant that it has been impossible to design the architecture for an online solution.

3.13 QSIC identified the need to update its suite of existing licences to enable more open access and use provisions for publicly available data and data sharing arrangements, and to introduce an online digital rights management system.

## 4. PROJECT SCOPE

4.1 Stage 2 of the project aimed to develop a Government Information Licensing Framework:

- to facilitate improved access to, and use of, government-held data and information to authorised users
- to establish a standard, single interface and licence system based on a standard set of terms and conditions for other levels of government and the private sector to access information about Queensland Government-held data and information
- to preserve the Queensland Government's intellectual property
- to reduce legal risks to the Queensland Government associated with misuse of data and information products and services

4.2 The terms and conditions of the Government Information Licensing Framework are to:

- be applicable to the Government's strategic information datasets
- be applicable to Queensland Government business units, in conjunction with other licences as necessary
- acknowledge the Queensland Government as a single business entity, and support cross-agency information access to support outcomes required under the Government's priorities
- support distributed custodianship (across government and the private sector)
- for data assets, consider and clearly define the copyright, intellectual property rights (especially when data is integrated), security, privacy and confidentiality obligations, and other specific statutory and legal constraints

- define Digital Rights Management statements for individual digital datasets
- define the fitness for purpose of data and information, including the extent of Government liability in relation to use of the data and provide relevant disclaimers for liability and fitness for use
- be applicable to all access and distribution methods including the internet, data file distribution and hardcopy
- cater for commercial access of datasets and information products
- be scalable – one determination providing a set of rules for all information access and use
- incorporate existing Government Information Standards, including Information Standard No 25 – Intellectual Property (IS25), Information Standard No 33 – Information Access and Pricing (IS33) and Information Standard No 44 – Draft Data Custodianship (IS44).

#### 4.3 These activities were undertaken during Stage 2:

- a series of consultations with key data custodians to identify current licensing practices and to review these practices against the range of available CC licences
- discussions with other interested organisations – Creative Capital Victoria, the Office of Spatial Data Management, the Australian Government Information Management Office and Creative Commons California (US)
- presentations were provided to the Unlocking IP Conference, held at the University of New South Wales and to the Spatial Sciences Institute NSW and Tasmania Regional Conferences – GIS Evolutions 2006
- analysis of current licensing arrangements being utilised by agencies
- consultation with agencies about the identified benefits of moving to the CC suite of licences
- background research
- review of policies and standards
- review of technical implementation of a digital rights management system.

#### 4.4 This project was guided by advisors including:

- Professor Brian Fitzgerald, Head, School of Law Queensland University of Technology (QUT)
- Steve Jacoby, Chair, QSIC
- Dr Peter Crossman, Queensland Government Statistician
- Neil Lawson, Executive Director, Land Information and Titles, Department of Natural Resources and Water
- Keith Millman, Commercial Counsel, Legal Services Unit, Queensland Treasury
- Dr Anne Fitzgerald, Adjunct Professor, School of Law QUT
- Tim Barker, Assistant Government Statistician and Director, Queensland Spa-

tial Information Office, Office of Economic and Statistical Research.

4.5 QSIC funded the secondment of Neale Hooper, Principal Lawyer, Crown Law, Department of Justice and Attorney-General to act as legal advisor and Principal Project Manager for Stage 2 of this project.

4.6 QUT provided in-kind support to the project through the legal and other advice provided by Professor Brian Fitzgerald and Dr Anne Fitzgerald and through the contribution of Brendan Cosman in assessing requirements for the technical implementation. Dr Anne Fitzgerald also undertook significant background research for the project, and analysed existing licences identified by agencies.

4.7 The Department of Natural Resources and Water provided in-kind support by offering Dr Anne Fitzgerald one day per week for the duration of the project. Graham McColm, from Information Policy, Department of Natural Resources and Water, assisted during Stage 2, by providing workshop presentations and analysing licences provided by agencies. QUT provided Brendan Cosman, who was funded by Information Queensland to assist the project with an assessment of issues associated with the technical implementation of the digital rights management system.

4.8 Stage 2 excluded implementation, expected to be conducted during Stage 3 as a pilot project with key agencies to validate the general operational and legal appropriateness of the created terms and conditions.

## 5. CREATIVE COMMONS

5.1 The CC model identified in Stage 1 is considered a best-practice example of open content licensing systems. Examples of other open content licences include AShareNet and the BBC's Creative Archive. (For a more detailed explanation of these licences see Attachment 2 – Overview of Open Content Licence Types and Attachment 6 – Background Research.)

5.2 The CC concept was developed by Professor Lawrence Lessig, Professor of Law at Stanford Law School, a proponent of reduced legal restrictions on copyright, trademark and radio frequency spectrum, and technology applications.

5.3 CC licences are based on the full range of exclusive rights that are conferred on copyright owners of the various categories of works and subject matter protected under the *Copyright Act 1968* (Cth). CC defines a spectrum of models which can be used by copyright owners in exercising the bundle of exclusive rights, ranging from 'copyright' where all rights are reserved by the creator, to 'public domain' where no rights are reserved by the creator. It allows creators to reserve some rights, to retain copyright and have their intellectual property protected while also inviting further sharing and use of the work. However, there is an important exception to the range of situations in which CC licences can be

used. They cannot be used to license copyright material if the copyright owner has applied a technological protection measure to preclude unauthorised use of the material. CC licences are not excluded from being used where the copyright owner has included Electronic Rights Management information in the protected material (see further below at paragraph 5.5).

5.4 CC includes a predetermined set of licensing terms and conditions written in three ways – in plain English, in legal terms, and in technical terms. It minimises administration by providing a consistent and transparent legal framework for all information resources.

5.5 CC licences are given effect online through a subset of digital rights management referred to as ‘Electronic Rights Management’. Digital rights management is a systematic approach to copyright protection for digital media which was created to prevent piracy of commercially marketed material and illegal distribution of paid content over the internet. Electronic Rights Management information is protected by Australian copyright law. The Electronic Rights Management information is used to ‘tag’ the media (as well as the web page which links to the media), which allows people and computer programs (such as search engines) to determine the licence attached to the media.

5.6 A central feature of open content licences is that the material in question is protected by copyright, which consists of rights that can be exercised exclusively by the copyright owner. Copyright automatically gives copyright owners a bundle of rights which are described as ‘exclusive’ because they enable the copyright owner to exclude others from doing certain acts in relation to the protected material. The bundle of exclusive rights that make up copyright varies according to the kind of material protected, with the most important rights being those to reproduce, to electronically communicate to the public and to make an adaptation of the material. Since the enactment of the *Copyright Amendment (Digital Agenda) Act 2000* (Cwlth), copyright owners also have the rights to protect their materials against unauthorised use by applying technological protection measures, and Electronic Rights Management information. Open content licences involve the granting of permission to other persons to use the copyright material in ways that fall within the bundle of exclusive rights belonging to the copyright owner. In other words, they authorise (permit) users to do certain specified acts within the scope of the bundle of rights which can be exercised exclusively by the copyright owner. Importantly, open content licences grant users rights to do acts that fall within the scope of the copyright owner’s exclusive rights and do not impose further (i.e. non-copyright related) obligations on the users of the copyright material. In this respect, open content licences differ from many traditional information licences which seek to impose, by means of a contract between the copyright owner and the recipient, additional obligations or constraints on users (e.g. limitations on re-use or confidentiality requirements).

5.7 CC has been adapted for use in over 40 countries, including sections of

the US, UK, South African and other governments, and not-for-profit organisations.

5.8 CC licences can be applied to a range of materials, including text, books, photographs, music and spatial data. In November 2005, Google introduced a specific CC search facility to enable searchers to locate materials available under the suite of CC licences.

5.9 Australian versions of the CC licences were developed in January 2005 in conjunction with *iCommons*, which oversees the internationalisation of the CC idea. The Australian CC licences enable creators to license works under Australian copyright law, which differs from the US copyright law in certain important respects. For example, under US copyright law no copyright subsists in Federal government materials. In substance, US Federal government materials are part of the public domain. The Australian CC licences are available from the CC website [creativecommons.org/worldwide/au/](http://creativecommons.org/worldwide/au/). The four categories of licence available are:



**Attribution:** The work is made available to the public with the baseline rights, but only if the author/custodian receives proper credit.



**Non-commercial:** The work can be copied, displayed and distributed by the public, but only if these actions are for non-commercial purposes.



**No Derivative Works:** This licence grants baseline rights, but it does not allow derivative works to be created from the original.



**Share Alike:** Derivative works can be created and distributed based on the original, but only if the same type of licence is used, which generates a ‘viral’ licence. These can be combined to create six licences:

- **Attribution 2.5**  
[creativecommons.org/licenses/by/2.5/au/](http://creativecommons.org/licenses/by/2.5/au/)
- **Attribution-NoDerivs 2.5**  
[creativecommons.org/licenses/by-nd/2.5/au/](http://creativecommons.org/licenses/by-nd/2.5/au/)
- **Attribution-NonCommercial 2.5**  
[creativecommons.org/licenses/by-nc/2.5/au/](http://creativecommons.org/licenses/by-nc/2.5/au/)
- **Attribution-NonCommercial-NoDerivs 2.5**  
[creativecommons.org/licenses/by-nc-nd/2.5/au/](http://creativecommons.org/licenses/by-nc-nd/2.5/au/)



- **Attribution-NonCommercial-ShareAlike 2.5**  
[creativecommons.org/licenses/by-nc-sa/2.5/au/](http://creativecommons.org/licenses/by-nc-sa/2.5/au/)
- **Attribution-ShareAlike 2.5**  
[creativecommons.org/licenses/by-sa/2.5/au/](http://creativecommons.org/licenses/by-sa/2.5/au/)

5.10 The Australian versions of the CC licences set out the same basic licensing elements as the international CC licences, but in language tailored to the Australian legal system. In addition, the Australian licences address the moral rights granted to certain authors under Australian copyright law. Similar moral rights do not exist in all other overseas jurisdictions and hence are not included in the generic CC licences. As a result, the Australian CC licences contain an additional restriction, in that a licensed work cannot be used in a manner that is derogatory or prejudicial to the original author's reputation, in accordance with the author's right of integrity.

5.11 The development of the Australian version of CC was led by Tom Cochrane, Deputy Vice Chancellor QUT, Professor Brian Fitzgerald, Head, School of Law QUT, and Ian Oi, Blake Dawson Waldron Lawyers. Professor Brian Fitzgerald has an international reputation in the area of Cyberlaw, Technology and Intellectual Property. QUT is also home to the Faculty of Creative Industries, which is keen to use the CC model to further develop innovation in the creative industries, the Faculty of Information Technology, which is a leader in information security, and the Faculty of Business, which has recognised expertise in technology policy and innovation.

5.12 QUT is the leading agency in Australia for CC and the OAK Law Project. The OAK Law Project was funded by the Commonwealth Department of Education, Science and Training and evolved out of the CC initiative to enable online licensing of research results, papers and publications arising from publicly funded research conducted at participating Australian universities. The OAK Law Project produces 'nationally and internationally applicable legal protocols and licences based on the CC model that can be used to facilitate open access to copyright material'. On the 28 September 2006 the *OAK Law Report Number 1* was released which investigates a legal framework that supports open access to Australian academic and research outputs such as datasets, articles and electronic theses and dissertations. This report explains that with the rise of networked digital technologies our knowledge landscape and innovation system is increasingly reliant on best practice copyright management strategies.<sup>4</sup>

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4 Open Access To Knowledge (OAK) Law (Science Commons) Project and B. Fitzgerald, A. Fitzgerald, M. Perry, S. Kiel-Chisholm, E. Driscoll, D. Thampapillai and J. Coates, OAK Law Report No 1 – *Creating a Legal Framework for Copyright Management of Open Access within the Australian Academic and Research Sector* (August 2006) [www.oaklaw.qut.edu.au](http://www.oaklaw.qut.edu.au).

5.13 CC licences are not suitable for use in relation to certain information transactions, including where:

- access to and use of data is restricted due to the confidential, private or classified nature of the data and where specific conditions of use would be agreed between the provider and recipient prior to access and use
- rights to access and use data are given as part of high-value commercial transactions, which involve negotiation of the terms of access and use between data providers and recipients.

Transactions of this kind are typically governed by legal agreements, licences, contracts or memoranda of understanding designed to maintain the confidentiality or privacy of the information or to secure its commercial value.

## 6. RATIONALE FOR NEW APPROACH

6.1 There is an increasing amount of activity, at national and international levels, to enable information and content generated or held by public sector institutions and publicly-funded universities and research institutes to be more readily accessed and re-used.

6.2 Although attention has been given to improving access to public sector information since the 1980s, efforts to facilitate access and re-use have strengthened in recent years. As well as advances in computing technology, an important contributing factor has been the body of economic research over the past decade which points to the advantages to be gained.<sup>5</sup> This trend is in recognition of the potential social and economic value of public sector datasets, databases and other informational products, articulated by key authors in this area – Carl Shapiro and Hal Varian, *Information Rules: A Strategic Guide to the Network Economy* (1999), Peter N. Weiss, article from US Department of Commerce, ‘Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts’ (2002), PIRA International Ltd, *Commercial Exploitation of Europe’s Public Sector Information* (2000), commissioned by the European Commission Directorate-General for the Information Society, and Stiglitz et al., ‘The Role of Government in a Digital Age’ (2000), Computer and Communications Industry Association, Washington, DC. (For more information on the economic benefits of open content licensing see Attachment 7 – Economic Benefits.)

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5 See for example, Peter N. Weiss, *Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts* (2002), US Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service [www.weather.gov/sp/Borders\\_report.pdf](http://www.weather.gov/sp/Borders_report.pdf). [www.osti.gov/datameeting/Borders\\_publisher\\_format.html](http://www.osti.gov/datameeting/Borders_publisher_format.html)

6.3 Internationally, one of the most significant initiatives in recent years has been the European Union's *Directive on the re-use of public sector information* ('the EU Directive'), which was adopted by the European Parliament and Council on 17 November 2003.<sup>6</sup> The EU Directive, which aims to facilitate the development of European data products based on public sector information, was the culmination of efforts that began in the late 1980s.<sup>7</sup> With a lack of clear policies or uniform practices in relation to access to and re-use of public sector information, European content firms dealing in the aggregation of information resources into value-added information products were perceived to be at a competitive disadvantage in comparison to their US counterparts. The lack of harmonisation of policies and practices regarding public sector information resources among the European Union Member States was regarded as a barrier to the establishment of European information products based on information obtained from different countries.<sup>8</sup> By contrast, the situation in the US was seen as providing exten-

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6 Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, Official Journal of the European Union, L 345/90, 31 December 2003.

[europa.eu.int/information\\_society/policy/psi/docs/pdfs/directive/psi\\_directive\\_en.pdf](http://europa.eu.int/information_society/policy/psi/docs/pdfs/directive/psi_directive_en.pdf).

7 See, in particular the Commission of the European Communities' *Guidelines for Improving the Synergy Between the Public and Private Sectors in the Information Market*, issued in 1989.

[europa.eu.int/information\\_society/policy/psi/docs/pdfs/](http://europa.eu.int/information_society/policy/psi/docs/pdfs/)

1989\_public\_sector\_guidelines\_en.pdf The agenda appears to have been reinvigorated by a major policy conference on public sector information, sponsored by the European Commission, which was held in Stockholm in 1996. [europa.eu.int/information\\_society/policy/psi/history/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/history/index_en.htm).

8 Problems were identified with response times to requests for information, pricing, existing exclusive deals and the overall lack of transparency. [europa.eu.int/information\\_society/policy/psi/directive/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/directive/index_en.htm) Such problems had been identified as far back as the 1980s, in the Introduction to the Commission of the European Communities Guidelines for Improving the Synergy Between the Public and Private Sectors in the Information Market, 1989, p. 5. 'Governments and public sector bodies collect large amounts of data and information, as part of their routine functions, which could be made available to the private sector for the construction and marketing of electronic database services. The private sector is well placed to combine information from a variety of government sources, and its prime function is to produce and distribute information products oriented to the needs of the market. In order to develop and strengthen the information industry, a positive initiative is required from governments, to encourage the use and exploitation of public sector data and information. However, there are few convergent policies or guidelines within Member States relating to the role of the public sector in this area. In addition, if there are different policies operating in the different Member States, then it will be very difficult to develop the market. It is therefore desirable that national

sive opportunities for the re-use of public sector information, due to a legislative framework which enhances access to and re-use of federal government information. Features of the US legal framework which were identified as contributing to the advantageous position of US firms include the broad right of citizens and businesses to electronically access Federal government information and re-use it for commercial purposes, the lack of copyright on Federal government materials, the lack of restrictions on re-use and the limitations of fees to marginal costs of reproduction and dissemination.<sup>9</sup>

6.4 European Union Member States were required to bring their national laws into conformity with the Directive by 1 July 2005 and to review the application of the Directive by 1 July 2008.<sup>10,11</sup> By 15 December 2005, 12 countries (including France, Ireland, Italy, Sweden, the Netherlands and the UK) had notified the European Commission that they had given effect to the Directive.<sup>12</sup> In the UK, the Directive has been given effect by the *Re-use of Public Sector Information Regulations 2005*, which came into force on 1 July 2005, and in May 2005 the UK government established an Office of Public Sector Information with responsibility for the coordination of policy standards on the re-use of public sector information.<sup>13,14</sup>

6.5 An independent study undertaken in the United Kingdom by Intrallect Ltd, initially a spinoff company from the University of Edinburgh, and the AHRC Research Centre for Studies in IT and IP Law at the University of Edinburgh considered the applicability of CC licences to facilitate access to and re-use of significant public sector information.<sup>15</sup>

6.6 It is also worth noting that The Gates Foundation now requires data shar-

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policies, as far as they exist, be coordinated at the Community level in order to allow the majority of the EC countries not yet having such a policy to follow these orientations on a national level’.

9 See ‘The situation in the United States’ [europa.eu.int/information\\_society/policy/psi/directive/us\\_situation/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/directive/us_situation/index_en.htm)

10 Article 12.1

11 Article 13

12 See ‘Implementation’ [europa.eu.int/information\\_society/policy/psi/implementation/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/implementation/index_en.htm).

13 Statutory Instrument 1515 of 2005 [www.opsi.gov.uk/si/si2005/20051515.htm](http://www.opsi.gov.uk/si/si2005/20051515.htm).

14 See the Office of Public Sector Information’s website [www.opsi.gov.uk/](http://www.opsi.gov.uk/) The Office of Public Sector Information, attached to the Cabinet Office, will advise on and regulate the operation of the re-use of public sector information, and will set standards and provide a practical framework to increase transparency and remove obstacles to re-use.

15 October 2005, the report for the UK study [www.intrallect.com/cie-study/CIE\\_CC\\_Final\\_Report.pdf](http://www.intrallect.com/cie-study/CIE_CC_Final_Report.pdf).

ing as a condition of its new funding program for a HIV/AIDS vaccine. The Gates Foundation requires all grantees to share their data to accelerate research and make available to all who can use it.<sup>16</sup>

6.7 In November 2005, Australian Government agencies – the Office of Strategic Data Management and the Australian Bureau of Statistics – abandoned their longstanding, ‘traditional’ restrictive government licensing practices in relation to their datasets, which included charging fees for the data and severely restricting or prohibiting commercial downstream use of the data by the licensee or others. This is an indication that, at the Australian Government level, there is a move to the philosophy of the open content licensing, and the removal of certain data charges and restrictions on downstream use of data, whether commercial or otherwise.

6.8 The current licence agreement being used by these agencies for online access to, and the download and further use of, their data resembles an open content licence as it grants very broad rights to use and sub-license data (commercially or otherwise), and requires that the Commonwealth be recognised as owner of the intellectual property rights in the dataset.

6.9 Two of several departures from a typical open content licence are that the licence requires an indemnity and obliges certain record keeping and reporting, but with reports only to be provided on reasonable request by the agency.

6.10 Put simply, these fundamental changes in access and management practices represent a major paradigm shift on the part of these Australian Government agencies and a significant step towards embracing the open content licensing principles and philosophies of only ‘some rights reserved’ as opposed to the traditional copyright ‘all rights reserved’ licence. The main feature of open content licensing models, including CC, is the requirement for the acknowledgement or attribution of copyright ownership and then the granting of a range of generous rights of use.

6.11 This fundamental change in Australian Government licensing practice coincided with the release of the report *Unlocking the Potential: Digital Content Industry Action Agenda*, Strategic Industry Leaders Group report to the Australian Government, November 2005.<sup>17</sup> This report identified three key issues in relation to intellectual property, including low levels of industry knowledge about managing intellectual property, the importance of effective intellectual property management to build revenue in firms, and insufficiently developed mechanisms for accessing Crown intellectual property for exploitation. The report also pro-

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16 Bill Gates Embraces the Knowledge Commons, On the Commons, July 21, 2006  
[onthecommons.org/node/941](http://onthecommons.org/node/941) [www.earlham.edu/~peters/fos/2006\\_07\\_16\\_fosblogarchive.html#115349848509092587](http://www.earlham.edu/~peters/fos/2006_07_16_fosblogarchive.html#115349848509092587).

17 [www.dcita.gov.au/arts/film\\_digital/digital\\_content\\_industry\\_action\\_agenda/dciaa\\_report](http://www.dcita.gov.au/arts/film_digital/digital_content_industry_action_agenda/dciaa_report).

posed solutions, including engaging with work occurring in the area of alternative approaches to intellectual property licensing, such as CC, and developing ways of improving access to Government intellectual property for commercial exploitation by digital content firms to encourage innovation.

6.12 This report contains a strong encouragement for the broader uptake of the CC licensing regimes by Australian Government agencies in relation to ‘Crown intellectual property’. Whilst the recommendations contained in the Un-locking the Potential report are not official government policy there is a push by the Australian Government to have its intellectual property promoted within the private sector to support industry growth.

6.13 Stage 2 of this project indicates that the CC licensing regime, and open content licensing more generally, will be of value to Queensland Government agencies, Queensland businesses and community members by enabling increased access to and re-use of public sector information (including spatial or mapping information), and will facilitate economic activity and better informed decision making generally, and foster the development of the information industry in Queensland.

## 7. CONSULTATIONS

7.1 Consultation workshops were conducted to provide key agencies with an overview of the findings from Stage 1, to outline the philosophy or principles governing open content licensing, to discuss the extent to which open content licensing, and CC in particular, might facilitate more efficient and effective licensing practices, and to identify the agency’s business needs. (For a more detailed report see Attachment 3 – Workshop Consultation Report.)

7.2 Workshops were conducted with data and information custodians from a range of Queensland Government agencies, including representatives from:

- Department of Natural Resources and Water – Indooroopilly, Information Policy, Products and Services, Land Information and Titling
- Environmental Protection Agency
- Department of Primary Industries and Fisheries
- Office of Economic and Statistical Research, Queensland Treasury
- Queensland State Archives
- Department of Public Works (Office of Government ICT)
- Smart Services Queensland
- Department of Justice and Attorney-General (Office of the Chief Information Officer, and Freedom of Information and Privacy Unit)
- State-wide Water Information Management Project, the Department of Local Government, Planning, Sport and Recreation
- Queensland Health

- QSIC Healthy Communities Working Group
- Information Queensland
- Australian Bureau of Statistics
- Commonwealth Office of Spatial Data Management
- Department of State Development, Trade and Employment
- GeoScience Australia
- Local Government Association of Queensland.

7.3 The workshops, and subsequent survey of participants, aided the analysis of existing licences used and assisted in identifying ‘gaps’ between the existing CC licences and current operational requirements.

7.4 Feedback from the workshops identified a clear demand for simpler and more standardised licences. It was also made clear by those attending the workshops that there was a need for some formality in licensing rather than informality and reliance upon ‘trusted relationships’. The consultation with agencies confirmed that the combination of the six CC licences would support the majority of data access and use transactions conducted by the Queensland Government.

## 8. ANALYSIS OF EXISTING LICENCES AND LICENSING ARRANGEMENTS

8.1 Time and resources available in Stage 2 did not permit a comprehensive assessment of every licence and agreement for information access or provision used by or imposed upon Queensland government agencies. Instead, a reference sample of licences was examined and analysed to establish the general characteristics of licences currently in use to develop an understanding of licensing policies and practices. Sample licences were identified by workshop attendees as being representative information transactions and licences. An analysis of the sample licences provided by those agencies which participated in the workshops identified common access and use rights, privileges and restrictions, as well as other terms and conditions.

8.2 Queensland Government licences and licensing arrangements were analysed to identify key characteristics, including ownership, permitted uses, prohibited uses, obligations and fees. The following lists the licences reviewed. (A more detailed analysis is provided in Attachment 4 – Analysis of Existing Licences. See also paragraph 8.6.)

QGIS licences:

- End User
- Memorandum of Understanding (MOU)
- Click Through (Online User)
- Business (OVAR, VAR, Reseller).

Department of Natural Resources and Water licences:

- User Licence
- Product Distributor
- Data Distributor
- Online Distributor
- Defined Developer
- Developer
- Data Sharing.

In addition, the Department of Natural Resources and Water uses memoranda of understanding and agreements.

It is clear from the consultation process that this department has developed and applies a fully developed and comprehensive suite of six or seven licences. It is generally accepted that the licences currently used by the Department of Natural Resources and Water have evolved from the QGIS licences, in response to the department's business requirements and environment. A considerable amount of the agency's data is available online. The department has developed a set of principles or guidelines to assist officers in identifying which of the licences is to be used in particular circumstances.

Information Queensland, Department of Natural Resources and Water – Spatialink/Infolink key data sets:

- Multiple agency use (e.g. State Digital Road Network)
- Share between agencies, add to and update (e.g. Cadastre from the Department of Natural Resources and Water)
- Public access (Licence type) (e.g. *Integrated Planning Act* planning schemes, the Department of Local Government, Planning, Sport and Recreation).

Information Queensland has adopted existing licensing arrangements established for the State Digital Road Network and the Cadastre. There are a significant numbers of data assets that still require relevant licences to be applied.

Environmental Protection Agency licences:

- Wildlife Online Website;
- State of the Environment (SOE) Online Database and Website
- Wildnet Data
- QGIS Herbarium Regional Ecosystems GIS Databases
- Herbarium User Licence.

The Environmental Protection Agency presently makes much of its data available online. It uses several kinds of fairly simple contract-based licences. The terms and conditions that apply generally to the Environmental Protection Agency's websites, which are usually accessed via hypertext links at the bottom of web pages, needs to be reviewed for consistency with the terms and conditions of the



standard licences used by the Environmental Protection Agency.

Queensland State Archives (QSA) licensing arrangements include:

- *Memorandum of Understanding* (for confidential surveys conducted by the Office of Economic and Statistical Research on behalf of QSA e.g. Technical reports, frequency tables, graphs)
- *Licensing (distribution) arrangement* with State Records NSW (for Keyword AAA Thesaurus to be distributed by QSA to Queensland public authorities)
- *Licence agreement* with public authorities in Queensland who use Keyword AAA
  - agreement covers intellectual property, prohibited uses, services by third parties, documents, defects, changes to licence conditions and termination of the licence agreement
- *Conditions of use* (e.g. information for research or private study, and for no other purpose – copies of public records in QSA’s collection by members of the public and researchers)
- *Conditions of entry* (e.g. access to public records for users of QSA’s public search room – a readers ticket to access the records indicates that users have agreed to the conditions of entry to the public search room)
- *Attribution/copyright* (e.g. QSA’s Annual Report used by Parliament, Minister, MPs, public authorities, the public – QSA has no objection to the material in its annual report being reproduced but asserts its right to be recognised as author of its material and the right to have its material remain unaltered).

Office of Economic and Statistical Research:

- Memorandum of Understanding
- Agreement.

The Office of Economic and Statistical Research memorandum of understanding documents reflect a strong, traditional, contract-based approach. Emphasis is placed upon compliance with the *Statistical Returns Act 1896* and applicable privacy Information Standards. The variables for particular projects are set out in the Schedule.

Licences from some other jurisdictions were also reviewed:

- Australian Bureau of Statistics (ABS):
  - CD 2001 Licence agreement
  - ABS@Final
  - ABS Conditions of Sale.

The ABS agreements reflect a strong, traditional, contract-based approach with

only restricted rights being conferred on licensees. The need to respect privacy and confidentiality is emphasised.

- Office of Spatial Data Management (OSDM) Australian Government:
  - Online User Licence
    - Agency-specific Deed of Licence for spatial data provided over the internet.

The online user licence is royalty-free and grants broad rights to the licensee. Whilst reflecting certain CC licence attributes it also contains certain traditional contract-based licence features.

- Natural Resources Canada:
  - GeoGratis User Agreement for Digital Data.<sup>18</sup>

The GeoGratis royalty-free licence permits the licensee to create and distribute online derivative information products, but prohibits on-distribution of the unaltered licensed data online. Recognition of copyright is required, together with an indemnity in favour of the licensor. This is a short licence written in plain English.

8.3 The findings from the analysis follow. Many of the licences, including those presently in use by the Department of Natural Resources and Water reflect a policy or philosophy focusing on the maintenance of control over the use of data downstream after it has been made available initially under the licence. These provisions are designed to maintain control over the use that may be made of the information through a chain or series of end-to-end interlocking contractual provisions. The legal measures used are essentially contract-based rather than copyright-based. The general approach is to endeavour to ensure, as far as practicable, that in each successive downstream transaction certain core or fundamental provisions are replicated. These provisions typically include:

- several forms of copyright notice and statement, depending on whether or not the licensee was entitled to create value-added or derivative products, to indicate copyright ownership (e.g. Crown copyright generally, or Crown copyright in the base data as initially licensed which then forms part of the derivative or value-added product)
- scope of use rights (e.g. right to sub-license, right to commercialise, right to create value-added/derivative products)
- an indemnity by the licensee in favour of the immediate licensor as well as the

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<sup>18</sup> [geogratis.cgdi.gc.ca/clf/en?action=userAgree](http://geogratis.cgdi.gc.ca/clf/en?action=userAgree).

State of Queensland.

8.4 Similar observations to those set out above apply to the current suite of QGIS licences, which in significant part were the precursors to the current suite of licences used by the Department of Natural Resources and Water. The QGIS licences were prepared for use by both the public and private sectors about 10 years ago and do not focus specifically on the legal or operational issues arising in the online environment.

8.5 The following paragraphs deal with specific terms and conditions contained in the existing sample of licences.

8.6 The existing 20 licences reviewed during Stage 2 were examined in relation to 42 concepts or terms, of which many map directly to 15 to 18 concepts or terms contained in the CC licences. The following tables are contained in Attachment 4 – Analysis of Existing Licences. They summarise in a general way the main characteristics of each of the 20 licences and the generally equivalent CC licence provision.

- TABLE 1: Analysis of Licences – Terms and conditions in existing licences
- TABLE 2: Broadly equivalent terms and conditions in the CC Attribution (BY) licence
- TABLE 3: Broadly equivalent terms and conditions in the CC Attribution Share Alike (BY-SA) licence
- TABLE 4: Broadly equivalent terms and conditions in the CC Attribution No Derivatives (BY-NC) licence
- TABLE 5: Broadly equivalent terms and conditions in the CC Attribution Non-commercial Share Alike (BY-NC-SA) licence
- TABLE 6: Broadly equivalent terms and conditions in the CC Attribution No Derivatives (BY-ND) licence
- TABLE 7: Broadly equivalent terms and conditions in the CC Attribution Non-commercial No Derivatives (BY-NC-ND) licence
- TABLE 8: Broadly equivalent terms and conditions in six CC licences.

8.7 The following section discusses the terms and conditions that are contained in the 20 licences reviewed and which are not included in any of the CC licences. These terms have been reviewed to identify whether they are still REQUIRED, and if still required whether they can be met through new POLICY, LEGAL (either through contract or legislation), or ADMINISTRATIVE arrangements aimed at streamlining the licensing process and making greater use of public sector information.

<b>TERM or CONDITION (see Table 1, Attachment 4 – Analysis of Existing Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
2. This term refers to 'ownership' and provides exclusive or sole licence to the licensee	This term has not been used in any of the licences reviewed and does not exist in the original QGIS licence terms. As it is not generally used, it is NOT REQUIRED.
7. This term refers to ownership and is used in the Geogratis (Natural Resources Canada) User Agreement for Digital Data. The Canadian licence uses it to state that a recording medium (CD/ tape) belongs to the licensee if it always belonged to the licensee.	This is considered to have been drafted in the pre-web environment and when recording mediums were more costly. It is suggested that this term is now NOT REQUIRED if web medium is used.
8. This term is used in 12 of the licences reviewed and prohibits a user from on-distributing material to third parties except own consultant.	This term ties in with term 10 and it would still be required for government licences for security reasons. These are outside the scope of the CC model and this term is REQUIRED – LEGAL (CONTRACT).
9. This prohibits the users from on-distributing the licensed material in unmodified form via the internet. It appears in two QGIS licences and in the Geogratis licence (Canada). Some further clarification of the definitions for 'derivative' and 'derivative only licence' will be required.	It is considered that this term is NOT REQUIRED if a new POLICY PRINCIPLE on access and use is adopted.
10. This term is in 13 of	This term reflects the government's privacy

<b>TERM or CONDITION (see Table 1, Attachment 4 – Analysis of Existing Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
the 20 licences reviewed and prohibits the use of the data or product for direct marketing or if it infringes privacy.	principles. This term is <b>REQUIRED – LEGAL (LEGISLATION), POLICY and ADMINISTRATIVE ARRANGEMENTS.</b>
12. This term appears in three licences – Natural Resources and Water Distributor, Environmental Protection Agency SOE Online Database and Website and Wildnet Data – and prohibits the user from producing reports or other products for distribution or sale without prior approval from the Department.	It is recommended that this term is for transactions outside the scope for the CC model and it is <b>REQUIRED – LEGAL (CONTRACT).</b>
16. This term defines a permitted use – to provide data to a consultant for a specified purpose – and is included in 11 of the licences reviewed.	Terms that apply to licensees must also apply to ‘agents’ such as consultants or contractors, and these ‘agents’ when working with confidential information are required to enter into a legal contract which includes a confidentiality provision. This term would still be required for transactions that are highly commercial or confidential and therefore outside the scope of the CC model. For these arrangements a policy principle and legal contract, including a confidentiality term are required. <b>REQUIRED – LEGAL ARRANGEMENT (CONTRACT).</b>
17. This term permits users to ‘provide products for no charge’ (hard copy or non-editable digital). This appears in six of the	There may be specific instances where agencies require this term, however if there is a change in charging and access policy, then it may not be required. <b>NOT REQUIRED – POLICY.</b>

<b>TERM or CONDITION (see Table 1, Attachment 4 – Analysis of Existing Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
reviewed licences – QGIS End User, MOU, Click Through, Natural Resources and Water User and Data Sharing licences, and the Environmental Protection Agency Herbarium User licence.	
18. This term permits users to publish un-edible digital files on the internet for viewing only and appears in the Natural Resources and Water User Licence.	This term is no longer required as it can be covered using a CC licence – BY-NC-ND or BY-ND and it is <b>NOT REQUIRED</b> if there is a new <b>POLICY PRINCIPLE</b> that supports more open access and use.
21. This term is used by Natural Resources and Water in its Online Distributor licence to appoint their own agents to on-distribute (requires Natural Resources and Water approval).	This term is not applicable to CC transactions and it is <b>REQUIRED – LEGAL CONTRACT</b> .
25. This term permits users to license other parties to on-distribute and value-add and appears in the QGIS Business: OVAR licence, the Natural Resources and Water Defined Developer licence and the OSDM (Federal Government) Online User licence.	This term is addressed by the CC licences (BY-SA) and it is <b>NOT REQUIRED</b> if a new <b>POLICY PRINCIPLE</b> to encourage wider use of copyright materials based on the CC model is adopted.

<b>TERM or CONDITION                      (see Table 1, Attachment                      4 – Analysis of Existing                      Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
28. This term is used in the Natural Resources and Water User licence and obliges the user to register with the Department to receive updates on licensed data.	This term is NOT REQUIRED if an ADMINISTRATIVE ARRANGEMENT such as information on packaging is used.
29. This term is used in two QGIS licences and three Natural Resources and Water licences – and obliges third parties to sign an agreement re the licence terms.	This term ties in with term 10 above. It is REQUIRED – LEGAL (CONTRACT).
30. This term is used in two QGIS Business licences and in three Natural Resources and Water licences – Data Distributor, Online Distributor and Developer –and obliges the user to keep records for royalty payments and for tracking on audits.	This term could be met through a POLICY PRINCIPLE and ADMINISTRATIVE ARRANGEMENT and it is NOT REQUIRED.
31. This term is used in four licences – the Natural Resources and Water Defined Developer, the Environmental Protection Agency Wildnet Data and QGIS Herbarium Regional Ecosystems GIS Databases and the OSDM Commonwealth Online	This term is used by the Department of Natural Resources and Water for transactions that would be outside the scope of the CC model and it is REQUIRED – LEGAL (CONTRACT).

<b>TERM or CONDITION (see Table 1, Attachment 4 – Analysis of Existing Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
User Licence. It obliges users to comply with additional/special conditions.	
32. This term is in the QGIS End User and Click Through licences and in the Environmental Protection Agency Defined Developer licence and obliges users to make a new licence application if extended uses or time-frames are required.	Under the CC model, the duration of licences is unlimited and if there is a POLICY PRINCIPLE based on the CC philosophy of making data available for use and re-use indefinitely then it is NOT REQUIRED.
33. This term is in the QGIS End User and the Natural Resources and Water Data Sharing licence and obliges the user not to corrupt or introduce errors into received data.	As this is already covered by a general law concept of ‘acting in good faith’, which could be reinforced by a POLICY PRINCIPLE, it is NOT REQUIRED. However, if the ‘indemnity’ term is not available, then this term may still be REQUIRED.
34. This term requires users to report if errors are found (Natural Resources and Water Data Sharing, OSDM Commonwealth Online User Licence and QGIS MOU).	As above with 33, this is covered by a general law concept of ‘acting in good faith’, which could be reinforced by a POLICY PRINCIPLE. This condition is NOT REQUIRED.
35. This term is in three licences and requires users to incorporate metadata from the Department in any new product.	This condition is central to good data management and it is required to reinforce the POLICY PRINCIPLES established in Information Standard No 34 – Metadata (IS34), and IS44. REQUIRED – POLICY and ADMINISTRATIVE ARRANGEMENTS (TECHNICAL SOLUTION).



<b>TERM or CONDITION (see Table 1, Attachment 4 – Analysis of Existing Licences)</b>	<b>COMMENT and RECOMMENDATION</b>
37. This term appears in 16 licences and ensures indemnity of the licensor by the licensee.	This needs to be limited to situations where there is a high risk and it is NOT REQUIRED if there is a POLICY PRINCIPLE related to legal liability and if a risk analysis is undertaken by the agency.
39. This term is in 15 licences and provides for termination due to breach or convenience.	It is not possible to terminate a CC licence for convenience only. However a CC licence terminates automatically on breach by the licensee. The convenience provision is NOT REQUIRED for transactions within the scope of the CC model. In the case of a breach the State could sue a licensee for damages. For transactions outside the CC scope, it would be REQUIRED.
42. This term is in 12 licences and refers to fees that are payable for access on the licence.	This term supports commercial transactions and it is considered outside the scope of the CC model and it is REQUIRED – POLICY and LEGAL (CONTRACT) for these cases.

8.8 Generally, the terms that continue to be required reflect transactions:

- that are highly commercial
- relating to confidential information or the use of private information (e.g. direct marketing etc)
- where time limits apply
- where the ability to terminate a licence is required or where the licence is revocable
- where an indemnity is required.

8.9 From this review of existing terms and conditions the legal requirements set out below, which are not provided for under the CC licences, would continue to be applicable and therefore should be addressed in any replacement template licences to be implemented within the Queensland Government. These are arrangements where a licensor needs to:

- limit authorised users – for example, to:
  - provide data to a consultant for a specified purpose

- prohibit users from on-distributing material to third parties except own consultant
  - appoint their own agents to on-distribute
  - oblige third parties to sign an agreement re the licence terms.
- establish pricing and charging – for example to:
    - refer to fees that are payable for access.
  - ensure good data management – for example to:
    - incorporate metadata from the custodian in any new product.

## 9. ISSUES ASSOCIATED WITH MOVING TO CREATIVE COMMONS LICENCES

9.1 The project team considered the issues and additional template licences or licence provisions that would be needed to bridge or close the gap between existing licensing arrangements and the CC licences.

9.2 A considerable number of Queensland Government agencies would, by adopting certain of the present CC licences, be able to meet all their business or operational requirements. The majority of Queensland Government databases could be made available under the simplest of the CC licences, namely the Attribution (or BY) licence, where there are no issues of privacy, confidentiality, statutory constraints or policy constraints. Using this licence, agencies could make such datasets readily available online:

- as free data or where a statutory charge or fee is payable
- without imposing any substantive requirements or limits on the initial recipient (licensee) or later recipients
- if the State's ownership of copyright is recognised at all times during any use by the original or subsequent recipients (licensees).

Licensees can receive data either on CD or DVD or as a download online.

The present CC Attribution (BY) licence is suitable without any amendment for the majority of public sector information.

9.3 The present proposal, being conceptually founded on open content licensing, does not involve going beyond the rights inherent in copyright ownership. In particular, it does not seek to impose further restrictions or constraints on the recipients of licensed data. It is for this reason that the present proposal recommends a preliminary qualifying process be conducted for each dataset, to exclude data which can only be distributed if further constraints or obligations are

imposed on recipients. In cases where it is considered necessary to impose further constraints or obligations on recipients of information, it will be necessary to consider whether such restrictions are to be imposed by contractual provisions, by administrative means, or by technological measures (e.g. by passwords or encryption).

9.4 There will be instances where data and information products will not qualify for the application of CC licences and where additions to and modifications of the CC licences are required. Therefore a limited number of standard templates will need to be developed for agencies to support information licensing transactions relating to confidential or private information or information with commercial value and for which the CC model is not appropriate. High value commercial transactions are outside the scope of the CC philosophy and licence structure. Agencies which conduct these transactions would still require negotiations and individual licence arrangements such as a memorandum of understanding or Specific Conditions of Use. Nevertheless any customised licences which need to be created to meet an agency's business requirements in a particular case should be based as far as practicable on CC baseline rights, to foster consistency as much as possible across the public sector.

9.5 In general terms it is apparent that some of the major issues of relevance for agencies are whether the licensee of public sector data has the right to make commercial use of the licensed data and whether the licensee has the right to use the licensed data to create derivative products. The present suite of CC licences directly addresses these issues in a legally effective manner for the majority of situations or information transactions engaged in by agencies.

9.6 *Non-endorsement provision:* As a matter of caution, it would be desirable if a 'non-endorsement provision' such as that currently in use in the BBC's Creative Archive Licence were added to the standard CC licence. The provision would be to the effect that the *Licensee must not use the licensed data in any way that would suggest or imply the Licensor's support, association or approval*. It is understood that such a clause will be included in the next version of the CC licences. This provision could be 'added to' the present standard CC Attribution licence by means of a statement on the agency's website, in combination preferably with a field in the metadata, styled 'additional legal provisions' so that this condition remained embedded in the data throughout its various uses online.

9.7 *Meaning of 'commercial/non-commercial' in CC licences:* CC is presently clarifying the meaning of 'non-commercial' as it is applied to three of its licences. As it stands, 'non-commercial' means that use of the licensed data is not *primarily* for financial gain, although some incidental commercial activity is permissible provided this activity is secondary or incidental to the primary non-commercial purpose. Nevertheless an agency would be able to collect a statutory charge or impose a licence fee under the Attribution (BY) licence, as well as under any of the three CC licences with the 'non-commercial' feature, as the non-

commercial restraint on use applies only to the licensee's use of the data (and not use by the licensor/agency).

9.8 As the CC licensing model does not deal comprehensively with 'commercial' access to and re-use of material – for example, where government agencies are required by government policy to recover the cost of information services through fee-for-service charges – additional licence terms would be needed. In some cases, data custodians may apply different conditions to commercial access and use of their data and services as opposed to non-commercial (not-for-profit) applications.

9.9 Whilst the CC model was designed from its inception to be used in the online environment of the internet, it also operates effectively and efficiently in the hardcopy (analog) environment and in the digital but non-online environment (e.g. where an agency provides data in digital format on say a CD or DVD as opposed to online via a website). Here a hard copy CC licence would be signed by the licensor and licensee.

9.10 As a result of considering the array of non-uniform licences presently in use across the public sector and the consultation conducted as part of this project, it is considered that a move to open content licensing, specifically CC licences, would result in the benefits set out below being secured.

From the perspective of the agency or Department there would be:

- consistency and transparent treatment of digital resources
- improved perception of 'value for money' by the general public
- reduction in effort of dealing with enquiries for information/resources
- reduction in effort of developing a re-use policy by sharing a common policy
- reduction in legal input through the adoption of existing licences rather than drafting new licences in each agency/department
- enhanced public relations, potentially leading to increased use of other services
- choice of licences offering flexibility
- a framework of rights clearances conditions in future projects or databases.

From the perspective of the users of public sector information, the benefits would be:

- wider access to previously unavailable digital resources
- clear, unambiguous and permissive conditions of use
- usability at the point of discovery
- reduced confusion through a common set of well-recognised licences and symbols
- peace of mind through knowing that re-use is legal and encouraged
- ability to re-distribute and make derivative works (in permitted cases)
- ability of search engines to offer searches based on the conditions of use.

9.11 The benefits of implementing CC licences, as far as practicable, across the public sector need to be contrasted with the disadvantages of the array of non-uniform licences presently in use across the public sector:

- The present proliferation of licence types causes confusion for users and will act as a barrier to acceptance. By using a licensing scheme that is already widely used (over 140 million resources are already linked to CC licences world-wide) familiarity will encourage use.
- When data or information resources from different sources are aggregated to produce collective or derivative works, problems of licensing the new work are reduced if the component works share licence conditions.
- If a new licence is created based on CC then trademarks, symbols, human-readable deeds and metadata associated with CC cannot be used.

9.12 These advantages and disadvantages generally coincide with those identified in the *Common Information Environment and Creative Commons: Final Report to the Common Information Environment Members of a Study on the Applicability of Creative Commons Licences* (2005) by Intrallect and the University of Edinburgh.<sup>19</sup>

## 10. DIGITAL RIGHTS MANAGEMENT

10.1 One of the greatest technological advances available online with the CC model is the digital rights management feature which automatically embeds metadata into the data prior to download wherever it is transmitted online. This enables users to know who the custodian of the data is, copyright ownership details, specific terms and conditions, and other details about the data to assist a user to assess its fitness for purpose.

10.2 Information Queensland will assist in the initial pilot for the digital rights management feature and requires that the system will:

- attach the terms and conditions to the datasets to be made available to potential downloaders
- enable users to select datasets to download
- enable users to aggregate selected datasets and accompanying terms and con-

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19 Intrallect Ltd (E Barker, C Duncan) and AHRC Research Centre for Studies in Intellectual Property and Technology Law, The University of Edinburgh (A Guadamuz, J Hatcher and C Waelde), *Common Information Environment and Creative Commons: Final Report to the Common Information Environment, Members of a Study on the Applicability of Creative Commons Licences*, 10 October 2005 [www.intrallect.com/cie-study/CIE\\_CC\\_Final\\_Report.pdf](http://www.intrallect.com/cie-study/CIE_CC_Final_Report.pdf).

ditions

- enable delivery of selected datasets to the user
- enable the capture and storage of download activity and terms and conditions supplied.

10.3 The digital rights management is dependent upon the infrastructure being compliant with the Government Enterprise Architecture and associated Information Standards. Using the terminology of the Government Enterprise Architecture, when data and its associated information are delivered to a user the bundle of information is referred to as a ‘payload’ and the user is a ‘consumer’. Under the proposed model, the payload delivery system would:

- allow the consumer to search the metadata repository
- allow the consumer to view the full metadata record for a selected dataset
- authenticate the user is permitted to download that dataset
- present the consumer with licence and usage restriction information
- handle or offload any e-commerce component (for cost recovery or statutory fee collection)
- create a payload containing the dataset, metadata and licence – if possible, the licence and metadata will also be embedded directly in the dataset.

10.4 An initial assessment of issues associated with the technical implementation of a digital rights management system has been made (Attachment 5 – Considerations for the Technical Implementation). A key technical requirement will be that the system will select and present a licence to the consumer, which must be accepted before data and information may be accessed, and which constitutes effective notice to the consumer of the terms under which they can access and use the data and information.

## 11. IMPLEMENTATION

11.1 Stage 2 of the project determined that a clear policy position supported by a sufficiently detailed set of guiding principles should underlie open content licensing to assist agencies in implementing it. Experience in Australia and internationally to date indicates that the development and adoption of a general policy and guiding principles are crucial steps in the implementation of systems designed to promote access to and re-use of public sector information. The importance of basing an access regime on an appropriate policy and guiding principles has been recognised in the Intrallect and University of Edinburgh report commissioned by the UK’s Common Information Environment, *Common Information Environment and Creative Commons* (2005) and in the Australian Government’s Office of Spatial Data Management, *A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing Policy* (2001).<sup>20</sup> Statements of the principles

underlying access and re-use are also central to the EU Directive on the re-use of public sector information of 2003 and the OECD's *Declaration on Access to Research Data from Public Funding* (2004) ('OECD Declaration').<sup>21</sup> (See Attachment 6 – Background Research, for clear statements of principles.)

11.2 A question raised during the project was whether a new 'licensing' Information Standard would be required, or whether a new approach to licensing could be handled using existing or draft standards. A review of key Information Standards indicates that the Queensland Government has moved towards an 'open content licensing' philosophy and this is reflected in some Information Standards, including IS33, IS25, and IS44.

11.3 IS33 states that 'Government information must be made accessible, directly or indirectly, to citizens of Queensland and those doing business in Queensland at no more than the cost of provision and in a manner which provides reasonable access to the community unless statutory requirements vary the access and pricing arrangements. Certain types of information will be required to be freely available'. While IS33 does not deal specifically with 'licensing' as such, it does promote access to government information. This standard is due for review. An option to be considered during the review is whether the standard should include stronger principles related to access to government information, and whether the name should be 'Access, Use and Pricing'.

11.4 IS25 was developed to provide guidance to agencies on how to appropriately manage and commercialise their intellectual property assets. Under the intellectual property policy agencies are responsible for managing the intellectual property assets they generate or use and commercialisation of intellectual property by an agency is generally ancillary to that agency's core business. Recognition is given to staff that develop intellectual property with commercial opportunities (including moral rights). The general principles on which this policy is based include that agencies:

- are responsible for the management of intellectual property assets owned or used by the agency, in a publicly accountable manner, in accordance with all relevant legislation, policies and guidelines
- should take appropriate and necessary steps to identify, secure, preserve, maintain, and, where appropriate, advertise the availability of commercial-

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20 Commonwealth Interdepartmental Committee on Data Access and Pricing, *A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing*, June 2001. [www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf). [www.osdm.gov.au/osdm/policy/accessPricing\\_summary.html](http://www.osdm.gov.au/osdm/policy/accessPricing_summary.html) (accessed 14 July 2006).

21 Directive 2003/98/EC, 17 November 2003, OJ L345/90, 31 December 2003, [europa.eu.int/information\\_society/policy/psi/docs/pdfs/directive/psi\\_directive\\_en.pdf](http://europa.eu.int/information_society/policy/psi/docs/pdfs/directive/psi_directive_en.pdf).

isation opportunities and enhance the operational and commercial value of intellectual property assets owned or controlled by the agency

- should not expend a significant amount of resources to further develop an intellectual property asset for the sole or substantial purpose of commercialisation of that asset
- should minimise the risks associated with the use of intellectual property assets and endeavour to commercialise such assets in a manner which does not expose the agency or the State to unnecessary or disproportionate risks. In the case of commercialisation agreements, this may involve ensuring that any warranties which the public authority gives are appropriate and that legal agreements include liability caps or indemnities from liability.

11.5 A key rationale for IS25 and the intellectual property policy is that government agencies can produce increased revenue, more efficient operation of service delivery, opportunities to develop local industry and deliver on the Government's commitment to a Smart State.

11.6 In addition to IS33 and IS25, the Office of Government ICT, Department of Public Works has developed a draft Information Standard for custodianship – IS44 – which in its current form contains the following principle in relation to data accessibility and protection:

Protecting the accessibility of data is fundamental to creating accessible and responsive government service delivery. To ensure maximum accessibility, use and interoperability of data across government and the community agencies must at a minimum:

- ensure access to data is maintained and readily available to authorised users
- provide licensing and metadata statements with any data that is released/shared
- ensure data is captured and maintained to a standard which facilitates its interoperability between systems
- establish licensing and contractual arrangements/agreements and charging regimes that are consistent with the requirements of IS33
- ensure that the privacy, security, confidentiality, copyright and intellectual property obligations are addressed when using and releasing datasets.

11.7 The two options for further establishing the principles of open content licensing across the Queensland Government are to:

- add licensing features where appropriate to existing standards e.g.:
  - reviewing IS33 to Access, Use and Pricing and including specific principles to support open content licensing
  - adding specific implementation advice to IS25 that includes the use of CC licences for government data and information



– proposing an additional principle to be included in the Draft IS44: *ensure that data is available for re-use unless privacy, confidentiality, security or highly commercial restrictions prevail.*

- establish a new standard on access and use which incorporates principles similar to those in the EU Directive and OECD Declaration.

11.8 The Queensland Government’s adoption of an open content licensing framework will support its open access objective and make government information available in a manner which provides reasonable access to the community.

11.9 It has been determined that further work is required to enable the CC licences to be implemented and this work is outlined in the *Government Information Licensing Framework Project Stage 3: Draft Project Plan* which was provided to the Strategic Information and ICT Board on 27 September 2006. An application for funding for Stage 3 has been submitted to the ICT Innovation Fund and Microsoft Program Committee to cover:

- further legal drafting to cover non-compliant information transaction
- development of the digital rights management system and implementation of the technical architecture
- pilot – 2 or 3 case studies (Office of Economic and Statistical Research, Information Queensland and Infolink Natural Resources and Water, Environmental Protection Agency, Department of Primary Industries and Fisheries, Department of Local Government, Planning, Sport and Recreation), more detailed consideration of the pilot agencies’ business requirements, a closer examination of all information transactions of the pilot agencies to identify issues which need to be addressed and to confirm the CC and other licence type are appropriate to meet the agencies’ overall business requirements
- extension of the whole-of-Government metadata profile to include relevant fields e.g. Access Rights, Copyright, Citation
- whole-of-Government metadata audit to update metadata with licensing information
- Business Case including cost-benefits analysis
- Cabinet Submission for consideration of whole-of-Government implementation
- International Open Content Licensing Conference (with QUT) implementation.

The following key data assets are disseminated by Information Queensland and are proposed to be included in Stage 3 in the first pilot:

<b>Proposed data asset</b>	<b>Custodian agency</b>	<b>Draft CC licence type</b>
Cadastre	Natural Resources and Water	Attribution–ShareAlike 2.5

<b>Proposed data asset</b>	<b>Custodian agency</b>	<b>Draft CC licence type</b>
IPA planning schemes	Local Government, Planning, Sport and Recreation	Attribution–NoDerivs 2.5
Population projections	Office of Economic and Statistical Research	Attribution–NoDerivs 2.5
State Digital Road Network	Main Roads	Attribution–NoDerivs 2.5

11.10 The Government Information Licensing Framework Toolkit has been developed to assist custodians in implementing open content licensing including the use of CC licences. (See Attachment 1 – Draft Government Information Licensing Framework Toolkit.)

## 12. CONCLUSION

12.1 Stage 2 of the *Government Information Licensing Framework Project* has confirmed the applicability and benefits of using the CC licences for key data custodians within the Queensland Government.

12.2 Background research undertaken during this stage has confirmed that a range of jurisdictions are moving to more open content models for licensing data and information and that governments particularly are improving the control of intellectual property in their data assets, as well as access to and re-use of public sector information by using models such as CC.

12.3 The project has identified the potential to work directly with the CC organisation to enable the implementation of the licences in the government environment.

12.4 This stage assisted in determining that the combination of CC licences would support the majority of data access and use transactions conducted by the Queensland Government.

12.5 It has been determined that further work is required to enable this licensing model to be implemented and this work is outlined in the *Government Information Licensing Framework Project Stage 3: Draft Project Plan* which was provided to the Strategic Information and ICT Board on 27 September 2006. An application for funding for Stage 3 has been submitted to the ICT Innovation Fund and Microsoft Program Committee.

# ATTACHMENT 1: DRAFT GOVERNMENT INFORMATION LICENSING FRAMEWORK TOOLKIT

## INTRODUCTION

The Government Information Licensing Framework (GILF) toolkit is available to government data and service custodians to assist in determining appropriate licences to apply to data access and use transactions with other departments, agencies, levels of government, and members of the public or private sector companies.

## BACKGROUND

The central aim of GILF is to promote and facilitate access to and re-use of public sector information (data) across both the public and private sectors.

The GILF is intended to assist custodians to consider how existing public sector data and information can be made more widely available and to provide some simple tools that obviate the need for extensive legal consultation.

Ultimately the GILF focuses on authorised users by ensuring that government-held data can be more readily discovered, accessed and used.

An extensive range of materials developed and held by governments is protected by copyright. The GILF involves the use by government of simple, standardised licences to make its copyright material available for access and re-use. In the absence of copyright, the granting of rights to the licensee to use the data would simply be based on the contractual relationship between the government as licensor and the user as licensee. Also, without copyright, difficulties arise due to the absence of privity of contract between the government and other parties downstream who have obtained access to the data. In such circumstances the downstream parties would not be bound by any terms of a contract with Government which impose obligations and restrictions in relation to the use of the data.

The GILF requires custodians to identify relevant qualifying public sector information that can be made available for access and re-use.

## QUALIFYING PRINCIPLES

Not all information held or owned by public sector agencies will be suitable for access and re-use under open content licences (e.g. CC licences) due to prohi-

bitions or restrictions on access and re-use for a variety of reasons, including privacy and confidentiality obligations, statutory constraints on release and use of information and other specific grounds. To ensure clarity, each government agency participating in the GILF should develop a comprehensive listing of all such restrictions on access and re-use of information held and managed by that agency.

Where a data asset, for whatever reason, does not satisfy the qualifying principles, this does not necessarily mean that no licensing whatsoever of that data asset may be possible by the custodian. However the data asset cannot be accessed using a CC licence. Any licensing of a non-qualifying data asset will need to involve direct negotiation by the custodian with the licensee/user wanting to access and use the data asset. Caution will need to be exercised by the custodian in the licensing of any non-qualifying data asset to ensure that all requirements have been satisfied. This negotiation process may involve the obtaining of legal advice and consultation with freedom of information and privacy officers as appropriate. (A general outline of intellectual property and related issues for government agencies is set out in IS25).

A thorough due diligence process or analysis must be undertaken by the custodian agency before licensing is begun to ensure the agency does possess all the necessary rights to enable it to license the databases and services in the manner intended without infringing the intellectual property rights of third parties.

Only public sector information contained in databases which have satisfied the qualifying principles will be made available under the government open content licensing regime. These databases are referred to in this Toolkit as ‘qualifying databases’.

## CHECKLIST

These questions will assist your agency to decide whether data and information may be made available using a CC licence, whether access to and use of the data is intended to provide a commercial return, or whether access and use is restricted due to security, confidentiality or privacy considerations.

a) Is your agency the custodian of the data asset or service – does it own copyright?

All intellectual property rights (e.g. copyright) in the data asset must be either owned by the State of Queensland or licensed to the agency from an appropriate third party under clear terms and conditions which legally authorise the agency to make that information available as part of the database or service intended to be made available by the agency for access and search.

The scope of rights conferred on the licensee/user will be dependent upon the State of Queensland's intellectual property rights and other property rights in the data assets intended to be licensed. The clear principle is that an agency is legally unable to grant more extensive rights to a licensee/user than it (the agency) possesses, either as a result of full ownership by the State or as a result of rights licensed in from a third party which has the necessary rights as owner or otherwise.

Can you document or establish:

- the nature of the data asset (work) and the context in which it was developed?
- how the work was produced or acquired, e.g. was it produced entirely within government, commissioned by government or was it acquired from an external source?
- whether, if third party material is included in the work, there nevertheless are no third party rights or restrictions which would prevent the agency from licensing the work as proposed.

If you can answer 'yes' to the questions 'is your agency the custodian' and 'does your agency have the right to license access and use' then go direct to b below. If your answer is 'no', or the answer is unsure then the data asset does not qualify for use under a CC licence and other access and use licensing arrangements will need to be considered.

b) *Is the data asset highly commercial?*

Is the data asset sold or licensed by the agency to generate significant revenue?

If your answer is 'yes', then an agreement, contract, or memorandum of understanding may be required to enable use and re-use of the data asset. Such arrangements are outside the scope of the CC model.

If your answer is 'no', go direct to c.

c) *Is the data asset confidential, private, subject to freedom of information legislation or subject to security restrictions?*

If the data asset is subject to:

- privacy obligations imposed by legislation, common law or Information Standards confidentiality obligations arising out of contract, fiduciary relationships or other circumstances
- statutory constraints on use and dissemination, e.g. specific restrictions on use or release of information.

It cannot be made available under a CC licence.

Information Standard No 42 – Information Privacy (IS42) prevents an agency from disclosing certain personal information about an individual.

An administrative constraint arises where another department/agency

has provided your department/agency with certain data under an administrative arrangement, such as a memorandum of understanding, under the conditions of which your department/agency has not been authorised to pass the information on to another department/agency or an external (third) party, either at all or at least in the way intended by your agency/department.

A legal constraint is where a statutory provision expressly prohibits an agency from disclosing or making information available.

A legal impediment would be where your department/agency has acquired a licence to certain data from an external (third) party on contractual conditions which do not permit your department/agency to pass on the information to another department/agency or an external (third) party, either at all or at least in the way intended by your agency/department. The simple but most important rule illustrated in this example of a legal impediment is that a department/agency intending to make certain data available to others is unable to pass on to another agency/department, or an external party, any more rights in relation to the data than it (the agency/department intending to disclose) possesses.

If your answer to c is 'yes', then an agreement, contract, or memorandum of understanding may be required to enable use and re-use of the data asset. These are outside the scope of the CC model.

If your answer is 'no', go direct to d.

d) *Is the data asset able to be provided to the public?*

If your answer is 'no', go direct to e.

If your answer is 'yes', go direct to f.

e) *Can the data asset be provided to other levels of government, other government agencies or non-government users?*

Agency to agency licensing – The same terms and conditions may apply to intra-government (e.g. agency-to-agency) information transactions as for information transactions between an agency and an external (third) party. Intra-government transaction licences operate as a memorandum of understanding or administrative arrangement only and are not legally binding.

f) *Do charges apply? e.g. statutory charges, licence fee, or cost of provision.*

If your answer is 'yes', then your department/agency is able to make the information available under one of the six standard CC licences on offer.

## APPLYING A CREATIVE COMMONS LICENCE

After an agency has identified a data asset which qualifies through the above

checklist, it can then assess which of the six CC licences may be applied.

1. As a copyright owner, identify which of the following licence conditions apply to the data asset:

*Attribution*: others are permitted to copy, distribute, display and perform the copyright work – and any derivative works based upon it – but only if they give credit to the creator/copyright owner of the copyright work

*Non-commercial*: others are permitted to copy, distribute, display and perform the copyright work – and any derivative works based upon it – but for non-commercial purposes only

*No Derivative Works*: others are permitted to copy, distribute, display and perform only exact copies of the work but cannot make derivative works based upon it (the ‘No Derivative Works’ option is incompatible with the ‘Share Alike’ option);

*Share Alike*: others may distribute derivative works only under a licence identical to that in (applicable to) the original work.

2. If more than one condition applies, choose the most appropriate combination from the following six CC licence types:

Attribution

Attribution – Non-commercial

Attribution – Share Alike

Attribution – No Derivatives

Attribution – Non-commercial Share Alike

Attribution – Non-commercial No Derivatives

3. Further details of the technological implementation of the six licences are contained in Attachment 5 – Considerations for the Technical Implementation.

## ATTACHMENT 2: OVERVIEW OF OPEN CONTENT LICENCE TYPES

The efforts in Australia and many other jurisdictions aimed at improving access to and re-use of public sector information are not based on the assumption that access and re-use can best be promoted by abandoning copyright in public sector materials and putting them into the public domain (as is the case with US Federal government materials). Rather, they are premised on the continuing subsistence of copyright in public sector materials and the adoption of open content models of licensing.

‘Open content’ licensing involves making copyright material available on liberal terms, to ensure it is readily accessible and is available for re-use. Copyright is claimed in the material but the terms of the open content licence make it available for use by a broad range of persons, in many ways and for many

purposes, while still precluding some uses of the material. The primary rights exercised by a copyright owner in relation to a copyright work are the rights to reproduce it, to publish it, to adapt it and to communicate it to the public in electronic form (e.g. on a website).

The open content licensing model can be contrasted with more traditional proprietary content licensing practices whereby the copyright owner exercises their rights by limiting the use of the copyright material to specified persons and purposes. On the spectrum between material which is in the public domain, at the one extreme, and proprietary content, at the other, open content material lies between the extremes but closer to the public domain. Open content material is protected by copyright but the copyright owner exercises their rights to ensure ready accessibility and to permit re-use while still reserving some rights (e.g. to be attributed as the creator/copyright owner of the material).

The open content licensing model is of particular relevance in systems designed to facilitate access to and re-use of public sector materials because, as well as acknowledging government ownership of copyright, it sets the conditions on which public sector information may be accessed and re-used in the digital, on-line context.

The following are examples of open content licensing models.

## CREATIVE COMMONS

The leading model of open content licensing is that developed by the CC project which was established by Professor Lawrence Lessig (Stanford University) and others in 2001.<sup>1</sup> Through the iCommons project it is now established in about 40 countries worldwide, including Australia. Its aim is to increase the amount of raw source material available online and to make access to such material easier and cheaper.

The CC project has developed a set of copyright licences which make copyright works freely available for use, on certain conditions. The CC licences were first released in December 2002 and were revised in 2004. Unlike the GNU General Public Licence from which it took its inspiration, the CC licences are not designed for software, but are intended for use in relation to other kinds of creative copyright material such as websites, educational materials, music, film, photographs, etc. Along with the text of the various open content licences, the project has developed metadata that can be used to associate creative works with their licence status in a machine-readable way.

In addition to certain 'baseline' rights and restrictions which are included in

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1 [www.creativecommons.org](http://www.creativecommons.org).



all CC licences, the copyright owner can choose from among certain licensing options, which can be used alone or in combination.

### *Baseline Features*

The following features are common to all CC licences:

- licensees are granted the right to copy, distribute, display, digitally perform and make verbatim copies of the work into another format
- the licences have worldwide application that lasts for the entire duration of copyright and are irrevocable
- licensees cannot use technological protection measures to restrict access to the work
- copyright notices should not be removed from all copies of the work
- every copy of the work should maintain a link to the licence.

### *Optional Features*

Copyright owners can choose from among the following optional licence conditions:

- *Attribution*: others are permitted to copy, distribute, display and perform the copyright work
- and any derivative works based upon it – but only if they give credit to the creator of the copyright work
- *Non-commercial*: others are permitted to copy, distribute, display and perform the copyright work – and any derivative works based upon it – but for non-commercial purposes only
- *No Derivative Works*: others are permitted to copy, distribute, display and perform only exact copies of the work but cannot make derivative works based upon it<sup>2</sup>
- *Share Alike*: others may distribute derivative works only under a licence identical to that in the original work.<sup>3</sup>

Each CC licence is expressed in three ways:

1) the Commons Deed, that is, a simple, plain-English summary of the licence, together with the relevant icon/s that indicate the scope of permitted use

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2 Note that the ‘No Derivative Works’ option is incompatible with the ‘Share Alike’ option.

3 Note that the ‘Share Alike’ option applies only to derivative works and is incompatible with the ‘No Derivative Works’ option.

2) the Legal Code, that is the ‘fine print’ licence document

3) the Digital Code, that is, the machine-readable translation of the licence, which helps search engines and other applications identify the copyright work by its terms of use.

When a copyright owner chooses to use a CC licence, they will also obtain some metadata (licensing information) which is encoded in the Resource Description Framework. CC metadata can be embedded in the copyright work in a variety of formats.<sup>4</sup>

The six CC licence types:

Attribution

Attribution – Non-commercial

Attribution – Share Alike

Attribution – No Derivatives

Attribution – Non-commercial Share Alike

Attribution – Non-commercial Share Alike No Derivatives

## AESHARENET

AEShareNet Limited is a non-profit company (established by the Australian Ministers of Education and Training) which has developed a number of Licence Protocols for the re-use of educational material, based on open content principles.<sup>5</sup> This system was set up to streamline the licensing of intellectual property so that Australian learning materials are developed, shared and adapted efficiently.

AEShareNet offers ‘instant’ licences and ‘mediated’ licences. The instant licences are low-effort licences that require no transaction, similar to CC. Under instant licences four types are offered:

- *AEShareNet-FfE – Free for Education*

May be freely used and copied for educational purposes only. May not be redistributed to the public.

- *AEShareNet-U – Unlocked Content*

May be freely copied, adapted and used by anyone. Exact copies must retain the owner’s copyright statement and the AEShareNet-U mark. Enhancements must

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4 For further information, see *Creative Commons Developers – Using Creative Commons Metadata* [creativecommons.org/technology/usingmarkup](http://creativecommons.org/technology/usingmarkup).

5 For an account of the development of the AEShareNet project [www.aesharenet.com.au/aesharenet/pdf/ajl\\_article.pdf](http://www.aesharenet.com.au/aesharenet/pdf/ajl_article.pdf).

not contain the owner's copyright statement and may have a new copyright statement by the Licensee.

- *AEShareNet-S – Share and Return*

Material may be freely used, copied, adapted and distributed. Copyright in any enhancements is vested with the original owner. This is intended to encourage adaptation, whilst reducing fragmentation of ownership of different versions.

- *AEShareNet-P – Preserve Integrity*

The material may be freely used, copied and distributed but only in its original form including the owner's copyright notice.

These 'instant' licences are all perpetual licences with no geographical limitations.

The AEShareNet mediated licences are AEShareNet C – Commercial Licence and AEShareNet E – End-user Licence. In both cases these are negotiated licences involving fees. The main differences are that the commercial licence permits the licensee to distribute copies while the end-user licence does not.<sup>6</sup>

## BBC'S CREATIVE ARCHIVE

The Creative Archive Licence was developed by the BBC to make content from its archive available through an open and transparent process.<sup>7</sup> The Creative Archive Licence Group, which was formed in April 2005, also includes Channel 4, The Open University, the British Film Institute, Teachers' TV and the Museums, Libraries and Archives Council.

The Creative Archive Licence is heavily inspired by the CC Licences. CC licences were considered for use by the Creative Archive Licence Group but rejected because two important requirements were not included. One requirement is that the Creative Archive Licence is restricted to UK use only – whereas CC allows no geographical restriction. The other requirement is a 'no endorsement or derogatory use' condition. While CC (England and Wales) includes no derogatory use (as defined in the UK Copyright Designs and Patents Act) it does not include no endorsement. The Creative Archive Licence requires that the licensed content must not be used for promoting political, charitable, or other campaigning purposes.

The remaining conditions of the Creative Archive Licence are essentially the

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6 For further information on the AEShareNet Licence Protocols [www.aesharenet.com.au](http://www.aesharenet.com.au) *Creative Licensing to Expand Australia's Public Domain*, Crisp, 11 May 2004 [www.aesharenet.com.au/Ffe/announcementffe.pdf](http://www.aesharenet.com.au/Ffe/announcementffe.pdf).

7 [creativecommons.bbc.co.uk/index.html](http://creativecommons.bbc.co.uk/index.html).

same as the CC BY–NC–SA (Attribution, Non-commercial, ShareAlike) licence. Note that Creative Archive offers only a single licence and not a choice as with CC and AEShareNet.

## ATTACHMENT 3: WORKSHOP CONSULTATION REPORT

1. The purpose of the workshops was to provide an overview of the findings from Stage 1 – present shortcomings, outline the philosophy or principles governing open content licensing, discuss with the agency the extent to which open content licensing, and CC in particular, might facilitate more efficient and effective licensing practices, and identify the agency’s business needs.
2. The second part of the workshop included a discussion of the six different licences available under CC and officers in attendance were asked to consider at a high level the potential applicability of one or more of the CC licences to meet their agency’s business or operational needs.
3. The third part had a strong practical operational focus with discussion of the operational realities for agencies, including how agencies acquired, processed and created data in the course of performing portfolio responsibilities. This involved a consideration of data inputs as well as data outputs for the agency.
4. Towards the end of the workshop attendees were provided with a survey form to be completed in the following fortnight.
5. The survey form required respondents to identify a representative information product or service and to specify the data inputs (e.g. any data acquired under licence from an external third party or obtained from another agency under a memorandum of understanding) and data outputs.
6. Respondent agencies were asked to identify any terms and conditions imposed on them in relation to each of the data inputs for the service or product and also any terms and conditions which they imposed on recipients of their service or product.
7. Finally the survey form invited suggestions on how the present licensing practices might be improved.
8. Agencies were asked to provide details of several representative products or services and to use a separate form for each.
9. Agency responses were analysed to identify any clear patterns.
10. This analysis identified the gap between agency business needs and determined what licensing options were available under CC.
11. The workshops (about 15 in total) confirmed the very broad range of public sector licensing practices identified in Stage 1. It soon became clear that

the level of informal licensing arrangements and practices (i.e. 'trusted' relationships without any documentation) identified in Stage 1 had been considerably under-reported.

12. Feedback at the various workshops was very positive with officers often expressing a strong desire to have in place an easy to use and effective licensing model such as CC.
13. The work conducted in Stage 2 resulted in identifying the pressing need to develop a clear set of principles governing access to and re-use of public sector information.
14. All agencies will need to operate in accordance with such principles.
15. The principles also need to address explicitly, and accommodate as considered appropriate, the business requirements of business units within certain agencies which have an operational charter or imperative to operate on a profit-making basis.
16. It is clear from the analysis of agency responses under Stage 2 that if implemented a CC or other open content licensing regime would not apply literally to all public sector information or databases.
17. Stage 2 has determined that CC does have the potential to apply to the vast majority of public sector information or databases.
18. Speaking generally, the vast majority of public sector information and databases which are unaffected by statutory constraints, privacy and confidentiality considerations etc are potentially suitable for access and re-use under a CC licensing regime or model.
19. For the vast majority of public sector information, CC has great potential to facilitate effective and efficient access to and re-use of public sector information under a simple, transparent, legally effective and automated set of standard licences.
20. It was made clear to all officers attending the workshops that there was no pre-determined outcome from the workshop process in favour of the use of the CC version of open content licensing.
21. The workshops were an open communication process through which various members in the project team outlined to agency officers the recent history of licensing practices across Queensland agencies as identified in the results of the survey of a broad cross-section of agencies conducted as Stage 1 of this project. Put simply, the results indicated a very non-uniform and often informal approach to the licensing of public sector data.
22. The second part of the workshops consisted of introducing the attending officers to the concept of open content licensing generally, through various international initiatives to date, and then in some more detail to one of the most well-known and well-established open content licensing regimes, namely the CC. This explanation of the key operational, technical and licensing features of the CC, which had its genesis in the US in 2001, included

- consideration and discussion of the different bundle of rights which are granted to licensees under each of the six standard licence agreements.
23. An outline of the key features of each of the six CC Licences, including the nature and scope of the right to use granted to the licensee under each of the licences is set out in Attachment 3 – Workshop Consultation Report.
  24. In the third part of the workshops the practical operational issues presently confronted by agencies generally were considered. This included discussing how agencies may take in or receive information (as an input) from a source outside the agency, whether from another Queensland government agency or a legal entity external to government (a third party), the various developmental and processing phases that may take place within an agency, in the performance of portfolio functions, leading to the creation of an information product or an information service which in turn may be made available (as an output) for use by others outside the agency, whether that be another Queensland government agency or an entity external to government (a third party).
  25. The workshops were all very well received.
  26. The final part of the workshop involved explaining the intended use of a brief survey form produced by the project team and requesting that the form be completed over the next few weeks by attendees or by other operational officers in their agency and then returned to the project team for analysis. The form has space at the top for an information product or service to be specified and then further columns and spaces for details of any data inputs and any applicable terms and conditions attaching to the inputs, and therefore imposed on the agency, and also for details of the agency's own output and any terms and conditions imposed by the agency, including any fee or charge, on recipients of the information product or service, whether that be another Queensland agency or a legal entity external to government (a third party).
  27. Officers were told that it was intended that whatever open content licensing regime is ultimately identified as meeting agencies information transaction requirements the same licensing regime would be applied to agency-to-agency information transactions as to agency to external party (third party) transactions. The only difference being that the licence agreement for the agency-to-agency transaction would have the effect of a memorandum of understanding or an administrative arrangement only whilst the licence agreement for the agency to external party would operate as a legally enforceable licence or contract.
  28. During the workshops it was made clear that the information from the completed survey forms would be analysed to identify the extent to which the six licences presently on offer from CC met the various agencies information transaction requirements and equally the extent to which and in what respects the six licences may not meet agencies requirements revealed by the survey. The project team would through this analysis process identify the 'gap' be-

tween the existing CC licences and the operational requirement disclosed in the survey forms.

29. Feedback from the workshops identified a clear demand for simpler and more standardised licences. It was also made clear by those attending the workshops that there was a need for some formality (i.e. simple licences) rather than the present frequent informality and reliance upon ‘trusted relationships’.

## ATTACHMENT 4: ANALYSIS OF EXISTING LICENCES



Table 1: Analysis of Licences – Terms and conditions in existing licences (Note: In Tables 1–8, ‘X’ denotes the presence of the characteristic or provision)

Agency	Licence Type & Characteristics	1	2	3	4	5	6
		Copyright – Ownership remains with licensor (No assignment)	Exclusive or sole licence granted to licensee	Non-exclusive licence granted to licensee	Term of licence a. fixed term b. term of copyright	Irrevocable licence	Non-transferable licence
Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)		X
	Business: VAR	X		X	X(3+3yr)		X
	Business: OVAR	X		X	X(3+3yr)		X
	Click Through	X		X			X
	MOU	X		X			X
	End User	X		X	X(3+3yr)		X
GEOGRATIS (Natural Resources Canada)	User Agreement for Digital Data	X		X			
OSDM (Cwith)	Online User Licence	X			X(10yr)		X
Environmental Protection Agency	Herbarium User Licence	X		X			X
	QGIS Herbarium Regional Ecosystems GIS Databases	X					X
	Wildnet Data	X					X
	SOE Online Database and Website	X					
	Wildlife Online Website	X					
	Data Sharing	X		X	X		X
Department of Natural Resources and Water	Developer	X		X	X		X
	Defined Developer	X		X	X		X
	Online Distributor	X		X	X		X
	Data Distributor	X		X	X		X
	Product Distributor	X		X	X		X
	User Licence	X		X			X

Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/ith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Physical goods – ownership or recording in medium belongs to licensee because CD/DVDs always belong to licensee b. transfer to licensee when fees paid	7			X(a)	
On-distribute licensed material to third parties a. except to own consultant	8	X		X	X(a)
On-distribute the licensed material in unmodified form via the internet	9			X	X
Use for direct marketing or infringe privacy	10	X	X		X
Create new/other products from licensed data for own purposes	11	X			X
Produce reports / other products for distribution or sale without prior approval from Dept	12	X			
Alter licensed data	13	X			X
Prohibited uses					

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Agency	Department of Natural Resources and Water						Environmental Protection Agency					OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy					
Use data for own internal purposes	14	X					X	X				X	X	X	X	X			
Create new products for own purposes	15	X					X					X	X	X	X	X	X		
Provide data to consultant for your specified purpose	16	X				X	X					X	X	X	X	X	X	X	X
Provide products for NO charge (hard copy or non-editable digital)	17	X					X					X	X	X	X	X	X		
Publish un-editable digital files on Internet for viewing only	18	X																	
Distribute to third parties who intend to re-sell value-add	19		X	X	X	X						X	X	X	X	X	X		
Distribute sub-sets of data including to re-sellers, value adders	20			X								X	X	X	X	X	X		
Appoint own agents to on-distribute (needs Departmental approval first)	21					X													
Create new products and distribute for specified purposes and timeframe only	22																		
Create new products (derivatives) and distribute (not limited by time or purpose)	23																	X	X

Permitted uses

Agency	24	25	26	27	28	29	30	31	32	33	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwrth)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Combines with other data to create new products	X											X			X
License other parties to on-distribute and value-add		X											X		X
Display copyright notice on copies/new product			X									X	X		X
Acknowledge State doesn't warrant completeness or liability etc.				X								X	X		X
Register with Dept to receive updates to licensed data			X												
Ensure third parties sign agreement terms and conditions from Dept				X		X									X
Keep records for a. royalty payments b. tracking/audit						X	X					X(b)			X(b)
Comply with additional/special conditions specified								X				X			
Make new licence application if extended uses or timeframes required									X					X	X
Not corrupt or introduce errors into licensed data											X				X



Table 2: Equivalent terms and conditions in the creative commons Attribution (BY) licence shown by shaded overlay

Agency	Licence Type & Characteristics	Ownership							
		1	2	3	4	5	6		
Department of Natural Resources and Water	Data Sharing	X		X	X		X		
	Developer	X		X	X		X		
	Defined Developer	X		X	X		X		
	Online Distributor	X		X	X		X		
	Data Distributor	X		X	X		X		
	Product Distributor	X		X	X		X		
	User Licence	X		X			X		
Environmental Protection Agency	Herbarium User Licence	X		X			X		
	QGIS Herbarium Regional Ecosystems GIS Databases	X					X		
	Wildnet Data	X					X		
	SOE Online Database and Website	X							
	Wildlife Online Website	X							
OSDM (Cwith)	Online User Licence	X			X(10yr)		X		
	GEOGRATIS (Natural Resources Canada)	User Agreement for Digital Data	X		X				
		Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)		X
			Business: VAR	X		X	X(3+3yr)		X
			Business: OVAR	X		X	X(3+3yr)		X
			Click Through	X		X			X
MOU			X		X			X	
End User	X			X	X(3+3yr)		X		

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Agency	7	8	9	10	11	12	13	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwlt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid											X(a)	
On-distribute licensed material to third parties a. except to own consultant	X	X		X				X	X		X	X(a)
On-distribute the licensed material in unmodified form via the internet				X							X	X
Use for direct marketing or infringe privacy	X			X					X	X		X
Create new/other products from licensed data for own purposes					X			X	X			X
Produce reports / other products for distribution or sale without prior approval from Dept						X			X			
Alter licensed data							X					
Prohibited uses												

Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Spatial Information
14	X	X	X	X	X	X
15	X	X	X	X	X	X
16	X	X	X		X	X
17	X	X	X		X	X
18	X					
19	X	X	X			X
20	X	X	X	X		X
21		X				
22		X				
23		X	X	X		X
24		X	X			X
25		X	X			X



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Agency	26	27	28	29	30	31	32	33	34	35	36	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/ft)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Display copyright notice on copies/new product	X		X									X	X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X		X			X					X	X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept			X	X												X	X
Keep records for a. royalty payments b. tracking/audit			X	X	X									X(b)		X(b)	
Comply with additional/special conditions specified						X							X	X			
Make new licence application if extended uses or timeframes required							X									X	
Not corrupt or introduce errors into licensed data								X								X	
Advise Dept if errors found									X							X	
Must incorporate metadata from Dept in any new product										X				X			
Ensure any third party user/distributor displays ALL relevant notices																X	X
Obligations																	

Agency	37	38	39	40	41	42
Department of Natural Resources and Water	X	X	X(a,b)		X	
	X	X	X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
	X		X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
Environmental Protection Agency	X	X		X		
	X	X	X(b)	X		
	X	X	X(b)			
						X
OSDM (Cw/wh)	X		X(a,b)	X	X	
GEOGRATIS (Natural Resources Canada)						
Queensland Spatial Information Strategy	X	X	X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
	X	X	X(a,b)	X	X	X
	X	X	X(a)	X	X	
		X	X(a,b)	X		X
	X	X	X(a,b)	X	X	X
Agency	Indemnity of licensor by licensee	No warranties	Termination a. for breach b. for convenience	Disclaimer/exclusion of liability	Applicable law clause	Fees are payable for access/licence
	Indemnity, warranty, disclaimer					Fees

Table 3: Equivalent terms and conditions in the creative commons Attribution Share Alike (BY-SA) licence shown by shaded overlay

Agency	Licence Type & Characteristics	Ownership					
		1	2	3	4	5	6
Department of Natural Resources and Water	Data Sharing	X		X	X		X
	Developer	X		X	X		X
	Defined Developer	X		X	X		X
	Online Distributor	X		X	X		X
	Data Distributor	X		X	X		X
	Product Distributor	X		X	X		X
	User Licence	X		X	X		X
Environmental Protection Agency	Herbarium User Licence	X		X			X
	QGIS Herbarium Regional Ecosystems GIS Databases	X					X
	Wildnet Data	X					X
	SOE Online Database and Website	X					
	Wildlife Online Website	X					
OSDM (Cwith)	Online User Licence	X			X(10yr)		X
	GEORATIS (Natural Resources Canada)	X		X			
Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)		X
	Business: VAR	X		X	X(3+3yr)		X
	Business: OVAR	X		X	X(3+3yr)		X
	Click Through	X		X			X
	MOU	X		X			X
	End User	X		X	X(3+3yr)		X

Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwilt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Prohibited uses  Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid  On-distribute licensed material to third parties a. except to own consultant  On-distribute the licensed material in unmodified form via the internet  Use for direct marketing or infringe privacy  Create new/other products from licensed data for own purposes  Produce reports / other products for distribution or sale without prior approval from Dept  Alter licensed data	7			X(a)		
	8	X	X	X	X(a)	
	9				X(a)	X
	10	X	X	X	X	X
	11	X	X	X	X	X
	12		X			
	13					X

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Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Spatial Information
14	X	X	X	X	X	X
15	X	X	X	X	X	X
16	X	X	X		X	X
17	X	X	X		X	X
18	X					
19	X	X	X			X
20		X	X	X		X
21						
22		X				
23			X	X		X
24		X	X			X
25		X	X			X

Agency	26	27	28	29	30	31	32	33	34	35	36	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwft)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Display copyright notice on copies/new product	X		X									X	X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X		X			X					X	X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept		X		X												X	X
Keep records for a. royalty payments b. tracking/audit			X	X	X									X(b)		X(b)	
Comply with additional/special conditions specified						X							X	X			
Make new licence application if extended uses or timeframes required							X									X	
Not corrupt or introduce errors into licensed data								X								X	
Advise Dept if errors found									X							X	
Must incorporate metadata from Dept in any new product										X				X			
Ensure any third party user/distributor displays ALL relevant notices												X		X		X	X
Obligations																	

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Agency	37	38	39	40	41	42	Queensland Spatial Information Strategy
Indemnity of licensor by licensee	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a)	X	X		
		X	X(a,b)	X		X	X
	X	X	X(a,b)	X	X	X	X
No warranties							
Termination a. for breach b. for convenience	X(a,b)			X	X		
	X(a,b)	X	X(b)	X			
Disclaimer/exclusion of liability	X(b)	X	X(b)				
						X	
Applicable law clause	X	X	X(a,b)	X	X		
	X	X	X(a,b)	X	X	X	
Fees are payable for access/licence	X	X	X(a,b)	X	X	X	
	X	X	X(b)	X	X	X	
Indemnity, warranty, disclaimer	X	X	X(a,b)	X	X	X	
	X	X	X(a,b)	X	X	X	
Fees	X	X	X(a,b)	X	X	X	
	X	X	X(a,b)	X	X	X	

Table 4: Equivalent terms and conditions in the creative commons Attribution No Derivatives (BY-NC) licence shown by shaded overlay

Agency	Licence Type & Characteristics	Ownership					
		1	2	3	4	5	6
Department of Natural Resources and Water	User Licence	X		X	X		X
	Product Distributor	X		X	X		X
	Data Distributor	X		X	X		X
	Online Distributor	X		X	X		X
	Defined Developer	X		X	X		X
	Developer	X		X	X		X
	Data Sharing	X		X	X		X
Environmental Protection Agency	Wildlife Online Website	X					
	SOE Online Database and Website	X					
	Wildnet Data	X					X
	QGIS Herbarium Regional Ecosystems GIS Databases	X					X
	Herbarium User Licence	X		X			X
OSDM (Cwith)	Online User Licence	X			X(10yr)		X
	User Agreement for Digital Data	X		X			
GEOGRATIS (Natural Resources Canada)	End User	X		X	X(3+3yr)		X
	MOU	X		X			X
	Click Through	X		X			X
	Business: OVAR	X		X	X(3+3yr)		X
	Business: VAR	X		X	X(3+3yr)		X
	Business: Reseller	X		X	X(3+3yr)		X
Queensland Spatial Information Strategy	End User	X		X	X(3+3yr)		X
	MOU	X		X			X
	Click Through	X		X			X
	Business: OVAR	X		X	X(3+3yr)		X
	Business: VAR	X		X	X(3+3yr)		X
	Business: Reseller	X		X	X(3+3yr)		X



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Agency	7	8	9	10	11	12	13	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwlt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid											X(a)	
On-distribute licensed material to third parties a. except to own consultant	X	X		X				X	X		X	X(a)
On-distribute the licensed material in unmodified form via the internet				X							X	X
Use for direct marketing or infringe privacy	X			X					X	X		X
Create new/other products from licensed data for own purposes					X			X	X			X
Produce reports / other products for distribution or sale without prior approval from Dept						X			X			
Alter licensed data							X					
Prohibited uses												

Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Spatial Information
14	X	X	X	X	X	X
15	X	X	X	X	X	X
16	X	X	X		X	X
17	X	X	X		X	X
18	X					
19	X	X	X			X
20		X	X	X		X
21		X				
22			X			
23		X	X	X		X
24		X	X			X
25		X	X			X

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Agency	26	27	28	29	30	31	32	33	34	35	36	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/ft)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Display copyright notice on copies/new product	X		X									X	X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X		X			X					X	X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept			X	X												X	X
Keep records for a. royalty payments b. tracking/audit			X	X	X									X(b)		X(b)	
Comply with additional/special conditions specified						X							X	X			
Make new licence application if extended uses or timeframes required							X									X	
Not corrupt or introduce errors into licensed data								X								X	
Advise Dept if errors found									X					X		X	
Must incorporate metadata from Dept in any new product										X				X			
Ensure any third party user/distributor displays ALL relevant notices																X	X
Obligations																	

Agency		Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/wh)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Indemnity of licensor by licensee	37	X	X	X		X	
	38	X	X			X	
		X	X	X(b)	X(a,b)	X	X
	39	X	X	X(b)	X(a,b)	X	X
		X	X			X	X
	40	X	X		X	X	X
		X	X			X	X
41	X	X		X	X	X	
	X	X			X	X	
42	X	X				X	
	X	X				X	
Indemnity, warranty, disclaimer							
Fees							

Table 5: Equivalent terms and conditions in the creative commons Attribution Non-commercial Share Alike (BY-NC-SA) licence shown by shaded overlay

Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)		X
	Business: VAR	X		X	X(3+3yr)		X
	Business: OVAR	X		X	X(3+3yr)		X
	Click Through	X		X			X
	MOU	X		X			X
	End User	X		X	X(3+3yr)		X
GEOGRATIS (Natural Resources Canada)	User Agreement for Digital Data	X		X			
OSDM (CwM)	Online User Licence	X			X(10yr)		X
Environmental Protection Agency	Herbarium User Licence	X		X			X
	QSI Herbarium Regional Ecosystems GIS Databases	X					X
	Wildnet Data	X					X
	SOE Online Database and Website	X					
	Wildlife Online Website	X					
Department of Natural Resources and Water	Data Sharing	X		X	X		X
	Developer	X		X	X		X
	Defined Developer	X		X	X		X
	Online Distributor	X		X	X		X
	Data Distributor	X		X	X		X
	Product Distributor	X		X	X		X
	User Licence	X		X			X
Agency	Licence Type & Characteristics	1	2	3	4	5	6
		Copyright – Ownership remains with licensor (No assignment) Exclusive or sole licence granted to licensee Non-exclusive licence granted to licensee Term of licence a. fixed term b. term of copyright Irrevocable licence Non-transferable licence	Ownership				

Agency	7	8	9	10	11	12	13	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwlt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid											X(a)	
On-distribute licensed material to third parties a. except to own consultant	X	X	X	X	X			X	X		X	X(a)
On-distribute the licensed material in unmodified form via the internet											X	X
Use for direct marketing or infringe privacy	X			X					X	X		X
Create new/other products from licensed data for own purposes					X			X				X
Produce reports / other products for distribution or sale without prior approval from Dept						X			X			
Alter licensed data							X					
Prohibited uses												

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Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Spatial Information
14	X	X	X	X	X	X
15	X	X	X	X	X	X
16	X	X	X		X	X
17	X	X	X		X	X
18	X					
19	X	X	X			X
20		X	X	X		X
21						
22			X			
23				X		X
24			X			X
25			X			X

Agency	26	27	28	29	30	31	32	33	34	35	36	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/ft)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Display copyright notice on copies/new product	X		X									X	X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X		X			X					X	X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept		X		X												X	X
Keep records for a. royalty payments b. tracking/audit			X	X	X									X(b)		X(b)	
Comply with additional/special conditions specified						X							X	X			
Make new licence application if extended uses or timeframes required							X									X	
Not corrupt or introduce errors into licensed data								X								X	
Advise Dept if errors found									X							X	
Must incorporate metadata from Dept in any new product										X				X			
Ensure any third party user/distributor displays ALL relevant notices											X			X		X	X



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Agency	37	38	39	40	41	42	Queensland Spatial Information Strategy
Indemnity of licensor by licensee	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a)	X	X		
		X	X(a,b)	X		X	X
	X	X	X(a,b)	X	X	X	X
No warranties	X	X	X(a,b)		X		
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X		X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(b)	X	X	X	X
Termination a. for breach b. for convenience	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(b)	X	X	X	X
Disclaimer/exclusion of liability	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
Applicable law clause	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
Fees are payable for access/licence	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X
	X	X	X(a,b)	X	X	X	X

Table 6: Equivalent terms and conditions in the creative commons Attribution No Derivatives (BY-ND) licence shown by shaded overlay

Agency	Licence Type & Characteristics	1	2	3	4	5	6	
Department of Natural Resources and Water	Data Sharing	X		X	X		X	
	Developer	X		X	X		X	
Environmental Protection Agency	Herbarium User Licence	X		X			X	
	QSIS Herbarium Regional Ecosystems GIS Databases	X					X	
	Wildnet Data	X					X	
	SOE Online Database and Website	X						
	Wildlife Online Website	X						
Department of Natural Resources and Water	Defined Developer	X		X	X		X	
	Online Distributor	X		X	X		X	
	Data Distributor	X		X	X		X	
	Product Distributor	X		X	X		X	
	User Licence	X		X			X	
	OSDM (Cwith)	Online User Licence	X			X(10yr)		X
		OSDM (Cwith)	X					
GEOGRATIS (Natural Resources Canada)	User Agreement for Digital Data	X		X				
	GEOGRATIS (Natural Resources Canada)	X						
Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)		X	
	Business: VAR	X		X	X(3+3yr)		X	
	Business: OVAR	X		X	X(3+3yr)		X	
	Click Through	X		X			X	
	MOU	X		X			X	
	End User	X		X	X(3+3yr)		X	
Agency	Ownership							
	Copyright- Ownership remains with licensor (No assignment)							
	Exclusive or sole licence granted to licensee							
	Non-exclusive licence granted to licensee							
	Term of licence a. fixed term b. term of copyright							
	Irrevocable licence							
	Non-transferable licence							

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Agency	7	8	9	10	11	12	13	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwlt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid											X(a)	
On-distribute licensed material to third parties a. except to own consultant	X							X	X		X	
On-distribute the licensed material in unmodified form via the internet											X	
Use for direct marketing or infringe privacy	X			X					X			X
Create new/other products from licensed data for own purposes				X				X	X			X
Produce reports / other products for distribution or sale without prior approval from Dept					X				X			
Alter licensed data							X					
Prohibited uses												

Agency	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Spatial Information
14	X	X	X	X	X	X
15	X	X	X	X	X	X
16	X	X	X		X	X
17	X	X	X		X	X
18	X					
19	X	X	X			X
20	X		X	X		X
21		X				
22		X				
23			X	X		X
24		X	X			X
25		X	X			X

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Agency	26	27	28	29	30	31	32	33	34	35	36	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cw/ft)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Display copyright notice on copies/new product	X		X									X	X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X		X			X					X	X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept				X												X	X
Keep records for a. royalty payments b. tracking/audit				X	X									X(b)		X(b)	
Comply with additional/special conditions specified						X							X	X			
Make new licence application if extended uses or timeframes required							X									X	
Not corrupt or introduce errors into licensed data								X								X	
Advise Dept if errors found									X							X	
Must incorporate metadata from Dept in any new product										X				X			
Ensure any third party user/distributor displays ALL relevant notices																X	X
Obligations																	

Agency		Department of Natural Resources and Water	Environmental Protection Agency	OSDM (CwIth)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Indemnity of licensor by licensee	37	X	X	X		X	
	38	X	X			X	
		X	X	X(b)	X(a,b)	X	X
	39	X	X	X(b)	X(a,b)	X	X
		X	X			X	X
	40	X	X		X	X	X
		X	X				X
41	X	X		X	X	X	
	X	X				X	
42	X	X				X	
	X	X				X	
Indemnity, warranty, disclaimer							
Fees							

*Table 7: Equivalent terms and conditions in the creative commons Attribution Non-commercial No Derivatives (BY-NC-ND) licence shown by shaded overlay*

Queensland Spatial Information Strategy	Business: Reseller	X		X	X(3+3yr)	
	Business: VAR	X		X	X(3+3yr)	
	Business: OVAR	X		X	X(3+3yr)	
	Click Through	X		X		
	MOU	X		X		
	End User	X		X	X(3+3yr)	
GEOGRATIS (Natural Resources Canada)	User Agreement for Digital Data	X		X		
OSDM (Cw/It)	Online User Licence	X			X(10yr)	
Environmental Protection Agency	Herbarium User Licence	X		X		
	QSI Herbarium Regional Ecosystems GIS Databases	X				
	Wildnet Data	X				
	SOE Online Database and Website	X				
	Wildlife Online Website	X				
Department of Natural Resources and Water	Data Sharing	X		X	X	
	Developer	X		X	X	
	Defined Developer	X		X	X	
	Online Distributor	X		X	X	
	Data Distributor	X		X	X	
	Product Distributor	X		X	X	
	User Licence	X		X		
Agency	Licence Type & Characteristics	1	2	3	4	5
		Copyright – Ownership remains with licensor (No assignment) Exclusive or sole licence granted to licensee Non-exclusive licence granted to licensee Term of licence a. fixed term b. term of copyright Irrevocable licence	Ownership			



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Agency	6	7	8	9	10	11	12	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (C/with)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Non-transferable licence	X		X		X			X		X		X
Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid											X(a)	X
On-distribute licensed material to third parties a. except to own consultant	X		X					X	X		X	X
On-distribute the licensed material in unmodified form via the internet											X	X
Use for direct marketing or infringe privacy	X				X				X	X		X
Create new/other products from licensed data for own purposes						X		X	X			X
Produce reports / other products for distribution or sale without prior approval from Dept				X					X			
Prohibited uses												

Agency	13	14	15	16	17	18	19	20	21	22	23	24	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwith)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	
Alter licensed data																		
Use data for own internal purposes		X												X			X	
Create new products for own purposes		X												X			X	
Provide data to consultant for your specified purpose				X													X	X
Provide products for NO charge (hard copy or non-editable digital)					X												X	
Publish un-editable digital files on Internet for viewing only						X												
Distribute to third parties who intend to re-sell value-add							X	X										X
Distribute sub-sets of data including to re-sellers, value adders								X										X
Appoint own agents to on-distribute (needs Departmental approval first)									X									
Create new products and distribute for specified purposes and timeframe only										X								
Create new products (derivatives) and distribute (not limited by time or purpose)																X		X
Combine with other data to create new products																		X

CHAPTER NINETEEN GOVERNMENT INFORMATION AND OPEN CONTENT  
LICENSING: AN ACCESS AND USE STRATEGY\*

Agency	25	26	27	28	29	30	31	32	33	34	35	Department of Natural Resources and Water	Environmental Protection Agency	OSDM (Cwilt)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy	Queensland Spatial Information
Licence other parties to on-distribute and value-add														X			
Display copyright notice on copies/new product	X	X	X		X	X							X	X	X	X	X
Acknowledge State doesn't warrant completeness or liability etc	X	X	X										X	X	X	X	X
Register with Dept to receive updates to licensed data	X																
Ensure third parties sign an agreement re terms and conditions from Dept					X												X
Keep records for a. royalty payments b. tracking/audit						X								X(b)			X(b)
Comply with additional/special conditions specified							X						X				
Make new licence application if extended uses or timeframes required								X									X
Not corrupt or introduce errors into licensed data									X								X
Advise Dept if errors found										X							X
Must incorporate metadata from Dept in any new product														X			X

Agency		Department of Natural Resources and Water	Environmental Protection Agency	OSDM (CwIth)	GEOGRATIS (Natural Resources Canada)	Queensland Spatial Information Strategy
Ensure any third party user/distributor displays ALL relevant notices	36	X		X		X
						X
Indemnity of licensor by licensee	37	X	X	X		X
						X
No warranties	38	X	X			X
						X
Termination a. for breach b. for convenience	39	X(a,b)	X(b)	X(a,b)		X(a,b)
						X(a,b)
Disclaimer/exclusion of liability	40	X		X		X
						X
Applicable law clause	41	X		X		X
						X
Fees are payable for access/licence	42	X	X			X
						X

Table 8: Equivalent terms and conditions in six creative commons licences

Licence Type & Characteristics		BY	BY-SA	BY-NC	BY-NC-SA	BY-ND	BY-NC-ND
Ownership	Copyright – Ownership remains with licensor (No assignment)	1	X	X	X	X	X
	Exclusive or sole licence granted to licensee	2					
	Non-exclusive licence granted to licensee	3	X	X	X	X	X
	Term of licence a. fixed term b. term of copyright	4	X(b)	X(b)	X(b)	X(b)	X(b)
	Irrevocable licence	5	X	X	X	X	X
	Non-transferable licence	6	X	X	X	X	X
	Physical goods – ownership of recording medium belongs to licensee because CD/tape a. always belonged to licensee b. transfers to licensee when fees paid	7					
Prohibited uses	On-distribute licensed material to third parties a. except to own consultant	8					
	On-distribute the licensed material in unmodified form via the internet	9					
	Use for direct marketing or infringe privacy	10					
	Create new/other products from licensed data for own purposes	11				X	X
	Produce reports / other products for distribution or sale without prior approval from Dept	12					
	Alter licensed data	13				X	X

Licence Type & Characteristics		BY	BY-SA	BY-NC	BY-NC-SA	BY-ND	BY-NC-ND
Permitted uses	Use data for own internal purposes	14	X	X	X	X	X
	Create new products for own purposes	15	X	X	X	X	X
	Provide data to consultant for your specified purpose	16					
	Provide product/s for NO charge (hard copy or non-editable digital)	17					
	Publish un-editable digital files on Internet for viewing only	18					
	Distribute to third parties who intend to re-sell value-add	19	X	X			X
	Distribute sub-sets of data including to re-sellers, value adders	20	X	X			
	Appoint own agents to on-distribute (needs Departmental approval first)	21					
	Create new products and distribute for specified purposes and timeframe only	22	X	X			
	Create new products (derivatives) and distribute (not limited by time or purpose)	23	X	X	X	X	
	Combine with other data to create new products	24	X	X	X	X	
	Licence other parties to on-distribute and value-add	25					
Obligations	Display copyright notice on copies/new product	26	X	X	X	X	X
	Acknowledge State doesn't warrant completeness or liability etc	27	X	X	X	X	X
	Register with Dept to receive updates to licensed data	28					

CHAPTER NINETEEN GOVERNMENT INFORMATION AND OPEN CONTENT  
LICENSING: AN ACCESS AND USE STRATEGY\*

Licence Type & Characteristics		BY	BY-SA	BY-NC	BY-NC-SA	BY-ND	BY-NC-ND
	Ensure third parties sign an agreement re terms and conditions from Dept	29					
	Keep records for a. royalty payments b. tracking/audit	30					
	Comply with additional/special conditions specified	31					
	Make new licence application if extended uses or timeframes required	32					
	Not corrupt or introduce errors into licensed data	33					
	Advise Dept if errors found	34					
	Must incorporate metadata from Dept in any new product	35					
	Ensure any third party user/distributor displays ALL relevant notices	36	X	X	X	X	X
Indemnity, disclaimer, warranty,	Indemnity of licensor by licensee	37					
	No warranties	38	X	X	X	X	X
	Termination a. for breach b. for convenience	39					
	Disclaimer/exclusion of liability	40	X	X	X	X	X
	Applicable law clause	41	X	X	X	X	X
Fees	Fees are payable for access/licence	42					

Table 9: Notes to the Department of Natural Resources and Water – Distributor Licences

AGENCY Natural Resources and Water	AGREEMENT IDENTIFICATION Data Distributor Licence
Main Features	Clause Id
<p>1. Ownership of intellectual property including copyright</p> <ul style="list-style-type: none"> <li>• Agreement does not transfer ownership of any intellectual property to the licensee [4.1.1]</li> </ul>	4.1

<ul style="list-style-type: none"> <li>• State owns or is licensor of the intellectual property including copyright [4.1.2]</li> </ul>	
<p>2. Licence type</p> <ul style="list-style-type: none"> <li>• Non-exclusive and non-transferable [1.1]</li> <li>• Licence has specified start and end dates and termination conditions [6.1, 6.2, 6.3, 6.4, 6.5]</li> <li>• Licence has dispute resolution clauses [7.1, 7.2]</li> </ul>	1.1, 6.1–6.6, 7.1, 7.2
<p>3. Permitted uses by licensee</p> <ul style="list-style-type: none"> <li>• Licensee can provide licensed data to customers, consultants for the specified purposes of this agreement [4.4]</li> <li>• If supplied to a consultant, that consultant must not receive any commercial consideration other than for the fee paid by the licensee [4.8.1]</li> <li>• Licensee is permitted to make copies of the licensed data for the purpose of this agreement and for security backup copies [4.7.1]</li> </ul>	4.4, 4.7, 4.8
<p>4. Prohibited uses by licensee</p> <ul style="list-style-type: none"> <li>• Licensee must not combine the licensed data with any other data to create other products [4.5.1]</li> <li>• Licensee cannot use the licensed data or a new product for any form of direct marketing or in breach of privacy laws [4.5.2]</li> </ul>	4.5, 9.6, 9.8, 9.12



<ul style="list-style-type: none"> <li>• Licensee must not use licensed data for own internal purposes [4.5.3]</li> <li>• Licensee must agree to be bound by any further restrictions specified by the licensor (specified in a schedule to agreement) [4.5.4] or any future legislations etc [9.12]</li> <li>• The licensee must not assign or sub-license any rights granted under this agreement without written consent of the licensor [9.6]</li> <li>• The licensee does not become a partner, employee or agent of the licensor and must not represent itself as such [9.8]</li> <li>• The licensee does not have the power or authority to enter any binding relationship with any third party for or on behalf of the licensor [9.8]</li> </ul>	
<p>5. Licensee’s obligations</p> <ul style="list-style-type: none"> <li>• Licensee must pay licence fees within 14 days of receiving licensor invoice [3.1]</li> <li>• Licensee must pay all royalty fees to licensor on a quarterly basis [3.1]</li> <li>• Licensee must not corrupt or introduce errors into licensed data and must notify the licensor if any errors in the licensed data are identified [4.2]</li> <li>• Licensee must agree that the li-</li> </ul>	<p>3.1, 4.2, 4.3, 4.6, 4.8, 4.9, 4.10, 4.11, 5.1–5.4</p>

<p>censed data is a valuable commercial resource of the licensor [4.3.1]</p> <ul style="list-style-type: none"> <li>• Licensee must agree to provide the licensed data only to its employees or consultants who need such access for the purposes of the licensee exercising its rights under the terms of this agreement [4.3.2]</li> <li>• Licensee must take all reasonable steps to protect the security of the licensed data [4.3.3] Licensee must not provide the licensed data to its consultants unless the consultant has first entered into an agreement with the licensee specifying the terms of this agreement [4.8.2] and that those agreements are consistent with the terms to this agreement and do not change their meaning [4.10.1, 4.10.2, 4.10.3, 4.10.4]</li> <li>• Licensee must ensure that all copies of the licensed data display the relevant notice (notice is specified in schedule to agreement) [4.6]</li> <li>• Licensee must ensure customers or consultants to whom the licensed data are supplied enter into an agreement with the licensee – by either a signed document or open network online agreement e.g. by click on ‘I Agree button’ [4.9.1 (i) (ii)]</li> <li>• Licensee must ensure that the</li> </ul>	
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<p>metadata supplied with the licensed data is (at least) supplied to any customers or consultants [4.9.1 (iii)]</p> <ul style="list-style-type: none"> <li>• Licensee must take all reasonable steps to enforce the terms and conditions of this agreement [4.11]</li> <li>• Licensee must maintain records for the licensor and make these available for auditing – records relate to data distributions by licensee and for royalty payments back to licensor [5.1, 5.3, 5.3, 5.4]</li> </ul>	
<p>6. Disclaimer of liability by licensor</p> <ul style="list-style-type: none"> <li>• The Department of Natural Resources and Water makes no representations or warranties in relation to the licensed data – excludes all liability to the extent permitted by law [8.1, 8.2]</li> </ul>	<p>8.1, 8.2</p>
<p>7. Indemnity by licensee</p> <ul style="list-style-type: none"> <li>• Licensee agrees to indemnify the State against all loss and liability (including consequential damages and negligence) in relation to the licensee’s use of the licensed data or any product made from the licensed data</li> </ul>	<p>8.3</p>
<p>8. Operates as a memorandum of understanding where the licensee is not a separate legal entity, e.g. another Queensland government department</p>	<p>9.10</p>

AGENCY Natural Resources and Water	AGREEMENT IDENTIFICATION Online Distributor Licence
Main Features	Clause Id
<p>1. Ownership of intellectual property including copyright</p> <ul style="list-style-type: none"> <li>• Agreement does not transfer ownership of any intellectual property to the licensee [4.1.1]</li> <li>• State owns or is licensor of intellectual property including copyright [4.1.2]</li> </ul>	4.1
<p>2. Licence type</p> <ul style="list-style-type: none"> <li>• Non-exclusive and non-transferable [1.1]</li> <li>• Licensor can appoint other licensees to same licensed information products [1.2]</li> <li>• Licence has specified start and expiry dates and termination conditions [7.1, 7.2, 7.3, 7.4, 7.5, 7.6]</li> <li>• Licence has renewal clauses [8.1, 8.2, 8.3, 8.4]</li> </ul>	1.1, 7.1–7.6, 8.1–8.4
<p>3. Permitted uses by licensee</p> <ul style="list-style-type: none"> <li>• Licensee can provide licensed information products to end user by way of – display on end user computer screen, printout from computer screen, electronic on-line supply to end users, email delivered to end user’s computer (provided email is then deleted from licensee’s computer), facsimile [4.9.5]</li> </ul>	4.9, 4.10

<ul style="list-style-type: none"> <li>• Licensee can, with prior approval from licensor, appoint one or more agents according to certain terms and conditions [4.10.1, 4.10.2, 4.10.3 (i), (ii), (iii), (iv), (v)] – the licensee’s agent/s are required to sign a formal agreement (with consistent conditions to the licensor/licensee agreement) with the licensee [4.10.4, 4.10.5, 4.10.6]</li> </ul>	
<p>4. Prohibited uses by licensee</p> <ul style="list-style-type: none"> <li>• Licensee must not reformat or alter an information product except for some specific exceptions [4.3.1] (note – these exceptions are [4.4.1, 4.8.5, 4.10.3 (vi), 4.10.3 (vii)] – these are covered off in Obligations below)</li> <li>• Licensee cannot use the licensed data or a new product for any form of direct marketing or in breach of privacy laws [4.3.2]</li> <li>• Licensee must not produce reports or publications based in any information products for public sale or distribution without prior written permission from licensor [4.3.3]</li> <li>• Licensee must not store any information product on any system for more than three working days [4.5.1]</li> <li>• Information products must not be distributed to any other end user or used for any other purposes than satisfying the original</li> </ul>	<p>4.3, 4.5, 10.6, 10.8, 10.12</p>

<p>request from an end user [4.5.2]</p> <ul style="list-style-type: none"> <li>• Licensee must agree to be bound by any further restrictions specified by the licensor (specified in a schedule to agreement) or any future legislations etc [10.12]</li> <li>• The licensee must not assign or sub-license any rights granted under this agreement without written consent of the licensor [10.6]</li> <li>• The licensee does not become a partner, employee or agent of the licensor and must not represent itself as such [10.8]</li> <li>• The licensee does not have the power or authority to enter any binding relationship with any third party for or on behalf of the licensor [10.8]</li> </ul>	
<p>5. Licensee’s obligations</p> <ul style="list-style-type: none"> <li>• Licensee must pay licence fees, establishment fees, access fees and information products fees as per a schedule in agreement [3.1]</li> <li>• Licensee must account for and pay information product fees for any internal uses (i.e. uses in addition to online distribution to third-party clients) [3.3]</li> <li>• Licensee must agree that the licensed data is valuable commercial resource of licensor and that the online access mechanism through the licensor’s</li> </ul>	<p>3.1, 3.2, 3.3, 4.4, 4.6, 4.7, 4.8, 4.9, 4.10, 5.1–5.6</p>

<p>systems is confidential [4.2.1]</p> <ul style="list-style-type: none"><li>• Licensee must take all reasonable steps to protect the security of the licensor's system, including how the licensee manages access by its end users [4.2.2, 4.8.3, 4.8.4, 4.8.5, 4.8.6, 4.8.7, 4.8.8, 4.8.9]</li><li>• Licensee must ensure that its employees use the licensed information products only for the purposes of exercising the licensee's rights under the terms of this agreement [4.2.2]</li><li>• Licensee must ensure that it maintains a firewall between its systems and those of the licensor to protect the licensor from unauthorised access to its systems [4.2.3, 4.8.1, 4.8.2]</li><li>• Licensee must trade under one trading name for the purposes of this agreement [4.6.1]</li><li>• Licensee must notify the licensor immediately if it becomes aware of any unauthorised uses of the information products or of the licensor's system [4.7.1]</li><li>• Licensee must promptly notify the licensor if it becomes aware of any unethical or dishonest uses of the information products [4.7.2]</li><li>• Licensee must ensure that all copies of the licensed information products display the relevant copyright [4.4.1]</li></ul>	
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<ul style="list-style-type: none"> <li>• Licensee’s system must display the relevant copyright notice [4.10.3 (vi)]</li> <li>• Any alteration of the copyright notice displayed by licensee must be approved by licensor [4.4.2]</li> <li>• Licensee’s system must display a banner at the bottom of each information product with data and time of access request by end user [4.8.5]</li> <li>• Licensee’s system must insert a banner at the bottom of each information product with data and time of access request by end user in any licensee agent’s system [4.10.3 (vii)]</li> <li>• Licensee must provide the licensor with one authorised access to the licensee system (at no cost) and demonstrate to the licensor all and any new products created by licensee [4.7.3]</li> <li>• Licensee must not provide any information products to end users unless they have first entered into an agreement with the licensee and where the terms of this agreement are consistent with the terms to the agreement between licensor and licensee [4.9.1]</li> <li>• Licensee must ensure each end user agrees to the specified terms and conditions by either a signed document or open network online agreement e.g. by click on ‘I Agree button’ [4.9.3]</li> </ul>	
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<ul style="list-style-type: none"> <li>• Licensee must ensure that the end user uses the information products only for its own internal purposes and does not on-supply or create new commercial products from the information products [4.9.4]</li> <li>• Licensee must maintain records for the licensor and make these available for auditing – records relate to data distributions by licensee and for royalty payments back to licensor [5.1, 5.2, 5.3, 5.4, 5.5, 5.6]</li> </ul>	
<p>6. Disclaimer of liability by licensor</p> <ul style="list-style-type: none"> <li>• Licensor makes some specific warranties including accuracy, completeness and limited compensation etc of information products. These are specified in a schedule for each information product. [9.1.1]</li> <li>• Licensee acknowledges and agrees it has not relied on representations, descriptions, illustrations or specifications from the licensor in entering into this agreement [9.1.3]</li> <li>• Licensor defines its liability for each information product in a schedule for each information product [9.2.1]</li> <li>• Except for specific liability guarantees in [9.1.1] and [9.1.2] – licensor makes no representations or warranties in relation to the li-</li> </ul>	<p>9.1, 9.2</p>

<p>censed information products – excludes all liability to the extent permitted by law [9.2.2]</p> <ul style="list-style-type: none"> <li>• Subject to clauses [9.2.1] and [9.2.2] the licensor is not liable for and direct, indirect, consequential loss or damage sustained by licensee in connection with this agreement or information product including anything sustained through negligence of licensee [9.2.3]</li> </ul>	
<p>7. Indemnity by licensee</p> <ul style="list-style-type: none"> <li>• License agrees to indemnify the State against all loss and liability (including consequential damages and negligence) in relation to the licensee’s use of the licensed data or any product made from the licensed data [9.3.1, 9.3.2]</li> </ul>	9.3
<p>8. Operates as a memorandum of understanding where the licensee is not a separate legal entity, e.g. another Queensland government department</p>	10.10
<p>9. Licensor obligations</p> <ul style="list-style-type: none"> <li>• Develop, maintain and process the information products [6.1]</li> <li>• Does not acquire any rights of ownership of licensee’s system [6.2]</li> <li>• Process relevant data, use best endeavours to ensure information product is accurate, ensure its system is operative and accessible to licensee’s system, promptly correct faults in licen-</li> </ul>	6.1–6.6, 9.1

<p>sor's system when needed [6.4]</p> <ul style="list-style-type: none"> <li>• Provide initial training of appropriate licensee's staff, supply needed documentation (help, training guides, user support manuals etc), update these materials as required, supply test data for licensee for demonstrations and training [6.5]</li> <li>• Provide a nominated end-user support contact person in normal business hours [6.6]</li> <li>• Licensor supplies information at licensee's own risk save the specific warranties given in [9.1.1, 9.1.2]</li> </ul>	
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AGENCY Natural Resources and Water	AGREEMENT IDENTIFICATION Product Distributor Licence
Main Features	Clause Id
<p>1. Ownership of intellectual property including copyright</p> <ul style="list-style-type: none"> <li>• Agreement does not transfer ownership of any intellectual property to the product distributor [4.3]</li> </ul>	4.3
<p>2. Licence type</p> <ul style="list-style-type: none"> <li>• Non-exclusive and non-transferable [1.1]</li> <li>• Licence has specified start and end dates and termination conditions [5.1, 5.2, 5.3, 5.4]</li> </ul>	1.1, 5.1–5.4
<p>3. Permitted uses by licensee</p> <ul style="list-style-type: none"> <li>• May distribute products to any</li> </ul>	2.1, 2.2

third parties including those who intend to re-sell the products [4.2]	
<p>4. Prohibited uses by licensee</p> <ul style="list-style-type: none"> <li>• The licensee must not assign or sub-license any rights granted under this agreement without written consent of the licensor [7.6]</li> <li>• The product distributor does not become a partner, employee or agent of the licensor and must not represent itself as such [7.8]</li> <li>• The product distributor does not have the power or authority to enter any binding relationship with any third party for or on behalf of the licensor [7.8]</li> </ul>	7.6, 7.8
<p>5. Licensee's obligations</p> <ul style="list-style-type: none"> <li>• Ownership of products does not pass to product distributor until all fees are paid [4.1]</li> </ul>	4.1
<p>6. Disclaimer of liability by licensor</p> <ul style="list-style-type: none"> <li>• The Department of Natural Resources and Water makes no representations or warranties in relation to the licensed data – excludes all liability to the extent permitted by law</li> </ul>	6.1, 6.2
<p>7. Indemnity by licensee</p> <ul style="list-style-type: none"> <li>• Product distributor will indemnify the State against all loss and liability (including consequential damages and negligence) in rela-</li> </ul>	6.3

tion to the licensee’s use of the licensed products	
8. Operates as a memorandum of understanding where the licensee is not a separate legal entity, e.g. another Queensland government department	7.10
<p>9. Ordering, accounts and product costs</p> <ul style="list-style-type: none"> <li>• A schedule is used to specify products sought, volumes and any discount pricing arrangements – orders sent to department’s contact officer in schedule [3.1, 3.2]</li> <li>• A credit account with the department can be established for the distributor – this account has management fees and payment conditions attached [3.4, 3.5, 3.6]</li> </ul>	3.1–3.6

## ATTACHMENT 5: CONSIDERATIONS FOR THE TECHNICAL IMPLEMENTATION

### GENERAL OUTCOMES

The technical implementation of the project should give effect to the legal requirements of the project in a practical way.

### NOTES

This document is, as far as possible, agnostic with respect to licence, technology and policy. This document is a first draft.

## DEFINITIONS

Where possible the terminology used in this report is consistent with the draft *Government Enterprise Architecture (GEA) White Paper Information Architecture*.

## GENERAL SPECIFICATION

The system will need to select and present a licence to the consumer, which must be accepted before the payload may be accessed. The presentation must constitute effective notice to the consumer of the terms under which they take the payload.

### *Licence Selection and Presentation – Minimum Requirements*

- If per-consumer licensing is to be undertaken, the system presents the appropriate licence on a per-consumer basis, using rules set by the information custodian
- The consumer must agree to the licence in a binding way, either as a memorandum of understanding (for any organisation which contracts as the Crown in right of the State of Queensland) or as a contract for licence (any other person)
- The system must log the provision of the payload under that licence to the consumer.

### *Licence Selection and Presentation – Optimal Solution*

- The system highlights to the consumer the specific metadata relating to limitations of use of the payload (for example, inaccuracies which render the information inappropriate for use in navigation)
- The system embeds or attaches the selected licence as Electronic Rights Management information in the payload.

### *Overall Process Flow*

- 1) Consumer searches metadata fields to find the relevant payload
- 2) Consumer examines detailed metadata for payload to determine suitability
- 3) Consumer is authenticated as permitted to download that payload
- 4) Consumer accepts the appropriate licence conditions
- 5) Consumer provides/authorises any financial transaction information
- 6) Consumer is provided with the payload.

### *Steps 1 and 2: Consumer Search and Selection*

An example of this can be seen on the Infolinks site.

The first iteration of the search function will present a basic search or an advanced search, as well as the ability to browse through the datasets available. The basic search should search a predefined set of metadata fields. The advanced search should present an interface to limit searches to specific fields, or to combine and refine searches etc. One of the searchable fields may be the licence fields themselves. It may be appropriate to allow a combination of text-based searches and setting of geographic constraints through a mapping tool (such as the tool on Information Queensland or Infolinks).

The metadata must be kept up to date to make this a worthwhile tool. Currently updates by custodians are undertaken on an irregular basis other than when prompted by the Office of Economic and Statistical Research staff. This practice will need to change – the accuracy of the metadata will directly relate to the value of the information to the wider community. Limited or inaccurate metadata will increase the cost to the consumer to find the data, or make it virtually impossible to find the data.

The actual metadata fields conform to the profile maintained by the Office of Economic and Statistical Research.

The metadata profile may need to be amended to include specific information on the licensing option. Of the current fields in the metadata profile, the ‘2.20.5 User Note’ field is the most appropriate to use, but this field would be best used to explain in general terms the licences. This will depend on whether the payload is offered under a single licence (licence ‘per-payload’), or if the same payload may be provided to different persons under different licences (licence ‘per-consumer/payload’). An example of this second option is the current suite of licences of the Department of Natural Resources and Water.

A new repeatable field in the profile which contains specific licensing information, through a few refinement fields, would be the best solution. This would be repeatable to cater to licensing per consumer/payload.

It would be advantageous for each dataset to reside at a static URL, for simplicity of revisiting frequently used datasets.

A search function based on time should also be available. Suggested searches include:

- All new datasets since last time the account was accessed.
- All datasets which were previously downloaded by the consumer, which have been updated since that last download.

### *Questions/Actions*

*Action 1:* Finalise the licensing model: whether licensing is done per-consumer/

payload or only per-payload.

*Action 2:* Adapt the metadata profile depending on the licensing model selected by the project.

*Action 3:* Ensure the metadata is kept up to date. (This is currently handled by the Office of Economic and Statistical Research staff in conjunction with database custodians).

*Action 4:* Define the fields to be included in a ‘basic search’.

### ***Step 3: Authentication***

It is most likely that authentication will be done through creating and then logging into an account. (Please note, the term ‘account’ here is used to denote a username/password, not a ‘financial’ account).

Policy will determine the level of information the consumer must provide to create an account. Alternatives range from the minimum of providing merely a username and password, through to providing alternative (non internet) contact information. Once provided, there is also a question of how much of the information is verified automatically or manually before activating the account.

With the ‘qualification’ process that will be undertaken to ensure that all databases accessible through the system are appropriate for public use (and the probable outcome that at least the first group of databases will be appropriate for licensing to consumers under a bare ‘attribution’ licence), it may be appropriate to only include automatic verification. A common automatic verification system is to require the consumer to include an email address in the information in their application for an account with the system. The consumer is then emailed a code to the provided email address, which is used to activate the account. Further limitations on this are also sometimes used (such as not allowing ‘free’ email addresses to be used for this verification step, etc). This establishes a minimum level of trust between the system and the consumer – that the consumer has offered a valid email address.

This system can then be expanded when further databases come online which require more extensive authentication to allow for accounts to be ‘upgraded’ by an administrator when they are verified as permitted to access more content.

The system may also provide for corporate group registration, where an account will be used by anyone within (say) a department or company. It may be advantageous to allow multiple individual accounts under a company account, for cost and access tracking purposes (see the section on financial transaction). If grouping of accounts is implemented, a system for the holder of the overall group account to add new accounts to that group account would cut administration overhead.

As with any collection of data, the privacy policy for the site should be in place and potentially presented to the consumer during the account creation



process.

*Action 5:* Determine whether automated account creation is appropriate.

*Rec:* Automated account creation with limited automated verification should be used for creation of ‘public’ accounts.

*Action 6:* Determine the level of information required to be provided to create an account.

*Rec:* The minimum standard should be first and last name, city/suburb, state, country, date of birth and a valid email address. Investigation of methods to block ‘free’ email accounts should be considered, with regard to the increasing reliance on free email accounts for many users.

*Action 7:* Determine whether ‘group’ accounts should be supported.

*Rec:* Group accounts will simplify the granting of access to users in a company or organisation, and simplify e-commerce. Failing to allow multiple users to attach to a group account will encourage the creation of a single account for a company, which will impede logging of user activity.

*Action 8:* Plan for further authentication steps and access levels when more sensitive data is brought online.

#### ***Step 4: Licence Presentation***

The licence must be presented in a way that constitutes clear notice of the terms to the consumer, which must be positively accepted before the process can continue. Lessons learned from other licensing cases should be put into practice here, so for example the consumer should be required to ‘read’ all of the licence before being able to accept it.

As part of this process, the consumer must also be presented with a second screen detailing the restrictions on using the payload – this is drawn from a mandatory field in the metadata (‘2.20.1 Use Limitation’).

*Action 9:* Determine ‘look’ and method of the licence and limitations presentation.

*Action 10:* Ensure the use limitation field is kept up to date.

#### ***Step 5: Consumer Provides/Authorises Any Financial Transaction Information***

This step may not be used on the first set of qualifying databases. However, it must be planned for. Some databases may be subject to statutory fees, and some may be licensed only under cost recovery schemes.

There will be two methods of approaching this. The first is to include in the metadata profile a field detailing the cost to access the payload under a specific licence. The second is to maintain the pricing and other information in a separate system. The choice of this will depend on the complexity of pricing structures

– the more complex the more a separate pricing system is indicated. Another consideration is that if the pricing information is included in the metadata, all consumers that search the metadata will have access to the different pricing details. This may assist in meeting transparency and non-discriminatory pricing goals.

There should be provision made for account customers either to pre-pay a balance or to allow invoicing on terms for all access from the account. As above, it may be advantageous to allow a corporate account to which a number of individual account's transactions are charged.

The decisions required here are business/policy decisions likely to be made externally to this project, so no action items are suggested at this time.

### ***Step 6: Presentation of the Payload***

The payload will consist of the data in an appropriate format, the metadata, and a copy of the licence under which the data was taken. As an example, the consumer may be presented with an archive file consisting of a Microsoft Excel spreadsheet (an XLS file) containing statistical data, an XML file containing the metadata, and a text file containing the licence details.

If possible, it would be advantageous for at least a subset of the metadata (including the licence under which the data was taken) to be embedded directly in the data file itself. This can be done in certain file formats which have flexible metadata structures which may be adapted to contain licence information. As an example, see the CC Microsoft Office add-in.

If the payload is licensed on a per-consumer/payload basis, the payload will need to include the correct version of the licence in the licence file, the metadata and the embedded metadata. This may be generated at the time the payload is delivered, or be manually compiled and then simply selected and delivered by the system.

The licence should make explicit that removing the metadata or licence information from the package is an offence (see the Electronic Rights Management information section of the *Copyright Act 1968* (Cwlth) Division 2A).

The presentation of the payload should (if possible) be accompanied by basic information about how to access the data – for example links to free data viewers appropriate to the data format selected. It may also be appropriate to link to some basic datasets that are released under compatible licences (the CC BY licence is compatible with all other CC licences) which will give context to the selected dataset. For example, links to basic maps of Queensland and Brisbane in the selected file format may be appropriate, along with basic information about how to use them as context on the selected dataset.

Technological challenges here depend very much on decisions made in previous sections, so no specific action items are suggested at this time.

## EXAMPLES OF USER EXPERIENCES

The following experiences assume some of the recommendations made above, and also assume that the CC licences and licensing model is selected for implementation.

### *Example 1: first time ‘casual’ consumer*

A property developer (‘Jane’) is considering purchasing a currently undeveloped parcel of land. Concerned about wildlife habitat issues, Jane accesses the Information Queensland site.

*Step 1:* Using the map, Jane selects the greater Brisbane area as a boundary, and then enters the Boolean search term ‘endangered OR threatened’ into the basic search box. The system will present her with all of the datasets which have any geographic extents falling within the selected area, and including the terms ‘endangered’ or ‘threatened’ in the defined ‘basic’ metadata fields.

*Step 2:* Jane can now review the descriptive metadata of all of the datasets that the search has returned, can further refine the search by adding a new term, or can clear the search and use an advanced search to only search for those terms in a specific metadata field. After reviewing the returned records, Jane finds a dataset comprising spatial data on locations of endangered bird species in the ESRI Shapefile format, and selects the ‘download’ link.

*Step 3:* At this point, the system will ask her to log in. As this is the first time she has accessed this site, she must create an account on the site. After being presented with the site’s privacy policy, Jane provides her full name, date of birth, company name and a valid email address. Jane is then asked to check her email account. Jane checks her account, and receives an email with a coded link to follow which will enable her account with Information Queensland, verifying that she has provided a valid email address. Now that she has created an account, she may log in and complete the authentication process as a ‘public’ consumer – a user with no special permissions.

*Step 4:* The system then checks the licensing information in the metadata, and presents a screen with the appropriate licence for a public consumer. For this data, the custodian has used the licensing toolkit to select an ‘attribution’ licence as appropriate for all users. Jane is presented with the CC BY licence deed, including a highly visible link to the full text of the licence. Agreeing to the licence, Jane is then presented with the usage information field from the metadata – which informs Jane that the data is to be used only for environmental study, and should not be relied on for land development purposes. Jane again indicates that she has read the usage information, now knowing that she will need to undertake further research before finalising the decision to purchase the property. Finally, the system presents Jane with a notice that the licence terms are only valid for the entire

payload – that she may not separate the metadata or licence information from the data files.

*Step 5:* The data custodian has indicated that there are no fees for accessing this information, so there is no e-commerce step in this transaction.

*Step 6:* The system presents a download link to the payload, along with links to some basic information about free tools to view the data. The payload in this case consists of an archive file, containing the following individual files:

- A TXT file with the CC BY licence
- An XML file with the metadata (including the licence terms)
- An SHP file, an SHX file, and a DBF file, which combined contain the actual mapping data
- An SHP.XML file, which mirrors much of the metadata (including the licence terms).

### *Example 2: A repeat ‘corporate’ user*

A legal research clerk (‘Cameron’) has been tasked with finding all recent traffic usage surveys on a road next to a major shopping centre, to support an application for a permanent closure of the road. This is a common request from his supervising partner at the firm Hutz and Simpson.

*Steps 1&2:* Cameron goes directly to the advanced search function, and searches for the name of the dataset. The search returns 1 result. He reviews the metadata, sees that the dataset has been updated since he last accessed it, and selects the download option.

*Step 3:* Cameron logs into his account on the system using his username and password, which is linked to the Hutz and Simpson group account. The office manager at Hutz and Simpson created the corporate account, and uses a special account administration screen to link the accounts created by Hutz and Simpson employees to the main group account.

*Step 4:* The data custodian has indicated that this dataset may only be licensed to nongovernment consumers under a CC BY–ND licence (so that it may be used, but no derivative works may be created). Cameron agrees to the CC BY–ND deed, the use restrictions from the metadata, and the notice to not separate the licence and metadata from the payload.

*Step 5:* The data custodian for the traffic dataset has indicated that there are statutory fees totalling \$125 which must be collected for corporate access. Hutz and Simpson prepay for access and have more than \$125 in their account. Cameron is presented with a virtual invoice for \$125 to accept.

*Step 6:* The system presents a download link to the payload, along with links to some basic information about free tools to view the data. The payload in this case consists of an archive file, containing the following individual files:

- A TXT file with the CC BY–ND licence
- An XML file with the metadata (including the licence terms)
- A KML file that is the actual traffic data (and embedded in the KML file is metadata including the licence terms).

### *Example 3: A government department user*

An employee of the Department of Emergency Services (‘Wendy’) is also looking for traffic usage surveys, this time for route planning purposes.

*Steps 1&2:* Wendy follows a bookmark in her web browser directly to the dataset she needs.

*Step 3:* Wendy logs into her account on the system using her username and password. Her account is linked to the Department of Emergency Services group account.

*Step 4:* The data custodian has indicated that this dataset may be licensed to government consumers under the CC BY licence. Wendy accepts the CC BY deed, use restrictions from the metadata and the notice not to separate the licence and metadata from the payload. As a government consumer, this takes the form of a memorandum of understanding rather than a binding contract.

*Step 5:* Rather than the statutory fee which is charged for non-government clients, the system merely records that the data was taken by the Department of Emergency Services.

*Step 6:* The system presents a download link to the payload, along with links to some basic information about free tools to view the data. The payload in this case consists of an archive file, containing the following individual files:

- A TXT file with the CC BY licence
- An XML file with the metadata (including the licence terms)
- A KML file that is the actual traffic data (and embedded in the KML file is metadata including the licence terms).

## ATTACHMENT 6: BACKGROUND RESEARCH

There is an increasing amount of activity, at national and international levels, directed at the development and implementation of systems to enable information and content generated or held by public sector institutions, publicly-funded universities and research institutes to be more readily accessed and re-used.

Although attention since the 1980s, has been given to improving access to public sector information, efforts to facilitate access and re-use have strengthened in recent years. As well as advances in computing technology, an important contributing factor has been the body of economic research over the past decade which points to the advantages gained by enabling access to and re-use of public

sector information.<sup>1</sup>

One of the most influential texts has been Carl Shapiro and Hal Varian's *Information Rules: A Strategic Guide to the Network Economy* (1999), which clearly explains the economic theory underlying the valuing of information.

'Technology changes. Economic laws do not...<sup>2</sup>

Economists say that the production of an information good involves *high fixed costs* but *low marginal costs*. The cost of producing the first copy of an information good may be substantial, but the cost of producing (or reproducing) additional copies is negligible. This sort of cost structure has many important implications. For example, cost-based pricing just doesn't work. A 10 or 20% mark-up on unit cost makes no sense when unit cost is zero. You must price your information goods according to consumer value, not according to your production cost.

Since people have widely different values for a particular piece of information, value-based pricing leads naturally to differential pricing...<sup>3</sup>

When managing intellectual property, your goal should be to choose the terms and conditions that maximise the *value* of your intellectual property, not the terms and conditions that maximise the protection'.<sup>4</sup>

In a study commissioned by the US Computer and Communications Industry Association, 'The Role of Government in a Digital Age' (2000), Stiglitz et al. examined the appropriate role of governments in the online and information environment.<sup>5</sup> The study proposed a set of principles to guide government involvement, based on a recognition that while governments have a role to play, it should not extend too far into downstream value-adding activities. Stiglitz's principles for online and informational government activity are the following:

- 'Green Light' for Online and Informational Government Activity
  - Principle 1: Providing public data and information is a proper governmental role

1 See for example, Peter N. Weiss, *Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts* (2002), US Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service [www.weather.gov/sp/Borders\\_report.pdf](http://www.weather.gov/sp/Borders_report.pdf) [www.osti.gov/datameeting/Borders\\_publisher\\_format.html](http://www.osti.gov/datameeting/Borders_publisher_format.html).

2 Pp. 1–2.

3 P. 3.

4 P. 5.

5 Joseph Stiglitz, P. R. Orszag and J. M. Orszag, *The Role of Government in a Digital Age* (2000), Computer and Communications Industry Association, Washington, DC [archive.epinet.org/real\\_media/010111/materials/stiglitz.pdf](http://archive.epinet.org/real_media/010111/materials/stiglitz.pdf).

- Principle 2: Improving the efficiency with which governmental services are provided is a proper governmental role
  - Principle 3: The support of basic research is a proper governmental role
- ‘Yellow Light’ for Online and Informational Government Activity
  - Principle 4: The government should exercise caution in adding specialised value to public data and information
    - Principle 5: The government should only provide private goods, even if private sector firms are not providing them, under limited circumstances
    - Principle 6: The government should only provide a service online if private provision with regulation or appropriate taxation would not be more efficient
    - Principle 7: The government should ensure that mechanisms exist to protect privacy, security, and consumer protection online
    - Principle 8: The government should promote network externalities only with great deliberation and care
    - Principle 9: The government should be allowed to maintain proprietary information or exercise rights under patents and/or copyrights only under special conditions (including national security)
- ‘Red Light’ for Online and Informational Government Activity
  - Principle 10: The government should exercise substantial caution in entering markets in which private-sector firms are active
    - Principle 11: The government (including government corporations) should generally not aim to maximise net revenues or take actions that would reduce competition
    - Principle 12: The government should only be allowed to provide goods or services for which appropriate privacy and conflict-of-interest protections have been erected.

One of the most significant initiatives in the re-use of public sector information in recent years has been the EU’s Directive on the re-use of public sector information. The EU Directive was adopted by the European Parliament and Council on 17 November 2003.<sup>6</sup> The EU Directive, which aims to facilitate the development

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6 Directive 2003/98/EC of the European Parliament and of the Council, 2003/98/EC, 17 November 2003, Official Journal of the European Union, L 345/90, 31 December 2003 [europa.eu.int/information\\_society/policy/psi/docs/pdfs/directive/](http://europa.eu.int/information_society/policy/psi/docs/pdfs/directive/)

of European data products based on public sector information, was the culmination of efforts that began in the late 1980s.<sup>7</sup> European content firms engaged in the aggregation of information resources into value-added information products, were perceived to be at a competitive disadvantage in comparison to their US counterparts, due to a lack of clear policies or uniform practices in relation to access to and re-use of public sector information. The lack of harmonisation of policies and practices regarding public sector information resources among the European Union Member States was regarded as a barrier to the establishment of European information products that were based on information obtained from different countries.<sup>8</sup> By contrast, the situation in the US was seen as providing extensive opportunities for the re-use of public sector information, due to a legislative framework which enhanced access to and re-use of Federal government information. Features of the US legal framework which were identified as contributing to the advantageous position of US firms include:

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[psi\\_directive\\_en.pdf](#).

- 7 See, in particular the Commission of the European Communities' Guidelines for Improving the Synergy Between the Public and Private Sectors in the Information Market, issued in 1989

[europa.eu.int/information\\_society/policy/psi/docs/pdfs/](#)

[1989\\_public\\_sector\\_guidelines\\_en.pdf](#). The agenda appears to have been reinvigorated by a major policy conference on public sector information, sponsored by the European Commission, which was held in Stockholm in 1996. See 'History'

[europa.eu.int/information\\_society/policy/psi/history/index\\_en.htm](#).

- 8 Problems were identified with response times to requests for information, pricing, existing exclusive deals and the overall lack of transparency. See 'Background'

[europa.eu.int/information\\_society/policy/psi/directive/index\\_en.htm](#) Such problems had been identified as far back as the 1980s, in the Introduction to the Commission of the European Communities Guidelines for Improving the Synergy Between the Public and Private Sectors in the Information Market, 1989, p. 5. 'Governments and public sector bodies collect large amounts of data and information, as part of their routine functions, which could be made available to the private sector for the construction and marketing of electronic database services. The private sector is well placed to combine information from a variety of government sources, and its prime function is to produce and distribute information products oriented to the needs of the market. In order to develop and strengthen the information industry, a positive initiative is required from governments, to encourage the use and exploitation of public sector data and information. However, there are few convergent policies or guidelines within Member States relating to the role of the public sector in this area. In addition, if there are different policies operating in the different Member States, then it will be very difficult to develop the market. It is therefore desirable that national policies, as far as they exist, be coordinated at the Community level in order to allow the majority of the EC countries not yet having such a policy to follow these orientations on a national level'.



- citizens and businesses have a broad right to electronically access Federal government information and can re-use it for commercial purposes
- there is no copyright on Federal government materials
- there are no restrictions on re-use
- fees for re-use are limited to, at most, marginal costs for reproduction and dissemination.<sup>9</sup>

European Union Member States were required to bring their national laws into conformity with the Directive by 1 July 2005 and to review the application of the Directive by 1 July 2008<sup>10,11</sup> By 15 December 2005, 12 countries (including France, Ireland, Italy, Sweden, the Netherlands and the UK) had notified the European Commission that they had given effect to the Directive.<sup>12</sup> In the UK, the Directive has been given effect by the *Re-use of Public Sector Information Regulations 2005* which came into force on 1 July 2005 and in May 2005 the UK government established an Office of Public Sector Information with the responsibility for the coordination of policy standards on the re-use of public sector information.<sup>13,14</sup>

While the Directive has established a European Union-wide legal framework governing policies and practices relating to the re-use of public sector information, it should be viewed alongside other European Union initiatives designed to make digital content in Europe more accessible, usable and exploitable. Of particular relevance is eContentplus, a four year program (2005–08) established by the European Commission’s Directorate-Generale for Information Society and Media, with a budget of €149 million ‘to tackle organisational barriers and promote take up of leading-edge technical solutions to improve accessibility and usability of digital material in a multilingual environment’.<sup>15</sup> The eContentplus

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9 See ‘The situation in the United States’ [europa.eu.int/information\\_society/policy/psi/directive/us\\_situation/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/directive/us_situation/index_en.htm).

10 Article 12.1.

11 Article 13.

12 See ‘Implementation’ [europa.eu.int/information\\_society/policy/psi/implementation/index\\_en.htm](http://europa.eu.int/information_society/policy/psi/implementation/index_en.htm).

13 Statutory Instrument 1515 of 2005 [www.opsi.gov.uk/si/si2005/20051515.htm](http://www.opsi.gov.uk/si/si2005/20051515.htm).

14 See the Office of Public Sector Information’s website [www.opsi.gov.uk/](http://www.opsi.gov.uk/) The Office of Public Sector Information, attached to the Cabinet Office, will advise on and regulate the operation of the re-use of public sector information, and will set standards and provide a practical framework to increase transparency and remove obstacles to re-use.

15 See the eContentplus program website.

[europa.eu.int/information\\_society/activities/econtentplus/index\\_en.htm](http://europa.eu.int/information_society/activities/econtentplus/index_en.htm).

The Decision No. 456/2005/EC of the European Parliament and of the Council, of 9 March

program has targeted three specific areas where development has been slow and the program can have a maximum impact, i.e. geographic information, educational content, and cultural, scientific and scholarly content.<sup>16</sup> The aim of the program is to facilitate ‘access to digital content, its use and exploitation, enhancing quality of content with well-defined metadata, and reinforcing cooperation between digital content stakeholders’.

## AUSTRALIAN COMMONWEALTH GOVERNMENT AGENCIES

In November 2005 the Commonwealth government agencies – the Office of Strategic Data Management and the National Data Network (National Data Network – in particular one of its key members, namely the Australian Bureau of Statistics) abandoned their longstanding ‘traditional’ restrictive government licensing practices in relation to their datasets, which included charging fees for the data and severely restricting or prohibiting commercial downstream use of the data by the licensee or others, and largely embraced the core principles or philosophy of the open content licensing movement, including CC.

Since November 2005 these Commonwealth government agencies have virtually removed all data charges, and restrictions on downstream use of their datasets, whether commercial or otherwise. Therefore the current licence agreement being used by these Commonwealth agencies for online access to, the download, and further use of their data, strongly resembles in many key respects an open content licence because the very broad rights to use commercially or otherwise, including the right to sub-license, are granted subject only to rather modest requirements including the explicit recognition (attribution) of the Commonwealth’s ownership of the intellectual property rights in the dataset, and certain record keeping and reporting obligations, with reports only to be provided on reasonable request by the agency. Nevertheless there are still some legal conditions included such as the requirement of an indemnity which are not generally included in open content licences.

Put simply, these fundamental changes in access and management practices

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2005, establishing a multilateral Community program to make digital content in Europe more accessible, usable and exploitable, Official Journal of the European Union L79/1, 24 March 2005.

[europa.eu.int/information\\_society/activities/econtentplus/docs/prog\\_decision\\_2005/econtentplus\\_decision\\_en.pdf](http://europa.eu.int/information_society/activities/econtentplus/docs/prog_decision_2005/econtentplus_decision_en.pdf).

16 For details of the eContentplus Work Program across these areas of content. [europa.eu.int/information\\_society/activities/econtentplus/docs/call\\_2005/ecp\\_work\\_programme\\_2005.pdf](http://europa.eu.int/information_society/activities/econtentplus/docs/call_2005/ecp_work_programme_2005.pdf).

represent a major paradigm shift on the part of these Commonwealth government agencies and a most significant step towards embracing the open content licensing principles and philosophies of only ‘some rights reserved’ as opposed to the traditional copyright ‘all rights reserved’ licence. The main feature of the open content licensing models, including the CC, is the requirement for the acknowledgement or attribution of copyright ownership and then the granting of a range of generous rights of use, the precise scope is determined by which licence is selected from the six standard licences on offer under the Australian chapter (iCommons) of the CC regime.

Whether or not or by coincidence this fundamental change in Commonwealth licensing practice coincided closely with the first public release of a report entitled *Unlocking the Potential: Digital Content Industry Action Agenda*, Strategic Industry Leaders Group report to the Australian Government, November 2005.<sup>17</sup>

Of particular relevance for present purposes is the following extract taken from the report.

### 3.5 INTELLECTUAL PROPERTY

#### *Issues*

- Low levels of industry knowledge about managing intellectual property
- The importance of effective intellectual property management to build revenue in firms
- Insufficiently developed mechanisms for accessing Crown intellectual property for exploitation.

#### *Proposed solutions*

- Identify and develop ways that firms can strengthen their protection of intellectual property, particularly by incorporating skills in identifying, managing and commercialising intellectual property into training frameworks
- Engage with work occurring in the area of alternative approaches to intellectual property licensing, such as CC
- Develop ways of improving access to Government intellectual property for commercial exploitation by digital content firms to encourage innovation.

Developing the efficient operation of copyright industries in the online environ-

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17 [www.dcita.gov.au/arts/film\\_digital/digital\\_content\\_industry\\_action\\_agenda/dcicaa\\_report](http://www.dcita.gov.au/arts/film_digital/digital_content_industry_action_agenda/dcicaa_report).

ment has been a priority since 2000, when the Government introduced the Digital Agenda copyright reforms.

Improved information and research into the management and use of digital copyright content will make an important contribution to efficient industries. A wide range of studies have been undertaken on these issues and there is a strong body of ongoing research in Australia and internationally, particularly in the areas of eLearning and digital rights management.

The Digital Content Industry has determined that, in the context of the Action Agenda's primary role to focus on measures to support industry development, the most significant intellectual property issues relate to:

- improving awareness about intellectual property management
- promoting mechanisms to support the Digital Content Industry in using its intellectual property to generate revenue streams.

Measures to promote intellectual property management underpin each strategy to advance industry development skills, research and development, investment and export'.<sup>18</sup>

Clearly this Report contains a strong encouragement for the broader uptake of the CC licensing regimes by Commonwealth agencies in relation to 'Crown intellectual property'. The two significant Commonwealth agencies mentioned above have promptly put the recommendations into practice and are now looking directly at the CC model to see whether it might be implemented more directly.

Clearly it would appear that whilst the recommendations contained in the Report are not official government policy nevertheless there is an unmistakably strong push by the Commonwealth government to have its intellectual property promoted out into the private sector to support industry growth.

In this context the principles and objective of the Licensing Project may be seen to be entirely consistent with the Commonwealth's philosophy of greater access to and use of 'Crown intellectual property'. For the purposes of this analysis, Queensland public sector databases which have satisfied the qualifying principles (qualifying databases) are 'Crown (the State of Queensland) intellectual property'.

## THE NEED TO DEVELOP POLICIES AND GUIDING PRINCIPLES TO SUPPORT MORE OPEN LICENSING ARRANGEMENTS

The development of systems for access to and re-use of public sector information

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18 P. 33.

needs to be based on a clear statement of overarching policy supplemented by guiding principles.

The general *policy* applying to information access and re-use needs to be clearly stated in appropriate documents (e.g. IS25, IS33, IS45 etc), which may need to be revised to ensure that they accurately reflect current policy.

A sufficiently detailed set of *guiding principles* based on the general policy needs to be developed, to provide guidance to government agencies in the implementation of the policy. As the principles will guide the implementation of the policy they need to be sufficiently detailed to be used to inform the development of licensing models and practices and should form the basis of implementation toolkits developed for use by individual agencies.

Experience to date in Australia and internationally shows that the development and adoption of a general policy and guiding principles are crucial steps in the implementation of systems designed to promote access to and re-use of public sector information.

For example, the importance of basing an access regime on an appropriate policy and guiding principles was recognised in the Intrallect and University of Edinburgh report commissioned by the UK's Common Information Environment, *Common Information Environment and Creative Commons* (2005), and in the Australian Government's Office of Spatial Data Management, *A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing Policy* (2001).<sup>19</sup> Statements of the principles underlying access and re-use are also central to the EU's Directive on the re-use of public sector information of 2003 and the OECD's *Declaration on Access to Research Data from Public Funding* (2004).<sup>20</sup>

The research and consultations conducted to date in the *Government Information Licensing Framework Project* (Stages 1 and 2) support a policy position that agencies should make public sector information available for access and re-use, unless there is a clear and justifiable reason why they should not. The guiding principles developed in other public sector information re-use projects address issues such as:

- materials should be made readily available, e.g. online, in electronic form and discoverable by search engines wherever possible and in formats that interoperate with other systems

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19 Commonwealth Interdepartmental Committee on Data Access and Pricing, *A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing*, June 2001 [www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf) [www.osdm.gov.au/osdm/policy/accessPricing\\_summary.html](http://www.osdm.gov.au/osdm/policy/accessPricing_summary.html) (accessed 14 July 2006).

20 Directive 2003/98/EC, 17 November 2003, OJ L345/90, 31 December 2003 [europa.eu.int/information\\_society/policy/psi/docs/pdfs/directive/psi\\_directive\\_en.pdf](http://europa.eu.int/information_society/policy/psi/docs/pdfs/directive/psi_directive_en.pdf).

- materials should be made available free of charge over the internet or at no more than the marginal cost of transfer for packaged products
- the conditions of use (licence terms) for the material should be transparent, e.g. conditions of use should be linked directly to the material so that users can immediately understand the basis on which the material is being made available and what re-use rights they have, so the material is re-usable at the point of discovery
- re-use rights should be as unconstrained as possible, including permitting commercial re-use (value-adding) wherever possible
- the range of permitted uses should be broad, including rights to modify the work and create derivative works
- re-use should be encouraged by permitting others to re-distribute resources.

## EXAMPLES OF POLICIES AND PRINCIPLES

The following are some examples of the policies and principles that have been developed by other jurisdictions to support more open licensing arrangements.

*Office of Spatial Data Management, Spatial Data Access and Pricing Policy (2001)*

In 2001, the Australian Government released the reports *Positioning for Growth – the Spatial Information Industry Action Agenda and A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing*.<sup>21,22</sup> These documents establish the following principles as the basis for spatial data access and re-use:

- fundamental spatial data will be provided:
  - free of charge over the internet, or
  - at no more than the marginal cost of transfer for packaged products, or
  - at the full cost of transfer for customised services
- there will be no restrictions on commercial value-adding to the listed fundamental spatial datasets
- spatial data will be provided subject to a licence setting out the conditions of transfer

The Australian Government Office of Spatial Data Management is charged with

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21 [www.industry.gov.au/assets/documents/itrinternet/SIAA\\_Positioning\\_20050606100443.pdf](http://www.industry.gov.au/assets/documents/itrinternet/SIAA_Positioning_20050606100443.pdf).

22 [www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf).

implementing the Australian Government's spatial data access and pricing policy, which is summarised as follows.<sup>23</sup>

This Policy is premised on the view that all fundamental spatial data should be freely available at no more than the marginal cost of transfer in order to maximise the net economic and social benefits arising from its use. As user requirements and technology trends converge, all agencies will make fundamental spatial data available through their websites. This is consistent with the Access Policy and the broader Government online initiatives. As datasets become accessible over the internet, the marginal cost of transfer approaches zero. Therefore, all fundamental spatial data will eventually be made available free of charge.

The basic elements of this pricing policy are:

- custodians of fundamental spatial data will make that data freely available through the internet at no cost, as soon as appropriate technology becomes available within the custodian agency
- fundamental spatial data distributed as packaged products will be made available at a price not exceeding the marginal cost of transfer
- fundamental spatial data distributed as customised products will be made available at a price not exceeding the full cost of transfer
- there will be no restrictions on commercial use or value-added activities related to fundamental spatial data, as defined in the Schedule to the Policy, although copyright may be reserved by the Commonwealth

The cost of providing fundamental spatial data as packaged products (e.g. CDs) or customised products (e.g. significant staff time and other resources to generate) is a legitimate charge to users – hence these may be made available at a price. However, data accessed through these mechanisms will also be available free over the internet, as each agency develops this capability.

## THE COMMON INFORMATION ENVIRONMENT AND CREATIVE COMMONS: FINAL REPORT (2005)

The Intrallect and University of Edinburgh report commissioned by the UK's Common Information Environment, *Common Information Environment and Creative Commons: Final Report to the Common Information Environment Members of a Study on the Applicability of Creative Commons Licences* (2005) observed that, in responding to legislative, cultural and economic forces to make resources available for re-use, public sector organisations will have to make difficult deci-

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23 Summary is available on the OSDM website [www.osdm.gov.au/osdm/policy/accessPricing\\_summary.html](http://www.osdm.gov.au/osdm/policy/accessPricing_summary.html).

sions when considering the specific conditions on which material is licensed.<sup>24</sup> To be able to make such decisions, the report considered it would be advisable to make them on a ‘sound and principled basis’ (p. 27). The report recommended that in order to achieve the strong motivation in many common information environment organisations to make their resources more available for use, it would be necessary for them to have ‘a clear policy that is disseminated throughout the organisation’ (p. 27). Any such policy would have to be based on the benefits to the organisation and users and the required changes to organisational practice. The report recommended that each common information environment organisation should make an active decision on whether it will adopt a policy for encouraging re-use of its resources (p. 27).

The report further recommended that the common information environment organisations adopting a policy for encouraging re-use should consider basing it on the following principles:

- Resources should be made available for re-use unless there is a justifiable reason why they should not
- The re-use of resources should be as unconstrained as possible. For example, resources should be made available for commercial re-use as well as non-commercial re-use wherever possible (e.g. the CC Attribution licence)
- The range of permitted uses of resources should be as wide as possible, for example, including the right to modify the resource and produce derivative works from it (e.g. CC Attribution–Non-commercial–Share Alike licence)
- Re-use should be encouraged by permitting others to redistribute resources on a world-wide basis
- Resources should be made directly available and discoverable electronically whenever possible
- The conditions of use for each resource should be linked directly to the resource so that they are re-usable at the point of discovery (p. 27).

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24 Intrallect Ltd (E Barker, C Duncan) and AHRC Research Centre for Studies in Intellectual Property and Technology Law, The University of Edinburgh (A Guadamuz, J Hatcher and C Waelde), Common Information Environment and Creative Commons: Final Report to the Common Information Environment Members of a Study on the Applicability of Creative Commons Licences, 10 October 2005 [www.intrallect.com/cie-study/CIE\\_CC\\_Final\\_Report.pdf](http://www.intrallect.com/cie-study/CIE_CC_Final_Report.pdf) [www.intrallect.com/cie-study/CIE\\_CC\\_Appendices.pdf](http://www.intrallect.com/cie-study/CIE_CC_Appendices.pdf) [www.intrallect.com/cie-study/](http://www.intrallect.com/cie-study/) (accessed 14 July 2006).



## EUROPEAN UNION'S DIRECTIVE ON THE RE-USE OF PUBLIC SECTOR INFORMATION (2003)

The EU Directive establishes a minimum set of rules governing the re-use and the practical means of facilitating re-use of existing documents held by public sector bodies of European Union Member States.<sup>25,26</sup> The principles set out in the EU Directive may be summarised as follows:

- where re-use of public sector documents is permitted, they will be re-usable for commercial or non-commercial purposes (in accordance with the conditions in Articles 5–11) and, where possible, will be made available through electronic means<sup>27</sup>
- public sector bodies are, through electronic means where possible and appropriate, to process requests for re-use and make the document available for re-use to the applicant or, if a licence is needed, to finalise the licence offer to the applicant within a reasonable time<sup>28</sup>
- public sector bodies shall make documents available in 'any pre-existing format or language, through electronic means where possible and appropriate'<sup>29</sup>
- where charges are made, 'the total income from supplying and allowing re-use of documents shall not exceed the cost of collection, production, reproduction and dissemination, together with a reasonable return on investment'<sup>30</sup>
- any conditions and charges applying to the re-use of documents must be transparent, i.e. they must be pre-established and published, through electronic means where possible and appropriate<sup>31</sup>
- public sector bodies may allow for re-use of documents without conditions or may impose conditions, where appropriate, in the form of a licence, and such conditions are not to unnecessarily restrict possibilities for re-use and are

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25 Note that 'public sector body' is defined in Article 2 as 'the State, regional or local authorities, bodies governed by public law and associations formed by one or several such authorities or one or several such bodies governed by public law'.

26 Article 1.1. The Directive needs to be implemented by EU Member States. An earlier attempt at providing voluntary guidelines for exploitation by the private sector of public sector information had little impact. See the Commission of the European Communities' Guidelines for Improving the Synergy Between the Public and Private Sectors in the Information Market, issued in 1989 [europa.eu.int/information\\_society/policy/psi/docs/pdfs/1989\\_public\\_sector\\_guidelines\\_en.pdf](http://europa.eu.int/information_society/policy/psi/docs/pdfs/1989_public_sector_guidelines_en.pdf).

27 Article 3.

28 Article 4.

29 Article 5.

30 Article 6.

31 Article 7.

not to be used to restrict competition, licences can be adapted to meet particular licence applications and are available in electronic form so they can be processed electronically, Member States are to encourage all public sector bodies to use the standard licences<sup>32,33</sup>

- ‘practical arrangements [must be] in place [to] facilitate the search for documents available for re-use, such as asset lists, accessible preferably online, of main documents and portal sites that are linked to decentralized asset lists’<sup>34</sup>
- any conditions on the re-use of documents must be ‘non-discriminatory for comparable categories of re-use’; where documents are re-used by a public sector body as input for commercial activities falling outside the scope of its public tasks, the same charges and other conditions are to apply to the supply of the documents for these activities as apply to other users<sup>35,36</sup>
- the re-use of documents is to be open to all potential actors in the market, ‘contracts or other arrangements between the public sector bodies holding the documents and third parties shall not grant exclusive rights’, exclusive arrangements established after the entry into force of the Directive are to be transparent and made public and all existing exclusive arrangements that do not qualify for the exception in Art 11.2 are to be terminated at the end of the contract or not later than 31 December 2008.<sup>37,38</sup>

## OECD’S DECLARATION ON ACCESS TO RESEARCH DATA FROM PUBLIC FUNDING (2004)

The OECD’s *Declaration on Access to Research Data from Public Funding* (2004) sets out a lengthy list of objectives and principles which are to govern access regimes for digital research data from public funding, including:

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32 Article 8.1.

33 Article 8.2.

34 Article 9.

35 Article 10.1.

36 Article 10.2.

37 Article 11 of the Directive. There is a public interest exception to this prohibition in Article 11(2), ‘where an exclusive right is necessary for the provision of a service in the public interest, the validity of the reason for granting such an exclusive right shall be subject to regular review, and shall, in any event, be reviewed every three years. The exclusive arrangements established after the entry into force of this Directive shall be transparent and made public’.

38 Article 11.3.

- openness
- transparency:
  - making information on data-producing organisations, documentation on the data they produce and specifications of conditions attached to the use of this data, available and accessible internationally
  - in regulations and policies related to information, computer and communications services affecting international flows of data for research, and reducing unnecessary barriers to the international exchange of these data
- legal conformity: paying due attention in the design of access regimes for digital research data to national legal requirements concerning national security, privacy and trade secrets
- professionalism
- protection of intellectual property: describing ways to obtain open access under the different legal regimes of copyright or other intellectual property law applicable to databases as well as trade secrets
- interoperability: paying due attention to the relevant international standard requirements for use in multiple ways, in co-operation with other international organisations

## THE DISSEMINATION OF GOVERNMENT GEOGRAPHIC DATA IN CANADA – GUIDE TO BEST PRACTICES

Chapter 4 of *The Dissemination of Government Geographic Data in Canada – Guide to Best Practices* deals with government licensing fundamentals, authority and constraints. It states that ‘government geographic data licence agreements are the written expression of a contractual relationship entered into by government in support of overarching government mandates and policy objectives. The terms governing government geographic data licence agreements find their justification in the data dissemination objectives established by government in support of the same overarching mandates and policy objectives. The subject-matter of government geographic data licence agreements is intellectual property. A basic understanding of intellectual property, and perhaps more precisely of copyright law, is useful to appreciate the legal intricacies of government geographic data licence agreements’.<sup>39</sup>

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39 *The Dissemination of Government Geographic Data in Canada – Guide to Best Practices*, Tim Werschler, Statistics Canada and Julie Rancourt, Department of Jus-

## ATTACHMENT 7: ECONOMIC BENEFITS

The broader economic benefits of a more open content policy will need to be addressed through a cost-benefit analysis to be conducted during Stage 3.

In many jurisdictions the philosophy and economics of giving agency business units the operational charter to generate revenue or profits through rents or licensing fees from other agencies or external parties, is being superseded by policies that support the ‘public good’ and broader economic benefits that flow from facilitating greater access and use without rents or nominal rents only.

The Smart State initiative has as one of its key objectives the development of a closer and more productive working relationship between the public and private sectors with the objective of promoting economic development in Queensland including the creation of high skilled jobs. If the GILF were to be implemented across the public sector agencies then this would greatly improve the efficiency and effectiveness with which the private sector could access and use public sector databases which satisfy the qualifying principles.

Through the use of the standardised online click licences identified in this project, private sector firms will be able to access and re-use data contained in the qualifying databases, whether for commercial or non-commercial purposes. This will enable the full potential of the data to be realised and at the same time foster the development of the information industry in Queensland.

Similar significant gains in operational effectiveness and efficiency to those identified above for the private sector would also be realised by government agencies in their dealings with other government agencies in relation to the access to and re-use of another department’s datasets (where those datasets satisfy the qualifying criteria). This would be on the basis that government agencies would use the same licensing arrangements in their agency-to-agency dealings as they would apply to their agency-to-external party transactions. If the same or a compatible licensing regime were to be implemented at the federal government and local government levels, the efficiencies that can be realised from the introduction of an open content licensing system to facilitate access and re-use to public sector information would be maximised. This would also greatly facilitate interoperability internationally and enhance Australia’s participation in the global economy.

The State Government’s IS25 – *Guidelines for the Management of Public Sector Intellectual Property* supports the proper management of public sector intellectual property assets including where appropriate the commercialisation of public sector intellectual property assets through the private sector. The relevant principles and guidelines to be followed by public sector agencies are set out in

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tion, Chapter 4 – Government Licensing Fundamentals, Authority and Constraints, page 24, Winter 2005, Version 1.2.

IS25. The public sector databases which satisfy the qualifying principles are public sector intellectual property assets for the purposes of applying IS25.

The proposed licensing regime supported by this project is also entirely consistent with the current government initiative, through the Department of State Development, Trade and Employment, for each public sector agency to establish and maintain an intellectual property register. Before an intellectual property asset qualifies to be included in an agency's intellectual property register the agency concerned must first apply a set of principles to establish the precise legal ownership of the intellectual property rights subsisting in the intellectual property asset. These details are then recorded and maintained in the Intellectual Property Register.

This process under the Intellectual Property Register initiative is in substance very similar to the qualifying process identified by this project as being necessary for agencies to apply to their databases before the databases which satisfy the qualifying principles (qualifying databases) may be made available online for access and re-use under the proposed arrangements. In substance the databases which have satisfied the qualifying principles established by this project are intellectual property assets for the purposes of the Intellectual Property Register initiative.

The Intellectual Property Register initiative needs to be implemented in practice in order to facilitate the proper identification, management and commercialisation of public sector intellectual property assets. This project is entirely consistent with these initiatives.

It would be entirely appropriate for any further work on cost-benefit analysis issues to be undertaken in Stage 3 to address the following works:

1. Peter N. Weiss's 2002 article from the US Department of Commerce (National Oceanic and Atmospheric Administration, National Weather Service) (Article: 'Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts' [www.osti.gov/datameeting/Borders\\_publisher\\_format.html](http://www.osti.gov/datameeting/Borders_publisher_format.html))
2. Joseph Stiglitz's article on 'The Role of Government in a Digital Age' (2000), Computer and Communications Industry Association, Washington, DC [archive.epinet.org/real\\_media/010111/materials/stiglitz.pdf](http://archive.epinet.org/real_media/010111/materials/stiglitz.pdf) (See Attachment 1 – Draft Government Information Licensing Framework Toolkit)
3. *Information Rules: A Strategic Guide to the Network Economy* (1999), a book by Carl Shapiro and Hal R. Varian, published by Harvard Business School Press, Boston, Massachusetts.

# CHAPTER TWENTY

## THE POWER OF INFORMATION: AN INDEPENDENT REVIEW\*

*Ed Mayo and Tom Steinberg*<sup>1</sup>  
EXECUTIVE SUMMARY

This is an unusual review in that it is a story of opportunities rather than problems. It takes a practical look at the use and development of citizen and state-generated information in the UK. For example, information produced by the government (often referred to as ‘public sector information’) includes maps, heart surgery mortality statistics and timetables, while information from citizens includes advice, product reviews or even recipes.

Public sector information underpins a growing part of the economy and the amount is increasing at a dramatic pace. The driver is the emergence of online tools that allow people to use, re-use and create information in new ways. Public sector information does not, however, cover personal information, such as credit record and medical histories. This is the first review to explore the role of government in helping to maximise the benefits for citizens from this new pattern of information creation and use.

When enough people can collect, re-use and distribute public sector information, people organise around it in new ways, creating new enterprises and new communities. In each case, these are designed to offer new ways of solving old problems. In the past, only large companies, government or universities were able to re-use and recombine information. Now, the ability to mix and ‘mash’ data is far more widely available.

The review was conducted through a wide-ranging literature review, three in-depth case studies and interviews with over 60 decision makers, website operators, and users inside and outside government. There are social and economic benefits to new ways of making and sharing information, whether involving government, citizens or both, for example:

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*1 This report reflects the views of the external authors and is not a statement of government policy.*

- In medical studies of breast cancer<sup>2</sup> and HIV patients, participants in online communities understand their condition better and generally show a greater ability to cope. In the case of HIV, there are also lower treatment costs<sup>3</sup>
- Studies of ‘wired’ local communities demonstrate that there are more neighbours who know the names of other people on their street<sup>4</sup>
- Sharing restaurants’ food safety information in Los Angeles led to a drop in foodborne illness of 13.3% (compared to a 3.2% increase in the wider state in the same time frame). The proportion of restaurants receiving ‘good’ scores more than doubled, with sales rising by 5.7%<sup>5</sup>
- By providing clear information when dispensing medication, pharmacists can improve patient adherence/persistence with medication advice by 16–33%.<sup>6</sup>

Since 1990, when the World Wide Web first made the internet usable by mass audiences, the number of users has risen from virtually none to 61% of the UK adult population. The impacts of this transformation are diverse and profound. TV consumption is falling and internet usage is rising fast, and as many prospective online shoppers now consider a search engine to be as important as talking to a trusted friend when making purchasing decisions.<sup>7</sup>

The largest websites are now often those that bring together information created by the people who use them. The proportion of people using such sites to help themselves and others is now on a par with the friendly societies and mutuals of the nineteenth century.

A wide range of user communities have emerged whose goals align closely with those of different parts of government. In education, for example, these

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\* This was first published as a report titled *The Power of Information: An independent review* by Ed Mayo and Tom Steinberg. The original report is available at: [www.opsi.gov.uk/advice/poi/power-of-information-review.pdf](http://www.opsi.gov.uk/advice/poi/power-of-information-review.pdf)

2 See Tim O’ Reilly, *What is web 2.0?*, 2005, at [www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html](http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html).

3 Hellinger, F. J. (2002). *Focus on Research: HIV Disease*, Agency for Healthcare Research and Quality, United States Department of Health and Human Services, available at [www.ahrq.gov/news/focus/fochiv.pdf](http://www.ahrq.gov/news/focus/fochiv.pdf)

4 Hampton, K. N. (2007). ‘Neighborhoods in the network society: the e-Neighbors Study’, *Information, Communication and Society*, forthcoming.

5 Jin, G. Z. and P. Leslie (2003). ‘The effect of information on product quality: Evidence from restaurant hygiene grade cards’, *Quarterly Journal of Economics* 118(2): 409–51.

6 Dr Grace Lomax, presentation to Patient Compliance, Adherence and Persistence Conference, 2005.

7 Henley Centre Report for AOL (2004). *Brand new world: how the internet is changing consumers’ attitudes to brands and what marketers and advertisers can do about it*, available at [www.aolbrandnewworld.co.uk](http://www.aolbrandnewworld.co.uk).

range from small self-help groups of a few dozen students with Asperger's Syndrome to over 8 million posts on TheStudentRoom, about issues such as homework and university applications. Parenting websites like Netmums<sup>8</sup> operate as an online community, with 275,000 users providing advice to prospective and current parents. In the consumer field, MoneySavingExpert<sup>9</sup> now has 2.5 million unique users per month with many sharing information on the latest money-saving tips and tricks.

Government itself produces a vast amount of highly valuable information, and the internet increases its potential social and economic value. In terms of scale, the Ordnance Survey, for example, estimates that it underpins £100 billion per year of economic activity in the UK.<sup>10</sup> Direct revenues from public sector information are only a fraction of the wider value that this information creates. Revenues to government from the sale and licensing of public sector information are around £340 million, and the total market for public sector information stands at £590 million per year. The Office of Fair Trading estimates that this could double to £1 billion per year if reforms are implemented.<sup>11</sup>

This report argues that government could now grasp the opportunities that are emerging in terms of the creation, consumption and re-use of information. Current policy and action is not yet adequate to grasp these opportunities. To this end, the report recommends a strategy in which government:

- welcomes and engages with users and operators of user-generated sites in pursuit of common social and economic objectives;
- supplies innovators that are re-using government-held information with the information they need, when they need it, in a way that maximises the long-term benefits for all citizens; and
- protects the public interest by preparing citizens for a world of plentiful (and sometimes unreliable) information, and helps excluded groups take advantage.

This review makes 15 practical recommendations in line with this strategy. These are designed to achieve a step change in the way that government acts in relation to public information and user-generated websites. Noting that clear leadership is required to effect the proposed changes, the review also proposes that the Cabinet Office, in conjunction with the Office of Public Sector Information (OPSI),<sup>12</sup> re-

8 [www.netmums.com](http://www.netmums.com).

9 [www.moneysavingexpert.com](http://www.moneysavingexpert.com).

10 Oxford Economic Research Associates Ltd (Oxera) Report for Ordnance Survey, *The economic contribution of Ordnance Survey GB*. September 1999.

11 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.offt.gov.uk/shared\\_offt/reports/consumer\\_protection/oft861.pdf](http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft861.pdf).

12 The Office of Public Sector Information (OPSI) is a part of the National Archives. It advises on and regulates the operation of public sector information re-use, including



port to the Cabinet Sub-Committee on Electronic Service Delivery (PSX(E)) by December 2007 on departments' plans for implementing this report's recommendations, and report again on progress and results by December 2008.

## RECOMMENDATIONS

### EXPLORING NEW OPPORTUNITIES

*Recommendation 1.* To improve service delivery and communication with the public, the Central Office of Information (COI), in partnership with the Office of Public Sector Information (OPSI), should coordinate the development of experimental partnerships between major departments and user-generated sites in key policy areas, including parenting advice (Department for Education and Skills), services for young people, and healthcare (Department of Health).

*Recommendation 2.* To reduce unnecessary duplication of pre-existing user-generated sites, COI should update the guidelines for minimum website standards by December 2007; departments should be strongly advised to consult the operators and users of pre-existing user-generated sites before they build their own versions.

*Recommendation 3.* Departments, monitored by COI, should research the scale and role of user-generated websites in their areas, with a view to either terminating government services that are no longer required, or modifying them to complement citizen-led endeavours.

*Recommendation 4.* To encourage innovation in the re-use of information by non-commercial users, UK trading funds should, in consultation with OPSI, examine the introduction of non-commercial re-use licences, along the lines of those pioneered by the BBC's Backstage project and Google Maps.

*Recommendation 5.* To promote innovation, Ordnance Survey should, by the end of December 2007, launch its Open Space project to allow non-commercial experimentation with mapping data.

*Recommendation 6.* To promote innovative use of public sector information, the Department for Transport, with the support of the Chief Scientific Adviser's Committee, should complete the partially undertaken scoping and costing of a 'data mashing laboratory' and advise the Cabinet Committee of Science and Innovation on appropriate next steps.

*Recommendation 7.* To improve understanding, effective usage and take-up of government services, COI should examine options for more self-help fora for public services and publish guidance for departments on how and when to set up

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the management of Crown copyright. For more, see [www.opsi.gov.uk](http://www.opsi.gov.uk).

such fora by December 2007.

## IMPROVING ACCESS TO PUBLIC SECTOR INFORMATION

*Recommendation 8.* To improve government's responsiveness to demand for public sector information, by July 2008 OPSI should create a web-based channel to gather and assess requests for publication of public sector information.

*Recommendation 9.* By Budget 2008, government should commission and publish an independent review of the costs and benefits of the current trading fund charging model for the re-use of public sector information, including the role of the five largest trading funds, the balance of direct versus downstream economic revenue, and the impact on the quality of public sector information.

*Recommendation 10.* To ensure the most appropriate supply of information for re-use, government should consistently apply its policy of marginal cost pricing for 'raw' information to all public bodies, including trading funds, except where the published economic analysis in recommendation 9 shows this does not serve the interests of UK citizens.

*Recommendation 11.* To improve the supply of government information for re-use, the Better Regulation Executive should promote publication of regulatory information, and should work with OPSI to encourage publication in open formats and under licences permitting re-use.

*Recommendation 12.* To ensure that OPSI can regulate the public sector information market effectively, government should review the fit between OPSI's functions and funding, and recommend options that will ensure it is fit for purpose.

## PROTECTING THE PUBLIC INTEREST

*Recommendation 13.* To maximise the potential value of civil servants' input into online fora, by autumn 2007 the Cabinet Office Propriety and Ethics and Government Communications teams should together clarify how civil servants should respond to citizens seeking government advice and guidance online.

*Recommendation 14.* The Digital Inclusion Team should explore the potential for promoting digital and social inclusion through the partnerships proposed in recommendation 1 and report to the Sub-Committee on Electronic Service Delivery (PSX(E)), in line with recommendation 15.

## FOLLOW-THROUGH AND NEXT STEPS

*Recommendation 15.* The Minister for the Cabinet Office, in conjunction with OPSI, should report to PSX(E) by December 2007 on departments' plans for implementing these recommendations, and by December 2008 on progress and results.

### PART 1: INTRODUCTION

This is an external review by Tom Steinberg, Director of mySociety, and Ed Mayo, Chief Executive of the National Consumer Council, produced with support from the Prime Minister's Strategy Unit

The arguments and recommendations are those of the authors only, and do not reflect government policy

The review is about information created both by citizens and government and is not about individuals' private information, such as medical or credit records.

1. In February 2007, following a Policy Review<sup>13</sup> seminar on 'The Power of Information', the Minister for the Cabinet Office, Hilary Armstrong, asked Tom Steinberg, Director of mySociety, to take forward a rapid review with Ed Mayo, Chief Executive of the National Consumer Council. Support for the review has been provided by the Prime Minister's Strategy Unit (see Appendix 1).

2. The commissioning of this review is consistent with issues raised by the Policy Review on Public Services and the recommendation that:

The government should support the development of new and innovative services that provide tailored advice to specific groups (for example the netmums.com website which provides a discussion and advice forum for mothers). These are outside government's direct influence, but government has a role to play in supporting them – for example by ensuring that they are not undermined by government programmes or websites with similar objectives, and have easy access to publicly available information.<sup>14</sup>

3. The terms of reference for the review are provided in Box 1 below.

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13 Announced by the Prime Minister in 2006, the Policy Review was a large-scale review of future challenges for government. For more information see: [www.cabinetoffice.gov.uk/policy\\_review/index.asp](http://www.cabinetoffice.gov.uk/policy_review/index.asp).

14 HM Government (2007). *Building on Progress: Public Services*, p. 38, accessed at [www.cabinetoffice.gov.uk/policy\\_review/index.asp](http://www.cabinetoffice.gov.uk/policy_review/index.asp).

**Box 1: Power of Information Review – terms of reference**

To explore new developments in the use of citizen- and state-generated information in the UK, and to present an analysis and recommendations to the Cabinet Office Minister as part of the Policy Review.

**Sub Questions**

What is already going on? How significant is it?

How can government catalyse more beneficial creation and sharing of information, and mutual support, between citizens?

What can be done to improve the way government and its agencies publish and share the data they already have?

Are there any notable information opportunities or shortfalls in sectors outside government that those sectors could work to rectify?

4. To inform the recommendations in this report, the review team has undertaken:

- interviews with over 60 stakeholders in central and local government, business and public bodies (see Appendix 2);
- a literature review into the current and potential benefits of online communities of support, political engagement and communication; and
- three in-depth case studies to illustrate the costs and benefits of more online public sector information exchange. The topics were: the benefits of health communities (see Appendix 3), the impacts of publishing restaurant food safety ‘scores’ (see Box 16), and options for an online income tax self-assessment advice facility (see Appendix 5).

5. This report represents an external analysis of the issues, and does not represent government policy or the views of the Government. While the following analysis is informed by a UK and global context, many recommendations relate to policy issues that are devolved. Because of the need to focus, such recommendations in this report apply to England only. However, many of the underlying issues – for example, about the rise of online communities and the opportunity for public services to engage in new ways online – will apply in equal measure to all parts of the UK. The Review hopes this work will be a resource for each of the devolved administrations, as they explore specific strategies appropriate to their context.

## CHANGES IN THE USE AND AVAILABILITY OF INFORMATION

- New tools online mean it is now as easy to create and distribute information online as it is to consume it
- Two groups of citizens have emerged as a consequence of the rise of the in-

ternet: people who make use of user-generated websites, and people who mix and ‘mash’ data to create valuable new information and services.

## USE OF THE INTERNET HAS BECOME WIDESPREAD, IMPACTING ON CITIZENS IN DIVERSE WAYS

6. The majority of the population of the United Kingdom now uses the internet, albeit with some important exceptions (for example, socially excluded groups and those without access). Internet usage has grown from virtually zero in 1990, when the World Wide Web first emerged, to approximately 61% today.<sup>15</sup> This is considerably faster than the historic growth rates of comparable communications technology, like radio or the PC. Furthermore, the UK now has the fifth largest broadband population in the world, with 12 million broadband households.<sup>16</sup>

### Box 2: Historic growth rates

‘It took just 40 years for the first 50 million people to own a radio; just 16 years for the first 50 million people to own a PC; but just 5 years for the first 50 million to be on the internet’.

Remarks by the Rt Hon Gordon Brown MP, Chancellor of the Exchequer, to the Government Leaders Forum Europe, at the Scottish Parliament, 31 January 2007

7. The internet has started rapidly and profoundly to affect social and economic relations in the United Kingdom. There is no better way to demonstrate the significance of the internet than to look at television. TV, resistant to moderation or abstinence campaigns from teachers and parents for 50 years, is now becoming measurably less and less popular among internet users.<sup>17</sup> TV consumption is falling and internet usage is rising fast.

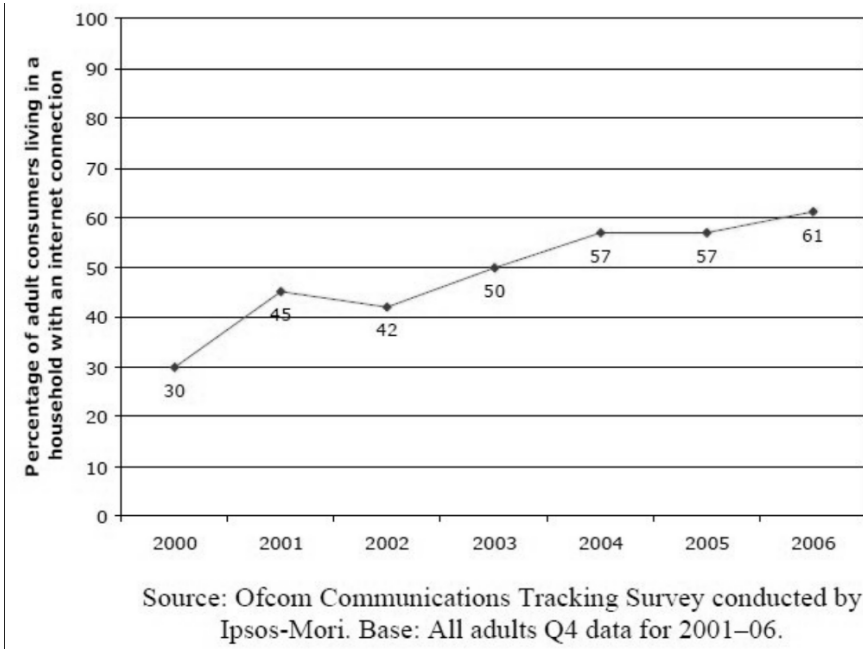
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15 Ofcom (2007). *The communications market 2007: nations and regions*, [www.ofcom.org.uk/research/cm/cm07/uk](http://www.ofcom.org.uk/research/cm/cm07/uk).

16 eMarketer, March 2007, [www.emarketer.com](http://www.emarketer.com).

17 Ofcom (2006). *International communications market report 2006*, [www.ofcom.org.uk/media/news/2006/11/nr\\_20061129](http://www.ofcom.org.uk/media/news/2006/11/nr_20061129).

Figure 1: UK trends in internet take-up<sup>18</sup>



8. This change in the way people use their time is affecting other things, such as the ways in which they make decisions. Internet users now consider search engines as important when researching products and services as personal recommendations from trusted friends.<sup>19</sup> A recent research report by the Pew Internet and American Life research program called ‘The Strength of Internet Ties’<sup>20</sup> found that 60 million Americans claimed that ‘the internet has played an important or crucial role in helping them deal with at least one major life decision in the past two years’.

## INCREASINGLY CITIZENS ARE MAKING THEIR

18 Ofcom (2007). *The communication market 2007: nations and regions*, [www.ofcom.org.uk/research/cm/cm07/uk](http://www.ofcom.org.uk/research/cm/cm07/uk).

19 Henley Centre Report for AOL (2004). *Brand new world: how the internet is changing consumers’ attitudes to brands and what marketers and advertisers can do about it*, available at [www.aolbrandnewworld.co.uk](http://www.aolbrandnewworld.co.uk).

20 Boase, J. et al. (2006). *The strength of internet ties*, Pew Internet and American Life Project, [www.pewinternet.org/pdfs/PIP\\_internet\\_ties.pdf](http://www.pewinternet.org/pdfs/PIP_internet_ties.pdf).

## OWN INFORMATION ON THE INTERNET, AND CONSUMING INFORMATION MADE BY OTHERS

9. Popular internet sites make it as easy to create information as to consume it. These tools include:

- fora and chat rooms that allow people easily to post questions and get answers on issues of common concern (e.g. The Thorn Tree travel forum<sup>21</sup>);
- social networking tools that allow people to keep track of the interests and activities of their friends (e.g. MySpace and Facebook);
- blogging and video sites that allow citizens easily to become writers, publishers and video producers (e.g. YouTube, Blogger); and
- wiki-based sites that enable joint creation of large and diverse repositories of user-generated information on particular topics (e.g. Wikipedia).

### Box 3: Wikipedia – an example of collaborative production

Wikipedia is one of the best-known and best-used sites on the internet. It is an online encyclopaedia that anyone can edit. Wikipedia is available in 249 different languages. Users employ a technology known as a ‘wiki’ to allow visitors to the site to add, remove, edit and change available entries, easily and quickly.<sup>22</sup> Other wikis in a variety of areas are blossoming around the web, such as one for the 2007 World Economic Forum in Davos, Switzerland.<sup>23</sup>

Previously, online collaborative systems were the preserve of specialist or professional communities. The changing use of technology has made collaborative production much easier and cheaper. In 2006, the English language Wikipedia registered its one millionth user account, and passed the 1.5 million mark for English articles.<sup>24</sup>

There has been much debate about the accuracy of information published on Wikipedia. A qualitative comparison of the online Britannica and Wikipedia has been published. On 14 December 2005, the scientific journal *Nature* reported that, within 42 randomly selected general science articles, there were 162 mistakes in Wikipedia versus 123 in Britannica.<sup>25</sup>

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21 [thorntree.lonelyplanet.com](http://thorntree.lonelyplanet.com).

22 The term ‘wiki’ is based on the Hawaiian word meaning fast (see [en.wikipedia.org/wiki/wiki](http://en.wikipedia.org/wiki/wiki)).

23 World Economic Forum homepage, [www.weforum.org/en/index.htm](http://www.weforum.org/en/index.htm).

24 Wikipedia, ‘History of Wikipedia’, [en.wikipedia.org/wiki/History\\_of\\_wikipedia#\\_note-milestone\\_articles#\\_note-milestone\\_articles](http://en.wikipedia.org/wiki/History_of_wikipedia#_note-milestone_articles#_note-milestone_articles).

25 Giles, J. (2005) ‘Internet encyclopaedias go head to head’. *Nature* 438: 900–901,

However, Encyclopædia Britannica, Inc. characterised Nature's study as flawed and misleading, and called for a 'prompt' retraction.<sup>26</sup>

10. Using these tools, citizens have increasingly changed their role from passive recipients of information provided by experts, to active producers of information themselves, and consumers of information made by other citizens. This information varies from recipes and photos to parenting advice, tributes and eulogies at times of bereavement.

11. Such creation and sharing of information across electronic networks is not new. Rather, it is a phenomenon that has only just achieved a scale of consequence for policymakers. Online communities have existed since before the World Wide Web as far back as the 1970s. They included email communities of self-help in the fields of health, education, job searching and so on, normally shared between experts in a few universities.

12. What used to be of esoteric interest to a handful of academics is now a mainstream part of the lives of millions of Britons. User-generated sites like YouTube,<sup>27</sup> Bebo<sup>28</sup> and MySpace<sup>29</sup> regularly occupy slots in the league tables of top websites in the UK. Even major sites that have a heritage of professionally authored work, such as the BBC and the newspaper websites, now all contain varying amounts of user-created information.

13. Amid this explosion of user-generated sites there is much that is of little or no relevance to government: online chat about bands, films, socialising and so forth is rightly considered none of the public sector's business. But there are sites that clearly relate directly to major government agendas and that are highly popular. MoneySavingExpert,<sup>30</sup> for example, is a site dedicated to helping people save money and get better deals on all sorts of goods and services. Its forum has 180,000 members and millions of visitors each month: easily on the scale of friendly societies or trade unions. One of the principal catalysts for this review was the need to find out how government should learn to live in a world that contains such remarkable new bodies.

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[www.nature.com/news/2005/051212/full/438900a.html](http://www.nature.com/news/2005/051212/full/438900a.html).

26 'Fatally Flawed: Refuting the recent study on encyclopedic accuracy by the journal Nature', *Encyclopædia Britannica, Inc.* (March 2006), [corporate.britannica.com/britannica\\_nature\\_response.pdf](http://corporate.britannica.com/britannica_nature_response.pdf).

27 [youtube.com](http://youtube.com).

28 [bebo.com](http://bebo.com).

29 [myspace.com](http://myspace.com).

30 [moneysavingexpert.com](http://moneysavingexpert.com).



## THE INTERNET IS INCREASING THE VALUE OF INFORMATION CREATED BY GOVERNMENT

14. The over 100,000 public bodies in the UK produce a huge range of information. These vary from school league tables to tide timetables, and from the Tube map to the Census.

15. Computers allow public sector information to be re-used and combined to make new services that were never envisaged when the information was originally collected. This generates social and economic value of diverse kinds.

16. One of the most remarkable examples of how much new value can reside inside what is essentially old information is the seemingly mundane field of postcodes. Originally, postcodes were allocated and recorded simply to help the Post Office deliver letters and parcels. These days the database describing which postcodes are to be found where in the UK underpins countless websites, from that of National Statistics to those of pizza-delivery companies. Every day new uses are found, generating extra value at no additional cost to the public sector.

## THESE TWO CHANGES HAVE CREATED TWO NEW GROUPS OF CITIZENS

17. The changes described above have facilitated the rise of two new groups of citizens. The first group comprises people who create information on the internet. The second group is composed of people who take information from various sources, including government, and mix it together to make new tools and services. The next two sections look at these two groups.

## THE FIRST NEW GROUP COMPRISES PEOPLE WHO TAKE PART IN USERGENERATED WEBSITES

18. The diversity of issues and activities covered on user-generated websites is more or less as great as the diversity of the people who use them. Some human needs are very common, though – for example, the experience of raising children – and consequently some very large user-generated websites have grown up around these. Two such sites in the UK are Netmums and Mumsnet (see Box 4).

Box 4: Netmums ([www.netmums.com](http://www.netmums.com)) and Mumsnet ([www.mumsnet.com](http://www.mumsnet.com))

Netmums is an online community for mothers and fathers with (or ex-

pecting) young children. The site claims 275,000 registered users spread across a ‘family of local websites’, in which ‘each local website is edited and maintained by a local mum with support from a central team’. The founders argue that local content is important because only ‘local mothers can truly access and provide the local information essential to life as a mum to young children’. The site provides advice and support for parents about bringing up their children, along with local listings of other services.

The site is similar to Mumsnet, another popular online site providing parenting information, along with reviews of products and services. Mumsnet claims around 10,000 posts and comments on an average day. Janice Turner, a columnist for *The Times*, wrote recently that she could not ‘see how the Government could improve on Mumsnet. Indeed, the fact it is run from one woman’s back bedroom in North London makes it infinitely more trustworthy’.

Box 5: Consumer advocacy – extract from a report by the Welsh Consumer Council (forthcoming)<sup>31</sup>

‘The *nthell:world*<sup>32</sup> web forum is one of the earliest examples of an independent effort mobilised by consumers against the actions of a single company. Formed in 2000 by NTL customer Frank Whitestone, it is a consumer lobby community, which set out to provide a public sounding board for customers disgruntled by the company’s service. Currently numbering over 25,000 members, *nthell:world* became an influential force because its focus concentrated, laser-like, on just one service provider (now Virgin Media), offering a space for customers to vent, share and highlight poor-quality provision. In what has become a public relations risk, company representatives who type ‘[Company Name] sucks’ into Google will often find that just such grassroots campaigns have been started against them.

‘Although the body of customer experience passing through the *nthell:world* represented bad publicity in high definition, in recognition of the positive contribution the site’s users were making to improving its services, NTL’s CEO Simon Duffy met the site’s owners in 2005 to discuss integrating<sup>33</sup> *nthell: world* into the company’s own customer service offer-

31 Welsh Consumer Council (unpublished report, forthcoming 2007). *Advocacy 2.0: Consumer empowerment and representation on the new net*.

32 [www.nthellworld.co.uk/home.php](http://www.nthellworld.co.uk/home.php).

33 Thread discussing contents of meeting on Cable Forum: [www.cableforum.co.uk/](http://www.cableforum.co.uk/)

ing – ensuring urgent problems highlighted on the forum were routed into the organisation’s existing infrastructure. Founder Whitestone later sold the site to NTL and joined the company as staff<sup>7</sup>.

19. People become regular users of such websites because the sites contain the sort of things they need to run their own lives: hints, tips, suggestions, moral support, stories, and reviews and so on, written and shared with other members of the public. Often advice dispensed in such fora trumps official guidance in terms of popularity simply because it is written in language that means something to users and has the name of a real person attached.

20. Parenting is not the only area where user-generated sites are helping people to help each other. Communities encountered by this review ranged from one with just a few dozen people using email to share and manage the experience of being a student with Asperger’s Syndrome to another called TheStudentRoom,<sup>34</sup> which had over 8 million posts, mainly about homework and university applications.

## THE SECOND NEW GROUP IS PEOPLE WHO RE-USE INFORMATION TO BUILD NEW TOOLS AND SERVICES (INCLUDING GOVERNMENT)

21. Another new group of citizens that has emerged out of the rapid technological change in the last half decade consists of information re-users, more colloquially and widely known as ‘data mashers’. This group includes businesses, non-profit organisations and normal internet users who want to mix and combine information to generate valuable new forms of information and new services.

22. Some of the most desirable information for this new group is data generated by government, especially geographic information, which can often be used like a glue to bind together disparate information.

23. Certain of these re-users are companies, some of which have grown to considerable size. The internet company uSwitch,<sup>35</sup> founded in 2000, helps people compare utilities providers. It combines private sector information with quantities of public sector information to deliver its services. It was recently bought for over £200 million.

24. At the other end of the scale is mtraffic,<sup>36</sup> a minimalist yet highly useful

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board/10/27095-cableforum-and-ntl-to-meet.html.

34 [www.thestudentroom.co.uk](http://www.thestudentroom.co.uk).

35 [uswitch.com](http://uswitch.com).

site for accessing the BBC's traffic reports on a mobile phone, which registers over 10,000 visits a month. It was built as a volunteer project by programmer Tom Dyson, one of the 1,300 members of the BBC's Backstage project. Backstage uses non-commercial data licences to encourage a community of data mashers who exist outside the commercial market.

25. The key challenge demonstrated by these examples is that the value inherent in certain sorts of information is now recognised as changing every day, and, largely speaking, is increasing. It is no longer true that only a big department or large company can generate important benefits using information. The cost-benefit calculations that historically underpinned what information is collected, who can use it, and how it is paid for are rapidly becoming outdated.

### PART 3: WHY THESE CHANGES MATTER

- The changing value of public sector information matters to government because there are substantial potential economic and social benefits to citizens from exploiting it
- Engaging with user-generated sites and data mashers can help government deliver better services, and help citizens to help themselves.

### INFORMATION PRODUCED BY THE PUBLIC SECTOR HAS ECONOMIC VALUE

26. Public sector information can generate economic value of two broadly different kinds:

- direct value: revenue generated for government by selling access to public sector information; and
- commercial value: revenue generated by companies who make use of public sector information.

27. One of the most easily measured forms of economic value generated by public sector information is the direct revenue earned by parts of the public sector selling information. In 2006, the Office of Fair Trading (OFT) estimated revenues from the public sector information market at £590 million per year.<sup>37</sup>

28. Companies pay for public sector information because it helps them make or save money. The Met Office, for example, is aware that 'every year

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36 mtraffic.org.

37 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.oft.gov.uk/shared\\_oftrreports/consumer\\_protection/oft861.pdf](http://www.oft.gov.uk/shared_oftrreports/consumer_protection/oft861.pdf).

UK companies lose thousands of pounds because of the weather – from late or absent staff, delayed deliveries, surplus or insufficient stock to cancellation of projects'.<sup>38</sup> Consequently, it offers services, built on public sector information, that help businesses make informed decisions that prevent the loss of company money.

29. Companies that use or re-use public sector information can generate revenue, part of which is later paid to government in the form of corporation tax. Estimating how much is paid in tax, or how much could be, is difficult but important. According to an economic study commissioned by Ordnance Survey, its geographic information underpins an impressive £100 billion of activity in the UK economy. It is easy to see that without good-quality mapping, postcodes or land ownership information, large parts of the economy would be unable to function at all (i.e. anything that required delivery, or sale, rental or purchase of property).

## INNOVATIVE USE OF PUBLIC SECTOR INFORMATION HAS SOCIAL VALUE

30. It can be easy to forget that government releases and uses public sector information to help large numbers of people. This review has identified a range of studies in which the direct benefits of high quality information were measured.

31. In a study involving 200,000 patients,<sup>39</sup> it was shown that, by providing clear and useful information when dispensing medication, pharmacists could improve patient adherence and persistence with medication advice by 16–33%. This both increased the welfare of patients, and saved government downstream costs of further unnecessary treatment.

32. A recent study of the effects of publishing heart surgery mortality rates showed the effect on later mortality rates to be at worst neutral and at best helpful to 26,000 patients studied.<sup>40</sup>

## INFORMATION CREATED BY CITIZENS HAS

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38 [www.metoffice.gov.uk/services/business.html](http://www.metoffice.gov.uk/services/business.html).

39 Dr Grace Lomax, presentation to Patient Compliance, Adherence and Persistence Conference, 2005.

40 Bridgewater, B., A. Grayson, N. Brooks, et al. (2007). 'Has the publication of cardiac surgery outcome data been associated with changes in practice in Northwest England? An analysis of 25,730 patients undergoing CABG surgery under 30 surgeons over 8 years', *Heart*, June 93(6): 744–748, available at [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=17237128&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=17237128&dopt=Abstract).

## ECONOMIC VALUE

33. Several studies have shown that using the internet increases customer knowledge and collective consumer power, leading to improved quality of goods and services, innovation and often lower prices. Research in 2003 found that use of price-comparison sites yielded an average saving of 16% on electronic goods.<sup>41</sup> Similarly, much of the travel holiday industry has been transformed by the internet, driven by the effect of information on consumer decisions (see Box 6).

### Box 6: How the internet has transformed the holiday industry

A Burst Media survey of over 2,000 web users who planned to travel in the next three months found that nearly half (47.2%) of respondents who intended to use the web to plan their upcoming travel said the internet would be their primary travel resource.<sup>42</sup> In 2006, 20.1% of UK survey respondents booked their most recent holiday online, compared to 16.8% in 2005 and 12.4% in 2004.<sup>43</sup> These changes are reducing the need for travel agents and improving the direct information base on which travellers are able to plan. Furthermore, the emergence of new websites allowing traveller feedback on certain travel venues and experiences can place pressure on the providers to improve over time.

## INFORMATION CREATED BY CITIZENS HAS SOCIAL VALUE

34. There are few historical precedents for the hundreds of thousands of people who come together out of a shared interest on single websites like Netmums. The precedents that do exist – corporations, friendly societies and trade unions – have all clearly had impacts on, and have raised questions about, the role of government. Despite the huge technological changes over the past 150 years, it is possible to detect the echoes of these earlier social institutions in current development, for example in helping:

- parents to raise healthy, well-educated, socially well-adjusted children;
- shoppers to avoid paying more than the going market rate for goods and ser-

41 Baye, M. R., J. Morgan, et al. (2003). 'The value of information in an online consumer electronics market', *Journal of Public Policy and Marketing* 22(1): 17–25.

42 Burst Media via Marketing Vox, February 2007, [www.burstmedia.com](http://www.burstmedia.com).

43 British Market Research Bureau's (BMRB), Target Group Index (TGI) Survey of GB 2006, available at [www.bmrb-tgi.co.uk/main.asp?p=130](http://www.bmrb-tgi.co.uk/main.asp?p=130).

vices; and

- the sick to recover, or cope with and manage their conditions.

35. Various academic studies have examined whether participation in different sorts of user-generated websites, normally online communities, has any positive impact. Most of the studies that have any measurable outcomes have shown some positive effect of participating in user-generated websites. For example, one study found a positive correlation between the amount of participation on online communities of fellow patients and the psychosocial well-being of women with breast cancer.<sup>44</sup>

36. Similarly, a US Health Department study found that use by HIV patients of their Comprehensive Health Enhancement Support System ‘not only helps HIV patients keep track of their condition and alert their doctors when they are having problems, but it also has helped lower their average treatment costs by \$400 a month’.<sup>45</sup>

37. Furthermore, and contrary to expectations, a study of 2,500 users of a Swedish commercial parenting site found that it was disadvantaged parents who received most support via the website. This support came in the form of finding people they could trust and ask for advice.<sup>46</sup> A remarkable 68% of users in the survey identified themselves as at or below average national income.

38. Of course, the objectives of citizens who operate user-generated websites do not match the objectives of government. Indeed, much of the media coverage of user-generated sites has focused on cases in which user-generated websites display information perceived as harmful or illegal. This review is aware of the potential to use any technology for good or bad purposes. Appendix 4 provides some examples where the creation and distribution of information online can actually be harmful. While this potential for harm does exist, it does not negate the potential for the same technology to be used in ways that promote positive social and economic outcomes.

## PART 4: THE CHALLENGES FACING

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44 Rodgers, S. and Q. Chen (2005). ‘Internet community group participation: psychosocial benefits for women with breast cancer’, *Journal of Computer-Mediated Communication* 10(4): article 5.

45 Hellinger, F. J. (2002). *Focus on Research: HIV Disease*, Agency for Healthcare Research and Quality, United States Department of Health and Human Services, available at [www.ahrq.gov/news/focus/fochiv.pdf](http://www.ahrq.gov/news/focus/fochiv.pdf).

46 Sarkadi, A. and S. Bremberg (2005). ‘Socially unbiased parenting support on the internet: a cross-sectional study of users of a large Swedish parenting website’, *Child: Care, Health and Development* 31(1): 43–52.

## GOVERNMENT

- There are significant new opportunities for government to capitalise on the new widespread ability to collect, re-use and distribute information
- Government has not yet fully engaged with the new generation of ordinary citizens wishing to use its information as ingredients in a new range of services
- Government can contribute indirectly to improve the lives of citizens by doing more to supply its information to the operators of user-generated websites
- Government needs a new strategy and vision for engaging with citizens and re-users of its information.

### GOVERNMENT EFFORTS TO RESPOND SO FAR

39. Government is aware that the internet is changing the face of the UK economy and society. Various government agencies are looking into issues around information use and re-use (see Box 7 below) and government has already made a number of policy changes in response to the evolving nature and value of information, including:

- *Cross Cutting Review of the Knowledge Economy* (2000),<sup>47</sup> which made recommendations regarding information subject to Crown copyright, and encouraged a shift to marginal cost pricing as a default position for the sale of information

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Box 7: Parts of government with information policy remits

The Office of Public Sector Information (OPSI) advises on and regulates the operation of public sector information re-use, including the management of Crown copyright.

The Advisory Panel on Public Sector Information (APPSI) advises ministers on information policy issues that will encourage and create opportunities for greater re-use of public sector information.

The Ministry of Justice is responsible for the ‘digital dialogue’, which is examining how central government can strengthen consultation and interaction with citizens using ICT.

The Department of Transport is responsible for the Science and Innovation Ministerial Committee’s Data Grand Challenge on realising the benefits of (particularly real-time) data within and outside government.

The Better Regulation Executive is looking at information as a regulatory tool, including focus-group work and a series of case studies.

The Government Communications Group is analysing the government’s digital and social media capability.

The e-Government Unit is responsible more generally for ensuring that IT supports the business transformation of government itself, so that government can provide better, more efficient public services.



- *Transformational Government: Enabled by Technology* (2005),<sup>48</sup> which made recommendations to design IT services more around the citizen, and move to a shared services culture
- *Service Transformation* (Varney Review) (2006),<sup>49</sup> in which Sir David Varney advised the Chancellor on ways to make the channels through which services are delivered more responsive to users, including improving Directgov and Businesslink so they become the primary information and transactional channels for citizens and businesses
- *Commercial Use of Public Information* (2006),<sup>50</sup> in which the Office of Fair Trading made a number of recommendations, including changing accounting practices to ensure that public sector information providers generate as competitive a market as possible in information.
- *Electronic Government Services for the 21st Century* (2000),<sup>51</sup> in which the Performance and Innovation Unit took a strategic view of which public services should be delivered by electronic means and looked at the options for securing delivery of these services, including the respective roles of the public and private sectors.

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48 HM Government (2005). *Transformational Government: Enabled by Technology*, [www.cio.gov.uk/documents/pdf/transgov/transgov-strategy.pdf](http://www.cio.gov.uk/documents/pdf/transgov/transgov-strategy.pdf).

49 Varney, D. (2006). *Service Transformation: A Better Service for Citizens and Businesses, a Better Deal for the Taxpayer* (Varney Review), [www.hm-treasury.gov.uk/media/53D/F2/pbr06\\_varney\\_review.pdf](http://www.hm-treasury.gov.uk/media/53D/F2/pbr06_varney_review.pdf).

50 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.offt.gov.uk/shared\\_offt/reports/consumer\\_protection/oft861.pdf](http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft861.pdf).

51 Cabinet Office (2000). *Electronic Government Services for the 21st Century*, [www.cabinetoffice.gov.uk/strategy/downloads/su/delivery/e-gov.pdf](http://www.cabinetoffice.gov.uk/strategy/downloads/su/delivery/e-gov.pdf).

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The e-Government Unit is responsible more generally for ensuring that IT supports the business transformation of government itself, so that government can provide better, more efficient public services.

40. Despite these positive moves, this review has found that there remains a need to push through reforms to ensure that the full benefits of information creation and re-use outside of government are exploited.

## GOVERNMENT HAS SO FAR INTERACTED LITTLE WITH USER-GENERATED WEBSITES

41. To date, government has not yet adequately engaged with most user-generated sites or non-professional re-users of its information. Part of the reason for this low level of engagement is likely to be risk aversion in light of the less controlled environment that user-generated websites represent. Websites on which anyone is allowed to participate are, by definition, less controlled than sites to which only the operator can contribute. This means that users may use sites in ways that are incompatible with government objectives or ways of operating. For example, civil servants may fear that, by providing relevant information for the users of a site, they might attract criticism toward government or themselves. Similarly, civil servants may be concerned that engaging in less controlled on-line fora may mean that bad or anti-social behaviour by other users could reflect poorly on government.

42. It is possible that government has not adequately engaged with user-generated sites simply because these new, large-scale user-generated sites have emerged too quickly for government to establish ways of connecting to them. For example, the managers of two different user-generated sites interviewed as part of this review each reported over 20 meetings with parts of government that wanted to engage with them but that simply did not yet have the contracting policy, processes and guidelines in place for collaborative work.<sup>52</sup>

## THERE ARE BARRIERS TO RE-USING

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52 Stakeholder interviews (see Appendix 2).

## INFORMATION PRODUCED BY GOVERNMENT

43. Research from the Statistics Commission<sup>53</sup> and the Office of Fair Trading shows that many users of public sector information report barriers to accessing the information that they need in order to add value.

44. Common sorts of barriers include:

- information that is too hard to find;
- information that is in the wrong format, making it hard or impossible to re-use;
- information not being made available when it is needed;
- not knowing that a certain piece of information exists in the first place;
- use of the information being constrained by licensing terms; and
- information that is too expensive.

Box 8: Example of a barrier to re-using public sector information

‘I got in touch with the Stern report team, because I wanted to re-publish it in a format that people could easily read and discuss on the internet. I couldn’t make the person at the other end of the phone line understand why I didn’t want the report in 600 page PDF format. So I said I wanted to be able to read it on my phone. He told me to get a better phone’.<sup>54</sup>

45. These barriers create costs, as well as other problems for both information users and government. The Office of Fair Trading estimates that improved availability of information to re-users could double the direct market value of public sector information to £1.1 billion per year,<sup>55</sup> and has made a detailed series of recommendations to help government do this – recommendations that this review endorses.

46. Much of this improvement is expected to come from better exploitation of public sector information that is already available at marginal cost, but that may not be very widely known or easy to access. Public sector information is often not considered valuable because the public sector body that creates it does not perceive its value and so does not try to make it easily available. Similarly, it is often not considered valuable or exploited because nobody outside government is aware that the valuable information exists.

47. The review also uncovered other reasons for under-exploitation of infor-

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53 Statistics Commission, ‘The use made of official statistics’, Report No. 33, March 2007.

54 Stakeholder interview (see Appendix 2).

55 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.oft.gov.uk/shared\\_oftr/reports/consumer\\_protection/oft861.pdf](http://www.oft.gov.uk/shared_oftr/reports/consumer_protection/oft861.pdf).

mation:

- unhelpful officials lacking knowledge, which leads to blockages or delays in processing requests because they are seen as low priority and difficult to follow through; and
- confusion about the copyright status of public bodies and their information, and where to apply for a licence; this can delay negotiations.

48. Reiterating the importance of these factors, a research paper<sup>56</sup> commissioned by the Department for Transport has identified a ‘silo mentality’ in government that can impede better exploitation of public sector information (i.e. the inability to see the benefits of distributing information to others). Genuine concerns include data confidentiality, loss of formal and informal controls over data access, and data integrity. Despite these concerns, this review did also discover instances of good practice, one of which is described in Box 9.

#### Box 9: The Statute Law Database

The Statute Law Database, created by the Department of Constitutional Affairs (now the Ministry of Justice), is an official and authoritative online database of revised UK primary legislation and is available free of charge to the public. The database can be found at: [www.statutelaw.gov.uk](http://www.statutelaw.gov.uk) Launched in late December 2006, it contributes to the new Ministry of Justice’s aims of improving access to justice.

In this case, the government department in charge reached the decision that the social value that accrued from the public being readily able to find out the laws under which they are governed outweighed the possible direct revenue generation from selling access.

Through strong departmental leadership and an innovative approach, which considered the long-term public benefit, the Department of Constitutional Affairs, now the Ministry of Justice, both created a public asset and brought acclaim for the department. It acted responsively to public demand, and the decision was applauded by information and law campaigners. The decision was described as a ‘sea-change’ in the way government information is made available to the public.<sup>57</sup>

56 RAND Corporation report prepared for the Office of Science and Technology’s Data Grand Challenge: Marsden, C., J. Cave, et al. (October 2006). *Better re-use of public sector information: evaluating the proposal for a government data mashing lab*, Rand Corporation.

57 Comment by Jim Wretham, OPSI in ‘Government looks at data shake-up’, *BBC News site*, 12 January 2007, [news.bbc.co.uk/1/hi/technology/6255321.stm](http://news.bbc.co.uk/1/hi/technology/6255321.stm).

## A NEW VISION AND STRATEGY

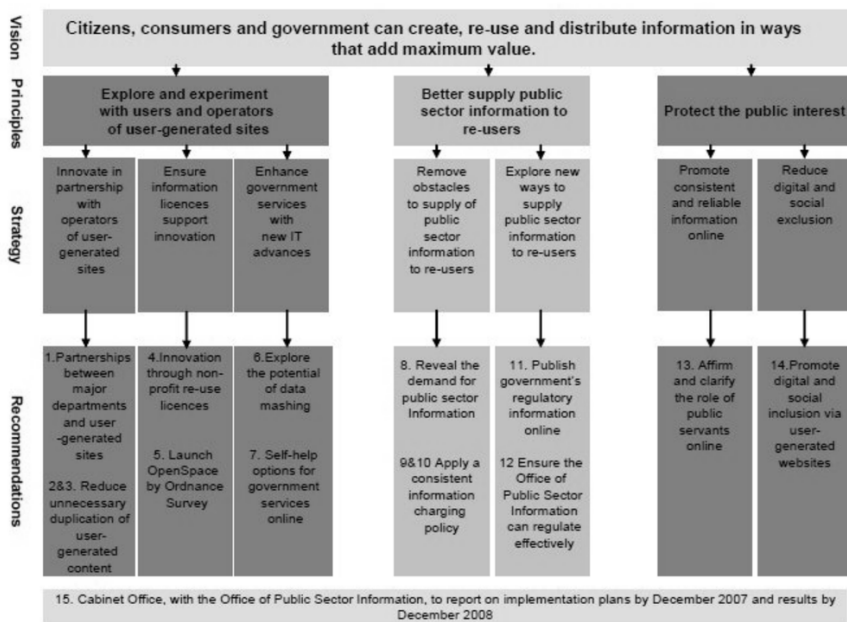
49. This report argues that government needs a new approach to public information of all kinds. If it is to capitalise on the emerging opportunities described above, government needs a clear vision and strategy. This review proposes a simple vision: that citizens, consumers and government can create, re-use and distribute information in ways that add maximum value.

50. The proposed strategy for achieving this vision involves government both addressing the barriers described above and actively taking the opportunities arising from the recent developments in the evolution of the internet. This report recommends a strategy through which government:

- welcomes and engages with users and operators of user-generated sites in pursuit of common social and economic objectives;
- supplies potential re-users with the public sector information they need, when they need it, in a way that maximises the long-term benefits for all citizens; and
- protects the public interest by preparing citizens for a world of plentiful (and sometimes unreliable) information, and helps excluded groups take advantage.

51. Figure 2 below shows how the vision, strategy and specific recommendations of this report relate to one another. Each of the following chapters covers one of the key strategic areas.

Figure 2: Vision, strategy and recommendations



## PART 5: EXPLORING NEW OPPORTUNITIES

Government should explore emerging opportunities to empower and benefit citizens in partnership with user-generated website operators and users.

To begin this process, government should:

- pilot 'Power of Information' partnerships between major departments and user-generated websites to explore the potential benefits for citizens;
- introduce standard non-commercial licences to encourage more innovation in the re-use of the most valuable sorts of public sector information;
- explore the possibilities for establishing or commissioning a government 'data mashing laboratory'; and
- introduce more self-help fora to improve understanding, effective usage and take-up of government services by users, particularly among the most disadvantaged.

52. The previous chapters suggest that there are various opportunities for better exploiting information to benefit UK citizens. This chapter makes recommendations about experiments to develop an understanding of how government can usefully participate in the new world of information production and distribution.

## GOVERNMENT SHOULD EXPERIMENT WITH 'POWER OF INFORMATION' PARTNERSHIPS WITH SUITABLE AND INTERESTED USER-GENERATED SITES

*Recommendation 1.* To improve service delivery and communication with the public, the Central Office of Information (COI), in partnership with the Office of Public Sector Information (OPSI), should coordinate the development of experimental partnerships between major departments and user-generated sites in key policy areas, including parenting advice (Department for Education and Skills), services for young people, and healthcare (Department of Health).

53. There are several types of collaboration between government and the operators of major user-generated websites that could potentially be of real value to the users of those sites. These include, but are not limited to:

- gathering feedback on different aspects of service provision;
- consulting citizens on different options for changes in service delivery;
- signposting information and services to specific groups of users who indicate particular needs;
- developing a citizen-friendly language; and
- identifying gaps in service delivery.

54. The idea that there might be mutual benefits is not new. Many user-generated website operators have never had much involvement with government. However, there are some who have tried many times to engage, finding that government departments are unable to respond quickly and flexibly. The Central Office of Information (COI),<sup>58</sup> in partnership with the Office of Public Sector Information (OPSI), should coordinate the development of experimental partnerships between major departments and operators of major user-generated websites in key policy areas, including parenting advice (Department for Education and Skills (DfES)), services for young people, and healthcare (Department of Health) to realise the benefits listed in the paragraph above.

55. COI and OPSI should liaise with the relevant departments to form a small project panel, whose task it would be to approach the managers of these web communities to discuss the possibility of collaboration. The exact details of the collaboration should not be predetermined by OPSI, COI or the relevant depart-

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58 The aim of the Central Office of Information (COI) is to enable central government and public sector bodies to secure policy objectives through achieving maximum communication effectiveness and best value for money. COI's objectives are to improve the effectiveness of and add value to government publicity programs. COI achieves this through consultancy, procurement and project management services across all communication channels. For more, see [www.coi.gov.uk](http://www.coi.gov.uk).

ments. Departments should carry out detailed discussions with the user-created website operators and identify mutually beneficial options. Government should not prejudge the exact nature of mutual benefits and should approach negotiations with an open mind.

56. In carrying out these discussions, departments should:

- work carefully with the operators and users of pre-existing sites to develop appropriate forms of interaction between government and users, and strongly heed any warnings about engagements that might deter users or harm the sites;
- engage primarily through named civil servants who are open about whom they work for, and who become regular members of communities over a period of time;
- consider how to fund initial engagements – some large sites are run by very small, overstretched organisations, and it should not be assumed that they can afford even to make the time to discuss engagement without some support; and
- evaluate these engagements in realistic time frames (i.e. no less than one year from start).

## GOVERNMENT SHOULD ENSURE IT DOES NOT DUPLICATE THE EFFORTS OF PRE-EXISTING USER-GENERATED SITES

*Recommendation 2.* To reduce unnecessary duplication of pre-existing user-generated sites, COI should update the guidelines for minimum website standards by December 2007; departments should be strongly advised to consult the operators and users of pre-existing user-generated sites before they build their own versions.

57. The corollary of embarking on partnerships with existing successful user-generated sites is that government does not attempt to replicate them and crowd them out of the market. The community of professionals who run user-generated websites in the UK has provided the review team with various examples where parts of the public sector have attempted to replicate their work (see Box 10).

Box 10: Duplication from the perspective of user-generated site operators

Netmums describe a sense of frustration that government departments have tried to ‘pigeon-hole’ them as potential contractors or promoters of government services, rather than seeing them as partners in providing a better service. Also DfES operates a user-generated parenting site called ParentsCentre<sup>59</sup> which Netmums see as duplicating their service to some



extent.

The non-profit organisation Patient Opinion, which seeks to enable patients' sharing of healthcare experiences and to influence health policy, has expressed concern that government may be replicating their service. They report that the first time they heard about the parallel and government-led 'user voice' function was through a published article.<sup>60</sup>

58. This is poor practice, for several reasons:

- Building a community of users on websites is a slow, difficult process with a very high failure rate. Duplicating efforts means investing in a very risky proposition
- This may be considered to be anti-competitive behaviour, which can make it harder for companies to attract capital, or for non-profit organisations to attract volunteers or funding
- Government could often achieve its own aims of working with service users more cheaply by working with pre-existing sites.

*Recommendation 3.* Departments, monitored by COI, should research the scale and role of user-generated websites in their areas, with a view to either terminating government services that are no longer required, or modifying them to complement citizen-led endeavours.

59. Given the spectacular growth in the number and size of user-generated websites, it seems unlikely that every government information service is now as essential as it once was. In order to reduce future duplication of online services between government and user-generated sites, the review recommends that relevant departments, monitored by COI, should research user-generated websites in their areas, with a view to either terminating government services that are no longer required, or modifying them to complement citizen-led endeavours.

## GOVERNMENT SHOULD PROMOTE INNOVATIVE RE-USE OF PUBLIC SECTOR INFORMATION BY GRANTING NON-COMMERCIAL LICENCES

*Recommendation 4.* To encourage innovation in the re-use of information by non-commercial users, UK trading funds should, in consultation with OPSI, examine the introduction of non-commercial re-use licences, along the lines of those pio-

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59 [www.parentscentre.gov.uk](http://www.parentscentre.gov.uk).

60 [society.guardian.co.uk/e-public/story/0,,2054474,00.html](http://society.guardian.co.uk/e-public/story/0,,2054474,00.html).

neered by the BBC's Backstage project and Google Maps.

60. The internet has created a new group of information users: people who mix and combine information to create new services of benefit to society. This culture of 'data mashing' has been led by enthusiasts and small businesses, empowered by visionary information-access programs from internet pioneers like Google and the BBC. In the past, few individuals or small organisations had the technology or skills to access and re-use public sector information. Today, the power of cheap computers and the wide availability of free software make mixing and mashing information quicker and easier.

**Box 11: Data mashing**

(e.g. mapping and transport data) to produce new products or services. 'Mash-ups' most commonly combine mapping data, such as that provided by Google, with data from another source. For instance, the website Chicagocrime<sup>61</sup> combines mapping data with information from the Chicago police department to create a free, automatically updated map of crime incidents in the city.

In the same way, the innovative American retail website Zillow<sup>62</sup> combines mapping data with information on local land value and house price sales to create a service that accurately estimates the value of a home at a given address.

61. Two things are worth noting about this new group of users. First, by virtue of their status as individuals or organisations wishing only to experiment, not build final products ready for market, they often do not have the resources to pay for expensive data. Second, in the past, larger organisations have found it difficult to engage with small numbers of individual developers. These developers want information delivered rapidly and possibly with no ultimate business use in mind. This difficulty has been exacerbated by the tendency on the part of some public sector information providers to seek licence negotiations, rather than simply sell information from a price list.

62. However, private sector technology companies decided a new approach was needed to engage with these groups of enthusiasts and developers. Seeing these individuals as a potential source of innovation for new products and services, they began to open up their internal information to individuals for free, using non-commercial licences. Examples include Google Code,<sup>63</sup> the Yahoo De-

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61 [chicagocrime.org](http://chicagocrime.org).

62 [zillow.com](http://zillow.com).

63 [code.google.com](http://code.google.com).

veloper Network,<sup>64</sup> and Flickr Services.<sup>65</sup>

63. Online retailer Amazon was among the first to spot this opportunity. An article in *Business Week* describes the early ‘epiphany’ of founder Jeff Bezos: ‘If the new computer set up allowed folks inside to be more creative and independent, why not open it up to outsiders, too?’ Consequently, in 2002, Amazon began offering outside software and website developers access to selected Amazon data, such as pricing trends, gradually adding more and more. Now Amazon is in a situation where it sees constant innovation from more than 200,000 outside web developers, up 60% from a year ago.<sup>66</sup>

64. Innovation in this area need not be limited to the private sector. The BBC is frequently cited as an innovator. In 2005, it launched a project, called BBC Backstage, to encourage non-commercial re-use of various types of information normally unavailable to outsiders. Popular types of content provided by the BBC as part of Backstage include traffic reports, weather data and the TV programming guide. The site has a development community of around 1,300 users and has resulted in a number of innovative projects, including a mobile phone traffic news system in the UK, mtraffic.

65. The BBC justifies its investment in BBC Backstage because it encourages innovation, and because the service helps to develop ‘niche applications’ that the Corporation itself might not develop. It provides the various types of content through easy-to-use non-commercial licences.

66. Ordnance Survey has also begun experimenting with non-commercial licensing. In October 2006, the organisation announced the creation of OS OpenSpace, a service that would have allowed users to apply to gain access to OS mapping data for ‘non-commercial use only’. At the time of the announcement, OS claimed that the application would ‘minimise barriers for individuals to access high quality data’ while also exposing OS data ‘to a wider community’ and would allow ‘the development of new ideas targeted at niche groups’.<sup>67</sup>

67. However, the service was never launched, and is currently on hold. Interviews with OS suggested that the major barrier to launching the application came from its relationships with smaller suppliers, who resented the possibility of non-commercial re-users obtaining free access to information that they had had to pay for as part of their commercial arrangements.

68. Similar barriers will exist for other public sector information holders, and in particular other UK trading funds, in attempting to experiment with non-commercial licences. Ordnance Survey found that those consumers already licensing

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64 developer.yahoo.com.

65 www.flickr.com/services/api.

66 ‘Jeff Bezos’s risky bet’, *Business Week*, November 2006, www.businessweek.com/magazine/content/04\_41/b3903462.htm.

67 *Introducing OS Openspace*, presentation by Andy Radburn, October 2006.

their mapping data strongly objected to the idea of similar information being given away for free to others, even if on a non-commercial basis. The same objections are likely to be found elsewhere, and a mechanism will have to be found to migrate non-commercial licence users onto commercial licences if they decide to use the information for commercial gain.

69. These concerns about competitiveness are serious and deserve attention. However, there are significant counterarguments that have led this review to continue to press for non-commercial licences.

70. The first argument is that the cost-recovery policy for trading funds already encourages and allows de facto price discrimination. For example, companies are charged different amounts for the use of certain Ordnance Survey datasets, depending on how many users they will have within the purchasing body. It does not actually cost Ordnance Survey more to serve more terminals, so price discrimination based broadly on the size of an organisation is already accepted policy.

71. Second, and more broadly, government already recognises the unique value of projects undertaken on a non-profit basis, and rewards such activity through tax reductions for registered charities. Charities might be economically characterised as organisations that produce disproportionate levels of public good and positive externalities from resources deployed. Information turned into new public services by non-commercial users is at the extreme end of such possible good, because its benefits can be shared almost infinitely at no marginal cost.

72. This review found little evidence that other UK public sector information holders, apart from Ordnance Survey, were attempting to follow the BBC and private sector organisations in pursuing not-for-profit licences to promote innovation. This is a substantial missed opportunity, which will only get bigger as it becomes easier to mix and re-use information on the internet.

73. This review recommends that UK trading funds, in consultation with OPSI, examine the introduction of non-commercial re-use licences, along the lines of those pioneered by the BBC's Backstage project and Google Maps.

74. Finally, given the central importance of mapping data in this area, Ordnance Survey should find ways to address the concerns of its existing customers, and launch its OpenSpace project. If timing permits, the launch of the OpenSpace project could be a way of piloting the proposed non-commercial re-use licensing approach prior to wider adoption.

*Recommendation 5.* To promote innovation, Ordnance Survey should, by the end of December 2007, launch its OpenSpace project to allow non-commercial experimentation with mapping data.

## INNOVATIONS WITHIN GOVERNMENT

*Recommendation 6.* To promote innovative use of public sector information, the Department for Transport, with the support of the Chief Scientific Adviser's Committee, should complete the partially undertaken scoping and costing of a 'data mashing laboratory' and advise the Cabinet Committee of Science and Innovation on appropriate next steps.

75. As well as encouraging innovation and data mashing by non-profit organisations, government could establish or commission its own efforts in these areas. Various proposals for a government 'data mashing laboratory' have been circulating since 2006. A government data mashing laboratory would establish a dedicated environment for the sharing of public sector information inside government and the experimental generation of new value from pre-existing information.

76. The idea of establishing such a laboratory has been considered as part of the Department for Transport's Data Grand Challenge. This is a project of the Science and Innovation Ministerial Committee, designed to realise the benefits of (particularly real-time) data within and outside government and, in particular, improving access to data held across different government departments and from external sources. A detailed paper on the data mashing laboratory was produced by officials at the Department for Transport (DfT) during 2006. It suggested the creation of a £10 million, two-year pilot project. Currently this initiative has stalled.<sup>68</sup>

77. Following the initial proposal, a DfT-commissioned paper examined the concept of a data mashing laboratory. The resulting research identified a number of barriers to good information sharing within government.<sup>69</sup> The paper's author, Chris Marsden, suggested that the concept came from the observation that many of the more pioneering approaches to exploiting information in the private sector were too advanced for government. Instead, government needed a 'safe space' where officials, public sector information holders and outsiders could access public sector information and information from the private sector, and experiment with the creation of new data products.

78. This review recommends that, as the Department for Transport re-examines this issue, it should bear several factors in mind:

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68 Department for Transport (2006) internal thinkpiece, *Proposal for a government data mashing lab*.

69 RAND Corporation report prepared for the Office of Science and Technology's Data Grand Challenge: Marsden, C., J. Cave, et al. (October 2006). *Better re-use of public sector information: evaluating the proposal for a government data mashing lab*, Rand Corporation.

- Any successful innovation space must have fluid links to individuals and bodies outside government
- Given the extremely low cost of data mashing, it should consider whether the full £10 million is absolutely necessary at the start
- It should consider whether the lab actually needs to be a physical place at all
- It should consider whether participants in the lab need themselves to be civil servants.

## SELF-HELP FORA FOR GOVERNMENT SERVICES ONLINE

*Recommendation 7.* To improve understanding, effective usage and take-up of government services, COI should examine options for more self-help fora for public services and publish guidance for departments on how and when to set up such fora by December 2007.

79. Earlier chapters of this report have demonstrated the significant potential for engaging citizens as users and co-producers of public services. Government is aware of this issue. Numerous reports have made the case for engaging more closely with the consumers of public services by allowing them more ‘voice’ and the ability to shape the services they are using. Sir David Varney’s recent review on service transformation argued that:

‘deep insight into customer needs, behaviours and motivations, plus the ability for citizens and businesses to have better information on the services on offer, are all important for the design of public services that support the Government’s desired policy outcomes’.<sup>70</sup>

80. Equally, the Government’s Policy Review document *Building on Progress: Public Services*<sup>71</sup> argued that: ‘The Government has an important role to play in helping citizens to make the most of their ability to influence the way in which they receive services. This includes using the internet and other technologies to enable citizens to shape services in ways and at times convenient to them’.

81. This review is particularly interested in ways of providing opportunities, using the internet, to help citizens help each other to use public services online. Charles Leadbeater, an expert on these issues, recently wrote that ‘reform should

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70 Varney, D. (2006). *Service Transformation: A Better Service for Citizens and Businesses, a Better Deal for the Taxpayer* (Varney Review), [www.hm-treasury.gov.uk/media/53D/F2/pbr06\\_varney\\_review.pdf](http://www.hm-treasury.gov.uk/media/53D/F2/pbr06_varney_review.pdf).

71 HM Government (2007). *Building on Progress: Public Services*. p. 37, accessed at [www.cabinetoffice.gov.uk/policy\\_review/index.asp](http://www.cabinetoffice.gov.uk/policy_review/index.asp).

start to be guided by an ethic of participation and self-management'.<sup>72</sup>

82. One way of putting these principles into practice is to examine the possibility of investing in online self-help fora. In particular, there is good evidence from the private sector that technology companies have led the way in providing online spaces and fora. On these fora, their customers can discuss how to use their goods or services. Examples of firms using content generated by users to improve their customer focus and service include Google's numerous Google Groups about its various services<sup>73</sup> and Microsoft's Knowledge Base.<sup>74</sup> If the companies do not provide or host such a service, third parties or enthusiasts are likely to fill the gap. Put simply, if you have a problem with a computer or a mobile phone, there is probably a forum, run by users of that product, that can help you fix it.

83. Private companies see three main benefits from engaging with and supporting online fora that discuss their products. First, such fora help consumers: web-based fora have become an excellent source for users of a service to provide useful tips, advice and support to other users. Second, such fora save companies money: users who find help online are less likely to call expensive phone lines. Third, fora improve innovation: online areas in which users can provide feedback, complain or identify problems allow companies to identify and fix problems in their products more quickly.

84. There is a significant opportunity for government to use online fora to allow users of services to help each other navigate and understand public services. Such fora could either be hosted by a government agency, or run independently but facilitated with relevant materials to help customers. Citizens frequently find public services confusing to navigate and understand. This is especially true of administrative tasks, such as filing tax returns, acquiring a driver's licence, applying for benefits, making a planning application or finding the right entity to complain to about a service.

85. Online self-help fora offer citizens a number of potential benefits. First, they could help users who are having difficulty coping with a complicated form or process – for filling in tax returns or applying for a benefit. Second, they can provide reassurance that any such process has been completed correctly. Third, they can provide an extra source of advice for significant decisions, in which users simply wish to talk to someone who is 'like them', making the same decision. Finally, they allow users to comment on the quality of the service itself.

86. There are a number of administrative tasks that could benefit from user fora. In particular, there are opportunities to introduce such online fora in various

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72 Charles Leadbeater (2007). 'The DIY state', *Prospect Magazine*, January.

73 [groups.google.com](http://groups.google.com).

74 [support.microsoft.com](http://support.microsoft.com).

specific public services, including:

- HM Revenue and Customs self-assessment tax returns (see Appendix 5);
- driving licence applications;
- benefits and tax credit applications;
- user complaints about government services;
- application for or renewal of car tax.

## PART 6: IMPROVING ACCESS TO PUBLIC SECTOR INFORMATION

- Government should provide better access to the public sector information it holds.
- To help government respond to rapidly changing demands for public sector information, a web-based channel for aggregating information requests should be set up.
- Government has a policy of charging very little (i.e. ‘marginal cost’) for providing public sector information to those that want to re-use it. However, trading funds (like Ordnance Survey) are excluded from this policy.
- There are arguments for and against moving to a different charging regime for the re-use of public sector information held by trading funds; economic analysis is required to determine whether a change would be appropriate.
- Except where this economic analysis suggests otherwise, government should consistently apply its policy of marginal cost pricing.

## REVEALING THE DEMAND FOR PUBLIC SECTOR INFORMATION

*Recommendation 8.* To improve government’s responsiveness to demand for public sector information, by July 2008 OPSI should create a web-based channel to gather and assess requests for publication of public sector information.

87. It is relatively easy to suggest changes that would give citizens and organisations better access to information held by government. These include:

- republishing information in open standards or as web services;
- changing when information is published to suit the needs of those requesting it;
- rewriting licences in situations where they currently prevent innovative re-use; and
- presenting databases in ways that suit the needs of re-users.

88. The problem is not how to make information available, but rather where to



allocate scarce resources in order to do so. This review argues that mandating all government departments or agencies to publish information in a certain way is likely to be expensive, unreliably implemented, and of dubious value for money. Instead, government should endeavour to improve the speed and efficiency with which they respond to demands from individuals and organisations to publish information.

89. Currently there are few incentives for individual government agencies to ensure that the information they produce is being widely and productively used. This is partly because they must bear the cost of sharing, and partly because few public organisations are primarily set up to provide information. To address this, the review recommends that OPSI create a single web-based channel to aggregate and openly publish requests for public sector information. The channel should be a new part of a pre-existing website, rather than a whole new site. It should work as a low-cost, open way of bringing together all the publicly filed requests for changes in the publication of public sector information.

90. This kind of web-based channel would allow users to read and endorse other requests for government information. There could also be an option to leave supporting evidence for why the information would be valuable. Furthermore, OPSI should carry out a rolling assessment program of the requests filed. In cases where releasing information would seem to be in the public interest, OPSI should write to the information holder in question and ask for a response to the proposal, including the cost implications. OPSI would also ideally report, as part of its annual review, on the number and nature of requests and the responses from information holders.

91. This approach would have the following effects:

- motivating government agencies to be more transparent about the choices they face around resource allocation;
- helping government agencies to be more transparent about the publication decision-making processes; and
- helping government agencies prioritise their responses to requests for information over time, allowing them to plan and budget accordingly.

92. The web-based channel would also help reveal where previously untapped value lies in the information held by government. In order to achieve all these goals, OPSI should ensure that public sector information providers link to the new channel.

93. The longer-term benefits of a web-based channel revealing the demand for public sector information are likely to include:

- users and organisations building products and services, free or paid for, that would not otherwise have existed (i.e. more innovation);
- better business and personal decisions made through wider availability of information in forms people want; and

- clear demonstrations of how working with information re-users (demonstrating a ‘co-production’ approach) can work in practice, possibly resulting in other analogous approaches across government.

## RECONSIDERING INFORMATION CHARGING POLICY

*Recommendation 9.* By Budget 2008, government should commission and publish an independent review of the costs and benefits of the current trading fund charging model for the re-use of public sector information, including the role of the five largest trading funds, the balance of direct versus downstream economic revenue, and the impact on the quality of public sector information.

*Recommendation 10.* To ensure the most appropriate supply of information for re-use, government should consistently apply its policy of marginal cost pricing for ‘raw’ information to all public bodies, including trading funds, except where the published economic analysis in recommendation 9 shows this does not serve the interests of UK citizens.

## CURRENT POLICY ON CHARGING FOR PUBLIC SECTOR INFORMATION

94. There is an ongoing debate over the extent to which government should charge citizens, NGOs or businesses for a licence to re-use the public sector information it collects. At present, government policy<sup>75</sup> is that public sector information holders that choose to make public sector information available should charge for re-use of ‘raw’ data (see below for definition) at ‘marginal cost’. In situations where government produces information that has been modified to add value, departments are required to charge at market rates. Recommendations 9 and 10 above pertain exclusively to the pricing of raw data.

### Box 12: Defining ‘raw’ data

‘Raw data...was defined in the Review of Government Information as ‘information collected, created, or commissioned within Government which is central to Government’s core responsibilities. The supply of selected components of a raw data package, exactly as in the package is raw

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75 HM Treasury (2001). *Charges for information: when and how*, [www.hm-treasury.gov.uk/media/A74/FF/charging\\_for\\_info.pdf](http://www.hm-treasury.gov.uk/media/A74/FF/charging_for_info.pdf), p. 9.

data supply, but the supply with further analysis, summarisation etc, or of data at a different level of aggregation to that used by Government, is not raw data for the purposes of this report but is value-added information'. Raw data is not synonymous with raw material, or with unchecked data. For example, the raw material for value-added services may, or may not, be raw data'. (HM Treasury, 'Charges for information: when and how' [2001])<sup>76</sup>

95. The policy of charging marginal cost for the bulk of government information is relatively new, and originated in the Government's 'Cross Cutting Review of the Knowledge Economy' (2000). The rationale for a policy change was that:

96. 'The current policy of average cost pricing creates a significant barrier to the re-use of information because it requires parts of government, where this is not core business, to make assessments and attributions of relevant costs and negotiate individual contracts in an area in which many departments and agencies are ill-placed to operate. Marginal cost pricing would remove this burden from both the department concerned and the private sector'.<sup>77</sup>

97. An exception to this policy is made for a class of public bodies known as trading funds. The Cross Cutting Review of the Knowledge Economy concluded that marginal cost pricing was appropriate for 'departments and agencies (other than trading funds)' but not for trading funds.<sup>78</sup> Because of the decision to exempt trading funds from marginal cost pricing and other historic decisions, there are some bodies that charge for most of their information (e.g. Ordnance Survey) which appear similar to other bodies (such as National Statistics) that do not charge.

## TRADING FUNDS

98. Trading funds collect most of the useful and economically valuable UK public sector information, with the Cross Cutting Review suggesting that they currently take in 92% of all government public sector information revenue.<sup>79</sup> The largest trading funds by revenue are Ordnance Survey, the Met Office, the UK

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76 Office of Fair Trading (2006). *Commercial Use of Public Information*.

77 HM Government (2000). *Cross cutting review of the knowledge economy*, para. 1.15, [www.hm-treasury.gov.uk/spending\\_review/spending\\_review\\_2000/associated\\_documents/spend\\_sr00\\_ad\\_ccrcontents.cfm](http://www.hm-treasury.gov.uk/spending_review/spending_review_2000/associated_documents/spend_sr00_ad_ccrcontents.cfm).

78 Office of Fair Trading (2006). *Commercial Use of Public Information*

79 Office of Fair Trading (2006). *Commercial Use of Public Information*, para. 4.7. This includes both statutory and non-statutory information revenue.

Hydrographic Office, HM Land Registry and Companies House.<sup>80</sup>

99. In common with other trading funds, these bodies operate on a ‘cost recovery’ basis. This means they are required to partially fund their operations and the collection, maintenance and updating of public sector information by charging their users for the re-use of the public sector information they hold. Because they charge, they do not have to be supported entirely by the taxpayer. This review estimates that sales by trading funds to non-government customers generate between £100 million and £200 million a year, including revenue from both statutory and non-statutory information services.

100. There are various different funding models for UK trading funds. Ordnance Survey funds almost its entire operations from direct commercial revenue, although diverse parts of government make up about half of its clientele by value. The Met Office, on the other hand, relies on a subsidy from the Ministry of Defence for around half of its income.

## INDIRECT ECONOMIC BENEFITS OF SHARING PUBLIC SECTOR INFORMATION

101. The amount of money generated by direct sales from trading funds is thought to be much smaller than the wider value of public sector information to the economy. Whenever an organisation or an individual uses some public sector information to generate a service that is then sold on, public sector information generates new economic value, although not necessarily for UK-based companies.

102. In its recent report, the Office of Fair Trading argued that there was some £500 million of untapped economic value in the whole UK public sector information market, on top of the £590 million currently generated. According to the study and to interviews conducted by the review team, this is a ‘conservative’ estimate, and is certainly considerably smaller than other estimates that put the value at between 0.8% and 8% of the entire economy (c. £10–100 billion).<sup>81</sup>

## ARGUMENTS FOR AND AGAINST CHARGING FOR PUBLIC SECTOR INFORMATION

103. It has been argued that lowering the cost of accessing and re-using some or

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80 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.offt.gov.uk/shared\\_offt/reports/consumer\\_protection/oft861.pdf](http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft861.pdf).

81 Office of Fair Trading (2006). *Commercial Use of Public Information*, Annex G, p. 19.

all public sector information could generate tax returns from new business that may exceed the direct revenue lost through forfeiting a proportion of the licence fees. This review recommends that this important, but as yet unsubstantiated, argument be examined through the proposed independent review of the costs and benefits of the current trading fund charging model. This section sets out some of the competing factors that need to be examined.

Box 13: Arguments for moving to non-cost-recovery pricing for raw information

- Rapid technological changes since 2000 have made it much easier and cheaper to re-use public sector information, and have generated new classes of information re-user, including individuals, enthusiasts, small companies and third sector bodies. These new users now have the tools to re-use the information, but are often unable to access it due to cost barriers. This is especially common in the field of geographic information, such as postcodes.
- While arguing for cost-recovery pricing for trading funds, the Cross Cutting Review argued more widely that, in the short run, ‘marginal cost pricing may bring considerable extra social benefits: information is a good for which this marginal cost is in many cases near to zero (once information is collected only the costs of reproduction, etc. are additional); there are also prospects that demand would grow rapidly in response to lower prices (information being an experience good) and as basic information is repackaged in innovative ways’. According to Derek Clarke, the South African Mapping Agency ‘did indeed find that the number of organisations consuming its data increased by 500%’ when it abandoned its previous charging policy.<sup>82</sup>
- Some empirical evidence exists to suggest both that the total size of the US re-use market is much larger than in European countries, and that certain types of markets for public sector information re-use (e.g. weather derivatives) expanded much more quickly in the US than in Europe. However, it is not possible from available research to determine whether this was related more to other factors, such as the size of the US.

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82 Question and answer session with Derek Clarke, Head of the South Africa Mapping Agency, 8 March 2007, *Guardian Technology* ‘Free our data blog’, available at [www.freeourdata.org.uk/blog/?p=106](http://www.freeourdata.org.uk/blog/?p=106).

## Box 14: Arguments for maintaining the status quo

- In the absence of economic analysis, the size of any economic gain from making some or all data available at marginal cost is unknown. By contrast, the direct income saved by not making the taxpayer fund trading funds can be calculated quite easily and is substantial (for example approximately £60 million a year for Ordnance Survey).
- Data quality may suffer. The need for trading funds to make a return on capital gives them an incentive to meet customer needs. Simultaneously, the cost-recovery model generates money required to invest in improving data and keeping it up to date. Anecdotal evidence from the US suggests that the quality of many types of US public data is lower than in the UK, although the review was unable to identify specific studies showing this, or the costs to the US economy of lower-quality data.
- Even if much more revenue is generated by companies re-using public sector information, it might not be by companies paying tax in the UK.
- If trading funds do not receive direct compensation for the service they provide through cost recovery, and if they are not obliged through statute or regulation to provide those services, their natural incentive is to make those optional services inaccessible, thus reducing the total information available for public use and re-use.

104. Government's existing charging policy in relation to trading funds is founded on the assumption that the wider benefits of a marginal cost model for re-use are small, compared to the data-collection costs and surpluses generated by trading funds. Existing government policy also assumes the benefits that accrue will primarily be private, and that the public should not have to pay for public sector information through general taxation. However, there is enough evidence (see below) to argue that these assumptions are now sufficiently out of date for them to require a detailed re-examination:

- Ordnance Survey's OXERA study<sup>83</sup> estimated that its data underpinned £100 billion of economic activity in the UK. If the current charging regime is reducing the size of possible economic activity by even a single percentage point of GDP, the tax income forfeited could dwarf the entire £50–60 million that is currently saved by having Ordnance Survey sell information on a cost-recovery basis.<sup>84</sup> This clearly warrants closer examination

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83 Oxford Economic Research Associates Ltd (Oxera) Report for Ordnance Survey, *The economic contribution of Ordnance Survey GB*, September 1999.

84 Prime Minister's Strategy Unit calculations based on Ordnance Survey's accounts.

- Making a return on capital does create positive incentives for good customer service. However, the incidences of unproductive barriers to innovation recorded by the Office of Fair Trading's report *Commercial Use of Public Information* raise concerns. It is perhaps unsurprising that any charging model creates non-cost barriers in terms of delay and bureaucracy, and narrows the prospective market to clients capable of entering into contract negotiations. The scale of these barriers under the current charging model is not known and is of concern
- The huge number of new data mash-ups that have grown up across the internet in the last two years demonstrates new value being generated from information re-used every day
- HM Treasury's (HMT) decision to make mainstream public sector information available at marginal cost has seen some striking successes. For example, the free website uSwitch<sup>85</sup> (based on public sector information) has created so much value that it was recently purchased for £210 million
- The historic division between personal use of public sector information (traditionally free) and uses that benefit or affect a wider group of people (traditionally licensed) is collapsing. Individuals increasingly expect that they should be able to share valuable information with friends and family without engaging in a licensing arrangement originally designed for businesses.

## POSSIBLE ALTERNATIVE CHARGING REGIMES

105. There is a major precedent that is often cited by those arguing for changes in the trading fund cost recovery model. In the United States, public sector information is collected by agencies funded from general taxation, and made available to commercial and non-commercial users for free. Publicly funded data collectors do not re-sell value-added public sector information products. Furthermore, recent changes in charging policies within the South African and Canadian mapping agencies have moved both towards the US model, rather than the cost-recovery model currently used in the UK.

106. International examples alone do not sufficiently justify changing the UK model. The review was told several times in interviews that there were disadvantages to the US approach. The most substantial, and often repeated, was that the economic benefits might not offset the fall in government income currently received from trading funds, resulting in a significant net revenue loss for the government. There were also concerns about inferior data quality as a result of this charging regime.

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85 [www.uswitch.com](http://www.uswitch.com).

## RECOMMENDED WORK

107. Acknowledging the indirect value of public sector information and the need to ensure that charging arrangements are best serving the UK economy, the Cross Cutting Review recommended that ‘further work should be undertaken by the Treasury and the DTI [Department of Trade and Industry] on the economics of information pricing with a view to developing further the evidence base and to inform future policy decisions’.<sup>86</sup>

108. This recommendation has not yet been implemented. No reliable economic analysis has been undertaken to estimate the costs and benefits of different charging regimes. This has been of particular concern, since technological changes have moved in a direction that challenges rather than supports the status quo by increasing the value that can be generated from any one piece of information.

109. Various options for reform of the cost-recovery trading funds are possible – not simply a blanket change in the charging for all products and services from all trading funds. Options include providing some or all information for free, pricing at marginal cost or pricing at an intermediate level between cost recovery and zero. The one thing that these various options have in common is that they are likely to increase the market for public sector information re-use at the expense of lower direct revenue to government from sales. The correct model will maximise net benefits.

110. If economic analysis dictates that some reform of trading fund pricing models is desirable, it will be necessary to re-examine the statutory functions of those trading funds. This would prevent changed charging models from reducing the amount of valuable public sector information produced.

## MOVING TO AN EVIDENCE-BASED UK CHARGING REGIME

111. This review does not believe that there is a case for exempting trading funds from the presumption of marginal cost pricing on a blanket basis, without critically examining on a product-by-product basis whether the exemptions are in the public interest. Current policy for non-trading funds is to assume that marginal cost pricing generates the most economic and social value for the UK.<sup>87</sup> Devia-

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86 HM Government (2000). *Cross cutting review of the knowledge economy*, [www.hm-treasury.gov.uk/spending\\_review/spending\\_review\\_2000/associated\\_documents/spend\\_sr00\\_ad\\_ccrcontents.cfm](http://www.hm-treasury.gov.uk/spending_review/spending_review_2000/associated_documents/spend_sr00_ad_ccrcontents.cfm).

87 HM Treasury (2001). *Charges for information: when and how*, available at [www.hm-treasury.gov.uk/media/A74/FF/charging\\_for\\_info.pdf](http://www.hm-treasury.gov.uk/media/A74/FF/charging_for_info.pdf).



tions from the marginal cost presumption ought only to occur when there is clear reason to believe that the public interest is best served by charging.

112. This review also agrees with the OFT that the Government should commission a review of the economic case for moving to a marginal cost pricing model. This should further develop the evidence base and inform future policy decisions. This report recommends that such a review:

- be published by HM Treasury;
- pay particular attention to the different market situations of the biggest five trading funds as separate pieces of analysis;
- be sufficiently resourced to examine the specific cases of the different re-use markets for different products;
- include best estimates of the economic activity generated by changing the pricing of raw public sector information, and the likely impact on tax revenues in the UK;
- include best estimates of revenue lost to government and the economic impact of any increase in taxation; and
- provide an international economic analysis of different public sector information re-use markets in comparable countries. This should include an analysis of comparative qualities of public sector information.

## PUBLISHING GOVERNMENT'S REGULATORY DATA ONLINE

*Recommendation 11.* To improve the supply of government information for re-use, the Better Regulation Executive should promote publication of regulatory information, and should work with OPSI to encourage publication in open formats and under licences permitting re-use.

## THE INTERNET CAN HELP PEOPLE GET BETTER VALUE FOR MONEY

113. A significant body of literature describes the losses that citizens incur because they lack information when making decisions, particularly purchasing ones. These losses come about, for example, when citizens cannot obtain enough information to evaluate the quality of a good or service before purchase.

114. Several studies have shown, for example, that using the internet increases customer knowledge and collective consumer power, ultimately leading to lower prices. Research in 2003 found that an average saving of 16% was achieved on electronic goods when price comparison sites were used.<sup>88</sup> Similarly, much of the travel holiday industry has been transformed by the internet, driven

by the effect of information on consumer decisions.

115. In economic terms, what happens when someone buys a good or a service without enough information to get a good deal is that they suffer ‘consumer detriment’. Consumer detriment occurs particularly where people make infrequent purchases, of high value, and where the quality is hard to judge in advance. Box 15 below highlights the very real cost to citizens of a market in which the internet has not yet helped reduce this problem.

Box 15: ‘Consumer detriment’ in the car industry

Car servicing is an example of the very high economic cost that the

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Box 15: ‘Consumer detriment’ in the car industry

Car servicing is an example of the very high economic cost that the UK bears from markets in which the sellers have considerably more information than buyers. Since 1985, there have been studies of the market that have found consistent problems and complaints, with mystery shopping confirming widespread evidence of poor standards, mis-selling and overcharging. Consumer detriment in the car servicing industry is estimated at £4 billion a year.<sup>89</sup>

The internet is only just starting to push the information balance in favour of the consumer. Academic research from the US, published as long ago as 2001, examined 300,000 car purchases, and discovered that customers who used an online service to inform themselves paid on average 2% (\$450) less.<sup>90</sup>

89 Johnstone, J. and A. Kozakova (2006). *Imperfect Markets*, National Consumer Council.

Box 16: Scores on the Doors

Scores on the Doors is a scheme whereby food safety information is made available at the point of sale, supported by web-based information systems. Several local authorities have already introduced Scores on the Doors schemes, and the Food Standards Agency (FSA) is now working with three groups of local authorities in London, the Midlands and Scotland to evaluate different pilots. Key issues for this evaluation will include the relationship between the ratings scheme and legal compliance, as well as the level of consistency between different schemes. Over the next two years, the FSA will test different models, and will seek to make a recommendation for one preferred scheme nationwide.

Schemes similar to Scores on the Doors operate in the United States, Australia, New Zealand and parts of Europe. A study of one scheme<sup>93</sup> in Los Angeles found that both consumer and supplier behaviour changed after the ratings became public. The proportion of restaurants receiving ‘good’ scores more than doubled, sales at these establishments rose by 5.7% (while sales fell at restaurants with poor ratings) and food-borne illness fell by 13%.

93 Jin, G. Z. and P. Leslie (2003). ‘The effect of information on product quality: Evidence from restaurant hygiene grade cards’, *Quarterly Journal of Economics* 118(2): 409–51.

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## BETTER PUBLIC SECTOR INFORMATION MAY ENABLE REDUCED REGULATION

116. The economic policy of the UK is based on an assumption that well-functioning markets in goods and services generate wealth and well-being. Whenever the suppliers of a good or service have better information about it than the citizens consuming it, markets work less efficiently than they should. As one study

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89 Johnstone, J. and A. Kozakova (2006). *Imperfect Markets*, National Consumer Council.

### Box 16: Scores on the Doors

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93 Jin, G. Z. and P. Leslie (2003). 'The effect of information on product quality: Evidence from restaurant hygiene grade cards', *Quarterly Journal of Economics* 118(2): 409–51.

notes, 'If citizens are to be given more choice in public policy and services, they must be provided with information in forms they are aware of, can find easily and are readily understandable when they are reached'.<sup>91</sup> Government has several options at its disposal to help achieve this.

117. The traditional approach has been to regulate – e.g. to force the suppliers either to lower the price they offer or to provide evidence that they are supplying at market rates. This has inefficiencies and costs because it requires government itself to search for all the necessary information to make appropriate decisions. It can also have unintended consequences (e.g. hindering one supplier and inadvertently providing a competitive advantage to another).

118. Another approach is for government to supply citizens with all the information they need to make their own decisions, which collectively influences the quality and price of supply. In such cases, sharing information can empower citizens to make better decisions. The *UK Government's Approach to Public Service Reform* (2006) and *Building on Progress: Public Services* (2007) both describe facilitating 'choice' and 'voice' as practical, often more efficient, alternatives to top-down traditional regulation. This approach still means costs for government in collecting and sharing the information necessary to empower citizens; but it is lighter touch and often (though not always<sup>92</sup>) more cost effective than regulation. Boxes 16 and 17 below show how this works in practice.

#### Box 16: Scores on the Doors

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91 Dutton, W. H., M. Peltu (2006). *Engaging with the Google generation: What Web 2.0 means for connecting government and citizens*, Summary of a workshop held at the Oxford Internet Institute on 19 December 2006 (Unpublished).

92 It is very important before embarking on an 'information provision' approach to reducing consumer detriment to ensure that it is actually the most effective option in the market. Sometimes the provision of information is simply 'burdensome'. For example, the Administrative Burdens Measurement exercise of 2006 revealed that almost a third (32%) of all administrative burdens constituted requirements to provide information to third parties.

mentation for one preferred scheme nationwide.

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Box 17: Decreased mortality following publication of hospital mortality rates

Recent medical research suggests that mortality dropped following the publication of information showing mortality rates for heart surgeries by hospital, and by individual surgeon.<sup>94</sup>

Better citizen-generated information may enable reduced regulation

119. The rise of user-generated websites signals another and potentially more efficient and cost-effective option for government. Government has long relied on not-for-profit agencies from the third sector to supplement its own information provision to citizens (e.g. the Citizens Advice Bureau service). However, the rise of user-generated sites provides a vehicle whereby citizens can collect and share information themselves, in a focused, low-cost way, reducing the information asymmetry between them and suppliers of goods and services. One of the best known of all such sites in the UK is MoneySavingExpert.

Box 18: MoneySavingExpert ([www.Moneysavingexpert.com](http://www.Moneysavingexpert.com))

MoneySavingExpert is a journalistic consumer finance website set up by specialised broadcaster/journalist Martin Lewis, to show people how to save money on financial services, retail and other consumer products. The site reports over 2.5 million unique users each month, with 1.3 mil-

93 Jin, G. Z. and P. Leslie (2003). ‘The effect of information on product quality: Evidence from restaurant hygiene grade cards’, *Quarterly Journal of Economics* 118(2): 409–51.

94 Bridgewater, B., A. Grayson, N. Brooks, et al. (2007). *Has the publication of cardiac surgery outcome data been associated with changes in practice in Northwest England? An analysis of 25,730 patients undergoing CABG surgery under 30 surgeons over 8 years*, *Heart*, June 93(6): 744–48, available at [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=17237128&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=17237128&dopt=Abstract).

lion people receiving the weekly email. The site has a very popular forum which has over a million readers a month and 180,000 members. One of the site's many campaigns involves helping consumers to campaign against bank overcharging. Since November 2006, over 3.3 million template letters have been downloaded to this end, with thousands sharing tips and reporting successes.<sup>95</sup>

120. The changes in citizen information use do not just affect those who create and use information on user-generated sites. For example, in the case of Scores on the Doors, government can maximise the benefits of the already published food safety information by making it more easily available for other sites to re-use.

121. In practice, this could mean government working in collaboration with those that provide websites such as Toptable.<sup>96</sup> Under such arrangements, government would help provide information about the safety of pubs and restaurants on the sites that citizens already use in great numbers to make their decisions about where to go. These websites all use the power of user opinion and user reviews to improve consumer experience.

## THE LIMITATIONS OF MORE INFORMATION

122. While potentially useful, it is important to acknowledge that providing more information or supporting peer-to-peer information sharing is not a panacea. Its effectiveness will often depend on how customers interpret and use the information provided. For example, on food safety, outlets at the worst end of the scale may not be concerned about poor ratings if it ultimately does not influence the decisions of their customers. Therefore, there remains a need for existing enforcement in some instances. Nevertheless, supporting more user-generated websites may provide government with a highly efficient and cost-effective way of significantly improving the lives of citizens.

123. Information relating to regulation should not always be published in every case. However, there should be a presumption in favour of publishing, unless there is a strong case for claiming that it would do more harm than good. Government should ensure that it is available in a form that makes it easy to bring this information to the sites that normal users already visit every day.

124. Consequently, this review recommends that government should publish

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95 Prosser, D. (2007). 'The consumer champion behind growing rebellion', *Independent*, 23 February, available at [money.independent.co.uk/personal\\_finance/invest\\_save/article2287042.ece](http://money.independent.co.uk/personal_finance/invest_save/article2287042.ece).

96 [www.toptable.co.uk](http://www.toptable.co.uk).

regulatory information on the internet in a format that consumers find easy to understand and that citizens and organisations can easily re-use and re-combine with other information. More specifically, the review recommends that the Better Regulation Executive promote publication of regulatory information, and should work with OPSI to encourage publication in open formats and under licences permitting re-use.

Box 19: Reputation systems – extract from a report by the Welsh Consumer Council<sup>97</sup>

‘Among the simplest means of online consumer self-expression is the indication of opinion through ratings. Ratings allow numerical data from individual contributors to be crunched to provide aggregates and patterns representative of a whole.

‘Product scores given by Amazon users provide median ratings that people use to judge the quality of a book or CD; review spaces give customers the opportunity to expand on their numerical expression (their poor ratings and statements<sup>98</sup> [about a product] provided a valuable counterpoint to the product manufacturer’s positive marketing campaign<sup>99</sup>).

‘The simple technology of submitted averages lets consumers become self-informing communities. The Tripadvisor<sup>100</sup> website allows customers to make judgements about the appeal of hotels and resorts, based on scores assigned by previous holidaymakers; mandatory feedback from eBay<sup>101</sup> users assigns karma scores, on which judgements are made as to the trustworthiness of buyers and sellers; users of the Yahoo! Shopping retail gateway and price-searching service can likewise benefit from each other’s merchant ratings.<sup>102</sup> Consumers are no longer reliant on individual reviews by magazines and critics, but, when collected, have become a resource to inform themselves’.

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97 Welsh Consumer Council (unpublished report, forthcoming 2007). ‘Advocacy 2.0: Consumer empowerment and representation on the new net’.

98 [www.amazon.com/exec/obidos/ASIN/B000BS6VWC/metafilter-20/ref=nosim](http://www.amazon.com/exec/obidos/ASIN/B000BS6VWC/metafilter-20/ref=nosim).

99 [www.crest.com/prohealth/home.jsp](http://www.crest.com/prohealth/home.jsp).

100 [www.tripadvisor.co.uk](http://www.tripadvisor.co.uk).

101 [www.ebay.co.uk](http://www.ebay.co.uk).

102 [help.yahoo.com/l/us/yahoo/shopping/ratings/shop-68.html](http://help.yahoo.com/l/us/yahoo/shopping/ratings/shop-68.html).

## ENSURING OPSI CAN REGULATE EFFECTIVELY

*Recommendation 12.* To ensure that OPSI can regulate the public sector information market effectively, government should review the fit between OPSI's functions and funding, and recommend options that will ensure it is fit for purpose.

125. The main organisation responsible for ensuring access to government's information is the Office of Public Sector Information. It regulates all organisations that produce information licensed under Crown copyright. The sort of regulatory work it carries out includes running the Information Fair Trader Scheme, examining formal complaints from private sector data users made against public sector information providers, and watching for anti-competitive behaviour. This last task is extremely important, as many of the biggest providers of public sector information are – at the very least – market dominant.

126. Evidence suggests that OPSI may be under-resourced and unable to perform its regulatory duties properly. The recent OFT report on *The Commercial Use of Public Information* argued:

‘Comparing the size of OPSI and the size of the sector it regulates with the established economic sector regulators and the size of the market sectors they regulate, OPSI appears very small, with both fewer financial resources and fewer staff’.<sup>103</sup>

127. The Information Fair Trader Scheme (IFTS) has 16 members, including Ordnance Survey, the Met Office and the Environment Agency, and has made significant improvements to information-trading activities. The OFT has recommended extending the scheme to all public sector bodies with a licensing income of more than £100,000 – a change that would bring some 300 local authorities within the scope of the IFTS and OPSI's remit. However, the benefits of this change are only realisable if OPSI is given the necessary resources to run the IFTS properly.

128. The OFT has also recommended the assessment of the cost allocation and finance regimes of agencies that are part of the Information Fair Trader Scheme. OPSI is currently not equipped to do this and there remains no routine audit of agencies' cost allocation and finance regimes, making it difficult to establish whether these agencies are distributing their information to re-users appropriately. OPSI is working with UK audit bodies to remedy this situation, but the limits to its capacity remain of considerable concern.

129. For OPSI to regulate effectively, government needs to be confident that

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103 Office of Fair Trading (2006). *Commercial Use of Public Information*, [www.offt.gov.uk/shared\\_offt/reports/consumer\\_protection/oft861.pdf](http://www.offt.gov.uk/shared_offt/reports/consumer_protection/oft861.pdf).



it is fit for purpose. Consequently, the review recommends that government examine the fit between OPSI's functions and funding, and come up with options to make it fit for purpose.

## PART 7: PROTECTING THE PUBLIC INTEREST

Government has a role to play in protecting the public interest.

Some specific actions it can take to do so include:

- promoting consistent, reliable information and enabling public servants to respond to citizens seeking government advice and guidance online; and
- helping excluded groups take advantage of new internet developments.

### PROMOTING CONSISTENT, RELIABLE INFORMATION

*Recommendation 13.* To maximise the potential value of civil servants' input into online fora, by autumn 2007 the Cabinet Office Propriety and Ethics and Government Communications teams should together clarify how civil servants should respond to citizens seeking government advice and guidance online.

130. It is currently unclear when and how government, and particularly public servants, should engage with citizens in online spaces, whether run by the government or by third parties. Public servants' reluctance to engage with citizens online is understandable, given issues surrounding propriety, political neutrality and the personal risk that information provided could be used against the particular public servant.

131. However, there is a need to move beyond a position of pure risk aversion if government is going to work with user-generated site users and operators. One important step towards this will be to clarify the rules about the permissible behaviour of civil servants in online spaces – not least whether such engagement is permissible at all.

132. The review has found numerous positive examples of public servants entering into online public spaces to leave information, give updates, and point to services and so on. Examples were also provided of where risk aversion went too far, possibly as far as withholding information of importance to the safety of citizens.

Box 20: Institutional risk aversion exacerbating rather than mitigating risks to citizens

‘I was once on holiday in a foreign country where some very active political unrest started kicking off. I won’t tell you where for fear of identifying the person I’m going to talk about, but the situation was serious enough for the Foreign Office to issue a travel advisory. I got chatting to this guy in a bar who worked at the British Embassy, and he was saying he was very frustrated that his bosses wouldn’t let him go and post something on the Lonely Planet forum. He knew perfectly well that was where all the travellers were looking for information and discussing the situation. ‘We should be in there, part of that conversation, or what’s the point?’ he said. And he was absolutely right’. (Stakeholder interviews)

133. Clear guidelines about acceptable forms of public servant engagement on-line help mitigate situations such as that described in Box 20 above and create confidence that benefits are realisable.

## TACKLING DIGITAL EXCLUSION THROUGH USER-GENERATED WEBSITES

*Recommendation 14.* The Digital Inclusion Team should explore the potential for promoting digital and social inclusion through the partnerships proposed in recommendation 1 and report to the Sub-Committee on Electronic Service Delivery (PSX(E)), in line with recommendation 15.

134. There are significant benefits accruing from the new IT tools available. However, these benefits may not reach all citizens. In particular, those unable to access the internet (whether because of lack of internet access or inadequate ICT skills) are unlikely to experience the benefits of the information shared online. Furthermore, even if they can access it, the information available online may not cater to the needs of certain disadvantaged groups.

135. Digital and social exclusion are not the same thing. Social exclusion happens when people or places suffer from a series of problems, such as unemployment, discrimination, poor skills, low income, poor housing, high crime, ill health and family breakdown.<sup>104</sup> Digital exclusion means lack of access to digital

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Box 21: Homeless UK ([www.homelessuk.org](http://www.homelessuk.org))

Launched in 2005, Homeless UK provides a website containing information about more than 8,000 services, including hostels, advice and support services. Registered local services are able to access information about available vacancies in hostels and housing projects.

Some of the benefits (described by the Digital Challenge Team<sup>108</sup> – a project management team set up to implement the Inclusion Through Innovation report<sup>109</sup> – include:

technology or the inability to enjoy the benefits of the internet and other digital technologies (e.g. through lack of ICT skills).

136. Many of those who are socially excluded are also digitally excluded. In particular, many of those who suffer specific social disadvantages also lack the skills to engage with technology. It is estimated that 79% of those on means-tested benefits lack practical ICT skills.<sup>105</sup> Furthermore, Ofcom has found that 15% of people are ‘involuntarily excluded’ from communications services, largely on account of cost.<sup>106</sup>

137. There are initiatives already in place to ensure that everyone can have internet access, along with the skills to make use of it. These include the Government’s commitment to give all school-age children access through internet-connected computers in schools, and the UK Online network<sup>107</sup> of centres providing free access across the UK.

138. This review supports the current government efforts to ensure that all citizens benefit from the recent advances in information technology. It may be that there are certain steps that government can take to promote participation even further. For example, it could encourage more government and user-generated content online that is attractive to those who are currently digitally excluded.

139. Addressing social exclusion is a much bigger issue than addressing digital exclusion; and it is one that cannot be solely – or even mainly – addressed by improving access to information online. However, for socially excluded people who do have internet access, there may be options to empower them and promote social inclusion using the kinds of online ICT tools and online innovations described in Chapter 1. Box 21 below, and the study of a Swedish commercial parenting site (see paragraph 37 above) illustrate how this can be done.

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- improved access to supportive services;
  - prevention of homelessness by providing information at an early stage;
  - increased knowledge of homelessness services; and
  - homeless people (and those at risk) being able to get the help they need, when they need it.

108 [digitalinclusion.pbwiki.com](http://digitalinclusion.pbwiki.com).

109 Office of the Deputy Prime Minister (2005). *Inclusion Through Innovation: Tackling Social Exclusion Through New Technologies*. A Social Exclusion Unit Final Report, available at [archive.cabinetoffice.gov.uk/seu/downloaddoc2c05.pdf?id=768](http://archive.cabinetoffice.gov.uk/seu/downloaddoc2c05.pdf?id=768).

105 Digital Inclusion Team (2007). *Digital inclusion landscape in England*, [www.digitalchallenge.gov.uk/links-and-resources/research/The%20Digital%20Inclusion%20Landscape%20In%20England.pdf](http://www.digitalchallenge.gov.uk/links-and-resources/research/The%20Digital%20Inclusion%20Landscape%20In%20England.pdf).

106 Ofcom (2006). *International communications market report 2006*, [www.ofcom.org.uk/media/news/2006/11/nr\\_20061129](http://www.ofcom.org.uk/media/news/2006/11/nr_20061129).

107 [www.ufi.com](http://www.ufi.com).

**Box 21: Homeless UK ([www.homelessuk.org](http://www.homelessuk.org))**

Launched in 2005, Homeless UK provides a website containing information about more than 8,000 services, including hostels, advice and support services. Registered local services are able to access information about available vacancies in hostels and housing projects.

Some of the benefits (described by the Digital Challenge Team<sup>108</sup> – a project management team set up to implement the Inclusion Through Innovation report<sup>109</sup> – include:

- improved access to supportive services;
- prevention of homelessness by providing information at an early stage;
- increased knowledge of homelessness services; and
- homeless people (and those at risk) being able to get the help they need, when they need it.

140. In line with these kinds of opportunities, the review recommends that the Digital Inclusion Team<sup>110</sup> explore the potential for promoting digital and social inclusion in partnership with operators of user-generated websites. To achieve this, the Digital Inclusion Team should be consulted when the partnerships mentioned in recommendation 1 are established. The review recommends that the Digital Exclusion Team explore the potential for promoting digital and social inclusion through the partnerships proposed in recommendation 1 and report on progress to the Sub-Committee on Electronic Service Delivery (PSX(E)) by December 2007.

## PART 8: FOLLOW-THROUGH AND NEXT STEPS

*Recommendation 15.* The Minister for the Cabinet Office, in conjunction with OPSI, should report to PSX(E) by December 2007 on departments' plans for implementing these recommendations, and by December 2008 on progress and results.

### IMPLEMENTING THE REPORT'S

108 [digitalinclusion.pbwiki.com](http://digitalinclusion.pbwiki.com).

109 Office of the Deputy Prime Minister (2005). *Inclusion Through Innovation: Tackling Social Exclusion Through New Technologies*. A Social Exclusion Unit Final Report, available at [archive.cabinetoffice.gov.uk/seu/downloaddoc2c05.pdf?id=768](http://archive.cabinetoffice.gov.uk/seu/downloaddoc2c05.pdf?id=768).

110 [www.digiteam.org.uk](http://www.digiteam.org.uk).

## RECOMMENDATIONS AND INTENT REQUIRES LEADERSHIP AND A CLEAR TIME FRAME

141. This review has recommended a number of specific steps to ensure that government maximises the benefits for citizens from new developments in the use and generation of information on the internet.

142. The specific recommendations are intended to signal the need for government to become more open. This includes openness to internet technologies that empower citizens to co-produce information with government. It also means openness in terms of sharing the information that government possesses, so that its re-use can benefit citizens.

143. Such openness is not cost free. As mentioned above, sharing government's information (particularly that held by trading funds) can mean sacrificing revenue in the short term for longer-term benefits. However, the potential benefits from sharing information often outweigh the costs, and, where this is the case, it should be shared.

144. Clear leadership will be required to effect the proposed changes. This review recommends that government mandate a specific policy lead to drive the recommendations forward and report back to government on progress. Over the longer term, this leadership needs to challenge government agencies to make the cultural shift required.

145. Two agencies currently appear to be well placed to provide the kind of leadership mentioned above. One organisation, the Office of Public Sector Information, has already been asked to act as a centre of influence and excellence with respect to the sharing of government's information. The Cabinet Office appears particularly well placed as a natural coordinating entity to further government's response to the opportunities arising around citizen publishing online.

## APPENDICES

### 1. LIST OF THE TEAM

#### EXTERNAL REVIEWERS

- Tom Steinberg, Director, mySociety
- Ed Mayo, Chief Executive, National Consumer Council

## STEERING GROUP

- Conrad Bird, Government Communications
- Alex Butler, Central Office of Information
- David Halpern, Prime Minister's Strategy Unit
- William Perrin, Delivery and Transformation Group
- Daniel Roulstone, Better Regulation Executive
- Michael Warren, Government Communications

## SECRETARIAT

- Steve Waldegrave, Deputy Director, Prime Minister's Strategy Unit
- James Crabtree, Policy Adviser, Prime Minister's Strategy Unit
- Amalie Kjaergaard, Delivery and Transformation Group, Cabinet Office
- Francesca Sainsbury, Policy Adviser, Prime Minister's Strategy Unit
- James Taylor, Prime Minister's Strategy Unit

## 2. INTERVIEW LIST

- Ministers and ministerial office staff (5)
- Departmental officials (30)
- Non-departmental civil servants (12)
- User-generated website operators (9)
- Private sector online entrepreneurs (10)
- Academics and other experts (6)

## 3. CASE STUDY: THE POWER OF INFORMATION IN HEALTHCARE

### INTRODUCTION

Few policy areas illustrate the potential power of information more clearly than healthcare. The internet is becoming a valuable source of information for patients prior to visiting a doctor; by those in search of a second opinion; and by friends and relatives trying to inform themselves about the condition of someone they know. The wide availability of health information online also arguably has profound implications for the relationship between patients and medical professionals. It also offers the potential for users of health services to provide

information to one another about both their medical conditions and their experiences of using the NHS.

## INFORMATION MATTERS IN HEALTH

There is strong evidence that better information results in improved health outcomes. Better information in the hands of patients has a number of positive outcomes, including an increase in patients' quality of life and feelings of psychological wellbeing. Equally, information can help to drive up standards. In a recent example, a report published in the medical journal *Heart*<sup>111</sup> in 2007 found that information provided in performance league tables about coronary bypass surgery led to lower death rates after major heart operations.

Information is particularly important for chronic and long-term care. Some 45% of the adult population in Britain have at least one long-standing medical condition. Many of these conditions, including diabetes, can be dealt with by intelligent self-management.

However, it would be naïve not to acknowledge the fact that significant risks do exist in this area. Much of the health information produced online is of poor quality, unverified and potentially unreliable. Certain online sources of information also promote poor health outcomes contrary to government policy and good medical practice (e.g. pro-anorexia sites – see Box 22 below). This has led to calls by some (including the Picker report<sup>112</sup>) for accreditation of information providers.

### Box 22: Pro-anorexia websites

'Pro-ana' refers to a concept or community that promotes or supports anorexia as a choice, rather than an eating disorder. 'Pro-ana' groups are common on the internet, and share advice through message boards and online communities. Doctors view the sites as supporting patients in their illnesses. A 2006 Stanford University study<sup>113</sup> found that 61% of the vis-

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111 Bridgewater, B., A. Grayson, N. Brooks, et al. (2007). 'Has the publication of cardiac surgery outcome data been associated with changes in practice in Northwest England? An analysis of 25,730 patients undergoing CABG surgery under 30 surgeons over 8 years', *Heart* June 93(6): 744–48. [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=17237128&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=17237128&dopt=Abstract).

112 Coulter, A., J. Ellins, et al. (2006). *Assessing the quality of information to support people in making decisions about their health and healthcare*, Picker Institute Europe, Oxford, available at [www.pickereurope.org/Filestore/Downloads/Health-information-quality-web-version-FINAL.pdf](http://www.pickereurope.org/Filestore/Downloads/Health-information-quality-web-version-FINAL.pdf).

itors to these sites used them to obtain tips on weight loss and purging techniques, as well as on how to hide their food-avoidance tactics from friends and family members. Beat (formally called the Eating Disorder Association) states that the real danger of ‘pro-ana’ sites comes when ‘a visitor affected by an eating disorder has at last found someone who really understands the way they feel about themselves’.

## PEOPLE INCREASINGLY SEEK INFORMATION ABOUT THEIR HEALTH, MUCH OF IT ONLINE

Accessible, quality health information is a vital part of healthcare. It is also increasingly being demanded by patients.

More and more British people are seeking information about their own health, and many are doing so online. Health information is increasingly available online, from both the NHS and other sources. Research carried out in 2005 suggests that the internet is the second most popular source of health information (after doctors).<sup>114</sup> In 2005, for example, 35% of British internet users sought health information online during a 12-month period.

Patients no longer want information provided only by medical professionals. For example, research demonstrates that many people find that exchange of experiences with other patients and ex-patients is the most reassuring and efficient way of getting information.<sup>115</sup>

As a health information provider, the internet clearly benefits from several unique characteristics: first, it can be accessed 24 hours a day; second, users can remain anonymous; and third, with increased ICT availability and decreased cost, the internet can reach a large section of the population.

## HIGHLIGHTING INNOVATION

There is already significant evidence of innovation and information sharing in the area of health, by the public, the private and the third sectors. Examples include:

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- 113 Wilson, B.A., Peebles, R. et al. (2006) ‘Surfing for Thinness: A pilot study of pro-eating disorder web site usage in adolescents with eating disorders’ *Pediatrics* 118 (6): e1635–e1643
  - 114 Office of Fair Trading (2006). *Commercial Use of Public Information*.
  - 115 Bessell, T. L., S. McDonald, C. A. Silagy, J. N. Anderson, J. E. Hiller and L. N. Sanson (2002). ‘Do internet interventions do more harm than good? A systematic review’, *Health Expectations* 5.



- Mihealth<sup>116</sup> is a web-based information system that supports breast cancer sufferers, their families and carers through a combination of generic, local and evidence-based information, as well as direct lived experiences and personalised resources. These tools, which support patients' self-management and improved self-care, include: Midiary, a personal diary that enables patients to keep track of hospital and other appointments; and Mimoodstates, which helps patients to record their mental and physical well-being on a daily basis
- Patient Opinion<sup>117</sup> seeks to enable patients to share their positive and negative experiences of healthcare, ranging from the temperature of the food served, to the professionalism of the nursing staff. This, in turn, provides independent feedback to the NHS and helps patients identify the 'best' healthcare providers for their specific needs, thereby empowering patient choice while (arguably) helping to improve the NHS by highlighting areas in need of improvement
- Jooly's Joint<sup>118</sup> is an online support network of over 10,000 people with Multiple Sclerosis. It provides a platform for people across the world to discuss and share their thoughts on living with MS, and so provides personalised reassurance and help in coping. This is reinforced by Julie Howell, who founded the website after being diagnosed with MS at the age of 19. As she says, 'JJ has been incredible in helping me develop as a person, in developing my understanding of life'
- NHS Choices<sup>119</sup> is a new website announced by Health Secretary Patricia Hewitt in April 2007. When launched, it will help patients choose the best place to go for treatment, thereby intensifying competition between NHS hospitals in England. This, it is hoped, will lead to improved service delivery.

#### 4. EXAMPLES OF HARMFUL INFORMATION ON USER-GENERATED SITES

##### RATEMYTEACHER

The appearance of user-generated sites such as Ratemyteacher<sup>120</sup> provides an example of how pupils can give feedback on education. However, media interest has focused on the potential for negative feedback to spiral out of control. The

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116 [www.mihealth.info](http://www.mihealth.info).

117 [www.patientopinion.org.uk](http://www.patientopinion.org.uk).

118 [www.joolysjoint.com](http://www.joolysjoint.com).

119 The NHS Choices website is due to be launched in 2007.

120 [www.ratemyteacher.co.uk](http://www.ratemyteacher.co.uk).

charity Teacher Support Network has produced a fact sheet for teachers, advising on how to deal with online bullying. The NASUWT teachers' union has shown government education officials evidence of online bullying on such message boards. The Department for Education and Skills is currently updating its guidance on responses to cyber-bullying, and is working with a range of websites to address the issue.

## IS HEALTH INFORMATION ONLINE ACCURATE?

Nearly half of all women recently diagnosed as having breast cancer turned to the internet for information on health.<sup>121</sup> Although clinicians, researchers and health-care consumers are concerned about the accuracy of online health information,<sup>122</sup> a 2006 study in the *British Medical Journal* found that most posted information on breast cancer was accurate.<sup>123</sup> Perhaps more importantly, most false or misleading statements were rapidly corrected by participants in subsequent postings. An examination of 4,600 postings found only 10 (0.22%) to be false or misleading. Of these, seven were identified as false or misleading by other participants and corrected within an average of 4 hours and 33 minutes (maximum 9 hours and 9 minutes). Consumers are satisfied with their online experience and are making choices based on the information that they encounter.<sup>124</sup>

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121 Satterlund, M. J., K. D. McCaul and A. K. Sandgren (2003). 'Information gathering over time by breast cancer patients', *Journal of Medical Internet Research* 5(3): 5.

122 Biermann, J. S, G. J. Golladay, M. L. Greenfield and L. H. Baker (1999). 'Evaluation of cancer information on the internet', *Cancer* 86: 381–90; Price, S. L, W. R. Hersh (1999). 'Filtering web pages for quality indicators: an empirical approach to finding high quality consumer health information on the world wide web', *Proceedings of the AMLA Symposium*.

123 Esquivel, A., F. Meric-Bernstam and E. Bernstam (2006). 'Accuracy and self correction of information received from an internet breast cancer list: content analysis', *British Medical Journal*, 2 March.

124 Fox, S. and L. Rainie (2000). *The online health care revolution: how the web helps Americans take better care of themselves* in Washington DC: Pew Internet and American Life Project: Online.

## 5. CASE STUDY: OPPORTUNITIES TO PROMOTE AND IMPROVE ONLINETAX RETURNS THROUGH USER FORA

### INTRODUCTION

Over 9 million British people file their personal tax returns annually, under the self-assessment program run by Her Majesty's Revenue and Customs (HMRC). In 2006–07, 9.5 million self-assessment forms were sent out and 2.9 million returns were filed online. Online self-assessment is one of the most prominent and most successful government programs to put public services online. Filing income tax returns online was identified by the European Union as one of 12 critical citizen services that should be put online throughout the European Union.

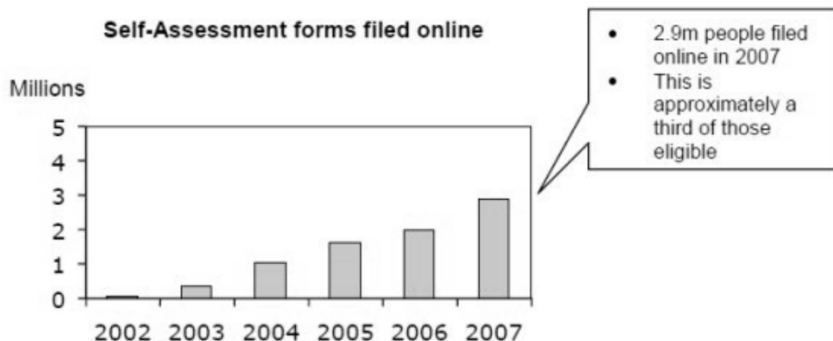
Given the importance of the online tax returns program, and the need to encourage more citizens who currently file their taxes on paper to do so online, this seemed a particularly useful case study area to explore whether government (particularly HMRC) might employ user self-help fora to improve its services.

### THE HISTORY OF ONLINE TAX RETURNS

HMRC, then called Inland Revenue, announced its decision to put self-assessment online in 2000–01. The self-assessment program includes small businesses, individuals, and individuals filing through advisers, such as accountants and tax specialists. Uptake of the service has been slow but steady. In 2002 only 76,000 filed online, rising to more than a million in 2004. Last year around 3 million filed online. (see Figure 3 below). However, take-up of HMRC's online filing has been relatively low compared to other countries. In 2004, it was 17%, compared to 44% in the US and 83% in Australia.<sup>125</sup>

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125 National Audit Office (2005). *HM Revenue and Customs, Filing of Income Tax Self Assessment Returns*' Report by the Comptroller and Auditor General, HC 74 Session 2005–2006, available at [www.nao.org.uk/publications/nao\\_reports/05-06/050674.pdf](http://www.nao.org.uk/publications/nao_reports/05-06/050674.pdf).



Source: Inland Revenue/HMRC Press Office 2002–07

## OBJECTIVES OF ONLINE TAX RETURNS

The online self-assessment program has three main benefits. First, it is more convenient for taxpayers. Filing online is quicker and easier than filling in long, cumbersome forms and reduces compliance costs. Second, the process of filing online is significantly faster and more accurate than the traditional paper-based route. By filing online, the most common mistakes can be avoided, as the system is designed to check for errors, as well as to perform the tax calculation for the user.

Third, online filing saves the Government money. If 50% of self-assessment forms were returned online, then, according to HMRC, savings of over £40 million a year (from 2011–12) could be possible.<sup>126</sup> HMRC estimates that the cost of processing a tax return is reduced from £22 for a paper form to £13 if the return is filed electronically, because the costs of data entry are eliminated and simple errors made by taxpayers in completing the form are rectified.<sup>127</sup>

## COMPLEXITY

To maximise these three benefits, HMRC plans to increase the number of taxpay-

126 National Audit Office (2005). *HM Revenue and Customs, Filing of Income Tax Self Assessment Returns* Report by the Comptroller and Auditor General, HC 74 Session 2005–2006, available at [www.nao.org.uk/publications/nao\\_reports/05-06/050674.pdf](http://www.nao.org.uk/publications/nao_reports/05-06/050674.pdf).

127 HMRC (2007). *Budget 2007: Regulatory Impact Assessments*, available at [www.hm-treasury.gov.uk/media/7E7/C5/bud07\\_ria\\_632.pdf](http://www.hm-treasury.gov.uk/media/7E7/C5/bud07_ria_632.pdf).

ers filing online. Increasing the number of those filing online, however, will be challenging. It is reasonable to assume that those ‘early adopters’ who initially decided to file online were those with the best IT skills. The remaining group, who have not filed online, are therefore likely to need increased support and encouragement. In order to realise these potential benefits, HMRC recognises the need to ensure that taxpayers are supported through what can be a complicated and confusing process.

In March 2006, HMRC published a review of its online services by Lord Carter of Coles.<sup>128</sup> The review identified difficulties with the ‘human experience’, in particular problems with telephone helpdesks, including complaints over jammed lines and advisers who were unable to answer questions, or who gave incorrect advice.

Equally, a report by the National Audit Office in June 2005 found that ‘although the HMRC website contained comprehensive information to help taxpayers file returns accurately, taxpayers did not always find the information they were seeking’.<sup>129</sup> It also indicated concern over the knowledge of call centre staff and the accuracy of the answers given to putative filers’ queries. Taxpayers, often with technical and highly specific queries, found that they had to make more than one call and then explain the problem again and again as they were put through to different people.

## OPPORTUNITY

With independent personal finance advice websites like MoneySavingExpert becoming more popular, it is clear that people are becoming more comfortable finding financial information online. Given the need for HMRC to increase the numbers of people using its service, as well as the combined complexity of tax in general and specific problems associated with online filing, this raises the question of whether there are opportunities to find new ways of helping and supporting taxpayers.

Research of internet-use patterns has shown a significant and growing trend for users to source information through a range of informal user-generated sources, ranging from wikis through to moderated fora, chat rooms and blogs. The private sector has embraced the potential for engaging customers in innovative ways, in order to provide cost-effective and comprehensive customer support

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128 Lord Carter of Coles (2006). *Review of HMRC Online Services*, accessed at [www.hmrc.gov.uk/budget2006/carter-review.pdf](http://www.hmrc.gov.uk/budget2006/carter-review.pdf).

129 National Audit Office (2005) *HM Revenue and Customs, Filing of Income Tax Self Assessment Returns* Report by the Comptroller and Auditor General, HC 74 Session 2005–2006. [www.nao.org.uk/publications/nao\\_reports/05-06/050674.pdf](http://www.nao.org.uk/publications/nao_reports/05-06/050674.pdf).

and advice. Notable examples have been in computing, where companies have used the ability of a diverse customer base to answer enquiries, which are often technically complex and highly specific, in simple, accessible language. Good examples of this include Apple's support fora,<sup>130</sup> Dell's Ideastorm forum<sup>131</sup> and Microsoft's Knowledge Base.<sup>132</sup>

Following the private sector in developing user-support fora could provide a number of benefits for government. A well-run, informative forum could provide users with helpful information, while simultaneously helping to reduce demand for other, more expensive forms of customer support. However, on the other side, HMRC and others would need to think carefully about the potential problems associated with such an approach. Steps would have to be taken to ensure that information was accurate, for legal and other reasons. This, in turn, would involve some expenditure to moderate fora and ensure the content is accurate. There is a risk that users would use the forum to criticise the service itself, creating bad publicity.

**Box 23: How a government online forum could help taxpayers with self-assessment**

Imagine a user who, while trying to complete her online tax self-assessment, is confused over how to register multiple sources of income. She searches the frequently asked questions section of the HMRC site, but the advice available doesn't capture the specific nature of her question. Rather than turn to an external source of information, she instead clicks on the link to the HMRC's new user-support forum. This links to a searchable series of fora, categorised by different groups of users (e.g. partners or self-employed). A simple word search reveals a series of users encountering similar problems, but none quite captures her specific query. She posts a short description of the issue, and another user responds, drawing attention to an answer he wrote to a similar query, which she can use to complete her form. An HMRC moderator later checks the factual accuracy of the second user's answer and edits the entry on the common problems section of the relevant user-category forum.

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130 [www.apple.com/uk/support](http://www.apple.com/uk/support).

131 [www.ideastorm.com](http://www.ideastorm.com).

132 [support.microsoft.com](http://support.microsoft.com).

# CHAPTER TWENTY-ONE

## TOWARDS A NATIONAL INFORMATION POLICY: DISCUSSION AND RECOMMENDATIONS IN THE REVIEW OF

Advances in information and communication technologies in the last decade or so – greatly increased computing power and storage capacity, grid and cloud computing, high speed broadband networks, the internet and web 2.0,<sup>2</sup> simulation and virtual worlds – have brought about an information revolution, leading to fundamental changes in the way information (especially digital data) is collected or generated, shared and distributed.

*Anne Fitzgerald*

The internet and digital technologies ('information and communications technologies' or ICTs) are re-shaping research, innovation and creativity. The interoperability, interactivity and immediacy of the internet provides a platform for innovation in activities as diverse as scientific research, the delivery of social services (including health and education), access to entertainment products and production of creative materials. Not only has there been a revolution in the way information of all kinds is created, used and disseminated, but developments of this kind are set to continue – and, more likely, to accelerate – into the future. These developments are of immediate relevance for a wide range of creators and users of digital content, including those involved in scientific research, the creative industries, and curators of cultural and historic collections, the public sector and members of the general community. New technologies enable

Developments in technology have fundamentally changed the way science

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2 See Tim O' Reilly, *What is web 2.0?*, 2005, at [www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html](http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html).

1 This chapter provides a background to the consideration of information policy in the Review of the National Innovation System, chaired by Dr Terry Cutler., which was commissioned by Senator Kim Carr, Minister for Innovation, Industry, Science and Research in January 2008. After holding public consultation sessions in all Australian capital cities, convening a series of expert roundtables on specific issues, and receiving around 700 written submissions, the review panel published the green paper, 'Venturous Australia: building strength in innovation' on 28 August 2008 (see [www.innovation.gov.au/innovationreview/Documents/NIS\\_review\\_Web3.pdf](http://www.innovation.gov.au/innovationreview/Documents/NIS_review_Web3.pdf)).

and research are organised, 'by linking the creativity of individuals and allowing organisations to collaborate, pool distributed computing power and exploit new ways of disseminating information'.<sup>3</sup> Now, vast amounts of digital data generated through research, observational projects<sup>4</sup> and instruments can be accessed online via distributed networks. Developments in information and communication technologies have made it possible to carry out research and address complex problems in ways that were not previously possible. Quality research now often involves virtual communities of researchers participating in large-scale web-based collaborations, opening their early-stage results to the research community and interacting with other researchers who can analyse the data or combine it with other datasets, with the objective of accelerating discoveries.<sup>5</sup> Governments and public sector bodies are centrally involved in information markets, not only because of their role as major providers of research funding, but also because they

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The author was an external advisor to the review and provided this material to the panel on 8 July 2008. It includes a an overview of developments in information policy in Australia and internationally which was initially prepared for the expert roundtable on Information Policy and Information Markets convened at QUT by Dr Cutler on 30 May 2008, as well as material derived from comments at the public consultation sessions in March and April 2008 and the written submissions to the review (available at [www.innovation.gov.au/innovationreview/Pages/home.aspx](http://www.innovation.gov.au/innovationreview/Pages/home.aspx)). As such, this material provides some context to the discussion and recommendations in chapter 7 of 'Venturous Australia' (especially recommendations 7.2 to 7.14) (see [www.innovation.gov.au/innovationreview/Documents/NIS\\_review-chapter7\(1\).pdf](http://www.innovation.gov.au/innovationreview/Documents/NIS_review-chapter7(1).pdf)). In order to provide an accurate account of the material available to the review panel, the material has not been further updated since it was provided to the panel in July 2008.

- 3 OECD, *Policy Brief: The Future of the Internet Economy*, June 2008 at p. 4.
- 4 For example, the Integrated Marine Observing System (IMOS) project established under the National Collaborative Research Infrastructure Strategy (NCRIS) (see [www.imos.org.au](http://www.imos.org.au)) and its Queensland-based node, the Great Barrier Reef Ocean Observing System (see announcement by Minister Carr on 9 May 2008 at [minister.innovation.gov.au/SenatortheHonKimCarr/Pages/NEWMONITORINGSYSTEMFORTHEGREATBARRIERREEF.aspx](http://minister.innovation.gov.au/SenatortheHonKimCarr/Pages/NEWMONITORINGSYSTEMFORTHEGREATBARRIERREEF.aspx)).
- 5 An example is the NCBI's GenBank which published the data gathered by the Human Genome Project. See Innovation Review submission 211 (Professor J Zobel). Another is the sequencing of the platypus genome which was carried out by Washington University with funding from the National Institutes of Health (NIH). The platypus genome is accessible at [genome.wustl.edu/genome.cgi?GENOME=Ornithorhynchus%20anatinus](http://genome.wustl.edu/genome.cgi?GENOME=Ornithorhynchus%20anatinus) and resources for exploring the sequence and annotation data are available through browser displays at Ensembl ([www.ensembl.org](http://www.ensembl.org)), UCSC ([genome.ucsc.edu](http://genome.ucsc.edu)) and the NCBI ([www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov)). See also the Microbial Commons project, described at [www.microbialcommons.ugent.be/](http://www.microbialcommons.ugent.be/)



are themselves significant producers and users of information and content across a very broad range of scientific, social, cultural and economic activities. Much of the information and content generated by governments and publicly-funded researchers is of value and relevance to the broader community as it provides the basis of evidence-based policy and decision-making, for example, in relation to health and social welfare. The impact of technological convergence is readily apparent in relation to the creative industries, giving rise to a digital economy in which arts, science, innovation and the economy are interconnected. Here, there is a blurring of the traditional boundaries between cultural and economic, commercial and community.<sup>6</sup> New ways of producing, using and distributing digital materials underpin the creative economy in which user-generated creativity and the participative web are central features.<sup>7</sup>

Economic research has highlighted the importance for innovation of information flows and the availability of information for access and re-use.<sup>8</sup> Information is crucial to the efficiency of markets and drives innovation.<sup>9</sup> Enhanced

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6 See Axel Bruns, Blogs, *Wikipedia, Second Life, and Beyond: From Production to Prodosage*, Peter Lang, New York, 2008

7 On the concept of user-led generation, see *Innovation Review Submission no. 410* (Darren Sharp, Smart Internet CRC)

8 See for example, J Stiglitz et al., *The Role of Government in a Digital Age*, Computer and Communications Industry Association, Washington DC, 2000; Carl Shapiro and Hal Varian, *Information Rules: A Strategic Guide to the Networked Economy* (1999); Peter N Weiss, *Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts* (2002); T Cutler, *Innovation and open access to public sector information*, paper presented at the National Information Summit, Brisbane, 13 July 2007, at [datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/F9C327CB32E974E84A25732F00186486/\\$FILE/Terry%20Cutler.pdf?openelement](http://datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/F9C327CB32E974E84A25732F00186486/$FILE/Terry%20Cutler.pdf?openelement); N Gruen, *How to choose your job, your oncologist, your fund manager and your real estate agent*, paper presented at the International Summit on Access to Public Sector Information, Brisbane, 4 March 2008, at [datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/F72518B483FF0B944A25740F00833724/\\$FILE/Dr%20Nicholas%20Gruen.pdf?openelement](http://datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/F72518B483FF0B944A25740F00833724/$FILE/Dr%20Nicholas%20Gruen.pdf?openelement); N. Gruen 'A National Information Policy?' (17 April 2008) *The Australian Financial Review*; P Crossman, *Productivity and Open Access to Public Sector Information*, paper presented at the International Summit on Access to Public Sector Information, Brisbane, 4 March 2008, at [datasmart.nsf/0/1E57C7FF76AB43944A25740F00830250/\\$FILE/Peter%20Crossman.pdf?openelement](http://datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/1E57C7FF76AB43944A25740F00830250/$FILE/Peter%20Crossman.pdf?openelement)

9 N Gruen, *How to choose your job, your oncologist, your fund manager and your real estate agent*, paper presented at the International Summit on Access to Public Sector Information, Brisbane, 4 March 2008, at [datasmart.nsf/0/F72518B483FF0B944A25740F00833724/\\$FILE/](http://datasmart.oesr.qld.gov.au/Events/datasmart.nsf/0/F72518B483FF0B944A25740F00833724/$FILE/)

information flows promote creativity, innovation and productivity.<sup>10</sup> The changes in information markets and a growing appreciation of the ‘power of information’<sup>11</sup> have led to a reassessment of the value of information, with a shift in focus away from the immediate financial income that may be obtained by selling information as a commodity, towards the wider social and economic benefits to be obtained from the use of the information.<sup>12</sup> The economic and social benefits flowing from access to publicly funded research results and public sector information have been considered in research studies in Australia and elsewhere. Houghton, Steele and Sheehan concluded in their 2006 report,<sup>13</sup> *Research Communication Costs in Australia: Emerging Opportunities and Benefits*, that open access models of scholarly communication have the potential to increase the economic and social returns from public investment in R & D.<sup>14</sup> Other studies supporting open access to public sector information on social and/or economic grounds include *Commercial Use of Public Information* (2006) commissioned by

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Dr%20Nicholas%20Gruen.pdf?openelement;

- 10 The Hon Kim Carr, Minister for Innovation, Industry, Science and Research, 7 February 2008, at [minister.industry.gov.au/SenatortheHonKimCarr/Pages/THEREIS-MORETHANONEWAYTOINNOVATERESEARCHFORDISCOVERY,UNDERSTANDING,ANDAPPLICATION.aspx](http://minister.industry.gov.au/SenatortheHonKimCarr/Pages/THEREIS-MORETHANONEWAYTOINNOVATERESEARCHFORDISCOVERY,UNDERSTANDING,ANDAPPLICATION.aspx). Note that this speech was also reported in the Australian’s Higher Education Supplement on 23 January 2008.
- 11 The phrase ‘power of information’ was adopted as the title of the report produced for the UK Government in 2007 by consultants Ed Steinberg and Tom Mayo. See [www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx).
- 12 Horst Forster (Director, ‘Content’, European Commission’s Directorate General for Information Society and Media, European Commission), *Re-use of Public Sector Information: Change, Growth and Transformation*, paper presented at ePSIplus Conference ‘PSI Re-use: Which Action Next?’ Brussels, 13 June 2008, available at [ftp.cordis.europa.eu/pub/ist/docs/dir\\_e/speech-hf-epsi-conference-130608\\_en.pdf](http://ftp.cordis.europa.eu/pub/ist/docs/dir_e/speech-hf-epsi-conference-130608_en.pdf).
- 13 This report was commissioned by the then Department of Education, Science and Training (DEST).
- 14 J Houghton, C Steele and P Sheehan, *Research Communication Costs in Australia: Emerging Opportunities and Benefits* (2006), at [www.dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST\\_Research\\_Communications\\_Cost\\_Report\\_Sept2006.pdf](http://www.dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST_Research_Communications_Cost_Report_Sept2006.pdf); see J Houghton, *Exploring the impacts of enhanced access to publicly funded research*, presented at the OECD’s Working Party on the Information Economy Workshop, *The Socioeconomic Effects of Public Sector Information on Digital Networks*, Paris, February 2008, at [www.oecd.org/dataoecd/11/20/40067323.pdf](http://www.oecd.org/dataoecd/11/20/40067323.pdf); see also J Houghton and P Sheehan, *The Economic Impact of Enhanced Access to Research Findings*, Working Paper No 23, Centre for Strategic Economic Studies, Victoria University, 2006, at [www.cfses.com/documents/wp23.pdf](http://www.cfses.com/documents/wp23.pdf).

the UK Office of Fair Trading,<sup>15</sup> *Models of Public Sector Information Provision via Trading Funds* (2008) commissioned by the UK Treasury,<sup>16</sup> the European Commission's report *Web 2.0 in Government: Why and How?* (2008)<sup>17</sup> and CapGemini's *Information Opportunity Report* (2008).<sup>18</sup> The need for further detailed research on the social and economic benefits of enhanced access to publicly funded research results and public sector information and access and pricing regimes for public sector information is being addressed in work being undertaken by a range of organisations around the world, including the OECD<sup>19</sup> and the ePSIplus Network.<sup>20</sup> In Australia, studies are being undertaken by the Centre for Strategic Economic Studies at Victoria University<sup>21</sup> and in the Office of Economic and Statistical Research (OESR) in Queensland Treasury.<sup>22</sup> As part of the

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- 15 Office of Fair Trading, *Commercial Use of Public Information*, December 2006, see [www.oft.gov.uk/advice\\_and\\_resources/resource\\_base/market-studies/public-information](http://www.oft.gov.uk/advice_and_resources/resource_base/market-studies/public-information).
  - 16 David Newbery, Lionel Bently and Rufus Pollock, *Models of Public Sector Information Provision via Trading Funds*, Cambridge University, February 2008, at [www.berr.gov.uk/files/file45136.pdf](http://www.berr.gov.uk/files/file45136.pdf).
  - 17 European Commission Joint Research Centre for Prospective Technological Studies (IPTS), *Web 2.0 in Government: Why and How?*, May 2008, at p. 39 and p. 45: '[4.8] .... It now becomes clear that besides opportunities for economic growth, there are significant opportunities for social benefits and public value [from PSI]. Citizens are able to build added-value services re-using public data (such as Planningalerts.com). This could change significantly the terms of the debate in favour of greater availability of public data'. Available at [ftp.jrc.es/JRC45269.pdf](http://ftp.jrc.es/JRC45269.pdf).
  - 18 CapGemini, *The Information Opportunity Report: harnessing information to enhance business performance*, 2008, at [www.uk.capgemini.com/for\\_you\\_to\\_use/thought\\_leadership/the\\_information\\_opportunity\\_report\\_2008/](http://www.uk.capgemini.com/for_you_to_use/thought_leadership/the_information_opportunity_report_2008/).
  - 19 See Paul Uhlir, Raed Sharif and Tilman Merz, *Measuring the Social and Economic Benefits: Review of the Literature and Future Directions*, presented at OECD WPIE workshop on public sector information, Paris, Feb 2008, at [www.oecd.org/dataoecd/23/42/40170933.ppt#258,3,Benefits of PSI Access and Re-use](http://www.oecd.org/dataoecd/23/42/40170933.ppt#258,3,Benefits%20of%20PSI%20Access%20and%20Re-use)
  - 20 Recommendation 6 of the ePSIplus Network's draft recommendations (version 18 May 2008) to the European Commission's review of the PSI Directive states: 'In the view of ePSIplus, no other course of action remains other than to continue and intensify work to establish and disseminate the economic case for low or no charges conclusively. The Commission should seek the support of at least one Member State in which conditions for longitudinal work can be established in at least one PSI sector, in order to create a convincing basis for effective dissemination to others'. See [www.epsiplus.net/reports/epsiplus\\_recommendations\\_to\\_the\\_ec\\_s\\_2008\\_review\\_of\\_the\\_psi\\_re\\_use\\_directive](http://www.epsiplus.net/reports/epsiplus_recommendations_to_the_ec_s_2008_review_of_the_psi_re_use_directive).
  - 21 See the Economic and Social Impacts of Open Access (Easi-OA) Research Agenda, Centre for Strategic Economic Studies, Victoria University, at [www.cfes.com/projects/Easi-OA.htm](http://www.cfes.com/projects/Easi-OA.htm).

review of the PSI Directive, the European Commission commissioned MICUS Management Consulting to undertake a survey of the PSI re-use market across Europe, focusing on geographic information, meteorological information and legal information.<sup>23</sup>

## INTERNATIONAL DEVELOPMENTS IN INFORMATION POLICY

Technological developments and economic theory have led, since the early 1990s, to greater interest in enabling access to and re-use of information and content produced or held by governments and publicly-funded research organisations. Much work has been done by national governments and international organisations on the development of policies and systems to enable information access and re-use. This has carried through into several high level policy statements on access to public sector information and publicly-funded research outputs which embrace open access as a core value (notably the Berlin Declaration (2003),<sup>24</sup> the Budapest Open Access Initiative (2002)<sup>25</sup> and the Bethesda Statement on Open Access Publishing (2003)<sup>26</sup>), the development of open access digital repositories and online journals, the introduction of open access publication requirements by providers of research funding and leading research institutions<sup>27</sup> and increasing uptake in open source/open content models of copyright licensing for software (e.g. GNU/GPL) and digital content (e.g. Creative Commons and Science Commons). Open access requirements are increasingly being introduced by research funding organisations and research institutions worldwide.<sup>28</sup> In 2008 the US National Institutes of Health (the largest funder of basic biomedical research in the world, spending US\$25 billion in 2005)<sup>29</sup> and two Harvard University faculties (the Law School<sup>30</sup> and the Faculty of Arts and Sciences<sup>31</sup>)

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22 Dr Cook's research project, entitled *A review of rationales for allocating costs and payments in producing and supplying public sector information*, is being conducted as a project within the CRC for Spatial Information.

23 See [www.micus.de/psi\\_studie/index\\_en.html](http://www.micus.de/psi_studie/index_en.html).

24 See [oa.mpg.de/openaccess-berlin/berlindeclaration.html](http://oa.mpg.de/openaccess-berlin/berlindeclaration.html).

25 See [www.soros.org/openaccess/read.shtml](http://www.soros.org/openaccess/read.shtml).

26 See [www.earlham.edu/~peters/fos/bethesda.htm](http://www.earlham.edu/~peters/fos/bethesda.htm).

27 Innovation Review submissions 211 (Professor J Zobel), 33 (B Cornell), 172 (Dr R Clarke).

28 For an international listing of open access mandates, see ROARMAP at [www.eprints.org/openaccess/policysignup/](http://www.eprints.org/openaccess/policysignup/)

29 See [grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html)

30 See [www.law.harvard.edu/news/2008/05/07\\_openaccess.php](http://www.law.harvard.edu/news/2008/05/07_openaccess.php)

introduced mandatory open access publishing policies, requiring peer-reviewed journal publications to be made available in open access repository.<sup>32</sup>

Internationally, some of the most significant initiatives have occurred in the European Union. Of particular relevance is the European Union's Directive on the re-use of public sector information (the EU PSI Directive), which was adopted by the European Parliament and Council on 17 November 2003. The EU PSI Directive, the culmination of efforts dating back to the late 1980s, is now being implemented throughout the European Union.<sup>33</sup> In the United Kingdom, implementation of the EU PSI Directive led to the establishment of the Office of Public Sector Information (OPSI) as the central body responsible for developing and managing the UK's system for public sector information access and re-use. A further initiative aimed at enabling the UK government to respond to the opportunities provided by digital technologies for information creation and re-use was the *Power of Information Review*, conducted in 2007 by consultants Ed Steinberg and Tom Mayo.<sup>34</sup>

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- 31 Adopted 12 February 2008, See [www.fas.harvard.edu/~secfas/February\\_2008\\_Agenda.pdf](http://www.fas.harvard.edu/~secfas/February_2008_Agenda.pdf) and [www.eprints.org/openaccess/policysignup/fullinfo.php?inst=Harvard%20University%20Faculty%20of%20Arts%20and%20Sciences](http://www.eprints.org/openaccess/policysignup/fullinfo.php?inst=Harvard%20University%20Faculty%20of%20Arts%20and%20Sciences). In an important advance on previous practice, instead of requiring academic authors to deposit their publications in the institutional repository themselves (which requires individual academic authors to assume responsibility for negotiating copyright interests with their publishers) Harvard's Faculty of Arts and Sciences obtains a licence from faculty authors which allows Harvard to deposit and make available faculty authors' publications on their behalf. Importantly, the Faculty of Arts and Sciences' policy also provides that any transfer of copyright to a publisher is subject to the licence granted by the faculty author to Harvard.
- 32 NIH's mandatory open access policy has received legislative backing by the *Consolidated Appropriations Act 2008* (Division G, Title II, Section 218 of Public Law 110-161) which states: 'The Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication to be made publicly available no later than 12 months after the official date of publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law'. See NIH's *Revised Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research*, at [grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-033.html).
- 33 See [www.epsipius.net](http://www.epsipius.net).
- 34 See [www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx). The Government's response was published in June 2007 – see: [cabinetoffice.gov.uk/publications/reports/power\\_information/power\\_information\\_response.pdf](http://cabinetoffice.gov.uk/publications/reports/power_information/power_information_response.pdf) The Power of Information Task Force was established in March 2008 – see [powerofinforma-](http://powerofinforma-)

The EU has also adopted Directives dealing specifically with environmental and spatial information. On 28 January 2003 the European Council and Parliament adopted the Directive on Public Access to Environmental Information<sup>35</sup> which obliges public authorities to provide timely access to environmental information. The Directive establishing an Infrastructure for Spatial Information (the INSPIRE Directive)<sup>36</sup> was adopted by the European Parliament and Council on 14 March 2007. There is a degree of overlap between the spatial information covered by the INSPIRE Directive and the information covered by the Environmental Information Directive and the PSI Directive. As well as these Directives, the European Commission has issued Communications addressing issues relevant to open access in relation to a broad range of information types including scientific and creative materials online: the Communication on scientific information in the digital age: access, dissemination and preservation was issued in 2007<sup>37</sup> and the Communication on creative content online in the single market was issued in 2008.<sup>38</sup>

During the last decade the OECD,<sup>39</sup> through its Directorate for Science, Technology and Policy<sup>40</sup> and, in particular, the Working Party on the Information Economy (WPIE) within that Directorate,<sup>41</sup> has examined the social and economic implications of the development and use of information and communication technologies, the internet and e-business. The Working Party on the Information Economy (WPIE)<sup>42</sup> has focused on a range of issues including digital

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tion.wordpress.com/.

- 35 Directive 2003/4/EC of The European Parliament and of the Council, 28 January 2003, On Public Access To Environmental Information And Repealing Council Directive 90/313/EEC OJL 041, 14/02/2003 P. 0026 – 0032. eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0004:EN:HTML.
- 36 Directive 2007/2/EC of the European Parliament and the Council of 14 March 2007 establishing an Infrastructure for Spatial Information [2007] OJ L 108/1, 25 April 2007. The INSPIRE Directive entered into force on 15 May 2007. Accessed at [www.ec-gis.org/inspire/directive/l\\_10820070425en00010014.pdf](http://www.ec-gis.org/inspire/directive/l_10820070425en00010014.pdf).
- 37 Communication from the Commission to the European Parliament, the Council, and the European Economic and Social Committee on scientific information in the digital age: access, dissemination and preservation, COM(2007) 56 final. [ec.europa.eu/research/science-society/document\\_library/pdf\\_06/communication-022007\\_en.pdf](http://ec.europa.eu/research/science-society/document_library/pdf_06/communication-022007_en.pdf).
- 38 Communication from the Commission to the European Parliament, the Council, and the European Economic and Social Committee on creative content online in the single market, COM(2007) 836 final. [ec.europa.eu/avpolicy/other\\_actions/content\\_online/index\\_en.htm](http://ec.europa.eu/avpolicy/other_actions/content_online/index_en.htm)
- 39 For an overview of recent OECD activity in relation to digital content and public sector information, see [www.epsplus.net/reports/oecd\\_psi\\_reports\\_presentations](http://www.epsplus.net/reports/oecd_psi_reports_presentations)
- 40 [www.oecd.org/departement/0,3355,en\\_2649\\_33703\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/departement/0,3355,en_2649_33703_1_1_1_1_1,00.html).
- 41 [www.oecd.org/sti/information-economy](http://www.oecd.org/sti/information-economy).

content and taken a leading role in the development of international policy on access to public sector information and publicly funded research outputs.<sup>43</sup> In January 2004, a Ministerial meeting of the OECD Committee for Scientific and Technological Policy adopted the Ministerial Declaration on Access to Research Data from public funding, recognising that ‘fostering broader, open access to and wide use of research data will enhance the quality and productivity of science systems worldwide’.<sup>44</sup> The Declaration is based on recognition that ‘an optimum

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42 [www.oecd.org/department/0,3355,en\\_2649\\_33757\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/department/0,3355,en_2649_33757_1_1_1_1_1,00.html).

WE SHARE a vision that the Internet Economy, which covers the full range of our economic, social and cultural activities supported by the Internet and related information and communications technologies (ICT), will strengthen our capacity to improve the quality of life for all our citizens by: ....

- Developing an increasingly important platform for research, international science co-operation, creativity and innovation in many different sectors.
- to contribute to the development of the Internet Economy, we will:
- Foster creativity in the development, use and application of the Internet, through policies that:
- Maintain an open environment that supports the free flow of information, research, innovation, entrepreneurship and business transformation.
- Make public sector information and content, including scientific data, and works of cultural heritage more widely accessible in digital format.
- Encourage basic and applied research on the Internet and related ICTs.
- Encourage universities, governments, public research, users and business to work together in collaborative innovation networks and to make use of shared experimental Internet facilities.
- Combine efforts to combat digital piracy with innovative approaches which provide creators and rights holders with incentives to create and disseminate works in a manner that is beneficial to creators, users and our economies as a whole.
- Encourage new collaborative Internet-based models and social networks for the creation, distribution and use of digital content that fully recognise the rights of creators and the interests of users.
- Strengthen the development of human resources to take full advantage of the Internet and related ICTs, and further develop ICT skills and digital and media literacy.<sup>49</sup>

49 OECD, *Seoul Declaration on the Future of the Internet Economy*, 18 June 2008, available at [www.oecd.org/dataoecd/49/28/40839436.pdf](http://www.oecd.org/dataoecd/49/28/40839436.pdf).

44 OECD, Committee on Scientific and Technological Policy, Ministerial Declaration on Access to Research Data from Public Funding C(2004)31/REV1, Art. 17, see t [www.oecd.org/document/0,2340,en\\_2649\\_34487\\_25998799\\_1\\_1\\_1\\_1,00.htm](http://www.oecd.org/document/0,2340,en_2649_34487_25998799_1_1_1_1,00.htm).

international exchange of data, information and knowledge contributes decisively to the advancement of scientific research and innovation'.<sup>45</sup> In December 2006, OECD Council endorsed the Principles and Guidelines for Access to Research Data from Public Funding developed by the OECD Committee for Scientific and Technological Policy<sup>46</sup> and in 2008 issued the Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information.<sup>47</sup> Both of these OECD documents were endorsed and adopted by the OECD Ministers at the OECD Ministerial Meeting on the Future of the Internet Economy in Seoul, Korea in June 2008.<sup>48</sup> Importantly, the principles stated in these documents have been included in the Seoul Declaration on the Future of the Internet Economy which was adopted by the OECD Ministers on 18 June 2008, in which the Ministers declared:

WE SHARE a vision that the Internet Economy, which covers the full range of our economic, social and cultural activities supported by the Internet and related information and communications technologies (ICT), will strengthen our capacity to improve the quality of life for all our citizens by:

....

- Developing an increasingly important platform for research, international science co-operation, creativity and innovation in many different

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45 See OECD, Committee on Scientific and Technological Policy, Ministerial Declaration on Access to Research Data from Public Funding C(2004)31/REV1, see [www.oecd.org/document/0,2340,en\\_2649\\_34487\\_25998799\\_1\\_1\\_1\\_1,00.htm](http://www.oecd.org/document/0,2340,en_2649_34487_25998799_1_1_1_1,00.htm).

46 OECD, Recommendation of the Council concerning Access to Research Data from Public Funding C(2006)184 [webdomino1.oecd.org/horizontal/oecdacts.nsf/Display/3A5FB1397B5ADFB7C12572980053C9D3?OpenDocument](http://webdomino1.oecd.org/horizontal/oecdacts.nsf/Display/3A5FB1397B5ADFB7C12572980053C9D3?OpenDocument).

47 The proceedings of a WPIE Workshop on public sector information, *The Socio-economic Effects of Public Sector Information on Digital Networks: Toward a Better Understanding of Different Access and Reuse Policies*, held in Paris on 4–5 February 2008 are available at [www.oecd.org/document/48/0,3343,en\\_2649\\_33757\\_40046832\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/48/0,3343,en_2649_33757_40046832_1_1_1_1,00.html). For background, see Graham Vickery and Sacha Wunsch-Vincent, *Digital Broadband Content: Public Sector Information and Content*, OECD Directorate for Science, Technology and Industry, DSTI/ICCP/IE(2005)2/FINAL, Committee for Information, Computer and Communications Policy, Working Party on the Information Economy 30-Mar-2006, available at [www.oecd.org/dataoecd/10/22/36481524.pdf](http://www.oecd.org/dataoecd/10/22/36481524.pdf) and Participative Web and User-Created Content: Web 2.0, Wikis and Social Networking (2007) Organisation for Economic Co-operation and Development, available at [www.oecd.org/dataoecd/57/14/38393115.pdf](http://www.oecd.org/dataoecd/57/14/38393115.pdf).

48 See OECD, *Shaping Policies for the Future of the Internet Economy*, Annexes, available at [www.oecd.org/dataoecd/1/28/40821729.pdf](http://www.oecd.org/dataoecd/1/28/40821729.pdf).



sectors.

- to contribute to the development of the Internet Economy, we will:
- Foster creativity in the development, use and application of the Internet, through policies that:
- Maintain an open environment that supports the free flow of information, research, innovation, entrepreneurship and business transformation.
- Make public sector information and content, including scientific data, and works of cultural heritage more widely accessible in digital format.
- Encourage basic and applied research on the Internet and related ICTs.
- Encourage universities, governments, public research, users and business to work together in collaborative innovation networks and to make use of shared experimental Internet facilities.
- Combine efforts to combat digital piracy with innovative approaches which provide creators and rights holders with incentives to create and disseminate works in a manner that is beneficial to creators, users and our economies as a whole.
- Encourage new collaborative Internet-based models and social networks for the creation, distribution and use of digital content that fully recognise the rights of creators and the interests of users.
- Strengthen the development of human resources to take full advantage of the Internet and related ICTs, and further develop ICT skills and digital and media literacy.<sup>49</sup>

## INFORMATION ACCESS AND USE IN AUSTRALIA

As a member of the OECD and a signatory to the Seoul Declaration and associated documents, Australia is committed (although not strictly legally bound) to implementing the principles which they set out. However, the position as it has developed in Australia in relation to information access and use is fragmented and lacks a coherent policy foundation, whether viewed in terms of interactions within or among the different levels of government at the local, State and Federal levels, or between the government, academic and private sectors. The issue of information access and re-use has been considered by various government agencies and in reports commissioned by governments over the last 15 years. Some important practices and initiatives can be identified but they are loosely connected, deal with different aspects of access and re-use and lack any formal coordination. No comprehensive statement of policy, principle or practice relating to informa-

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49 OECD, *Seoul Declaration on the Future of the Internet Economy*, 18 June 2008, available at [www.oecd.org/dataoecd/49/28/40839436.pdf](http://www.oecd.org/dataoecd/49/28/40839436.pdf).

tion flows has yet been developed by any tier of Australian government or for any information sector.<sup>50</sup> The difficulty – often the impossibility – of accessing government information – either by government or third party users – was raised in the Australian Spatial Consortium’s<sup>51</sup> submission to the Innovation Review.<sup>52</sup>

To some extent, Australia can be seen to have disengaged from the theoretical and practical developments on access to information that have been a central concern in many other countries (particularly the European Union and the United States) during the last decade or so. With some notable exceptions (which are discussed below), there has been a low level of awareness in Australia about steps being taken in other jurisdictions and by international organisations (such as the OECD) to enable greater access to public sector information and outputs of publicly funded research. In respect of developments in specific sectors (e.g. requirements for access to environmental information such as those applying under the Aarhus Convention<sup>53</sup> and the EU Directive on access to environmental information<sup>54</sup>) there is little evidence of awareness in Australia of such developments and their importance for public and private sector entities. While the Copyright Law Review Committee’s review of Crown copyright in 2005 – 2006 provided an opportunity to examine the issue of access to public sector information, the CLRC was unable to contextualise its inquiry within the framework of international developments and ideas about access to and re-use of PSI.<sup>55</sup>

A recent acknowledgement of the need for a coordinated national approach towards information access and re-use is found in the proposal for a National Information Sharing Strategy (NISS) which was approved by the relevant Com-

50 The Australian position can be contrasted with that in New Zealand, where the government published its national information policy in 1997.

51 The Australian Spatial Consortium is made up of the six lead organisations in the spatial information sciences in Australia: ANZLIC – the Spatial Information Council, ASIBA (the Australian Spatial Information Business Association), the Spatial Sciences Institute (SSI), the Cooperative Research Centre for Spatial Information (CRC-SI), the Public Sector Mapping Agency (PSMA) and 43 Pty Ltd.

52 Submission no. 307, Australian Spatial Consortium at p. 1.

53 Convention on Access to Information, Public Participation and Decision Making, and Access to Justice in Environmental Matters, Aarhus, Denmark, 25 June 1998, see [www.unece.org/env/pp/documents/cep43e.pdf](http://www.unece.org/env/pp/documents/cep43e.pdf). See FERN, *Accessing Environmental Information In and From the European Community: a practical guide to your right to know*, November 2007, accessed at [www.fern.org/media/documents/document\\_4095\\_4108.pdf](http://www.fern.org/media/documents/document_4095_4108.pdf).

54 European Directive 2003/4/EC on public access to environmental information. This has been implemented in the United Kingdom in the Environmental Information Regulations 2004.

55 A useful analysis of the CLRC’s inquiry is found in Professor G Greenleaf’s submission (no. 504(R)) to the Innovation Review, at pp. 70–71.

monwealth, State and Territory Ministers at the meeting of the Online and Communications Council (OCC) on 29 June 2007. The NISS proposal, which is being carried forward by AGIMO, envisages the development of a standardised approach to information sharing to support the delivery of government services, for use by all portfolio areas at all levels of government.

To date, Australian activities aimed at enabling information access and re-use have been largely focused on two key areas: spatial data and publicly funded research outputs (whether in the form of publications or data). Much of the impetus for access to public sector materials has come from the spatial community, which has for many years been a proponent of the view ‘that government held information, and in particular spatial information, will play an absolutely critical role in increasing the innovative capacity of this nation’.<sup>56</sup> The most advanced policy on data access is the *Spatial Data Access and Pricing Policy* (2001) developed by the Office of Spatial Data Management (OSDM)<sup>57</sup> which forms the basis of the free data download services offered by Geoscience Australia.<sup>58</sup> Other significant initiatives have also had their origins in demands for improved access to spatial data. An example is the Queensland Spatial Information Council’s (QSIC) proposal for a Government Information Licensing Framework (GILF)<sup>59</sup> to provide a policy and legal framework supporting the sharing and re-use of spatial and other information (e.g. water data) within and across the various levels of government and between government and the private sector.<sup>60</sup>

Various initiatives relating to publicly funded research results have been developed within the Accessibility Framework for Publicly Funded Research which was established in 2004 as part of the *Backing Australia’s Ability – Building Our*

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56 Submission no. 307, Australian Spatial Consortium, at p. 2.

57 See [www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf) and generally [www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx](http://www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx).

58 See [www.ga.gov.au/products/servlet/controller?event=DEFINE\\_PRODUCTS](http://www.ga.gov.au/products/servlet/controller?event=DEFINE_PRODUCTS)

59 Queensland Spatial Information Council, *Government Information and Open Content Licensing: An Access and Use Strategy* (2006), accessed at [www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE). For the report of the National Information Summit, Brisbane, 13 July 2007, see [www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/D6C8E0616BC7FB414A2573B7000C42E5/\\$FILE/Conference%20Report%20-%20National%20Summit%20Open%20Access.pdf?openement](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/D6C8E0616BC7FB414A2573B7000C42E5/$FILE/Conference%20Report%20-%20National%20Summit%20Open%20Access.pdf?openement)

60 See the comment on the Power of Information Task Force website, 27 June 2008, at [powerofinformation.wordpress.com/2008/06/27/australian-licensing-examples/](http://powerofinformation.wordpress.com/2008/06/27/australian-licensing-examples/); See also the West Australian government initiative, the Shared Land Information Platform (SLIP) which aggregates data government-wide and provides a data download facility.

*Future through Science and Innovation* package.<sup>61</sup> The Accessibility Framework was designed to manage research information, outputs and infrastructure in order to enable them to be more readily discovered, accessed and shared. It aims to provide a regulatory environment that both enables and encourages the population of digital repositories in order to provide better access to information.<sup>62</sup> The Prime Minister's Science, Engineering and Innovation Council (PMSEIC) in *From Data to Wisdom: Pathways to Successful Data Management for Australian Science (2006)*<sup>63</sup> recommended that 'Australia's government, science, research and business communities establish a nationally supported long-term strategic framework for scientific data management, including guiding principles, policies, best practices and infrastructure'<sup>64</sup> and the adoption of 'mechanisms to enable the discovery of, and access to, data and information resources'.<sup>65</sup>

The Open Access to Knowledge (OAK) Law and Legal Framework for e-Research projects established as part of the Research Information Infrastructure Framework for Australian Higher Education under *Backing Australia's Ability* deal with the legal issues involved in managing open access publication of research papers and data so as to enable access and re-use.<sup>66</sup> A major project funded under the *Backing Australia's Ability* package is the National Collaborative Research Infrastructure Strategy (NCRIS). The NCRIS capability, Platforms for Collaboration, supports technological platforms that enhance researchers' ability to generate, collect, share, analyse, store and retrieve information.<sup>67</sup> A central component of the Platforms for Collaboration is the establishment of the Aus-

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61 See [www.dest.gov.au/sectors/research\\_sector/policies\\_issues\\_reviews/key\\_issues/accessibility\\_framework/](http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/accessibility_framework/) and [backingaus.innovation.gov.au/](http://backingaus.innovation.gov.au/) accessed 24 April 2008.

62 See [www.dest.gov.au/sectors/research\\_sector/policies\\_issues\\_reviews/key\\_issues/accessibility\\_framework/](http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/accessibility_framework/).

63 Prime Minister's Science, Engineering and Innovation Council, Working Group on Data for Science, *From Data to Wisdom: Pathways to Successful Data Management for Australian Science*, (2006) [www.dest.gov.au/sectors/science\\_innovation/publications\\_resources/profiles/Presentation\\_Data\\_for\\_Science.htm](http://www.dest.gov.au/sectors/science_innovation/publications_resources/profiles/Presentation_Data_for_Science.htm); see also [pandora.nla.gov.au/tep/75221](http://pandora.nla.gov.au/tep/75221).

64 Recommendation 1.

65 Recommendation 6.

66 See [www.oaklaw.qut.edu.au](http://www.oaklaw.qut.edu.au) and [www.e-research.law.qut.edu.au/](http://www.e-research.law.qut.edu.au/).

67 See [www.ncris.dest.gov.au/capabilities/collaborative\\_investment\\_plan\\_platforms.htm](http://www.ncris.dest.gov.au/capabilities/collaborative_investment_plan_platforms.htm).; see also, *Towards the Australian Data Commons: A Proposal for an Australian National Data Service*, October 2007, at [www.pfc.org.au/pub/Main/Data/TowardstheAustralianDataCommons.pdf](http://www.pfc.org.au/pub/Main/Data/TowardstheAustralianDataCommons.pdf) and Innovation Review submission no. 339, National Collaborative Research Infrastructure Strategy (NCRIS) Committee.

tralian eResearch Infrastructure Council (AeRIC).<sup>68</sup>

Several universities (including QUT)<sup>69</sup> have introduced open access policies for academic publications and, in December 2006, the two major Australian public research funding bodies – the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) – announced the introduction of open access guidelines for published papers and data resulting from funded research projects, effective 2008.<sup>70</sup> Both policies encourage researchers to:

Consider the benefits of depositing their data and any publications arising

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68 Final Report of the e-Research Coordinating Committee, *An Australian e-Research Strategy and Implementation Framework*, DEST, April 2006, p. 55.

69 See [eprints.qut.edu.au/](http://eprints.qut.edu.au/). In 2008, QUT amended clause 3.1.5 of its IP policy to ensure open access to scholarly works published by QUT academics – see [www.mopp.qut.edu.au/D/D\\_03\\_01.jsp#D\\_03\\_01.05.mdoc](http://www.mopp.qut.edu.au/D/D_03_01.jsp#D_03_01.05.mdoc). It states:

QUT assigns the right to publish scholarly works to the creator(s) of that work. The assignment is subject to a perpetual, irrevocable, worldwide, royalty-free, non-exclusive licence in favour of QUT to allow QUT to use that work for teaching, research and commercialisation purposes and to reproduce and communicate that work online for non-commercial purposes via QUT's open access digital repository.

If required, QUT will sign documents to more fully record the staff member's ownership of the right of publication of the copyright in a scholarly work and QUT's non-exclusive licence to that work.

The version of the scholarly work that QUT can make available via the digital repository may be the published version or the final post-peer review manuscript version. QUT will agree to third party publisher-requested embargoes of 12 months or less (from date of publication by the third party publisher) on the publication of the manuscript via the digital repository.

Open access requirements have also been adopted by the University of Tasmania (see [eprints.utas.edu.au/](http://eprints.utas.edu.au/)) and Charles Sturt University (see [bilby.unilinc.edu.au:8881/R?func=search&local\\_base=GEN01-CSU01](http://bilby.unilinc.edu.au:8881/R?func=search&local_base=GEN01-CSU01)) and are being considered at Macquarie University (see [www.earlham.edu/~peters/fos/2008/07/macquarie-vc-preparing-to-propose-oa.html](http://www.earlham.edu/~peters/fos/2008/07/macquarie-vc-preparing-to-propose-oa.html)).

70 Australian Research Council, *Discovery Projects Funding Rules for funding commencing in 2008* [www.arc.gov.au/pdf/DP08\\_FundingRules.pdf](http://www.arc.gov.au/pdf/DP08_FundingRules.pdf) National Health and Medical Research Council, *Project Grants Funding Policy for grants commencing in 2008* [www.nhmrc.gov.au/publications/\\_files/profundingpol.pdf](http://www.nhmrc.gov.au/publications/_files/profundingpol.pdf). See also the ARC's response to the Productivity Council's draft research report on Public Support for Science and Innovation (2006), recommending that consideration be given to the funding of institutional open access repositories: Australian Research Council, *Response to the Productivity Commission Draft Research Report – Public Support for Science and Innovation* (2006) [www.arc.gov.au/pdf/response\\_PCdraftresearchreport\\_06.pdf](http://www.arc.gov.au/pdf/response_PCdraftresearchreport_06.pdf).

from a research project in an appropriate subject and/or institutional repository [because in order to] maximise the benefits from research, findings need to be disseminated as broadly as possible to allow access by other researchers and the wider community.<sup>71</sup>

Support for the introduction of requirements for open access to papers and data from publicly funded research projects is found in the Productivity Commission's report *Public Funding for Science and Innovation* (2007)<sup>72</sup> and in speeches by the Minister for Innovation, Industry, Science and Research, Senator Kim Carr:

[R]esearch and research data should be widely disseminated and readily discoverable. The results of publicly funded research should be publicly available ... [Funds should be] used to get us moving towards an open access regime for publicly funded research. A lot of work needs to be done on sorting through the legal and infrastructure issues, including the implications for public-private collaborations. However, it will be worth the effort. More accessible information equals more robust debate equals a stronger national innovation system.<sup>73</sup>

Other important initiatives established to enable access to public sector information include:

- the National Data Network (NDN)<sup>74</sup>
- the eMarine Information Infrastructure (eMII) facility established by the Integrated Marine Observing System (IMOS) project, funded under the National Collaborative Research Infrastructure Strategy (NCRIS)<sup>75</sup>

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71 Australian Research Council, *Discovery Projects Funding Rules for funding commencing in 2008*, [1.4.5.1] [www.arc.gov.au/pdf/DP08\\_FundingRules.pdf](http://www.arc.gov.au/pdf/DP08_FundingRules.pdf); National Health and Medical Research Council, *Project Grants Funding Policy for grants commencing in 2008*, [16.2]. [www.nhmrc.gov.au/publications/\\_files/profunding-pol.pdf](http://www.nhmrc.gov.au/publications/_files/profunding-pol.pdf).

72 Productivity Commission, *Public Support for Research and Innovation*, Research Report (2007) 240, 243 [www.pc.gov.au/study/science/finalreport/index.html](http://www.pc.gov.au/study/science/finalreport/index.html) at 3 April 2007.

73 The Hon Kim Carr, Minister for Innovation, Industry, Science and Research, 7 February 2008, available at [minister.industry.gov.au/SenatortheHonKimCarr/Pages/THEREISMORETHANONEWAYTOINNOVATERESEARCHFORDISCOVERY,UNDERSTANDING,ANDAPPLICATION.aspx](http://minister.industry.gov.au/SenatortheHonKimCarr/Pages/THEREISMORETHANONEWAYTOINNOVATERESEARCHFORDISCOVERY,UNDERSTANDING,ANDAPPLICATION.aspx). Note that this speech was also reported in the Australian's Higher Education Supplement on 23 January 2008.

74 [www.nationaldatanetwork.org/ndn/ndnhome.nsf/Home/Home](http://www.nationaldatanetwork.org/ndn/ndnhome.nsf/Home/Home).

75 See [www.imos.org.au/](http://www.imos.org.au/) Note that IMOS has established the eMarine Information In-

- the provision of free and unrestricted data by the Australian Bureau of Statistics (ABS)<sup>76</sup>
- IP Australia's AusPat database which provides free online access to Australian patents and patent applications filed since 1979.<sup>77</sup>

There have been several reports on access to information and digital content, including *Commerce in Content: Building Australia's International Future in Interactive Multimedia Markets* (1994),<sup>78</sup> *Unlocking the Potential: Digital Content Industry Action Agenda* (2005)<sup>79</sup> and *From Data to Wisdom: Pathways to Successful Data Management for Australian Science* (2006).<sup>80</sup>

Along with the rise in support for access to information has come a growing recognition of the importance of developing systems and processes for proper data management. If the benefits of enhanced access are to be realised, it is essential for there to be active and professional management of the processes by which research data and information are generated, organised, evaluated and disseminated.<sup>81</sup> The importance of professional management of research data and information has consistently been identified as central to data and information infrastructures.<sup>82</sup> The International Council for Science (ICSU) in its report *Scientific Data and Information: A report of the CSPR Assessment Panel* (2004) stated that data management expertise has become a core skill for researchers,

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frastructure (eMII) facility to manage marine data and information generated by IMOS. See [imos.org.au/emii.html](http://imos.org.au/emii.html).

76 In November 2005, ABS abandoned the restrictive licensing practices it had previously applied in licensing its datasets, which had involved charging fees for access to data and the restriction or prohibition of commercial downstream use by the licensee and/or others. Since then ABS has eliminated virtually all charges for data and restrictions on downstream use of their data (that is, both access and re-use), whether commercial or otherwise.

77 See [www.ipaustralia.gov.au/auspat/](http://www.ipaustralia.gov.au/auspat/)

78 Cutler & Company, 1994, produced for the Department of Industry Science and Technology, CSIRO, and the Broadband Services Expert Group, see [www.nla.gov.au/misc/cutler/cutlercp.html](http://www.nla.gov.au/misc/cutler/cutlercp.html)

79 Strategic Industry Leaders Group report to the Australian Government, November 2005, see [www.dbcde.gov.au/\\_\\_data/assets/pdf\\_file/0006/37356/06030055\\_REPORT.pdf](http://www.dbcde.gov.au/__data/assets/pdf_file/0006/37356/06030055_REPORT.pdf)

80 Prime Minister's Science, Engineering and Innovation Council, Working Group on Data for Science, *From Data to Wisdom: Pathways to Successful Data Management for Australian Science*, (2006) [www.dest.gov.au/sectors/science\\_innovation/publications\\_resources/profiles/Presentation\\_Data\\_for\\_Science.htm](http://www.dest.gov.au/sectors/science_innovation/publications_resources/profiles/Presentation_Data_for_Science.htm).

81 See Margaret Henty, 'Developing the Capability and Skills to Support e-Research', *Ariadne*, 55, April 2008, available at [www.ariadne.ac.uk/issue55/henty/](http://www.ariadne.ac.uk/issue55/henty/).

82 See Innovation Review submission 165 (Australian Academy of Science).

who should receive data management training as part of their education. The NCRIS Strategic Roadmap identified ‘data storage management, access, discovery and curation’ as one of the five key inter-related components of collaborative e-research platforms. To enable access to and re-use of information it is necessary not only to adopt appropriate technical standards, practices and architecture, but also to develop legal frameworks that facilitate access and re-use, whether on an inter-organisational basis or across national borders.<sup>83</sup> The benefits that may potentially be gained through advances in information and communications technologies will not be achieved solely through engineering but will result from a combination of social, legal and technical factors. The NCRIS Strategic Roadmap (2006) acknowledged that the management of research outputs requires the coordination of many elements, including the appropriate hardware and software, supporting workflows, policy and regulatory frameworks, administrative arrangements and resources. Importantly, it makes the point that while much of the work on data access to date has focused on the use of technical mechanisms to overcome barriers to access, it is also necessary to ensure that the legal context is understood and that intellectual property interests (notably copyright) are effectively managed.<sup>84</sup> As Professor Paul David has commented in relation to e-science collaboration, ‘if it is to be achieved, [it] will more likely be the resultant of a nexus of interrelated social, legal *and* technical transformations. The socio-institutional elements of a new infrastructure supporting research collaborations ... are every bit as complicated as the hardware and computer software, and, indeed, may prove much harder to devise and implement’.<sup>85</sup>

When the increasing demands in Australia for improved access to information are considered in the context of international developments, it becomes apparent that there is a need for an Australian National Information Policy (or Strategy) which facilitates and promotes the dynamic, networked exchange of ideas and information.<sup>86</sup> Development of such a policy or strategy would require a systematic study of our economic institutions with a view to understanding how

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83 See OECD *Principles and Guidelines for Access to Research Data from Public Funding* at 14, at [www.oecd.org/dataoecd/9/61/38500813.pdf](http://www.oecd.org/dataoecd/9/61/38500813.pdf).

84 Australian Government, Department of Education, Science and Training (DEST), *National Collaborative Research Infrastructure Strategy (NCRIS)*, see [www.dest.gov.au/sectors/research\\_sector/policies\\_issues\\_reviews/key\\_issues/ncris/](http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/ncris/).

85 Paul A David, *Towards a cyberinfrastructure for enhanced scientific collaboration: providing ‘soft’ foundations may be the hardest part*, Oxford Internet Institute Research Report No. 4 (2004 revised May 2005), see [www.oii.ox.ac.uk/research/publications.cfm](http://www.oii.ox.ac.uk/research/publications.cfm).

86 See generally, N. Gruen ‘A National Information Policy?’ (17 Apr 2008) *The Australian Financial Review*.



information is collected, handled and disseminated, so that existing impediments to efficient information flows can be eliminated and the flow of information can be improved for social and economic benefit.

A National Information Policy (or Strategy) must be founded on current economic theory and research about the social and economic benefits of information flows (including the respective roles of government and the private sector)<sup>87</sup> and a detailed understanding of the practices and experiences in other key jurisdictions (notably the United States, the United Kingdom and the European Union). In establishing the policy and guiding principles, it will be necessary to have regard to the policy and principles that have been developed in other jurisdictions and at the international level, particularly the OECD's Seoul Declaration on the Future of the Internet Economy<sup>88</sup> and associated materials, including the *Principles and Guidelines for Access to Research Data from Public Funding*<sup>89</sup> and the *Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information*.<sup>90</sup>

## SUBMISSIONS TO THE REVIEW OF THE NATIONAL INNOVATION SYSTEM

Support for development and implementation of a national policy (or strategy) for access to information was expressed at forums held during the public consultation

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- 87 On this issue see submission no. 305, Australian Spatial Information Business Association (ASIBA).
- 88 OECD, *Seoul Declaration for the Future of the Internet Economy*, 18 June 2008, available at [www.oecd.org/dataoecd/49/28/40839436.pdf](http://www.oecd.org/dataoecd/49/28/40839436.pdf).
- 89 OECD, *Recommendation of the Council concerning Access to Research Data from Public Funding* C(2006)184. [webdomino1.oecd.org/horizontal/oecdacts.nsf/Display/3A5FB1397B5ADFB7C12572980053C9D3?OpenDocument](http://webdomino1.oecd.org/horizontal/oecdacts.nsf/Display/3A5FB1397B5ADFB7C12572980053C9D3?OpenDocument).
- 90 The proceedings of a WPIE Workshop on public sector information, *The Socio-economic Effects of Public Sector Information on Digital Networks: Toward a Better Understanding of Different Access and Reuse Policies*, held in Paris on 4–5 February 2008 are available at [www.oecd.org/document/48/0,3343,en\\_2649\\_33757\\_40046832\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/48/0,3343,en_2649_33757_40046832_1_1_1_1,00.html). For background, see Graham Vickery and Sacha Wunsch-Vincent, *Digital Broadband Content: Public Sector Information and Content*, OECD Directorate for Science, Technology and Industry, DSTI/ICCP/IE(2005)2/FINAL, Committee for Information, Computer and Communications Policy, Working Party on the Information Economy 30-Mar-2006, available at [www.oecd.org/dataoecd/10/22/36481524.pdf](http://www.oecd.org/dataoecd/10/22/36481524.pdf) and *Participative Web and User-Created Content: Web 2.0, Wikis and Social Networking* (2007) Organisation for Economic Co-operation and Development, available at [www.oecd.org/dataoecd/57/14/38393115.pdf](http://www.oecd.org/dataoecd/57/14/38393115.pdf).

round in March and April 2008, as well as in several written submissions.<sup>91</sup> The National Library of Australia's submission to the Innovation Review supported a 'national information infrastructure' which encompasses the academic, industry and government sectors, urging the endorsement 'a national digital information agenda that includes strategies to address the creation of a national digital information framework'.<sup>92</sup>

The CRC for Spatial Information called for a National Information Infrastructure:<sup>93</sup>

Australia's government agencies, through ANZLIC – The Spatial Information Council and the Australian Spatial Information Business Association (ASIBA) have identified as a fundamental need in Australia the development of a nation-wide online information infrastructure (or coordinated and linked suite of portals) for sharing datasets within government and by the private sector.

There are emerging and compelling arguments to show that provisioning information more efficiently to the end user will be a critical driver of innovation. Government agencies at all three levels in Australia control vast data stores, most of which are difficult or impossible for users to access. This initiative seeks to unlock the value for the enormous number of potential users.

An emerging proposition for the use of data over the Internet and the Web is that the more interactions that end users can undertake, and the more complex these interactions become, the more valuable the outcome. Moreover, if the outcome can be achieved in near real time, even greater value is added. This initiative will drive much greater utility for end users of information online. It will tackle the processes of linking disparate data stores (including spatial data), custodial and legal arrangements, licensing, governance arrangements, tensions between open access and proprietary requirements, and the development of new standards, protocols and default-use conditions. It will be underpinned by a Creative Commons approach that will look to create a new on-line culture of data sharing.

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91 See Submissions no. 33 (B Cornell), 78 (Dr D Rooney), 172 (Dr R Clarke), 211 (Prof. J Zobel), 303 (CRC for Spatial Information), 305 (Australian Spatial Information Business Association – ASIBA), 306 (Council of Australian University Librarians – CAUL), 307 (Australian Spatial Consortium), 428 (Prof. B Fitzgerald), 450 (CSIRO Staff Association), 493 (CAMBIA), 504 (Prof. G Greenleaf), 548 (Australian Bureau of Statistics).

92 Submission no. 423, National Library of Australia at pp. 6–7.

93 Submission no. 303, Cooperative Research Centre for Spatial Information (CRC-SI) at pp. 19–20.

The Australian Spatial Industry Business Association (ASIBA) called for the establishment of a national spatial information policy.<sup>94</sup> The Australian Spatial Consortium, the umbrella body formed by all the major spatial information bodies in Australia, advocates the establishment of a ‘national information portal’, together with a supporting structure and resourcing, to improve discoverability, access and the flow of information.<sup>95</sup> The Australian Spatial Consortium also suggested that a creative commons approach be adopted in providing access to information:<sup>96</sup>

The members recognise that users often improve the information they get and two way flows, together with a single data model approach (collect once and make available for all), is the most effective means for managing information. The national information portal, and all of the support mechanisms it requires, may require new management structures to permit the better management of information. A structure that accommodates the federated model of information management currently operating across jurisdictions in Australia will be needed. Such an approach would accelerate transformation of spatial information value chains, harmonising the creation of value by our government institutions and private sector corporations, and increasing the competitive advantage of Australian industries in national and international markets.<sup>97</sup>

The CSIRO Staff Association proposed that the principles underpinning the role and participation of the public sector in innovation should value ‘open communication and dissemination of the outcomes of publicly funded research’<sup>98</sup> and expressed the view that ‘open access will increasingly become a crucial issue for public sector research institutions’.<sup>99</sup> The submission stated:<sup>100</sup>

The Staff Association supports the principle underpinning open access to publications and data from publicly funded research. We suggest that there are efficiencies that could be gained by more effectively sharing data within government-funded agencies and departments. One obvious example is access to geospatial data between agencies such as CSIRO, the Bureau of

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94 Submission no. 305, ASIBA at p. 5. See also ‘Spatial, the final frontier’, *Australian Financial Review*, 16 May 2008 at p. 63.

95 Submission no. 307, Australian Spatial Consortium, p. 1.

96 Submission no. 307, Australian Spatial Consortium, pp. 1–2.

97 Submission no. 307, Australian Spatial Consortium, p. 2.

98 Submission no. 450, CSIRO Staff Association, p. 10.

99 Submission no. 450, CSIRO Staff Association, p. 20.

100 Submission no. 450, CSIRO Staff Association, p. 19.

Meteorology and Federal and State Government departments.

Open access does not necessarily have to lead to reduced opportunities for development of intellectual property and commercialisation in CSIRO or the NIS as a whole. Conversely, open access to publicly funded research, when managed appropriately, should lead to enhanced awareness and creativity opportunities. CSIRO will always have research in its portfolio that is commercial-in-confidence and/or where intellectual property is tied to the funding partner. However, for projects or programmes that are purely publicly funded, CSIRO should be encouraged to disseminate the outcomes of its research more readily.

Furthermore, once these outcomes have gone through internal accountabilities such as peer review, they should be freely accessible to the wider community, particularly online. Publication in open access journals and easier availability of publications on the CSIRO website would facilitate greater interaction and awareness about the developments in science with the general public.

QUT's submission raised the need to consider 'the social cost of locking up IP generated by publicly funded research and restricted access to data held within government agencies', expressing support for 'a national system and protocol for the storage of, and access to, research data, especially where the data is obtained under the auspices of public funding'.<sup>101</sup> CAMBIA urged the adoption of an open access publishing policy for publicly funded science (similar to that adopted by the US National Institutes of Health in 2008), to apply to works resulting from research funded wholly or partially by public monies.<sup>102</sup> It also made the point that while the 'information commons' is clearly important, the innovation system requires information to be converted into a knowledge base which is capable of being used:<sup>103</sup>

If we are to see effective innovation system reform, it will be through the realization that the delivery of science-enabled innovations into the social and economic market place will be the metric by which we will be judged, not just by collaborative science and information, per se, nor the monetizing of the components, the tools and the findings that lead to an effective innovation.<sup>104</sup>

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101 Submission no. 424, QUT (Professor P Coaldrake), at p. 4.

102 Submission no. 493, CAMBIA at p. 9.

103 Submission no. 493, CAMBIA at p. 6; see also submission no. 548, Australian Bureau of Statistics at p. 3.

104 Submission no. 493, CAMBIA at p. 9.

Professor Brian Fitzgerald<sup>105</sup> proposed a national information policy which would encompass a ‘national knowledge sharing strategy within and between government/s, researchers, citizenry and business’.<sup>106</sup> He identified what he calls the ‘pure exchange of ideas’ as central to the innovation system, requiring the ‘freedom to innovate’<sup>107</sup> or ‘information flows and information markets’.<sup>108</sup> He explained:

Australia needs to become a true laboratory of experimentation fuelled by the greatest possible freedom to exchange ideas (through formal and informal professional and social networks). In today’s networked society and economy we have learned that we cannot predetermine knowledge construction and that serendipity (discovery by chance), contributions by everyday citizens (from the periphery) and seamless access to the network and to the knowledge are vitally important. The networked environment has shown us more than ever that no one person has a monopoly on knowledge and that collaborative endeavour (some of our Web 2.0 colleagues might call this ‘crowdsourcing’) is a fundamental part of discovery...<sup>109</sup>

Australia’s ability to lead the world in developing institutional (government, education and industry) and informal ways (citizenry and social networks) of managing, facilitating and providing access to and usability (flow and re-use) of information, knowledge, data and culture must be seen as one of the greatest drivers of innovation and competitive advantage in the global market economy.

Professor Fitzgerald pointed to an emerging broad international consensus – as evidenced by the recent OECD declarations and recommendations – that ‘the default rule’ is that ‘publicly funded knowledge, data, content and culture should be available for open access’:

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105 Submission no. 428, Prof. B Fitzgerald at p. 3.

106 Submission no. 428, Prof. B Fitzgerald and p. 8.

107 See R Jefferson, *Freedom to Innovate as a Human Right* [blogs.cambria.org/raj/index.php/2007/04/05/freedom-to-innovate](http://blogs.cambria.org/raj/index.php/2007/04/05/freedom-to-innovate).

108 N. Gruen ‘A National Information Policy?’ (17 Apr 2008), *The Australian Financial Review*.

109 See generally: G. Vickery and S. Wunsch-Vincent, *Participative Web and User-Created Content: Web 2.0, Wikis and Social Networking* (2007) Organisation for Economic Co-operation and Development [www.oecd.org/dataoecd/57/14/38393115.pdf](http://www.oecd.org/dataoecd/57/14/38393115.pdf); E. Mayo and T Steinberg, *The Power of Information* (2007) (and UK Government response), [www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx);

Open access should be the default rule. A national policy (that involves the States perhaps through COAG) and a set of principles that support this need to be articulated (ideally by the end of 2008) so that public administrators have clear direction on this issue.

The Australian Bureau of Statistics' submission made the point that there are 'rich sources of valuable information potential available from the operational and administrative activities' of government departments, as well as the private and voluntary sectors. Advances in communications technology mean that it may 'be feasible to unlock these potential sources of rich and timely data and make it available to innovators across Australia. However, the ABS cautioned that use of statistical data must subject to adequate protection (physical and legal) for personal privacy.<sup>110</sup>

Several submissions called for the development of an Australian creative archive to provide access to publicly funded creative and cultural materials.<sup>111</sup> Professor Brian Fitzgerald and Jessica Coates observed that although public agencies (including the ABC, SBS, Film Australia, the National Film and Sound Archive and the National Library of Australia) own large amounts of creative content, the combined effect of copyright issues and 'static archiving practices' means that users have been limited to dealing with these materials on a passive, 'view only' basis:<sup>112</sup>

Remixing and distribution are integral to the digital environment's creative capacity, yet these practices are almost impossible under current archive licensing regimes. As a result, the potential for this content, and its contribution to Australia's cultural and economic growth, is drastically limited.<sup>113</sup>

Proposals were advanced for establishment of a digital creative archive from which cultural archival content could be made available for access and re-use under flexible licensing terms, similar to the BBC's Creative Archive project. Professor Graham Greenleaf illustrated by reference to the National Library of

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110 Submission no. 548, Australian Bureau of Statistics.

It is a collaborative workspace for creative content communities and a test-bed, fostering 'open source' interactions between ABC and digitally-connected social networks. Through collaboration, peer critique, and media sharing within the legal framework of Creative Commons licensing, Pool will serve as an online mentoring system. Pool's curatorial framework will provoke collaboration between ABC producers and communities to build new forms of collaborative creation in public media. <sup>116</sup>

116 Submission no. 597, Australian Broadcasting Corporation, p. 6.

112 Submission no. 435, J Coates and Prof. B Fitzgerald, p. 10.

113 Submission no. 435, J Coates and Prof. B Fitzgerald, p. 10.

Australia's Picture Australia service:<sup>114</sup>

The National Library of Australia's Picture Australia aims to be the definitive pictorial service for and about Australians and Australia, providing one search over collections in 45 major Australian public institutions. Pictures, (photos, sketches, cartoons etc) are often only available for private research and study, but some are available for other uses. Picture Australia's 'Click and Flick' is an initiative to open Picture Australia to contributions from the Australian public, through uploads to Flickr using Creative Commons licences. Picture Australia now includes over 1.1 million images from the collections of 45 organisations and, now, individuals via Flickr. Its federated combination of public domain images, Crown copyright images made available for free access, and images contributed by the public under voluntary public rights licences (Creative Commons) is indicative of what creative collaboration among public institutions can do.<sup>115</sup>

The Australian Broadcasting Corporation's submission pointed to its own Pool project ([pool.org.au](http://pool.org.au)) as an example of the kind of initiative which can build 'a critical mass of innovative content of general community interest' and enable the ABC to contribute to Australia's 'information commons'. Pool is a media-sharing web project being developed by ABC's Radio National, together with UTS, researchers at RMIT and the University of Wollongong and a community of contributors. It enables users of the site to download and remix content, including ABC Archive material.

It is a collaborative workspace for creative content communities and a test-bed, fostering 'open source' interactions between ABC and digitally-connected social networks. Through collaboration, peer critique, and media sharing within the legal framework of Creative Commons licensing, Pool will serve as an online mentoring system. Pool's curatorial framework will provoke collaboration between ABC producers and communities to build new forms of collaborative creation in public media.<sup>116</sup>

## RECOMMENDATIONS

The following recommendations are proposed for consideration by the review

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114 [www.pictureaustralia.gov.au](http://www.pictureaustralia.gov.au).

115 Submission no. 504(R), Prof. G Greenleaf, p. 9.

116 Submission no. 597, Australian Broadcasting Corporation, p. 6.

panel:

### ***(1) Establish a National Information Policy/Strategy***

Advances in information and communication technologies have brought about an information revolution, leading to fundamental changes in the way information (especially digital data) is collected or generated, shared and distributed. The internet and digital technologies are re-shaping research, innovation and creativity. Economic research has highlighted the importance for innovation of information flows and the availability of information for access and re-use. Information is crucial to the efficiency of markets and enhanced information flows promote creativity, innovation and productivity. In order to maximise these benefits it is essential to formulate a National Information Policy/Strategy which facilitates and promotes the dynamic, networked exchange of ideas and information, and removes the current impediments to the efficient flows of information. A National Information Policy/Strategy must be founded on current economic theory and research about the social and economic benefits of information flows, as well as an understanding of the practices and experiences in other key jurisdictions, including the policy and principles formulated by bodies such as the OECD.

### ***(2) Promote access to and re-use of government or public sector information (PSI) (content and data) for the purpose of sponsoring social, cultural and economic innovation.***

Making public sector content and information (PSI) available for access and re-use can lead to significant economic and social benefits, such as fostering the development of new products and services (e.g. weather forecasting and environmental management), seeding new forms of cultural activity and addressing key societal challenges (e.g. indigenous disadvantage, child health, climate change, environmental sustainability). Greater access to, and re-use of, government information will result in better informed and focused public sector decision and policy making, enhance the role of parliaments, and invigorate participatory democracy throughout Australia. The default position to be adopted is that the vast majority of public sector information (PSI) that is eligible for public release (that is, not subject to restrictions based, for example, on personal privacy or national security considerations) should be available on an open access basis, at marginal or no cost. To facilitate this outcome, open content licences including Creative Commons licences need to be used and the application of copyright law in relation to materials held by the public sector may need to be reviewed.

### ***(3) Promote access to and re-use of publicly funded research data and scholarly publications and cultural***



*materials.*

It should be mandated that the results of research funded by the public sector – whether in the form of data, materials or journal articles – are to be made openly accessible to the fullest possible extent possible (taking into account legal constraints, including the need to protect personal privacy). A sustained effort is required to develop and nurture a discoverable, well managed, legally compliant and interoperable ‘data commons’, the full potential of which may be realised through various endeavours including groundbreaking research, evidence-based policy making and social, democratic and creative activity.

***(4) Promote access to and re-use of publicly funded creative and cultural material and indigenous cultural heritage materials through a ‘creative archive’.***

The store of Australian cultural and creative materials – particularly where they have been produced or acquired through public funding sources – should be accessible and re-usable across the community. Access to the wealth of material collected in Australia’s public cultural institutions – that ‘define our past achievements and our future hopes’<sup>117</sup> – through digital databases<sup>118</sup> which make creative and cultural materials available for access and re-use will foster creativity and enable Australians to better understand and identify with their cultural heritage. An Australian creative archive would protect and preserve Australian creative content, and act as a practical tool to inform, educate, support and stimulate Australia’s creative future. Importantly, collections of indigenous cultural heritage materials could be included so they are more readily available for access and innovative use (in a culturally appropriate manner) by indigenous peoples, academics, governments and policymakers.<sup>119</sup>

***(5) Develop the capabilities and skills required to implement the National Information Policy/Strategy***

If the benefits of enhanced access to information are to be realised, it will be necessary for the processes and systems for generating, organising, evaluating and disseminating research data and information to be actively and professionally managed. There is a need to develop the new skills and professions required to

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117 Senator Kim Carr, First Speech, 5 May 1993, see [www.aph.gov.au/Senate/senators/homepages/first\\_speech/sfs-AW5.htm](http://www.aph.gov.au/Senate/senators/homepages/first_speech/sfs-AW5.htm).

118 See *Australia 2020 Summit: Initial Summit Report*, ‘Towards a Creative Australia: the future of the arts, film and design’, pp. 29–30.

119 Submission no. 638, AIATSIS, p. 9.

enable the National Information Policy/Strategy to be implemented. Managing access to and re-use of information requires the coordination of a numerous policy, administrative, technical and legal elements. The skills and capabilities required are cross-disciplinary, including computer-based (hardware and software) technical skills, data storage management, data discovery and analysis, curation, project management, communication, collaboration and an understanding of how to develop legal frameworks for managing copyright and intellectual property interests to facilitate access and re-use.

# CHAPTER TWENTY-TWO

## POWER OF INFORMATION TASKFORCE FINAL REPORT, February 2009\*

*Power of Information Taskforce (Richard Allan, Chair)*  
FOREWORD

When Ed Mayo and Tom Steinberg's 'Power of Information review' was published in 2007 it rapidly became apparent that this was a significant contribution to thinking about the ways in which government has to adapt itself to a world in which most people regularly use the internet.

The creation of the Task Force in 2008 was part of a series of positive responses by Government to the report. Over the last nine months, the Task Force has attempted to develop further the agenda set out in the report. The recommendations in this report should therefore be read alongside those in the original report on which they build.

The Taskforce brought together a group from government, industry and the third sector who all share a passion for using ICT to enable better public service delivery.

All members have contributed in a personal capacity rather than on behalf of their respective organisations and this independence of approach is reflected in our conclusions.

The group has itself worked largely through web 2.0 tools – communicating as a web group, publishing our progress via a blog and RSS feed, and producing this draft report on a wiki.

We have been able to:

- Demonstrate significant latent capacity in the community for innovative informationbased applications through the Show Us A Better Way competition;
- Raise further the profile of the Power of Information agenda through engagement with central and local government, industry and civil society;
- Contribute to the public and internal government debates around access to UK geospatial data;
- Build links with people working on similar agendas in other countries for the mutual exchange of ideas and expertise;
- Support the creation of social media guidance for civil servants;

- Examine the usability of key government websites and commission new guidance based on the output of our study;
- Experiment with using modern web publishing tools for data that is currently published using traditional methods;
- Develop a model for an architecture for government websites that better supports content re-use;
- Begin work on the concept of a repository for government information.

We recognise that many people both inside and outside government have been working over several years on projects which provide a sound ‘proof of concept’ for the use of web 2.0 technologies for public service purposes.

The Taskforce believes it has made a further contribution to this body of work. Yet, we are still some way from being able to assert that the public services are making as full a use as possible of the potential offered by evolving internet technologies.

We believe that with this learning from many sources informing our actions, we have the opportunity now to take some major steps forward in making this part of the mainstream of public service activity.

Our recommendations describe the key actions that we believe Government can take in the short to medium term to realise this opportunity and we look forward positively to the debate and responses that they generate.

## EXECUTIVE SUMMARY

This report has been produced shortly after Lord Carter’s interim report on Digital Britain. The Taskforce’s recommendations affect the things people do with the broadband networks that are the major focus of Digital Britain.

The report calls for action in six areas where the Taskforce believes significant improvements can be made to government’s use of digital technologies:

- enhancing Digital Britons’ online experience by providing expert help from the public sector online where people seek it;

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\* This was first published as a report titled *Power of Information Taskforce Final Report* by the Power of Information Taskforce. The original report is available at: [www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx). The Taskforce has the following membership: Richard Allan (Chair), Tom Steinberg (MySociety), Tom Loosemore (OFCOM), Sally Russell (Netmums), Richard Sargeant (Google), Alex Allan (Cabinet Office), Andrew Stott (Cabinet Office), and Natalie Ceoney (National Archives).

- creating a capability for the UK public sector to work with both internal and external innovators;
- improving the way government consults with the public;
- freeing up the UK's mapping and address data for use in new services;
- ensuring that public sector information is made as simple as possible for people to find and use;
- building capacity in the UK public sector to take advantage of the opportunities offered by digital technologies.

Millions of people in Britain regularly seek help online and in public about their daily lives. The report explains how the public sector can and should help people online in the places they go to seek help.

In the extended UK public sector, the BBC has a world leading model for innovation in its 'backstage' service which encourages people to innovate in remarkable ways with the BBC's data and services. The report recommends that UK central government should create such a 'backstage' capability to unlock the huge innovation potential of the government's information.

Digital communications technologies clearly offer the potential for new methods of consultation around government policy. The report sets out a set of immediate measures that could be taken to start taking advantage of this potential. The process of producing this report has itself followed this new schema for consultation.

Data and information are the lifeblood of the knowledge economy. The report's recommendations on liberalising non-personal government information would provide an information stimulus if implemented.

The report refers specifically to the need for a more liberal approach to the re-use of mapping and address data in the UK based on the evident demand for this type of information. It makes recommendations for Ordnance Survey, the UK's official mapping agency, to free up their licensing regime in general and to make information available for free, on simple terms, for innovators and the third sector.

If data is to be truly useful for a broad range of innovators it must be easy to obtain and the terms under which it can be used have to be as open and intelligible as possible. The report therefore recommends actions on the cataloguing of public sector information and on government licensing terms, especially in respect of the most common government licensing scheme, Crown Copyright.

Finally, the Taskforce recognises that when mainstreaming any innovation, systemic culture and behaviour change is required. It believes firmly that now is the time for the innovative approaches that it recommends to be brought into the mainstream of UK government. The report therefore calls for action to help the public sector acquire the new skills and practices required to support this.

## RECOMMENDATIONS

In summary, the Taskforce makes the following recommendations:

*Recommendation 1* Public servants should take part in online peer support forums as a matter of course. Public bodies should investigate and publish lists of the major forums in their areas of responsibility and engage with these following a published plan. A cross-governmental list and set of Departmental plans should be published by the Cabinet Office by Q3 2009 with a follow up report on progress in Q1 2010. This builds on the enabling work advised by the Taskforce on the publication of social media guidance for civil servants.

*Recommendation 2* Public servants will require adequate internet access to take part in social media as part of their job. The Cabinet Office should work with staff involved in setting access rules and defining standard browser capabilities and issue guidance.

*Recommendation 3* Unlock innovation in leading public sector sites using a ‘backstage model’, a standing open online innovation space allowing the general public and staff to co-create information-based public services. This capability should be a standard element of public information service design. The government should build on the new backstage service for Directgov.

*Recommendation 4* Invest in innovation that directly benefits the public by ensuring that public sector websites spend about as much on innovation as leading knowledge businesses. Directgov, Businesslink and NHS Choices should create a combined innovation pot of 10% of their budgets, focused on improving the public experience of government websites, through outside-in innovation not internal requirements. Some of this money should be used to support development of APIs for data with the greatest demand as demonstrated by ‘backstage’ communities and the OPSI data unlocking service.

Annual plans on how this £10m innovation pool is to be deployed should be published and agreed by a new Head of Digital Engagement.

*Recommendation 5* To take advantage of the potential of new online techniques to open up the policy dialogue online the government needs to do the following:

- Clear and mandatory standards on accurate tagging and metadata which would allow consultations to be found by the subjects, interests and places they affect as well as by the policy issue
- Breaking down consultation papers from monolithic documents into navigable, searchable, separate points which can be commented upon individually
- Implementing the tools – readily available elsewhere on the internet – which allow people to comment on individual items, to comment on other’s comments and to collaborate in developing and improving the content (perhaps through the sort of collective authorship we see on Wikipedia); the publication by DIUS of the Innovation White Paper and the Cabinet Office New Opportu-

nities White Paper in this way are good examples of what can be done without major investment

- Participation by officials in the process in line with the Government's recently published code of practice on social media, so that the consultation period is one of active dialogue
- Use of the same tools to explain at the end of the consultation period, in the same level of detail, what the Government had decided and why
- Mandatory publication of consultation materials in open, semantic, electronic formats that not only allow the relevant government website to host the material but also allow others to take the material, present it, gather views and feed those back to government in innovative ways.

The government should update the Code of Practice on Consultation maintained by the Better Regulation Executive in BERR to reflect these principles.

*Recommendation 6* A plan for supporting the change needed in policy development skills to make the most of online participation should be developed by Government Skills by end 2009, with a concomitant training plan from the National School for Government.

*Recommendation 7* It is the Taskforce's view that 'freeing up' geospatial data should be a priority. The Ordnance Survey requires urgent reform. Recent announcements of cost reductions at the Ordnance Survey point the way to wider reforms. This reform should include at a minimum:

- Basic geographic data such as electoral and administrative boundaries, the location of public buildings, etc should be available for (re)use free of charge to all
- There should be simple, free access to general mapping and address data for modest levels of use by any user
- Voluntary and community organisations pursuing public policy objects should benefit from straightforward standard provisions for ensuring access to geospatial data at all levels of use
- Licensing conditions should be simplified and standardised across the board and, for all but the heaviest levels of use, should be on standard terms and conditions and should not depend on the intended use or the intended business model of the user
- The OpenSpace API, similar to but currently a constrained version of Google Maps, should become the primary delivery point for the Ordnance Survey's services
- Creation of a freely available single definitive address and postcode available for the UK for (re)use.

## *Recommendation 8*

- Government should ensure that there is a uniform system of release and licensing applied across all public bodies; individual public bodies should not develop or vary the standard terms for their sector
- The system should create a ‘Crown Commons’ style approach, using a highly permissive licensing scheme that is transparent, easy to understand and easy to use, modelled on the ‘Click Use’ license, subject to the caveats below
- OPSI, part of the National Archives, should investigate how source code can be handled within the public sector information framework, and look into appropriate licensing terms drawing on best practice in the open source community
- The Government should report on the options for these three recommendations by end 2009 and if required, statutory measures should be brought forward not later than the 2009/2010 session.

*Recommendation 9* OPSI, part of the National Archives, and COI should work on updated guidance on publishing information, including requirements for publication in legislation. Guidance should help information producers publish in a form that is cost-effective, reaches the largest audience and can easily be re-used.

*Recommendation 10* Public information should be available at marginal cost, which in practice means for free online. Exceptions to this rule should pass stringent tests to ensure that the national benefit is actually served by charging for information and thus limiting its re-use. OPSI (part of The National Archives) should define and consult publicly upon such tests which they then enforce.

*Recommendation 11* Public bodies are often required to publish notices and other information in newspapers, by physical notices or by other means. The same information should now also be published directly to the internet. This will increase the opportunity for those people and businesses affected to see the information, either directly (for example, by search) or by others ‘mashing’ the information in the ways promoted elsewhere in this report. In doing so, public bodies should follow the OPSI guidance and many may find it cost-effective to use the London Gazette service rather than develop their own systems.

*Recommendation 12* OPSI should begin a communications campaign to represent and improve understanding of the permissive aspects of Crown Copyright along the lines of creative commons by end June 2009. This should be combined with ‘permission to scrape’ being given over Crown Copyright data, removing any risk of prosecution under the Computer Misuse Act. This might fall under the banner of a ‘Crown Commons’ brand. OPSI should begin a communications campaign to that end by end June 2009.

*Recommendation 13* As the internet changes, so should the way information is published. The taskforce has developed with stakeholders a model to inform online publishing. This breaks out information into several layers with external



interfaces at each layer, allowing re-use both of the raw data and the intervening software interfaces. OPSI should develop and further test the model and publish it with a delivery mechanism, implementation plan and explanatory material by end June 2009. It should become the standard to which new systems, or re-implemented versions of existing systems, are implemented from a date determined by the CIO Council.

*Recommendation 14* The government should ensure that public information data sets are easy to find and use. The government should create a place or places online where public information can be stored and maintained (a ‘repository’) or its location and characteristics listed (an online catalogue). Prototypes should be running in 2009.

*Recommendation 15* Stay at the leading edge of customer driven service improvement. The Permanent Secretary for Government Communications should regularly publish best practice and innovation in engaging large number of people online such as Show Us a Better Way, Dell Ideastorm, Apps for Democracy, etc. An initial readout should be published on the Cabinet Office website by Q3 2009.

*Recommendation 16* Communities and Local Government should work with local government to develop and adopt a Power of Information Beacon award. The criteria for this award should start with the Taskforce’s proposed licensing model and be extended as best practice develops.

*Recommendation 17* Government should encourage and assist the development of capability outside government in online empowerment or mutual support for public service outcomes, particularly in the Third Sector. It should also address the issue of those online organisations or people which are delivering clear, highly leveraged social value but which do not have a sustainable funding model. HMT and Cabinet Office, particularly the Office of the Third Sector should bring forward proposals by end June 2009.

*Recommendation 18* The Taskforce repeats Steinberg and Mayo’s recommendation 12 on resourcing OPSI, a part of National Archives.

*To ensure that OPSI can regulate the public sector information market effectively, government should review the fit between OPSI’s functions and funding, and recommend options that will ensure it is fit for purpose.*

*Recommendation 19* The taskforce endorses the NAO report and urges the government to ensure that the NAO findings are implemented.

*Recommendation 20* The Taskforce worked with the COI to produce ‘usability’ criteria and guidance for central government websites. These criteria should be published with an implementation plan to central government websites. The criteria and guidance should be published as soon as possible with an implementation plan by June 2009. The approach should be extended to the websites of the wider public sector including local government, health and police.

*Recommendation 21* The web is developing all the time; so are ideas about how it and public sector information could be used. The Cabinet Office should

have a modest fund for leading-edge R&D to continue to test ideas and incubate new capabilities, and it should co-ordinate R&D work in this area elsewhere in the public sector.

*Recommendation 22* A new external high level advisory panel should replace the Taskforce, reporting to the Minister for the Cabinet Office. The Panel should advise Ministers and public servants on the latest developments in the area in the UK and overseas, scrutinise departmental plans and capabilities, set priorities for the Cabinet Office's R&D fund, have a dialogue with the information community inside and outside government and drive and monitor progress in implementing the recommendations set out above. The Panel should work closely with the Advisory Panel on Public Sector Information. It should publish regular reports on the internet about developments and the government's progress. The panel should be established by June 2009.

*Recommendation 23* The Government IT Profession initiative – which covers the whole public sector – should specifically develop skills and cultures for IT professionals needed to support the implementation of this report. In particular, skills relating to the web, re-use of information including data mashing and delivering modern web functionality.

*Recommendation 24* The Taskforce has commissioned online training material on website usability from COI that can be deployed rapidly at relatively low cost. The Permanent Secretary Government Communications should bring forward a plan to train communications staff in the basics of social media and a modern web presence by Q3 2009. Consideration should be given to adapting and extending this training to public sector leaders and then more widely.

*Recommendation 25* The government should bring forward a plan to work with the higher education community on an increased UK capacity and capability for data mashing, including a focal point or virtual centre of excellence. The Cabinet Office should bring forward a plan by Q3 2009.

## HELPING PEOPLE ONLINE WHERE THEY SEEK HELP

Britain's thriving online co-operative and empowerment movements are moving into the mainstream. The Taskforce judges that now is an ideal time for public services to work with these movements adding value to both parties. Emerging good practice in public services should grow to become normal activity

### **Public servants taking part in online peer support forums**

A small group of mums can reach an audience of hundreds of thousands. They do not need a large organisation with an expensive IT support system or technological expertise. If 30,000 parents were meeting in a

park or football stadium to share information and tips about parenting, government would take notice. Citizens are helping each other in online communities, and working towards the same goals as government on a range of issues, from parenting to health and financial management.

Hilary Armstrong MP, Government response to Power of Information  
Review

Online peer support forums are going from strength to strength. Millions more people are engaging in online peer support forums than at the time of the original Power of Information Report in 2007. One major support network, The Student Room, now has 1.4m unique visitors a month, run by a small business and its own user community with 60 volunteer moderators. Netmums, represented on the Taskforce is growing by up to 20,000 new members a month. In the offline world we cannot think of any UK membership organisations growing this fast.

The Taskforce has encountered a remarkable range of mutual support forums of all sizes for all audiences. These range from: Money Saving Expert (reporting 6.4 million visitors in December alone with 3 million people receiving a weekly email) to the Army Rumour Service (reporting over 340 million page views since 2004 and over 42,000 registered users) the targeted The Poultry Keeper (which has over 70,000 posts), to the specialist Noise Abatement Society forum helping people with noise problems (over 3,000 posts), the Sheffield Forum (over 2 million posts about a City with a population of 0.5m). The forums supporting the IDEA Communities of Practice and Rightsnet also show how public sector professionals work together online, in public, on challenging day to day issues. We tend to use the word ‘forum’ to describe generic types of activity that could be enabled by a bulletin board, a blog, web chat, or an email group amongst others.

The Taskforce has assembled a list of sites for reference. This is simply a representative list compiled from our experience. We believe that a comprehensive search for relevant sites by different government departments and agencies would discover many more examples of potentially useful forums and so should be undertaken as a matter of urgency. Sites should also be given the opportunity to put themselves forward and for people to suggest them. Any list should include basic audience segmentation for each site.

In the USA Pew Research reports that:

The internet ... has now surpassed all other media except television as an outlet for national and international news ... For the first time in a Pew survey, more people say they rely mostly on the internet for news than cite newspapers.

There is now a compelling case for government to follow their citizen customers and give advice in the places citizens seek it. Peer support forums have now en-

tered the mainstream and should be treated as an important place in which to help citizens.

COI identified a lack of guidance for civil servants as an important barrier to participation in social media. The Taskforce worked with Ministers and officials to produce guidance for civil servants to take part in social media. This has been supplemented with a manual by the Cabinet Office Government Communications Group. However, an interview with an Online Community Manager, whose job it was to help officials take part in online policy discussions suggested that there are many cultural barriers to be overcome at a personal level for civil servants.

Steinberg and Mayo recommended that

To improve service delivery and communication with the public, the Central Office of Information (COI), in partnership with the Office of Public Sector Information (OPSI), should coordinate the development of experimental partnerships between major departments and user-generated sites in key policy areas, including parenting advice (Department for Education and Skills), services for young people, and healthcare (Department of Health).

In pursuit of this recommendation, COI did some useful strategy work to advise public sector managers on how to take decisions about engaging in social media. This is published for the first time here COI strategy report. COI did not find it easy to engage Departments in such experimental partnerships but unearthed some examples in the report.

Steinberg and Mayo also recommended that

To reduce unnecessary duplication of pre-existing user-generated sites, COI should update the guidelines for minimum website standards by December 2007; departments should be strongly advised to consult the operators and users of pre-existing user-generated sites before they build their own versions.

This analysis still stands – that in general government should not set up its own support forums. Rather it should go to where the customers are seeking help and provide it there, if customers would welcome it in the context of that forum.

There are a wide range of interventions that could be made. TheStudentRoom.co.uk observed that the nature of intervention needed to be carefully thought through. In the student room case, people go to peer forums to seek advice initially from their peers, rather than from government. But government advisors from a service such as NHS Direct could add real value if a person requiring specific help was referred to them by a forum moderator.

Another site owner felt that in the case of health advice, a specific clinic

might work best for their property, and another site owner that call centre advisor experts should simply take part in the discussion online where people were asking for help on technical aspects of benefits. However, some sites clearly would not welcome such intervention.

There is therefore no simple one-size-fits-all model for what would constitute effective intervention in online forums. Rather, it should be for each public service organisation to draw up their own strategy in consultation with the administrators of forums which they have identified as significant for them.

We do also recognise that the landscape of online activity changes rapidly requiring such strategies to be regularly-updated living documents rather than being set in stone at infrequent intervals. Many successful forums are small third sector or entirely volunteer efforts, which cannot be expected to go through an onerous procurement process – the COI should examine how to make it easier for the public sector and informal sites to work together without a stifling procurement overhead.

The Taskforce judges that the moment is right for a firmer push for public servants to engage in peer support forums, with public measurement and reporting and so makes the following recommendation.

### *Recommendation 1*

Public servants should take part in online peer support forums as a matter of course. Public bodies should investigate and publish lists of the major forums in their areas of responsibility and engage with these following a published plan. A cross-governmental list and set of Departmental plans should be published by the Cabinet Office by Q3 2009 with a follow up report on progress in Q1 2010. This builds on the enabling work advised by the Taskforce on the publication of social media guidance for civil servants.

## ACCESS TO THE INTERNET AT WORK FOR PUBLIC SERVANTS

Public sector workers cannot be expected to be up to date with or exploit the power of information to transform public services if they cannot access the internet at work. The Taskforce viewed a report of survey work done for the Minister for Digital Engagement on access to social media sites in summer 2008. This showed that large numbers of public sector workers have access to mainstream social media websites blocked, a finding confirmed by a recent informal survey and market research in local government by Public Sector Forums.

The Cabinet Office report noted that Departments had different needs and capabilities and said:

while similar criteria are considered, it is clear that departments are coming to different conclusions on access, suggesting they are taking different views of the degree of risk or benefit associated with these types of site. While most departments clearly feel that blocking access is necessary to some degree, they also emphasise that their ‘appropriate use’ policies or codes of conduct have a key role in governing individual behaviour in this area.

‘Most policies include a provision for allowing exceptional access to specific sites for individuals that can make a strong case on the basis of business need. In some cases where use is typically blocked or restricted, non-networked PCs are made available for staff to access social media or webmail sites.

‘Several departments noted that they are currently or will soon review their policy in this area, with some noting that they see the need for more help and guidance for staff beyond that available in the published guidelines for Civil Servants on online participation. Policy ownership resides in the majority of cases with IT (with input from HR, Finance, and Communications); though in a few cases the reverse applies.

4 departments allow access to all of the sites above as standard across their network.

12 department block access to all of them as standard across their network (but several note they will make case-by-case exceptions).

14 departments allow access to some; block access to others

In the modern world public servants need internet access to do their jobs, in particular to keep up with changing citizen customer behaviours. The Taskforce is concerned that access to narrowly defined ‘whitelists’ of acceptable websites can act to inhibit innovation. New systems, such as the Cabinet Office Flex system offers a secure browsing environment within which whitelist controls can be rolled back to a minimum. Public servants also need to have access to industry standard client capabilities such as modern browsers and plug-ins.

The Taskforce recognises that there are tensions between: the ever changing IT security threat profile, a need to have room to innovate, different HR policies required for different types of organisation and the constantly changing opportunities offered by new web services. One of the biggest challenges is keeping policies in this area up to date and synchronised across an estate as large as the public sector. In order to manage the risks of internet access HR staff and the security authorities need to be in close contact with those who can articulate the benefits.

The Cabinet Office is leading work to examine the issues in this area, which the Taskforce supports. The least burdensome outcome would be a simple common internet access policy fit for the modern era and capable of evolving to cover

as many public sector workers as possible. Given the widely differing operational environments of public sector workers (from intelligence analysts to nurses to contact centre workers) this may have to be a small but coherent family of policies.

The Cabinet Office should investigate the issues with staff involved in setting access rules and issue internal guidance. Where necessary Departments should work with CESG to accredit and deploy secure web browsing technology (already being used in Flex, a government shared ICT service) which would allow a full range of sites to be viewed at full functionality while protecting Government's own systems against the introduction of rogue software ('malware').

### *Recommendation 2*

Public servants will require adequate internet access to take part in social media as part of their job. The Cabinet Office should work with staff involved in setting access rules and defining standard browser capabilities and issue guidance.

## INNOVATE AND CO-CREATE WITH CITIZENS ONLINE

Leading organisations are using recent internet developments, including those known as 'Web2.0' to work with people in new ways. These developments make it easier, cheaper and faster to create to collaborate, innovate and create new information services.

The Show Us A Better Way Competition demonstrated not only the appetite for innovating with information but that people could respond spontaneously and create new products. The Government has already embraced 'co-production' in its strategy for the public services, and the Taskforce believes that there would be significant public value in opening up Government data and websites as platforms for others to develop and innovate further.

## A 'BACKSTAGE' MODEL FOR GOVERNMENT

The Taskforce endorses the sentiment of this passage from the DIUS White Paper on Innovation:

Innovation in public services will be essential to the UK's ability to meet the economic and social challenges of the 21st century ... The Government is uniquely placed to drive innovation in public services, through allocating resources and structuring incentives. Major forces such as attitudes to

risk, budgeting, audit, performance measurement and recruitment must be aligned to support innovation. Together, and with effective leadership, these will progressively overcome existing cultural and incentive barriers. Those responsible for public service delivery must also learn the lessons of open innovation and adopt innovative solutions from the private and third sectors.

Quoted from DIUS Innovation Nation section 44.

The web enables and indeed is enabled by open innovation on a large scale. There is an opportunity for the public sector to work with the web community to drive innovation in public information and web services. The Show Us A Better Way competition, a simple online call for ideas on re-use of public data attracted 500 entries. One of the UK's and arguably the world's leading examples of information-based open innovation is the BBC service known as 'backstage.bbc.co.uk'. In its FAQ, the BBC explains its backstage model thus:

Who is backstage.bbc.co.uk for?

backstage.bbc.co.uk is for individual developers and designers to build things using BBC content and anyone who has an idea for how to use BBC content in new ways. It is not for big corporates to play around with. backstage.bbc.co.uk is for non-commercial use by the little people.

backstage.bbc.co.uk is part of the BBC's wider remit to 'build public value' by sharing our content for others to use creatively. How do you 'build public value'? One of the ways is through supporting innovation as the BBC Governors response to the Graf report of BBC online makes clear:

'The BBC will support social innovation by encouraging users' efforts to build sites and projects that meet their needs and those of their communities ... The BBC will also be committed to using open standards that will enable users to find and repurpose BBC content in more flexible ways'.

backstage.bbc.co.uk aims to promote innovation amongst the design and developer community: if people are able to do interesting, productive things with the content then we'd like to support them. Finally and as a useful by-product of the above, backstage.bbc.co.uk is an opportunity to identify talent in the online community.

The Taskforce sees a number of advantages for the public services in adopting this model.

- It would create an ongoing source of innovative ideas for the use of government data, some of which may be rolled back into the principal websites whilst others remain free-standing
- It has the potential to build stronger working relationships between developers inside and outside government strengthening the capabilities of both parties



- And it would provide a useful channel for resolving some of the technical issues around access to government data that is made available under the Public Sector Information re-use regime.

The Taskforce has discussed at some length with the government website Directgov the potential for innovation along the lines of backstage.bbc.co.uk We understand that Directgov welcomes this initiative, and were pleased to see the recent launch of their first innovation platform – innovate.direct.gov.uk.

The Taskforce judges that leading public sector sites should create a Government Backstage capability as a joint effort. This will concentrate developer talent and public interest in one place and create a virtual centre of excellence in public sector data mashing. If Government Backstage were to work closely with BBC Backstage there is the potential to create a world class innovation and R&D resource.

### *Recommendation 3*

Unlock innovation in leading public sector sites using a ‘backstage model’, a standing open online innovation space allowing the general public and staff to co-create information-based public services. This capability should be a standard element of public information service design. The government should build on the new backstage service for Directgov.

## INNOVATION BUDGET

The Taskforce judges that successful leading high tech businesses will spend at least 10% of their budget on innovation; data reported by Booz & Co suggests as much as 13.6% for software and internet companies. Given the speed at which the internet and people’s use of it changes the government’s leading web sites need to keep pace with innovation online. The rapid rise of social networking sites demonstrates how innovation can rapidly change people’s communication habits. With over 60% of the population online and American studies showing that more people use the internet for news than the traditional press, it is particularly important for government sites to innovate themselves, given their central role in communications.

The Taskforce is making a range of recommendations that will require leading government sites to innovate. These sites are in the Taskforce’s view adequately funded to innovate but by demonstrating more transparency in how they do so would aid the innovation process. The Taskforce would like to see explicit provision made for investment in innovation, plans for such investment published and some central co-ordination to ensure that this effort is pooled and not duplicative.

One of the benefits of Show Us A Better Way was to see what information and services people wanted. The government should use their experience of running a ‘backstage’ service to get a sense of the relative priority of different areas. This should then be linked to funding API development for the data and services of greatest potential utility. Requests submitted through the data unlocking service created by OPSI, part of the National Archives, in response to a recommendation in the original Power of Information report should also help guide this prioritisation.

### *Recommendation 4*

Invest in innovation that directly benefits the public by ensuring that public sector websites spend about as much on innovation as leading knowledge businesses. Directgov, Businesslink and NHS Choices should create a combined innovation pot of 10% of their budgets, focused on improving the public experience of government websites, through outside-in innovation not internal requirements. Some of this money should be used to support development of APIs for data with the greatest demand as demonstrated by ‘backstage’ communities and the OPSI data unlocking service.

Annual plans on how this £10m innovation pool is to be deployed should be published and agreed by a new Head of Digital Engagement.

## OPEN UP THE POLICY DIALOGUE ONLINE

The public services can break out of the traditional challenge/response model of consultation by using the latest online tools. Consultations should be presented on Departmental websites in a format and using tools that allow real participation. An agenda to achieve this would include the following:

### OPENING UP AN ONLINE POLICY DIALOGUE

The Taskforce judges that the interactive technologies that have been the subject of much of its work also provide a good platform for engagement in policy discussions. Formal consultations by the public services essentially present information for comment on the web. If this information is made easier to re-use, the Taskforce judges that consultations will reach more people in new ways. It is clear from discussions with HMSO that the online distribution of government consultation ‘documents’ exceeds by orders of magnitude the distribution of printed copies. If the main means of distribution is digital, then the opportunity to take a digitally native approach should be seized.

Whilst this topic was not explicitly covered in the original Power of Information report recommendations, we believe that is worth setting out here thinking that has developed over the last year. The Taskforce recognises that digital technologies allow for many innovative forms of engagement beyond web-based commentable formats but believes that getting the web formats right is an important next step.

There is excellent practice in opening up the policy dialogue in the UK upon which to build, such as Downing Street ePetitions, CommentOnThis, the Hansard Society eDemocracy program and the new innovation platform at DIUS, which is hosting this report. The Taskforce has worked closely with 'TellThemWhatYouThink' which scrapes many government consultations into one place for free, to understand the technical obstacles and opportunities. The Taskforce has also followed the work of MySociety in the UK and the Sunlight Foundation in the USA on transparency and data publication.

The original Power of Information report was one of the first to be re-worked and presented on CommentOnThis as an experiment. CommentOnThis was an early innovator in reworking government consultation documents online so that they can be used more easily. More recently a team of civic bloggers in Birmingham has translated and repurposed Birmingham's 'Big City Plan' on the web in Big City Plan Talk. This Taskforce report was presented in 'beta' mode for comment and review by the online community before being finalised, generating hundreds of comments which were reflected in the final version.

These technical developments could improve the effectiveness of policy development in consultation, but will require new skills amongst policymakers and communicators. A plan for supporting the change needed in policy development skills should be developed by Government Skills by end 2009, with a concomitant training plan from the National School for Government.

The Government's Code of Practice on consultation was recently updated. It provides the right hooks for online consultation but the code is generic to all methods of consulting people.

Thought should also be given to alternative versions of consultation documents which could be used to reach a wider audience ... and to alternative methods of consultation. Guidance on methods to support formal consultation exercises to help reach specific groups and sectors (regional, public meetings, online tools, focus groups, etc.) is available.

'Consultation exercises that allow consultees to answer questions directly online can help reduce the burden of consultation for those with the technology to participate. However, the bureaucracy involved in registering (e.g. to obtain a username and password) should be kept to a minimum.

Guidance reflecting the Taskforce's views and signposts to help could either be

added to the code or placed alongside it. The Taskforce is encouraged that this is an area that the Central Office of Information is examining in some detail.

### ***Recommendation 5***

To take advantage of the potential of new online techniques to open up the policy dialogue online the government needs to do the following:

- Clear and mandatory standards on accurate tagging and metadata which would allow consultations to be found by the subjects, interests and places they affect as well as by the policy issue
- Breaking down consultation papers from monolithic documents into navigable, searchable, separate points which can be commented upon individually
- Implementing the tools – readily available elsewhere on the internet – which allow people to comment on individual items, to comment on other’s comments and to collaborate in developing and improving the content (perhaps through the sort of collective authorship we see on Wikipedia); the publication by DIUS of the Innovation White Paper and the Cabinet Office New Opportunities White Paper in this way are good examples of what can be done without major investment
- Participation by officials in the process in line with the Government’s recently published code of practice on social media, so that the consultation period is one of active dialogue
- Use of the same tools to explain at the end of the consultation period, in the same level of detail, what the Government had decided and why
- Mandatory publication of consultation materials in open, semantic, electronic formats that not only allow the relevant government website to host the material but also allow others to take the material, present it, gather views and feed those back to government in innovative ways.

The government should update the Code of Practice on Consultation maintained by the Better Regulation Executive in BERR to reflect these principles.

### ***Recommendation 6***

A plan for supporting the change needed in policy development skills to make the most of online participation should be developed by Government Skills by end 2009, with a concomitant training plan from the National School for Government.

## **REFORM GEOSPATIAL DATA**

The importance of geospatial data (digital maps) for public good and economic

prosperity was identified by Steinberg and Mayo in 2007. However, for both innovators and the general public, the situation remains disappointingly unchanged. About one third of the entries to the Show Us A Better Way competition required geospatial data and provided a clear demonstration to the Taskforce of the importance of updating current policy on geospatial information. Various barriers exist to its use, particularly licensing, cost and timely availability.

## MAPS AND GEOSPATIAL INFORMATION

The Ordnance Survey is fundamental to delivering the power of information for the economy and society. The Taskforce has contributed to the Government's Trading Funds Assessment. This Assessment should be radical and fundamental.

Maps are an easy to understand way of presenting complex information. However, until recently creating tools for presenting information on maps was very difficult and expensive to do. This is no longer the case.

Since around the time of the launch of online mapping services such as Multimap and Google maps with subsequent opening of APIs for easy re-use there has been a steady decline in the complexity and cost of development. It is now possible for people to create innovative mapping services in their spare time on a cheap laptop. This should be a tremendous spur for innovation in all sectors in the UK, as it has been in countries like the USA, Canada and Australia which have liberal public information regimes.

The Taskforce has been impressed by the extent to which access to geospatial data has been a recurrent theme during its activities. For example, the Show Us a Better Way competition had around 500 entries and of these over one third were for ideas around maps and location. It is possible to speculate why this is: perhaps people want 'government' to present a simple, 'smart face' based on location and service; perhaps they want to plan how to get to the hospital or the quickest route to school.

There are two components that are needed to make location aware services:

- Where the user is interested in; and
- What the area is like.

Whilst GPS devices are becoming more common, the universal key to location is postcode. The government should create a freely available single definitive address and postcode database available for the UK. Once created it should be made freely available for (re)use and maintained by the Ordnance Survey, Royal Mail and Local Government. This could be seeded by the census.

The public sector and associated bodies contains several rich geospatial data sets: flood information in the Environment Agency; demographic information in ONS; location of school, hospitals and other public buildings; transport informa-

tion; etc. However, the jewel in the Crown's geospatial data is the information in Ordnance Survey. For the reasons set out below, Ordnance Survey's information is underpins almost all public sector geospatial information.

In the Ordnance Survey the British Public have very high quality maps with universal coverage and rapid incorporation of changes but there seemed to be an unusual number of barriers to society and the economy making the best use of this service. There is a high demand for map-based public sector information services. But the complex and legalistic licensing and charging regime offered by the Ordnance Survey is acting as a barrier, both real and perceived, to innovation in this area (see WhoOwnsScotland case study).

The Taskforce recognises that some progress has been made with the creation of OpenSpace in response to a recommendation in the original Power of Information Report. However, the force of findings of the Transport, Local Government and the Regions Committee's report into Ordnance Survey in 2002 still hold true:

the dual role of OS as a public service provider and a commercial organisation; the boundaries between OS's operations and those of its licensed partners; the difficulties caused in pricing and copyright negotiations by OS's dominant position in the market; and the availability and cost of OS data.

The importance of the information held by the trading funds has been highlighted repeatedly over the years. This has been reinforced in recent times by the original 2007 Power of Information report, the 2008 Communities and Local Government report Place Matters: the Location Strategy for the United Kingdom, the work of Advisory Panel on Public Sector Information, the 2006 Office of Fair Trading Commercial Use of Public Information (CUPI) study and a 2008 report by Cambridge economists commissioned by BERR and HM Treasury. Research by Oxera for the Ordnance Survey suggests that their information alone underpins 12–20% of economic activity. While the points in this section can be generalised for all government information businesses e.g. other trading funds or the Environment Agency, both the scale of the prize and of the change needed create a focus on Ordnance Survey.

However, the current access regime is aimed at maximising the average return on capital for a single data business, not the overall welfare of the UK. Economic theory generally holds that maximum welfare is generated from charging at marginal cost, but the Ordnance Survey charges out at average cost as part of its Trading Fund approach. Analysis by Cambridge University suggests that current pricing directly reduces the size of the UK economy by £190m a year, in a sector that has been growing at an average rate of 9% a year. If the impact found by Oxera is true then this figure will be much higher.

The Taskforce spent some time looking at the issue of crime mapping which has excited much interest over recent months. We were struck that in common with other public sector organisations; the Metropolitan Police chose to implement a service based upon Google Maps rather than any directly-sourced Ordnance Survey product.

The Taskforce followed the interesting debate that was generated around the use of data which has been ‘derived’ from Ordnance Survey maps. Derived data can be difficult to define but, in the context of Ordnance Survey, arguably contains any information that has been created by reference to a map including: electoral regions, geo-tagged performance information and the location of public buildings. Ordnance Survey claim copyright in derived data. This means that use of other online mapping services may be challenged and discouraged.

At the same time Ordnance Survey’s own online mapping service is restricted to charitable/hobbyist use. This leaves risk averse public bodies with no ‘safe’ way to create innovative portals like that at Redbridge.

The Taskforce judges that technological advances in delivery increase the distortion in the public service delivery and economic activity through the current charging and licensing regime. For example:

- *Who runs local services* – The ability to discover easily administrative boundaries is essential for democracy. At present these are held by the Ordnance Survey and cannot be presented free at the point of use to the public in a form they can re-use. For example, despite the fact that electoral areas are set down in statute, the Ordnance Survey hold the copyright to displaying the regions on a map
- *Finding public services* – Bulk information about schools has recently been made available. It does not contain precise locations provided to the Ordnance Survey by the schools because of perceived problems with licensing
- *Crime Mapping* – Crime Maps were announced by the Home Secretary in the July 2007 Crime Strategy. Inspired by the Taskforce’s crime map mock ups, some forces were looking at a Google Maps interface. Ordnance Survey claimed that this would breach their license but don’t (at date of writing) allow public sector use of Openspace
- *Census information* – The census provides high quality local information. Despite the census areas being original work, licensing concerns have stopped the ONS providing an online geospatial interface to their data
- *Local Authority information* – one large local authority expressed bewilderment to the Taskforce that the location data for its own street furniture seemed to be owned by the Ordnance Survey. The Ordnance Survey often claims derived copyright in public service locations, often despite the original information coming from other public bodies.

This is not new analysis. The importance of geospatial data was identified by

Steinberg and Mayo in 2007 but for users, the situation remains unchanged. There is now a pressing need for reform at the Ordnance Survey. Shareholder Executive and HM Treasury are currently undertaking a review of the trading fund business model. They should seize the opportunity to recast the Ordnance Survey as a mapping agency for the 21st Century. Technological advances have shifted the fundamentals of the traditional Ordnance Survey business model and there is a real risk that it will find itself an anachronism as it is outpaced by more open alternatives such as Open Street Map, supported by cheap technology to support map-making.

However, there is no such thing as a free lunch. A substantial shift towards distributing data at marginal cost will not be achievable without finding a new funding model and the Assessment should consider the effect of funding on business incentives.

### *Recommendation 7*

It is the Taskforce's view that 'freeing up' geospatial data should be a priority. The Ordnance Survey requires urgent reform. Recent announcements of cost reductions at the Ordnance Survey point the way to wider reforms. This reform should include at a minimum:

- Basic geographic data such as electoral and administrative boundaries, the location of public buildings, etc should be available for (re)use free of charge to all
- There should be simple, free access to general mapping and address data for modest levels of use by any user
- Voluntary and community organisations pursuing public policy objects should benefit from straightforward standard provisions for ensuring access to geospatial data at all levels of use
- licensing conditions should be simplified and standardised across the board and, for all but the heaviest levels of use, should be on standard terms and conditions and should not depend on the intended use or the intended business model of the user
- The OpenSpace API, similar to but currently a constrained version of Google Maps, should become the primary delivery point for the Ordnance Survey's services
- Creation of a freely available single definitive address and postcode available for the UK for (re)use.

## MODERNISE DATA PUBLISHING AND RE-USE

The Taskforce found that recent developments on the web have increased the po-



tential for re-using public information to improve public service outcomes and create new businesses. How information is published and licensed for re-use is central to these benefits being realised. Although the core regime for public sector information in the UK works, non-personal public information held by, for example, the police, health bodies and local authorities is often not available. This is bad for democratic expression, the economy and citizen customers. Further reform and better communication to potential re-users would increase the national benefit

## RIGHT OF RE-USE

### CONSISTENT, COMPREHENSIBLE RIGHTS TO RE-USE INFORMATION FROM PUBLIC BODIES

... to protect individual liberty we should have the freest possible flow of information between government and the people ... Public information does not belong to Government, it belongs to the public on whose behalf government is conducted.

Gordon Brown, Prime Minister, Liberty Speech 29 October 2007

Information maintained by the Federal Government is a national asset. Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public.

President Barack Obama, Presidential Memorandum 21 January 2009

Yochai Benkler put the economic case in favour of this approach in the *Wealth of Networks*. It has since been expanded on in *Government and the Invisible Hand*. *MySociety* in the UK and the *Sunlight Foundation* in the United States of America demonstrate practical applications.

The entries to the *Show Us a Better Way* competition run by the Taskforce illustrated many new ways of re-using public information to support or enhance public services. The Taskforce was pleased to see a similar exercise developed in parallel in the US by *Apps for Democracy*, which generated further good ideas. However, much of the information innovators sought in the UK was held not by central government but by organisations in the wider public sector – particularly local authorities, police forces, schools, the Post Office and the National Health Service. This information is not easy to access, impeding innovation, economic activity and democratic expression.

There are two inter-related issues: consistency of licensing; and availability of information.

## CONSISTENCY OF LICENSING

For information held by central government the provisions of Crown Copyright apply. Crown Copyright is often misunderstood, and we make recommendation on that elsewhere in the report. But Crown Copyright has the advantage of being a consistent framework for licensing developed by experts after widespread consultation. Public bodies that are not part of central government are not covered by Crown Copyright by default. Instead there are a wide range of copyright, licensing and re-use rules for published information.

There are significant variations in licensing even within the same part of the public sector. For instance, while working with the Home Office on crime mapping, the Taskforce found ‘dead end’ copyright notices on some police websites (e.g. Northants) with no apparent provision for re-use, and more permissive statements on others (e.g. the Metropolitan Police). So a potential re-user of crime information might face over forty different copyright policies for the different forces.

This inhibits innovation, re-use and debate of vital public information such as crime statistics. Inconsistency in licensing is a particular inhibitor of economic activity – SMEs seeking to re-use the information as part of a business need unambiguous intellectual property clearance – several complained to the Taskforce. Clear re-use policies can also be important for people seeking to re-use public information to lobby public bodies for better public services.

Individual police forces, hospitals, schools and councils can each set their own copyright policy on the information they publish. A survey by PSI Consulting for the Advisory Panel on Public Sector Information revealed a poor state of compliance with the Re-Use of Public Sector Information Regulations – most Local Authorities not having even basic re-use policies. Our experience in talking with data owners is that copyright policy often arises not from a detailed assessment of the different options but from best efforts by staff that lack access to expert advice or effective guidance. One typical response from a senior local government officer was:

I spoke with the web manager – she said she put the © symbol on when the website was published some years ago because she thought that we had better have something just in case. She isn’t a copyright expert after all.

There are contrasting examples of good practice: Essex and Warwickshire Councils for instance have signing up to the OPSI Information Fair Trader Scheme. We make recommendations elsewhere about how good practice in local government can be encouraged.

Another grey area which has been drawn to our attention is that computer source code created by individuals and organisations in the public sector as part

of their public task may also be a valuable information asset. This is generally not considered within the framework of ‘Public Sector Information’ at present leading to uncertainty over licensing terms and objectives.

As more code is likely to be generated as government adopts web 2.0 practices, it would be timely to use the expertise of OPSI, part of the National Archives, to investigate how this can be handled within the public sector information framework, and to look into appropriate licensing terms drawing on best practice in the open source community.

## AVAILABILITY OF INFORMATION

Inconsistent licensing and re-use policies reflect an historically weak policy on information release in the wider public sector. This has been due to limitations in the European Directive on the Re-use of Public Sector Information, which as transposed by the UK allows public sector bodies such as the police or health authorities to opt out of making their information available for re-use. The Advisory Panel on Public Sector Information, in its letter to Michael Wills, the Minister for public information at the Ministry of Justice, said:

The availability of PSI from UK Public Sector Bodies (PSBs) that can be used for wider purposes is not mandatory in the Directive or the UK Regulations. This ensures that inconvenient requests to use PSI can simply be parked. We believe that some form of guaranteed right of access and use (subject to limited exceptions, such as personal information) is essential to encourage the widespread exploitation of PSI. This need not be expensive since – as we argue in the report – many potential users would take the responsibility for adding value to information provided in an ‘as is’ state.

The Directive does not prevent member state governments going beyond its provisions to apply re-use rules more widely. Indeed the Taskforce understands that now the Commission would encourage governments to do so. The Taskforce judges that there is a case for the government to do so in the UK.

We have also been concerned to find some examples where information of great potential value for the achievement of public policy objectives is not available for re-use. Departments are not always operating within the government’s policy framework, which says that core information is made available for re-use free of charge, including for commercial purposes. This appears to be a particularly significant issue in the transport sector where services are run by private operators. Public transport operators, local authorities, regional Travelines and Transport Direct are all involved in creating and aggregating transport data. Significant sums of public money are being spent on this data yet complex rights

issues appear to be limiting wider re-use. We found that the National Public Transport Data Repository described itself as ‘Crown Copyright’. However, investigations showed this database is not actually government data and that the NPTDR charges significant fees for use.

The National Public Transport Access Node (NaPTAN) database, of the bus stops, coach stations, airports, ferry terminals etc and the related National Public Transport Gazetteer, a topographic database of towns and settlements, both largely originate from public sector information, but are not freely available for commercial re-use. The Taskforce has found it hard to reconcile these arrangements with the Government’s overall licensing policy.

In order to deliver the Prime Minister’s vision set out in his Liberty speech, the Taskforce judges that there should be a presumption in favour of information which has been created by public sector bodies being available for re-use. We would also like to see clear and consistent copyright and licensing rules applied to make it easy to work with data from multiple sources in the public sector. These rules should be communicated in a simple way to both potential information users and the people who run public sector websites. This would be a radical extension of easy information re-use, stimulating innovation, economic activity and holding public bodies better to account for the services they deliver.

### ***Recommendation 8***

Government should ensure that there is a uniform system of release and licensing applied across all public bodies; individual public bodies should not develop or vary the standard terms for their sector.

The system should create a ‘Crown Commons’ style approach, using a highly permissive licensing scheme that is transparent, easy to understand and easy to use, modelled on the ‘Click Use’ license, subject to the caveats below.

OPSI, part of the National Archives, should investigate how source code can be handled within the public sector information framework, and look into appropriate licensing terms drawing on best practice in the open source community.

The Government should report on the options for these three recommendations by end 2009 and if required, statutory measures should be brought forward not later than the 2009/2010 session.

## EMBEDDING BEST PRACTICE

It is common for UK legislation to contain within it a statutory duty to publish defined items of information. These references vary widely from instructions to

publish in specific journals such as the London Gazette through to simple instructions that something must be produced. Publishing technology has overtaken these instructions in legislation; just as the phrase ‘in writing’ has been overtaken. There is an opportunity to modernise the way information is published which would both be more cost-effective and allow the information to be more easily used across multiple channels, thereby increasing the likelihood of it reaching relevant audiences.

The Taskforce has been pleased to see OPSI put the London Gazette online with sophisticated data feeds making information published there accessible to a far wider audience than ever before. We understand that this work is a world leading demonstration of publishing for the semantic web by a government. We have also looked at the way in which government publicises its job vacancies as an example of an area which could benefit from a smart application of new technology. We believe that OPSI, working with COI is well placed to issue guidance on best practice for the evolving menu of choices that public bodies can use for publishing public information.

Where there is a statutory requirement to publish ‘notices’ or other information we consider that it would always have been Parliament’s intent to ensure that the information reached all the relevant people. So, in addition, if necessary, to publishing in the form specified by statute, public bodies should publish the same information on the internet in a manner specified by The National Archives (OPSI) so that it is searchable, scrapable, and provides a structured feed. Many bodies may find it cost-effective to use the London Gazette service.

### ***Recommendation 9***

OPSI, part of the National Archives, and COI should work on updated guidance on publishing information, including requirements for publication in legislation. Guidance should help information producers publish in a form that is cost-effective, reaches the largest audience and can easily be re-used.

### ***Recommendation 10***

Public information should be available at marginal cost, which in practice means for free online. Exceptions to this rule should pass stringent tests to ensure that the national benefit is actually served by charging for information and thus limiting its re-use. OPSI (part of The National Archives) should define and consult publicly upon such tests which they then enforce.

### ***Recommendation 11***

Public bodies are often required to publish notices and other information in news-

papers, by physical notices or by other means. The same information should now also be published directly to the internet. This will increase the opportunity for those people and businesses affected to see the information, either directly (for example, by search) or by others ‘mashing’ the information in the ways promoted elsewhere in this report. In doing so, public bodies should follow the OPSI guidance and many may find it cost-effective to use the London Gazette service rather than develop their own systems.

## CROWN COPYRIGHT

When the public sector publishes information people should understand that it is intended for re-use. Action is required to improve understanding of Crown Copyright, which the Taskforce found to be misunderstood by creators and re-users of data. Crown Copyright, despite its historic name, is designed to encourage re-use in the majority of cases yet the Taskforce found little appreciation of this. There were even suggestions that it was deterring potential re-users.

The use of symbols within creative commons is helpful in making the scheme intelligible to a broad range of non-expert users. OPSI may wish to give consideration to how government licensing could benefit from a greater use of symbols and other graphical means of conveying licensing information – perhaps the creation of a ‘Crown Commons’ branded license.

### *Recommendation 12*

OPSI should begin a communications campaign to re-present and improve understanding of the permissive aspects of Crown Copyright along the lines of creative commons by end June 2009. This should be combined with ‘permission to scrape’ being given over Crown Copyright data, removing any risk of prosecution under the Computer Misuse Act. This might fall under the banner of a ‘Crown Commons’ brand. OPSI should begin a communications campaign to that end by end June 2009.

## MODERNISING INFORMATION PUBLISHING

In the twenty-first century, information is the force powering our democracy and our economy. Both the private and the public sector increasingly rely on information and knowledge, and create value through their ability to manage these valuable assets. Successful societies and economies in the future will depend on how well they enable information to be appropriately shared.

Sir Gus O'Donnell Cabinet Secretary in 'Information matters: building government's capability in managing knowledge and information'

The public sector produces very large quantities of information for which the web has become a critical distribution channel. Websites have changed a great deal in recent years. Successful sites have become data systems that deliver a service to the customer in many different places by allowing re-use of information. The government's use of the web is about more than the application of a set of communication tools such as blogs and wikis. The web has an architecture based on resources and links. This enables it to be a highly effective platform for data. Some of the most successful online tools work well because they are designed and engineered in keeping with this architecture of the web. Examples include the photo sharing website, Flickr, and the social networking service, Twitter. These services separate data from presentation and provide separate APIs. These APIs make the service more useful and help drive traffic to the site.

Generalising this, a person may be looking at a company's product information on the company's own website or seeing it embedded in a widget in someone else's site or blog. For example a person might have a community website containing feeds of information from say the BBC for traffic reports for that area or a widget from a bookstore offering books relevant to that area or a feed of planning applications from their local authority. The information from the bookstore or the BBC or the local authority would be the same if you went to their own sites, it is being re-presented automatically in a third party location. More people will see the information if it is on more sites.

The government web estate needs to move far closer to conforming with 'The Architecture of the World Wide Web' (2004) or Tom Coates nine point plan in 'native to a web of data' (2006). The world has moved from a controlled world, with a relatively small number of publishers selecting who and what gets published, to a world of massively democratised and decentralised publishing on the web. Web 2.0 tools such as blogs, wikis and twitter are tools at the far end of this trend. Anyone can say anything about anything, at relatively little or no cost.

These developments have led to different information structures for websites that provide and receive information. The Office for National Statistics is consulting on the use of a new model for access to the 2011 census data involving an interface to allow re-users to get at the underlying de-personalised data, rather than have to go through the ONS own top-level website (see consultation here). Their Chief Technology Officer reports:

ONS is developing a data explorer that will itself be founded on an API which I hope will be published. It will be capable of operating across all ONS outputs, and so is not limited to our plans for the next Census (we hope to have it out there, and through a few releases before we reach Cen-

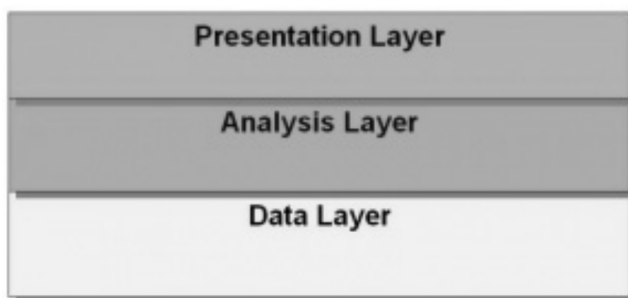
sus outputs)

Such new structures enable easy re-use of information by third parties. The Taskforce discussed on its blog a new information model for public sector websites to design in re-use of information.

## DESIGNING IN RE-USE

This issue is discussed in detail on the Taskforce blog.

Diagram 1: The 'Traditional Approach'



The emphasis of much web development to date has been on the presentation of the data to the public.

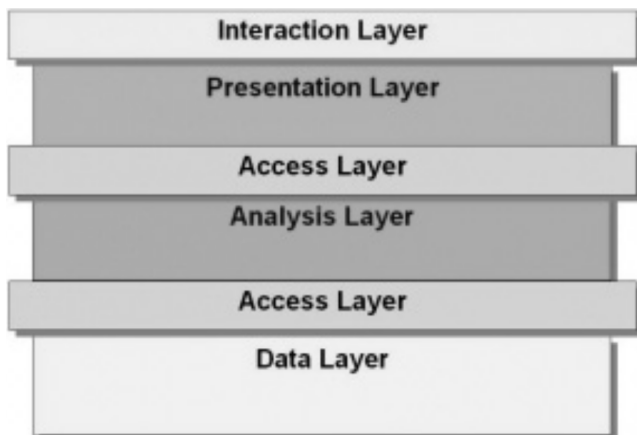
The assumption was that a particular website would be the unique interface to a particular set of data.

This meant that little or no thought might have been given to how anyone else would use the data set in question.

Sometimes the data and any analysis of it could be unpicked from such a site but in many instances this would be extremely difficult.

Diagram 2: A Power of Information model





Thinking has moved on over recent years with a developing understanding of the importance of separating data from its presentation. If nothing else, this allows for simpler changes to the presentation layer as, for example, websites are re-designed.

**Presentation Layer** – the public-facing front end, typically a set of web pages

**Access Layer** – all the information needed to access the data, including technical, legal and commercial aspects

**Analysis Layer** – any form of interpretation of the raw data, typically for summary presentation

**Access Layer** – all the information needed to access the data, including technical, legal and commercial aspects

**Data Layer** – the raw data sets

The Taskforce judges that to realise the power of much public information a different approach is needed to the way public data sets are treated when published on the web. There is a need for several access layers to the data. These layers must address all the issues that are necessary to enable use of the data. These typically include technical issues such as file formats, intellectual property issues such as copyright, and commercial issues such as pricing where applicable. The access layer is discussed in more detail here. Access to data allows many other actors to create their own analyses of it. A further Access Layer could allow re-use of the output of the analysis activity. This must again address any technical, intellectual property and commercial issues. With the Access Layers in place there is scope for multiple web presentations of the data. Additional value can be generated through the ability to interact with a community around the data.

The full realisation of the power of the information is realised when all layers are in place with the architecture designed to offer opportunities for interaction.

### *Recommendation 13*

As the internet changes, so should the way information is published. The taskforce has developed with stakeholders a model to inform online publishing. This breaks out information into several layers with external interfaces at each layer, allowing re-use both of the raw data and the intervening software interfaces. OPSI should develop and further test the model and publish it with a delivery mechanism, implementation plan and explanatory material by end June 2009. It should become the standard to which new systems, or re-implemented versions of existing systems, are implemented from a date determined by the CIO Council.

## FINDING PUBLIC INFORMATION FOR RE-USE

### LARGE SCALE PUBLISHING OF PUBLIC INFORMATION

Public information distributed across thousands of websites is expensive or time consuming to gather for re-use. The cost can be so high that little or no re-use occurs. The Show Us a Better Way competition revealed this to be a problem when people seek information about complex public service choices. One of the winning entries, School Guru demonstrates the scale of the challenge when choosing a school. Taskforce members with experience of building large mash ups identified a high search and acquisition cost as a major barrier to innovation in the re-use of data.

Where information is presented in one place it makes it much easier to re-use. The District of Columbia in the USA provides a vivid example of aggregating data for re-use in its data catalogue. Their Chief Technology Officer has pulled together all of the District's major data sets onto one web page and provided the data for free as a choice of feeds and downloads. This makes it very easy for people to use information in a way that suits them. Using modern techniques and storage it is relatively easy and inexpensive for government to aggregate performance and other data as it is produced. And then make it freely available for re-use in virtual or physical data repositories.

Professor Nigel Shadbolt of the University of Southampton referred the Taskforce to use of data repositories in the academic sector to aggregate resources for research. The Open Knowledge Foundation held a useful workshop with the Taskforce on finding and re-using information. The workshop discussed the use

of data catalogues which point people to where information can be found, such as the Comprehensive Knowledge Archive Network (CKAN). The workshop demonstrated that finding public sector information is not straightforward and requires a detailed knowledge of how government works. The OPSI Public Sector Information Unlocking Service, although welcome is only intended to address part of the way to solving this problem.

The challenge of ensuring information is discoverable and remains available over time will be met by a combination of catalogues and physical data repositories. Examples of each already exist across the public sector in the information management strategies of individual organisations. There are initiatives that aim to bring some consistency such as the Information Asset Register overseen by OPSI, part of the National Archives. Further information on information asset registers can be found in a paper produced for the ePSIplus network. However, in spite of these efforts, significant challenges remain for potential re-users, who may not have detailed knowledge of the structures of government, in finding and understanding relevant and useful information sources.

The Taskforce recommends that the government build on this existing work by establishing a public sector information repository and catalogue function based around the Office of Public Sector Information, part of the National Archives. OPSI has the expertise in modern information publishing and, as an offshoot of National Archives, can take a long term view of custodianship. We understand that officials in OPSI have already sketched out the architecture to deliver such a service at minimal expense.

The Taskforce is pleased that the pre budget report contains a commitment from Communities and Local Government (CLG) to move forward in publishing its performance data obtained for the Comprehensive Performance Assessment (CPA). If this performance data were to be published in a well structured way, it should be possible to produce a map of public services to help inform people's choices.

### ***Recommendation 14***

The government should ensure that public information data sets are easy to find and use. The government should create a place or places online where public information can be stored and maintained (a 'repository') or its location and characteristics listed (an online catalogue). Prototypes should be running in 2009.

## **KEEP UP TO DATE WITH BEST PRACTICE IN ENGAGING LARGE NUMBERS**

The Taskforce ran a competition called Show Us A Better Way which generated

around 500 ideas for uses of public sector data. This exceeded our expectations and proved to be a very positive experience in terms of the breadth and quality of ideas and the broader interest generated in the Power of Information agenda.

This is part of a growing trend of developing methods to harness the public's ideas for improving products and services. The Taskforce believes that there are important lessons that can be learnt from these exercises that would be of benefit to the public services. The greatest value will be generated if there is a mechanism within government for seeking and sharing best practice in this rapidly developing field.

### *Recommendation 15*

Stay at the leading edge of customer driven service improvement. The Permanent Secretary Government Communications should regularly publish best practice and innovation in engaging large number of people online such as Show Us a Better Way, Dell Ideastorm, Apps for Democracy, etc. An initial readout should be published on the Cabinet Office website by Q3 2009.

## BEACON STATUS – ENCOURAGING AND REWARDING EXCELLENCE

The Taskforce talked with stakeholders and aired on its blog a low cost approach for unlocking the power of information in Local Government. The Taskforce set out some simple rules in plain English that would help a Local Authority encourage information re-use and save money by adopting a simple policy:

- Ensure you have a copyright notice or a license to tell people what they can and can't do with your information (which is also your intellectual property).
- Every local authority owns its own copyrights and database rights. You are required by law (the Public Sector Information regulations) to publish the terms under which your material can be re-used.
- To minimise bureaucracy and cost it makes sense for your information to be available for people to re-use for free under a simple standard license. The best way to do this is using the plain English 'PSI Click-Use license', administered by the Office of Public Sector Information, part of the National Archives.
- All you need to do is adopt a policy for your Council's information to be licensed by 'The Controller of Her Majesty's Stationery Office', who also licenses Crown copyright information for the government. There is clear guidance on the process for extending the scope of the click-use licence.
- You will need to adopt a mandate following standard approved wording.

Following this process should reduce cost to the local authority by doing some-

thing once rather than many times. It could also foster local economic and third sector activity. Where leading local authorities take such measures they should be recognised and rewarded. The IDEA ‘Beacon’ scheme is a prestigious award scheme that recognises excellence in local government. The IDEA website describes the Beacon Scheme:

The Beacon Scheme was set up to disseminate best practice in service delivery across local government ... Themes are selected for each round of the scheme by Government Ministers. The themes represent issues which are important in the day-to-day lives of the public and reflect key government priorities. Themes are announced one or two years in advance and some themes will be repeated in future rounds. Beacon status is granted to those authorities who can demonstrate a clear vision, excellent services and a willingness to innovate within a theme. Awards are made by government ministers based on recommendations made by an independent advisory panel.

The Taskforce has discussed with Communities and Local Government the possibility of a Beacon award for excellence in unlocking the power of local government information.

### *Recommendation 16*

Communities and Local Government should work with local government to develop and adopt a Power of Information Beacon award. The criteria for this award should start with the Taskforce’s proposed licensing model and be extended as best practice develops.

## SUSTAINABILITY OF THIRD PARTY SERVICES

The Taskforce believes that if digital engagement becomes a more mainstream activity for government, as we feel it should, then questions of sustainability and support will become more pressing.

Many sites and services of public value are entirely created and maintained by communities or social entrepreneurs and do not require government intervention. However, the Taskforce also found that without some capacity for appropriate intervention there is a risk that public value from this sector will not be maximised.

We believe that there is scope for intervention at all phases of site development.

In the initial development phase, the main measures to consider are in the

opening up of public data sources and in the provision of a supportive environment for innovation. These measures are addressed by other recommendations in this report. We also believe that innovation competitions and small grants can make a significant contribution in this phase. This conclusion is based on our own experience of the Show Us A Better Way competition as well as our observation of the positive impact of similar exercises, such as AppsForDemocracy in Washington DC, and of the small grants from the Ministry of Justice's Innovation Fund for Democratic Engagement.

Other issues arise during the later phases of growth and 'normal' operation. We have become informed about this by the experience of Netmums and MySociety, who are both represented on the Taskforce, and of other sites such as PatientOpinion and TheStudentRoom, who have met with various Taskforce members. We recognise that there is more work to be done in understanding the issues in depth and developing models that address them and this is reflected in our recommendations.

We believe it is important to be clear that while many sites and services are developed on a shoestring budget this does not mean that they can be sustained on a shoestring as the costs of supporting users can rise dramatically once a site enters the mainstream. This is especially significant if they become integral to the delivery of public service objectives.

There are issues of straightforward financial viability, of fairness in terms of rewards for services delivered, and of appropriateness in terms of maintaining independence that all need to be considered if government is to depend on the availability of these services.

There are a number of models for providing support to develop and sustain services. These include:

- the provision of high quality, relevant public service content;
- technical assistance and technology platform support;
- funding through a paid-for advertising model;
- funding for specific events/exercises run in partnership with public services;
- direct grant support.

The Taskforce believes that models for providing support are insufficiently developed at present, largely due to the relative novelty of these services as potential public sector partners. We fear that much good work may be threatened if consideration is not given to developing such models as a matter of some urgency. Our goal in this should be to create a menu of options that is most likely to create sustainable innovative digital services that support public service objectives.

We note that the experience of the Public Service Broadcasting sector, whilst not directly applicable, may have some relevance here. We have a long experience in the UK of promoting investment in high quality public service broadcast content via a number of mechanisms similar to those described above.

We also note that a key tool in the PSB sector has been a mechanism to establish the limits of the BBC's services. Again, whilst not directly transferable, we believe that there are important lessons here for the public sector web estate to consider so that it sends clear signals about where it will and will not develop its own centrally-funded web services. We are more likely to see innovation by parties outside government where there is such a capacity to define the spaces in which government is not intending to operate.

### *Recommendation 17*

Government should encourage and assist the development of capability outside government in online empowerment or mutual support for public service outcomes, particularly in the Third Sector. It should also address the issue of those online organisations or people which are delivering clear, highly leveraged social value but which do not have a sustainable funding model. HMT and the Cabinet Office, particularly the Office of the Third Sector should bring forward proposals by end June 2009.

## A MODERN CAPABILITY

The Taskforce recognises that significant resourcing implications will have to be addressed if our proposed changes to the way public services work are to be successful. Many people in the public sector already have the skills needed to deliver them and this inherent capability will increase to a degree over time by the simple process of recruitment of new staff from cohorts who use web tools in their daily lives. However, there is a need to intervene to ensure consistency of knowledge about best practice across this very diverse community, to ensure that there is ongoing external input and to make specialist functions, such as copyright and licensing expertise, available more widely.

## RESOURCING OPSI, A PART OF THE NATIONAL ARCHIVES

The government should ensure that the public sector makes the best use of scarce talent and expertise while it is upskilling to take advantage of the power of information. This work is at the leading edge for any public sector and skills are in short supply.

The public sector will need to resource and use world class centres of excellence such as OPSI, a part of National Archives, carefully to avoid both wasteful duplication and missed opportunities to tap their expertise. Things that can be

done once for the whole of government should only be done once, in line with the Transformational Government strategy. The more resources for instance OPSI has, the more efficient it can be in providing a shared service for government as a whole. OPSI's running costs of £1.04m per annum, reported in the United Kingdom Report on the Re-Use of Public Sector Information 2008 (Cm 7446) are modest compared to the £205m annual running costs of central government web operations estimated by the NAO. However as is often the case in the public sector, the costs and benefits fall to different organisations.

### *Recommendation 18*

The Taskforce repeats Steinberg and Mayo's recommendation 12 on resourcing OPSI, a part of National Archives.

To ensure that OPSI can regulate the public sector information market effectively, government should review the fit between OPSI's functions and funding, and recommend options that will ensure it is fit for purpose.

## IMPLEMENT THE NATIONAL AUDIT OFFICE REPORT

The National Audit Office published a report 'Government on the internet: progress in delivering information and services online' in July 2007 that made important recommendations for the government's web estate.

The Taskforce noted in particular the expenditure estimate for the central government web estate:

We estimate the annual running costs for central government websites as £208 million. Some departments and agencies still have weak information about the costs and usage of their information provision and other facilities online. Hence they are unlikely to be maximizing the value gained from these expenditures

The Taskforce judges that the NAO recommendations will, if implemented help the delivery of the power of information. A greater focus on relevant communication channels and the real costs of websites through a thorough audit will help administrators take better decisions about how to engage with online communities and to make information available for others to re-use.



### ***Recommendation 19***

The taskforce endorses the NAO report and urges the government to ensure that the NAO findings are implemented.

## **GOVERNMENT WEBSITES SHOULD MEET BASIC USABILITY CRITERIA**

It is easier to extract benefit from information that is presented on the web in a usable way.

The Taskforce commissioned work on usability from the agency Bunnyfoot to identify good and bad aspects of government websites. The review found that some government websites are failing to get the basics right, for example:

- Not helping people to navigate the site easily
- Not helping search engines like Google to find the site
- Not speaking the language of the user

In response, the Cabinet Office is working with Departments to resolve the specific issues identified in the review. Of the 150 separate issues identified, departments have firm plans in place to resolve 116 of them.

A good example of design focused on usability can be found here. The Cabinet Office has also asked COI to build a ‘usability toolkit’ for web developers and web content editors across government covering the basics of usability in a way that is engaging and interactive. The aim is to raise awareness of usability issues across government and to improve the quality of government websites. The toolkit will be delivered by end March 2009.

### ***Recommendation 20***

The Taskforce worked with the COI to produce ‘usability’ criteria and guidance for central government websites. These criteria should be published with an implementation plan to central government websites. The criteria and guidance should be published as soon as possible with an implementation plan by June 2009. The approach should be extended to the websites of the wider public sector including local government, health and police.

## **CONSTANT INNOVATION AND STAYING UP TO SPEED WITH NEW IDEAS**

The Taskforce has done its work and will disband itself if the Minister for Digital Engagement agrees. However we want to ensure that the government continues

to stay abreast of the latest developments so that it can serve citizens well in the future. Work by DIUS on innovation confirms the view that special arrangements are required to ensure that large organisations maintain an effective capacity to innovate. The Taskforce wants to ensure that relevant Ministers and the Head of Digital Engagement have an external sounding board and think tank to help them keep abreast of a fast moving field.

The Power of Information work arose in late 2006 from the innovation strand of the Transformational Government program. It is important that such innovation continues. We would also recommend that curiosity driven, risk taking research continues in the Transformational Government team as the emphasis shifts to implementing the Taskforce's recommendations.

### ***Recommendation 21***

The web is developing all the time; so are ideas about how it and public sector information could be used. The Cabinet Office should have a modest fund for leading-edge R&D to continue to test ideas and incubate new capabilities, and it should co-ordinate R&D work in this area elsewhere in the public sector.

### ***Recommendation 22***

A new external high level advisory panel should replace the Taskforce, reporting to the Minister for the Cabinet Office. The Panel should advise Ministers and public servants on the latest developments in the area in the UK and overseas, scrutinise departmental plans and capabilities, set priorities for the Cabinet Office's R&D fund, have a dialogue with the information community inside and outside government and drive and monitor progress in implementing the recommendations set out above. The Panel should work closely with the Advisory Panel on Public Sector Information. It should publish regular reports on the internet about developments and the government's progress. The panel should be established by June 2009.

## **IT PROFESSION SKILLS**

The issues raised by this report point to quite new approaches and techniques in the publishing of information. One early indicator is the proposal for an API model for publishing the 2011 census. As with any innovation, the challenge for a large organisation such as the public sector is to capture the skills of leading professionals and transfer them to the body of the workforce. The UK Government IT profession and the work of other professional bodies such as the Society of Information Technology Management (SOCITM) provide good mechanisms

to deliver this.

The Government IT Profession and SOCITM describe themselves as follows:

The Government IT profession brings together all IT professionals working across the UK public sector: UK government departments and agencies, local government, the emergency services and specialist deliverers such as the health sector. It includes everyone from new entrants through to the members of the Chief Information Officer Council.

The Society of Information Technology Management was founded in 1986 as the professional association for ICT managers working in and for the public sector. Members are drawn primarily from local authorities but also from the police and fire services, housing authorities and other locally delivered public service.

Managers or consultants from organisations supplying ICT products and services to the public sector, or which support public services in other ways, may also join the Society.

This report makes recommendations to the government and confines itself to the Government IT profession but we would encourage SOCITM to behave in a similar way.

### ***Recommendation 23***

The Government IT Profession initiative – which covers the whole public sector – should specifically develop skills and cultures for IT professionals needed to support the implementation of this report. In particular, skills relating to the web, re-use of information including data mashing and delivering modern web functionality.

## **MODERN TRAINING IN MODERN SKILLS**

In conversations with civil servants in Whitehall, the Taskforce has found varying levels of expertise and familiarity with the tools and techniques discussed in this report. While there are some areas of world leading expertise, use and expertise is still patchy.

### ***Recommendation 24***

The Taskforce has commissioned online training material on website usability from COI that can be deployed rapidly at relatively low cost. The Permanent

Secretary Government Communications should bring forward a plan to train communications staff in the basics of social media and a modern web presence by Q3 2009. Consideration should be given to adapting and extending this training to public sector leaders and then more widely.

## INCREASE UK CAPACITY FOR DATA MASHING VIA HIGHER EDUCATION

The Taskforce was struck that much of the innovation in the vibrant UK data mashing scene comes from people associated with the higher education sector, either recent or current students or academics. In fact innovation in public sector data mashing has largely come from individuals and the third sector rather than from the major IT companies that supply the government.

Many of the people doing data mashing have a background in the sciences and specialist research into data mashing should be increased. The Taskforce also sees great potential in broadening the capability to mashup data out into the social sciences and beyond. To combine people with a strong research interest in re-using public information with the skills to do so. The ‘technical’ skills needed to manipulate and present data are diminishing thanks to services such as Yahoo Pipes and the research information repositories arising in the UK. In the same way that use of spreadsheets, databases and statistical packages became commonplace in academia in the early 1990s, now might be the time for data mashing to follow a similar path.

### *Recommendation 25*

The government should bring forward a plan to work with the higher education community on an increased UK capacity and capability for data mashing, including a focal point or virtual centre of excellence. The Cabinet Office should bring forward a plan by Q3 2009.

## ACKNOWLEDGEMENTS

The Taskforce would like to thank all those who have contributed to its work and in particular the secretariat who were drawn from the Cabinet Office, Central Office of Information and the Office of Public Sector Information, part of the National Archives. Many other people inside and outside government have actively contributed by commenting on the blog and beta report and by taking part in various Taskforce activities. You know who you are – please take a \*bow\*. And we are encouraging the use of #poit as a tag for Taskforce related material on the web

so we can all keep contributing.

# CHAPTER TWENTY-THREE

## DIGITAL ECONOMY FUTURE DIRECTIONS\*

*Brian Fitzgerald, Anne Fitzgerald, Jessica Coates and Kylie Pappalardo*

### CONSULTATION TOPIC 1: OPEN ACCESS TO PUBLIC SECTOR INFORMATION

Advances in information and communication technologies have brought about an information revolution, leading to fundamental changes in the way information is collected or generated, shared and distributed. The internet and digital technologies are re-shaping research, innovation and creativity. Economic research has highlighted the importance of information flows and the availability of information for access and re-use. Information is crucial to the efficiency of markets and enhanced information flows promote creativity, innovation and productivity. There is a rapidly expanding body of literature which supports the economic and social benefits of enabling access to and re-use of public sector information.<sup>1</sup>

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1 Note in particular: Houghton, J., Steele, C. and Sheehan, P., *Research Communication Costs in Australia: Emerging Opportunities and Benefits*. DEST. 2006, at [dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST\\_Research\\_Communications\\_Cost\\_Report\\_Sept2006.pdf](http://dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST_Research_Communications_Cost_Report_Sept2006.pdf). Houghton, Steele and Sheehan concluded in their 2006 report that open access models of scholarly communication have the potential to increase the economic and social returns from public investment in R&D. See also Houghton, J., Rasmussen, B., Sheehan, P., Oppenheim, C., Morris, A., Creaser, C., Greenwood, H., Summers, M. and Gourlay, A (2009) *Economic implications of alternative scholarly publishing models: Exploring the costs and benefits*. Project Report to Joint Information Systems Committee (JISC) by Victoria University & Loughborough University, United Kingdom (Unpublished) available at [ie-repository.jisc.ac.uk/278/](http://ie-repository.jisc.ac.uk/278/); Newbery, D, et al., *Models of public sector information provision via trading funds*, Department for Business, Enterprise and Regulatory Reform and HM Treasury, London, 2008, at [www.opsi.gov.uk/advice/poi/models-psi-via-trading-funds.pdf](http://www.opsi.gov.uk/advice/poi/models-psi-via-trading-funds.pdf). See also Kirsti Nilsen, *Economic Theory as it Applies to Statistics Canada: A Review of the Literature*, Submitted to Statistics Canada, 7 May 2007, pp. iii-iv, at [www.chass.utoronto.ca/datalib/misc/](http://www.chass.utoronto.ca/datalib/misc/)

(Note that a substantial research project associated with QUT's Intellectual Property: Knowledge, Culture and Economy

The draft Consultation Paper (p. 3) states that the Australian Government acknowledges that economic benefits and social well-being can result from access to certain categories of public sector information (PSI). (The term 'public sector information' (PSI) is used here in the same sense as in the draft Consultation Paper, that is, to include information and data produced by the public sector as well as materials that result from publicly-funded cultural, educational and scientific activities). Governments play a central role in ensuring that PSI can be accessed, used and re-used. As observed in the draft Consultation Paper (p. 3), there is increasing support for 'the notion that the Australian Government should provide access to public sector information (PSI) on terms that clearly permit the use and re-use of that information'. This observation is supported by submissions to the 2008 Review of the National Innovation System, several of which raised the importance of improving the Australian environment for accessing and re-using PSI.<sup>2</sup>

Professor Brian Fitzgerald's submission stated:

An ability to access and re-use knowledge, data, content and culture (especially that which is digitised) is nowadays a key factor in finding new ways of doing things for social, cultural and economic purposes. There is a broad consensus across the world that the default rule should be that publicly funded knowledge, data, content and culture should be available for open access.<sup>3</sup>

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Nilsen%20Economics%20Paper%202007%20final%20version.pdf, accessed 22 December 2008. See also, presentations at OECD Working Party on the Information Economy workshop on public sector information, *The Socioeconomic Effects of Public Sector Information on Digital Networks: Toward a Better Understanding of Different Access and Reuse Policies*, Paris, 4–5 February 2008, available at [www.oecd.org/document/48/0,3343,en\\_2649\\_34223\\_40046832\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/48/0,3343,en_2649_34223_40046832_1_1_1_1,00.html).

- \* This submission was first published as Submission of the Intellectual Property: Knowledge, Culture and Economy (IP: KCE) Research Program, Queensland University of Technology (QUT) to the Department of Broadband, Communications and the Digital Economy's Digital Economy Future Directions consultation paper prepared by Brian Fitzgerald, Anne Fitzgerald, Jessica Coates and Kylie Pappalardo. The original submission is available at: [www.dbcde.gov.au/digital\\_economy/digital\\_economy\\_consultation/submissions](http://www.dbcde.gov.au/digital_economy/digital_economy_consultation/submissions) (under Queensland University of Technology QUT Law Faculty) at 10 June 2009.
- 2 See, for example, Submission no. 307, Australian Spatial Consortium at p. 1, [www.innovation.gov.au/innovationreview/Documents/](http://www.innovation.gov.au/innovationreview/Documents/) 307-Australian\_Spatial\_Consortium.pdf, and Submission 428, Brian Fitzgerald, [www.innovation.gov.au/innovationreview/Documents/428-Brian\\_Fitzgerald.pdf](http://www.innovation.gov.au/innovationreview/Documents/428-Brian_Fitzgerald.pdf).

This emergence of a broad consensus on access to and re-use of PSI is increasingly apparent in policy documents and practical initiatives worldwide. The Department has identified some of these in the draft Consultation Paper (p. 3), notably, the OECD's 2008 Seoul Declaration on the Future of the Internet Economy and supporting policy framework,<sup>4</sup> the 2003 European Council and European Union's Directive on the Re-use of Public Sector Information (2003),<sup>5</sup> and the 2007 UK Power of Information Review.<sup>6</sup>

In Australia, however, the current situation with respect to PSI access and re-use is fragmented and lacks a coherent policy foundation, whether viewed in terms of interactions within or among the different levels of government at the local, State/Territory and Federal levels, or between the government, academic and private sectors.

The issue of information access and re-use has been considered by various government agencies and in reports commissioned by governments over the last 15 years. There is a range of initiatives at the Federal and State/Territory government levels promoting or examining open access to PSI (as noted, pp. 3–5 of the draft Consultation Paper) but these are only loosely connected, deal with different aspects of access and re-use and lack any formal coordination. Where initiatives have occurred, they have generally been in specific information domains (e.g., the results of publicly funded research, either in the form of publications or data; patent specifications; statistical data; and spatial information). The issue of the most appropriate licensing model for use in relation to PSI was the focus of the Queensland Government's Government Information Licensing Framework (GILF) project which influenced the adoption of open content licensing (such as Creative Commons) by other State and Federal Government agencies.<sup>7</sup>

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- 3 Submission 428, Brian Fitzgerald at p. 4, [www.innovation.gov.au/innovationreview/Documents/428-Brian\\_Fitzgerald.pdf](http://www.innovation.gov.au/innovationreview/Documents/428-Brian_Fitzgerald.pdf).
  - 4 OECD (2008) The Seoul Declaration for the Future of the Internet Economy and the shaping policies for the future of the internet economy, noting in particular the annexed including the Recommendation concerning Access to Research Data from Public Funding and the Recommendation for Enhanced Access and More Effective Use of Public Sector Information, available at [www.oecd.org/site/0,3407,en\\_21571361\\_38415463\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/site/0,3407,en_21571361_38415463_1_1_1_1_1,00.html).
  - 5 European Council and European Parliament Directive on the Re-use of Public Sector Information (2003) available on the European Commission's website at [ec.europa.eu/information\\_society/policy/psi/library/index\\_en.htm#Key\\_documents\\_\(PDF\\_files\)](http://ec.europa.eu/information_society/policy/psi/library/index_en.htm#Key_documents_(PDF_files)).
  - 6 *The Power of Information: an independent review by Ed Mayo and Tom Steinberg* (2007), commissioned by the Cabinet Office, UK Government, available at [www.opsi.gov.uk/advice/poi/index](http://www.opsi.gov.uk/advice/poi/index), [www.cabinetoffice.gov.uk/newsroom/news\\_releases/2007/070607\\_power.aspx](http://www.cabinetoffice.gov.uk/newsroom/news_releases/2007/070607_power.aspx) and [www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx).



Initiatives such as these are important and provide evidence of a growing awareness of the importance of ensuring access to and re-use of PSI, they remain fragmented and separate and involve relatively few Government departments and agencies.<sup>8</sup> No comprehensive statement of policy, principle or practice relating to information flows has yet been developed by any tier of Australian government or for any information sector.<sup>9</sup>

Section 1 of the draft Consultation Paper (p. 5) raises several questions with respect to PSI: what categories of PSI are most likely to promote innovation and the digital economy?; what issues/factors facilitate the use and re-use of PSI?; what are the best formats in which to provide PSI?; what licensing terms would best facilitate use and re-use of PSI (and should they differentiate between commercial and non-commercial use and re-use)?

Many of these questions raise issues of the kind that would be addressed in a national information policy, the establishment of which was recommended in the *Venturous Australia* report of the Review of the National Innovation System. Of particular significance are the Innovation Review recommendations 7.7 and 7.14:

*Recommendation 7.7* Australia should establish a National Information Strategy to optimise the flow of information in the Australian economy.

The fundamental aim of a National Information Strategy should be to:

- utilise the principles of targeted transparency and the development of auditable standards to maximise the flow of information in private markets about prod-

7 Queensland Spatial Information Council (QSIC), *Government Information Licensing Framework (GILF)* project [www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/6C31063F945CD93B4A257096000CBA1A](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/6C31063F945CD93B4A257096000CBA1A). CC Australia blog – ‘The Australian census goes CC’: [www.creativecommons.org.au/node/207](http://www.creativecommons.org.au/node/207); CC blog – ‘Australia’s census going CC BY’: [creativecommons.org/weblog/entry/11313](http://creativecommons.org/weblog/entry/11313); ‘Creative Commons licensing is coming to the ABS!’: [www.abs.gov.au/websitedbs/D3310114.NSF/4a256353001af3ed4b2562bb00121564/8b2bdbc1d45a10b1-ca25751d000d9b03!OpenDocument](http://www.abs.gov.au/websitedbs/D3310114.NSF/4a256353001af3ed4b2562bb00121564/8b2bdbc1d45a10b1-ca25751d000d9b03!OpenDocument); ePSIplus: [www.epsiplus.net/news/abs\\_sets\\_an\\_example](http://www.epsiplus.net/news/abs_sets_an_example); ABS Copyright notice: [www.abs.gov.au/websitedbs/D3310114.nsf/home/%C2%A9%20Copyright](http://www.abs.gov.au/websitedbs/D3310114.nsf/home/%C2%A9%20Copyright); Dylan Bushell-Embling, ‘Private eyes on public data’, *The Age* and *The Sydney Morning Herald*, 25 September 2008, available at [www.theage.com.au/news/technology/private-eyes-on-publicdata/2007/09/24/1190486224755.html?page=fullpage](http://www.theage.com.au/news/technology/private-eyes-on-publicdata/2007/09/24/1190486224755.html?page=fullpage) and [www.smh.com.au/news/technology/private-eyes-onpublic-data/2007/09/24/1190486224755.html?page=fullpage](http://www.smh.com.au/news/technology/private-eyes-onpublic-data/2007/09/24/1190486224755.html?page=fullpage) accessed 27 August 2008.

8 Among the most prominent are Geoscience Australia, Australian Bureau of Statistics, the Department of Education (DEWWR), the Department of Innovation, Industry, Science and Research (DIISR) and AGIMO.

9 The Australian position can be contrasted with that in New Zealand, where the government published its national information policy in 1997.

- uct quality; and
- maximise the flow of government generated information, research, and content for the benefit of users (including private sector resellers of information).

*Recommendation 7.14* To the maximum extent practicable, information, research and content funded by Australian governments – including national collections – should be made freely available over the internet as part of the global public commons. This should be done whilst the Australian Government encourages other countries to reciprocate by making their own contributions to the global digital public commons.

The draft Consultation Paper notes (p. 5) that several Australian Government departments and agencies are working to scope policy development for a national approach to access to certain categories of PSI and that this work will involve engagement with States and Territories.

As the questions set out in Section 1 of the draft Consultation Paper (p. 5) relate to issues that could appropriately be addressed in a national information policy, it is submitted that, rather than address each of the questions separately, the better approach is to consider how to proceed most directly to the development of a national information policy.

For reasons which have yet to be fully understood, Australia largely failed to engage with developments in the formulation of policies and principles for access to PSI that took place at the national (UK, US, NZ), regional (EU) and the international levels (UNESCO, OECD) over the last decade. At the international level in particular, the Australian government appears not to have played a significant role (via participation in working groups) formed by a range of international organisations (notably UNESCO, OECD and ICSU/CODATA) to advance the policy framework for access to PSI. (Australia only rejoined CODATA, one of the leading international organisations concerned with science data, in 2008 after our membership lapsed many years earlier.) While there have been a number of occasions during the last 10 years when the opportunity arose to address the issue of access to and re-use of government information, these were either not recognised or acted upon.

When the extent and significance of developments internationally is appreciated, it is apparent that Australia needs to work towards facilitating better access to and re-use of PSI. The full economic, cultural and environmental value of information produced or funded by the public sector can be realised through enabling greater access to and re-use of the information. To do this effectively it is necessary to describe and establish a policy framework that supports greater access and re-use among a distributed, online network of information suppliers and users.<sup>10</sup>

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10 Professor Anne Fitzgerald (2008, ongoing) *Policies and Principles on Access To*

There has been little policy advancement in Australia on the matter of access to government information since the Office of Spatial Data Management's (OSDM) Policy on Spatial Data Access and Pricing in 2001.<sup>11</sup> In light of the fact that relatively little attention has been given to this issue in Australia, assistance can be derived from a study of developments in other jurisdictions and under the auspices of international organisations and collaborations.

It may be of assistance to the department to consider the research undertaken by Professor Anne Fitzgerald on access policies, principles and practices in Australia and internationally, which has been made available in the form of an annotated literature review that is being progressively published and updated at the auPSI website.<sup>12</sup>

One of the most useful guides to the development of a national information policy is the report prepared by Paul Uhler for UNESCO in 2004, *Policy Guidelines for the Development and Promotion of Governmental Public Domain Information*.<sup>13</sup> UNESCO's work from the late 1990s provided the basis for work on the development of PSI access and re-use policies at the international level and fed into the more recent work of other bodies such as the OECD, the World Summit on the Information Society (WSIS) and the Internet Governance Forum (IGF).

Uhler describes three main elements that must be implemented in developing

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*and Reuse of Public Sector Information: a review of the literature in Australia and selected jurisdictions*, Chapter 1: Australia, p. 8, available at [eprints.qut.edu.au/15649/](http://eprints.qut.edu.au/15649/).

- 11 See Australian Government Office of Spatial Data Management, Spatial Data Access and Pricing (webpage) [www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx](http://www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx) and Australian Government Geoscience Australia, Commonwealth Spatial Data Policy Executive – incorporating Office of Spatial Data Management (webpage) [www.ga.gov.au/nmd/asdi/osdm.jsp](http://www.ga.gov.au/nmd/asdi/osdm.jsp). See also the report of the Commonwealth Interdepartmental Committee on Spatial Data Access and Pricing (June 2001) *A Proposal for a Commonwealth Policy on Spatial Data Access and Pricing*, p. 2, available at [www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf). See Professor Anne Fitzgerald (2008, ongoing) *Policies and Principles on Access To and Reuse of Public Sector Information: a review of the literature in Australia and selected jurisdictions*, Chapter 1: Australia, esp. at pp. 10–12 and 41–50, available at [eprints.qut.edu.au/15649/](http://eprints.qut.edu.au/15649/).
- 12 Professor Anne Fitzgerald (2008, ongoing) *Policies and Principles on Access To and Reuse of Public Sector Information: a review of the literature in Australia and selected jurisdictions*, available at [www.aupsi.org/publications/reports.jsp](http://www.aupsi.org/publications/reports.jsp); Chapter 1: Australia and Chapter 2: New Zealand available at [eprints.qut.edu.au/15649/](http://eprints.qut.edu.au/15649/); Chapter 6: Canada available at [eprints.qut.edu.au/17067/](http://eprints.qut.edu.au/17067/).
- 13 For details, see UNESCO at [portal.unesco.org/ci/en/ev.php-URL\\_ID=15862&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=15862&URL_DO=DO_TOPIC&URL_SECTION=201.html).

a national information policy:

The establishment of [a national information] policy involves decisions in three main areas:

## 1. SCOPE OF INFORMATION TO BE MADE AVAILABLE

As a guiding principle, information produced by public entities in all branches and at all levels should be presumed to be available to the public, and any formal exceptions preventing citizens from accessing public information should be specifically justified and formulated as narrowly as possible. National governments should be encouraged to expand access to various types of public information resources and, if necessary, to re-assess the balance between the existing policies and practices for making those information resources available and the legal protections that restrict use or re-use of such information. In addition, all publicly funded intergovernmental organisations should provide open access to all their publications and public databases, especially to potential users in developing countries, free of charge.

## 2. ACCESS TO AND USE OF PUBLIC INFORMATION AS A LEGAL PRINCIPLE

One of the major elements of a comprehensive approach to promoting access to and use of governmental public domain information is the adoption of a national 'Freedom of Information' (FOI) law, providing for access by citizens on request to the information held by the government that is not otherwise made routinely available. Countries that do not yet have a FOI law for their public information should adopt one, following a comparative analysis of such similar laws in other countries, while those countries that already do have such a law may wish to further revise their existing legislation. Any exceptions to the principle of availability, such as national security restrictions, and the protection of personal privacy and of trade secrets, should be carefully balanced.

Freedom of Information laws are, however, not in themselves sufficient. In practice, such laws typically involve a bureaucratic, cumbersome, and relatively expensive process that the citizen must undertake in order to obtain information that is legally in the public domain and should be made public. Therefore, the government should also develop a comprehensive Information Policy Framework for the management and active dissemination of governmental information, as outlined below.

### 3. COMPREHENSIVE GOVERNMENTAL INFORMATION POLICY FRAMEWORK

The Policy Framework that addresses information management and dissemination should be broad enough to encompass information in both paper and digital formats, and should provide special guidance regarding electronic management and dissemination. The focus should always be on producing and disseminating public information that meets the needs of citizens as openly and inexpensively as possible, with special attention to multicultural or disadvantaged communities. Three main areas of action need to be addressed in developing the national public Information Policy Framework:

- Creating the appropriate public information management structure;
- Defining the public information management policy requirements; and
- Adopting strategies on information systems and information technology management.

The following key procedural elements should be taken into account in developing the national Information Policy Framework:

1. The Policy Framework must reference all supporting reports and laws on which it is based
2. In developing the Policy Framework and associated detailed implementation plan at the national level, it is essential to involve representatives of all major stakeholder groups in a consultative process
3. Analytical factors that need to be considered are: legal, economic, institutional, social and cultural, research and educational. Specific applications areas or sectors with special information objectives and implementation requirements, such as health, environment, energy, transportation, finance and defence, also need individual consideration
4. Following the completion and formal approval of the Information Policy Framework, the Chief Information Officers (CIOs) of all major government entities need to develop detailed plans for implementation of all the guiding policies within the context of the official activities and subject matter purview of these entities'.<sup>14</sup>

Uhlir's description of the key elements required for a national information policy highlights the need for governments to:

- consider what information is to be made publicly available (with open access as the default);

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14 Paul Uhlir, *Policy Guidelines for the Development and Promotion of Governmental Public Domain Information*, UNESCO, Paris, 2004, at pp. vi - vii.

- develop legal frameworks that provide not only for freedom of information (FOI) but also encompass a positive right of access to PSI: and
- develop a comprehensive national Information Policy Framework and detailed plans for implementation of the guiding policy, including strategies on information systems and information technology management.

The implementation plan for the Information Policy Framework could be expected to include guidelines and toolkits (similar to those developed by the Open Access to Knowledge (OAK) Law project in relation to research publications and data).<sup>15</sup> Among the legal issues that would need to be dealt with in the Information Policy Framework is the question of copyright ownership of, and users rights in relation to, materials such as survey plans which are produced by non-government parties but are provided to government to enable certain fundamentally governmental functions to be carried out.<sup>16</sup>

In developing a national information policy, it is necessary to have regard to the international context. Much can be learned from the approaches taken over many years in other countries and in international organisations. The lessons learned from the experiences of other governments can help avoid some of the failures or difficulties experienced elsewhere and identify successful legal and policy models that might be adapted to the Australian context. The importance of adopting an international focus was acknowledged in the *Venturous Australia* report of the National Innovation System (2008), which recommended that ‘Australian governments should adopt international standards of open publishing as far as possible’.<sup>17</sup>

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15 For a list of OAK Law project publications, see [www.oaklaw.qut.edu.au/reports](http://www.oaklaw.qut.edu.au/reports).

16 Of particular relevance here is the High Court’s decision in *Copyright Agency Ltd v The State of New South Wales* [2008] HCA 35 at [www.austlii.edu.au/au/cases/cth/HCA/2008/35.html](http://www.austlii.edu.au/au/cases/cth/HCA/2008/35.html).

17 Recommendation 7.8. Note that this Recommendation also proposed that ‘[m]aterial released for public information by Australian governments should be released under a creative commons licence’. For more on the application of Creative Commons licences to data and PSI, see generally: Submission 428, Brian Fitzgerald at p. 8, [www.innovation.gov.au/innovationreview/Documents/428-Brian\\_Fitzgerald.pdf](http://www.innovation.gov.au/innovationreview/Documents/428-Brian_Fitzgerald.pdf); Fitzgerald, Fitzgerald, Middleton, Lim and Beale, *Internet and E Commerce Law* (2007) LBC/Thomson Sydney at 260–269 and references contained therein; Australian Productivity Commission, *Cost Recovery by Government Agencies Report* (2001) 24, 167, 171–2, [www.pc.gov.au](http://www.pc.gov.au); Professor David Newbery, Professor Lionel Bently, and Rufus Pollock, *Models of Public Sector Information Provision via Trading Funds*, Cambridge University, February 26, 2008; B Fitzgerald, J Coates and S Lewis (editors) *Open Content Licensing: Cultivating the Creative Commons*, (2007) Sydney University Press, Sydney; E. Bledsoe, J. Coates and B Fitzgerald, *Unlocking the Potential Through Creative Commons: an industry engage-*

Of particular relevance are developments in Europe (with a particular focus on the UK), the United States and New Zealand as well as in entities that form part of the United Nations system, inter-governmental organisations and international (non-government) organisations.<sup>18</sup> The US and the UK governments are endeavouring to establish effective practices to give effect to policies supporting open access to PSI. Importantly, these developments have been possible because of long-established policies on access to PSI, which have been implemented at a whole-of-government level. In the US, OMB Circular A-130 establishes the policy framework,<sup>19</sup> while in the UK and Europe the policy framework consists of the broad-reaching Directive on the Re-use of Public Sector Information (2003),<sup>20</sup> as well as the specific Directive establishing an Infrastructure for Spatial Information (2007) (the INSPIRE Directive)<sup>21</sup> and the Directive on Public

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*ment and action agenda*, (2007) ARC Centre of Creative Industries and Innovation, August 2007, [creativecommons.org.au/unlockingthepotential](http://creativecommons.org.au/unlockingthepotential); D. Bushell-Embling, 'Private Eyes on Public Data' *Sydney Morning Herald* (25.09.07) [www.smh.com.au/news/technology/private-eyes-on-public-data/2007/09/24/1190486224755.html?page=fullpage](http://www.smh.com.au/news/technology/private-eyes-on-public-data/2007/09/24/1190486224755.html?page=fullpage); Queensland Spatial Information Council, *Government Information and Open Content Licensing: An Access and Use Strategy* (2006) [www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/F82522D9F23F6F1C4A2572EA007D57A6/\\$FILE/Stage%20%20Final%20Report%20-%20PDF%20Format.pdf?openelement](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/F82522D9F23F6F1C4A2572EA007D57A6/$FILE/Stage%20%20Final%20Report%20-%20PDF%20Format.pdf?openelement); M van Eeoud and B van der Wal, *Creative Commons Licensing for Public Sector Information: Opportunities and Pitfalls* (2007) [www.ivir.nl/creativecommons/index-en.html](http://www.ivir.nl/creativecommons/index-en.html).

- 18 The range of materials to be considered would include: the EU Directives on Re-use of Public Sector Information (2003) and the Directive establishing an Infrastructure for Spatial Information (INSPIRE) (2007); the US Office of Management and Budget (OMB) Circular A-130 (2000); the OECD Seoul Declaration on the Future of the Internet Economy (2008), including the Recommendation concerning Access to Research Data from Public Funding and the Recommendation for Enhanced Access and More Effective Use of Public Sector Information; and the work of international organisations such as the International Council for Science (ICSU), and its specialist science data committee CODATA, and international scientific collaborations such as the Scientific Committee on Antarctic Research (SCAR) operating under the Antarctic Treaty system..
- 19 Office of Management and Budget (OMB) (2000) Circular A-130 – Management of Federal Information Resources, [www.whitehouse.gov/omb/circulars/a130/a130-trans4.html](http://www.whitehouse.gov/omb/circulars/a130/a130-trans4.html).
- 20 European Council and European Parliament Directive on the Re-use of Public Sector Information (2003) available on the European Commission's website at [ec.europa.eu/information\\_society/policy/psi/library/index\\_en.htm#Key\\_documents\\_\(PDF\\_files\)](http://ec.europa.eu/information_society/policy/psi/library/index_en.htm#Key_documents_(PDF_files)).
- 21 European Council and European Parliament Directive establishing an Infrastructure

Access to Environmental Information (2003).<sup>22</sup>

Further developments are already underway in 2009. In the US, key features of President Obama's technology policy are aimed at creating 'a transparent and connected democracy'. The Obama administration's technology policy includes the following objectives:

- Open Up Government to its Citizens: Use cutting-edge technologies to create a new level of transparency, accountability, and participation for America's citizens
- Bring Government into the 21st Century: Use technology to reform government and improve the exchange of information between the federal government and citizens while ensuring the security of our networks.<sup>23</sup>

Immediately upon coming to office in January 2009, President Obama issued a Directive encouraging transparency in government and instructing US government agencies to err on the side of making information public.<sup>24</sup>

Meanwhile, in the UK the government has been at the forefront of EU Member States in pursuit of the objective of 'freeing up the UK's public sector information for innovative new services... [and] to move into the mainstream activities that are currently minority best practice'.<sup>25</sup> On 4 March 2009, the UK Power of Information Taskforce released its final report online.<sup>26</sup> The Executive Summary of the report states:

Data and information are the lifeblood of the knowledge economy. The report's recommendations on liberalising non-personal government information would provide an information stimulus if implemented.

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for Spatial Information (the INSPIRE Directive) (2007) [inspire.jrc.ec.europa.eu/](http://inspire.jrc.ec.europa.eu/).

22 European Parliament and European Council Directive on Public Access to Environment Information (2003) Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on Public Access to Environmental Information and Repealing Council Directive 90/313/EEC (2003) See: [eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0004:EN:HTML](http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0004:EN:HTML), Official Journal L 041, 14/02/2003 P. 0026 – 0032.

23 See the Technology Policy on the White House web site at [www.whitehouse.gov/agenda/technology/](http://www.whitehouse.gov/agenda/technology/).

24 Barack Obama, *Transparency and Open Government*, Memorandum for the Heads of Executive and Agencies, Office of the Press Secretary, The White House, 21 January 2009, [s3.amazonaws.com/publica/assets/docs/transparencymemo.pdf](http://s3.amazonaws.com/publica/assets/docs/transparencymemo.pdf).

25 Power of Information Taskforce Report (beta, February 2009), available at [poit.cabinetoffice.gov.uk/poit/](http://poit.cabinetoffice.gov.uk/poit/).

26 Power of Information Taskforce Report (final, February 2009), released 4 March 2009, available at [poit.cabinetoffice.gov.uk/poit/](http://poit.cabinetoffice.gov.uk/poit/).



The report refers specifically to the need for a more liberal approach to the re-use of mapping and address data in the UK based on the evident demand for this type of information. It makes recommendations for Ordnance Survey, the UK's official mapping agency, to free up their licensing regime in general and to make information available for free, on simple terms, for innovators and the third sector.

If data is to be truly useful for a broad range of innovators it must be easy to obtain and the terms under which it can be used have to be as open and intelligible as possible. The report therefore recommends actions on the cataloguing of public sector information and on government licensing terms, especially in respect of the most common government licensing scheme, Crown Copyright.

Finally, the Taskforce recognises that when mainstreaming any innovation, systemic culture and behaviour change is required. It believes firmly that now is the time for the innovative approaches that it recommends to be brought into the mainstream of UK government. The report therefore calls for action to help the public sector acquire the new skills and practices required to support this.<sup>27</sup>

Given that the OECD Ministers' Seoul Declaration on the Future of the Internet Economy (together with its associated supporting documents)<sup>28</sup> represents the most significant and recent statement agreed upon in a multilateral forum, it should be closely considered in the development of an Australian national information policy. As a member of the OECD and a signatory to the Seoul Declaration, Australia is committed (although not strictly legally bound) to implementing the principles which it sets out. OECD Recommendations are OECD legal instruments that describe standards or objectives which OECD member countries are expected to implement, although they are not legally binding. However, through long-standing practice of member countries, a Recommendation is considered to have great moral force.<sup>29</sup>

Of immediate relevance for the purposes of the draft Consultation Paper are the OECD's Principles and Guidelines for Access to Research Data from Public Funding and the Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information. Key principles in each of these documents were included in the Seoul Declaration and the two documents form part of the supporting materials annexed to the Seoul Declaration.<sup>30</sup> It is submitted that

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27 *ibid.*, p. 4.

28 Adopted by the OECD Ministers on 18 June 2008.

29 OECD, *Principles and Guidelines for Access to Research Data from Public Funding*, 2007, see [www.oecd.org/dataoecd/9/61/38500813.pdf](http://www.oecd.org/dataoecd/9/61/38500813.pdf) at p. 8.

30 See OECD, *Shaping Policies for the Future of the Internet Economy*, Annexes, avail-

in seeking to answer the questions set out in Section 1 of the draft Consultation Paper (p. 5) regard should be had to the principles set out in Annex F to the Seoul Declaration, which the OECD recommends that Member countries take into account and implement in establishing or reviewing their policies regarding access and use of PSI.

In developing strategies on information systems and information technology management in the Information Policy Framework, direction should be taken from current thinking and practice in jurisdictions which are most advanced in the development of their national information policies.<sup>31</sup>

While noting that considerable progress in making PSI accessible has recently been made by agencies including Geoscience Australia and the Australian Bureau of Statistics, in general Australian governments have yet to grasp the potential of web 2.0 digital technologies. The value of using web 2.0 technologies was demonstrated during the February 2009 Victorian bushfires when, without delay, Google uploaded Country Fire Authority data into Google Maps to deliver online, real-time mapping of the location and intensity of the fires.<sup>32</sup>

A good illustration of the thinking which has (to date) prevailed among Australian governments is found in the diagrams used to explain data flows in the report prepared for the Intergovernmental Committee on Surveying and Mapping (ICSM),<sup>33</sup> *Spatially Enabling Australia Recommendations: ICSM ASDI Consul-*

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able at [www.oecd.org/dataoecd/1/28/40821729.pdf](http://www.oecd.org/dataoecd/1/28/40821729.pdf). *The Principles and Guidelines for Access to Research Data from Public Funding* is Annex D; and the *Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information* is Annex F. The *Recommendation* is reproduced in this book as Chapter 25.

- 31 See in particular, the recent article by Professor Ed Felten (and associates) of Princeton University's Centre for Information Technology Policy: Robinson, Yu, Zeller and Felten, 'Government Data and the Invisible Hand', *Yale Journal of Law and Technology* 11: 160 (2009) available at SSRN at [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1138083](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1138083); see also the *Power of Information Taskforce report* (released in beta form in February 2009; final report forthcoming 2009).
- 32 For a description of the bushfire-tracking service on Google Maps, see [www.zdnet.com.au/news/software/soa/Google-map-tracks-deadly-bushfires-in-Victoria/0,130061733,339294842,00.htm](http://www.zdnet.com.au/news/software/soa/Google-map-tracks-deadly-bushfires-in-Victoria/0,130061733,339294842,00.htm). For comment, see Nicholas Gruen, *Copyright, exclusive ownership, Web 2.0 and fighting bushfires*, *The Age*, 14 February 2009; also posted at Club Troppo at [clubtroppo.com.au/2009/02/13/copyright-exclusive-ownership-web-20-and-fighting-bushfires/](http://clubtroppo.com.au/2009/02/13/copyright-exclusive-ownership-web-20-and-fighting-bushfires/).
- 33 The Intergovernmental Committee on Surveying and Mapping (ICSM) is a standing committee of ANZLIC (the Australia and New Zealand Land Information Council – see [www.anzlic.org.au/about.html](http://www.anzlic.org.au/about.html)). It was established by the Prime Minister, State Premiers, and the Chief Minister of the Northern Territory in 1988. Since that time the Australian Capital Territory and New Zealand have joined ICSM. The Aus-

tancy ('the ICSM Report').<sup>34</sup> In particular, Figures 4 and 5 in the ICSM Report<sup>35</sup> should be compared with Diagram 2 ('The Power of Information model') in the UK Power of Information Taskforce report.<sup>36</sup> Although these reports were produced only 12 months apart, the Power of Information Taskforce report evidences a big shift in the UK government's thinking about how web 2.0 technologies can be harnessed to enable users to directly access PSI. The UK Power of Information Taskforce report recommends:

### *Recommendation 13*

As the internet changes, so should the way information is published. The taskforce has developed with stakeholders a model to inform online publishing. This breaks out information into several layers with external interfaces at each layer, allowing re-use both of the raw data and the intervening software interfaces. OPSI should develop and further test the model and publish it with a delivery mechanism, implementation plan and explanatory material by end June 2009. It should become the standard to which new systems, or re-implemented versions of existing systems, are implemented from a date determined by the CIO Council.

### *Recommendation 14*

The government should ensure that public information data sets are easy to find and use. The government should create a place or places online where public information can be stored and maintained (a 'repository') or its location and characteristics listed (an online catalogue). Prototypes should be running in 2009.<sup>37</sup>

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tralian Defence forces are also represented on ICSM. Membership is comprised of senior representatives of surveying and mapping agencies. For information on ICSM see [www.icsm.gov.au/icsm/about/index.html](http://www.icsm.gov.au/icsm/about/index.html).

34 Geomatic Technologies, *Spatially Enabling Australia Recommendations: ICSM ASDI Consultancy*, January 2008, available at [www.icsm.gov.au/icsm/asdi/ASDI-Spatially\\_Enabling\\_Australia-V2.pdf](http://www.icsm.gov.au/icsm/asdi/ASDI-Spatially_Enabling_Australia-V2.pdf) Note that it appears from the confidentiality statement at the beginning of this document that it was initially distributed on a commercial-in-confidence basis. The 'print date' of the document is given as 22 July 2008.

35 *ibid.*, at pp. 18–19.

36 *Power of Information Taskforce Report*, (released in beta form in February 2009; final report released on 4 March 2009), p. 27, available at [poit.cabinetoffice.gov.uk/poit/](http://poit.cabinetoffice.gov.uk/poit/).

37 *Power of Information Taskforce Report*, (released in beta form in February 2009; final report released on 4 March 2009), p. 7, available at [poit.cabinetoffice.gov.uk/poit/](http://poit.cabinetoffice.gov.uk/poit/).

As Uhler's 2004 UNESCO report makes clear, in developing a national information policy, a broad approach must be taken. The Information Policy Framework for the management and active dissemination of PSI should be comprehensive and integrated, although individual consideration may be required for specific areas or sectors with special information objectives and implementation requirements (such as health, environment, energy, transportation, finance and defence).

To date, Australian activities aimed at enabling information access and re-use have been largely focused on two key areas: spatial data and publicly funded research outputs (whether in the form of publications or data). Much of the impetus for access to public sector materials has come from the spatial community, which has for many years been a proponent of the view 'that government held information, and in particular spatial information, will play an absolutely critical role in increasing the innovative capacity of this nation'.<sup>38</sup> (Note that access to government-owned geospatial data has also featured centrally in the UK Power of Information Taskforce's report.<sup>39</sup>)

In Australia, the most advanced policy on data access is the *Spatial Data Access and Pricing Policy* (2001) developed by the Office of Spatial Data Management (OSDM)<sup>40</sup> which forms the basis of the free data download services

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38 Submission no. 307, Australian Spatial Consortium, at p. 2.

39 *ibid.* at p. 6 and pp. 19–21. Recommendation 7 is as follows:

It is the Taskforce's view that 'freeing up' geospatial data should be a priority. The Ordnance Survey requires urgent reform. Recent announcements of cost reductions at the Ordnance Survey point the way to wider reforms. This reform should include at a minimum:

Basic geographic data such as electoral and administrative boundaries, the location of public buildings, etc should be available for (re)use free of charge to all.

There should be simple, free access to general mapping and address data for modest levels of use by any user.

Voluntary and community organisations pursuing public policy objects should benefit from straightforward standard provisions for ensuring access to geospatial data at all levels of use

Licensing conditions should be simplified and standardised across the board and, for all but the heaviest levels of use, should be on standard terms and conditions and should not depend on the intended use or the intended business model of the user.

The OpenSpace API, similar to but currently a constrained version of Google Maps, should become the primary delivery point for the Ordnance Survey's services.

Creation of a freely available single definitive address and postcode available for the UK for (re)use.

40 See [www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf) and generally [www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx](http://www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx).

offered by Geoscience Australia.<sup>41</sup> Other significant initiatives have also had their origins in demands for improved access to spatial data. Of note here is the Queensland Spatial Information Council's proposal for a Government Information Licensing Framework (GILF)<sup>42</sup> to provide a policy and legal framework supporting the sharing and re-use of spatial and other information (e.g. water data) within and across the various levels of government and between government and the private sector.<sup>43</sup>

Various initiatives relating to publicly funded research results were developed within the Accessibility Framework for Publicly Funded Research established in 2004 as part of the *Backing Australia's Ability – Building Our Future through Science and Innovation* package.<sup>44</sup> The Accessibility Framework was designed to manage research information, outputs and infrastructure in order to enable them to be more readily discovered, accessed and shared. It aims to provide a regulatory environment that both enables and encourages the population of digital repositories in order to provide better access to information.<sup>45</sup> The Prime Minister's Science, Engineering and Innovation Council (PMSEIC) in *From Data to Wisdom: Pathways to Successful Data Management for Australian Science* (2006)<sup>46</sup> recommended that 'Australia's government, science, research and business communities establish a nationally supported long-term strategic

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41 See [www.ga.gov.au/products/servlet/controller?event=DEFINE\\_PRODUCTS](http://www.ga.gov.au/products/servlet/controller?event=DEFINE_PRODUCTS).

42 Queensland Spatial Information Council, *Government Information and Open Content Licensing: An Access and Use Strategy* (2006), accessed at [www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE). For the report of the National Information Summit, Brisbane, 13 July 2007, see [www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/D6C8E0616BC7FB414A2573B7000C42E5/\\$FILE/Conference%20Report%20-%20National%20Summit%20Open%20Access.pdf?openelement](http://www.qsic.qld.gov.au/QSIC/QSIC.nsf/0/D6C8E0616BC7FB414A2573B7000C42E5/$FILE/Conference%20Report%20-%20National%20Summit%20Open%20Access.pdf?openelement).

43 See the comment on the Power of Information Task Force website, 27 June 2008, at [powerofinformation.wordpress.com/2008/06/27/australian-licensing-examples/](http://powerofinformation.wordpress.com/2008/06/27/australian-licensing-examples/); See also the West Australian government initiative, the Shared Land Information Platform (SLIP) which aggregates data government-wide and provides a data download facility.

44 See [www.dest.gov.au/sectors/research\\_sector/policies\\_issues\\_reviews/key\\_issues/accessibility\\_framework/](http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/accessibility_framework/) and [backingaus.innovation.gov.au/](http://backingaus.innovation.gov.au/) accessed 24 April 2008.

45 See [www.dest.gov.au/sectors/research\\_sector/policies\\_issues\\_reviews/key\\_issues/accessibility\\_framework/](http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/accessibility_framework/).

46 Prime Minister's Science, Engineering and Innovation Council, Working Group on Data for Science, *From Data to Wisdom: Pathways to Successful Data Management for Australian Science*, (2006) [www.dest.gov.au/sectors/science\\_innovation/publications\\_resources/profiles/Presentation\\_Data\\_for\\_Science.htm](http://www.dest.gov.au/sectors/science_innovation/publications_resources/profiles/Presentation_Data_for_Science.htm); see also [pandora.nla.gov.au/tep/75221](http://pandora.nla.gov.au/tep/75221).

framework for scientific data management, including guiding principles, policies, best practices and infrastructure'<sup>47</sup> and the adoption of 'mechanisms to enable the discovery of, and access to, data and information resources'.<sup>48</sup>

The Open Access to Knowledge (OAK) Law and Legal Framework for e-Research projects established as part of the Research Information Infrastructure Framework for Australian Higher Education under *Backing Australia's Ability* have dealt extensively with the legal issues involved in managing open access publication of research papers and data so as to enable access and re-use.<sup>49</sup> Several universities (including QUT)<sup>50</sup> have introduced open access policies for academic publications and, in December 2006, the two major Australian public research funding bodies – the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) – announced the introduction of open access guidelines for published papers and data resulting from funded research projects, effective 2008.<sup>51</sup> Both policies encourage researchers

47 Recommendation 1.

48 Recommendation 6.

49 See [www.oaklaw.qut.edu.au](http://www.oaklaw.qut.edu.au) and [www.e-research.law.qut.edu.au/](http://www.e-research.law.qut.edu.au/).

50 See [eprints.qut.edu.au/](http://eprints.qut.edu.au/). In 2008, QUT amended clause 3.1.5 of its IP policy to ensure open access to scholarly works published by QUT academics – see [www.mopp.qut.edu.au/D/D\\_03\\_01.jsp#D\\_03\\_01.05.mdoc](http://www.mopp.qut.edu.au/D/D_03_01.jsp#D_03_01.05.mdoc). It states:

QUT assigns the right to publish scholarly works to the creator(s) of that work. The assignment is subject to a perpetual, irrevocable, worldwide, royalty-free, non-exclusive licence in favour of QUT to allow QUT to use that work for teaching, research and commercialisation purposes and to reproduce and communicate that work online for non-commercial purposes via QUT's open access digital repository.

If required, QUT will sign documents to more fully record the staff member's ownership of the right of publication of the copyright in a scholarly work and QUT's non-exclusive licence to that work.

The version of the scholarly work that QUT can make available via the digital repository may be the published version or the final post-peer review manuscript version. QUT will agree to third party publisher-requested embargoes of 12 months or less (from date of publication by the third party publisher) on the publication of the manuscript via the digital repository.

Open access requirements have also been adopted by the University of Tasmania (see [eprints.utas.edu.au/](http://eprints.utas.edu.au/)) and Charles Sturt University (see [bilby.unilinc.edu.au:8881/R?func=search&local\\_base=GEN01-CSU01](http://bilby.unilinc.edu.au:8881/R?func=search&local_base=GEN01-CSU01)) and are being considered at Macquarie University (see [www.earlham.edu/~peters/fos/2008/07/macquarie-vc-preparing-to-propose-oa.html](http://www.earlham.edu/~peters/fos/2008/07/macquarie-vc-preparing-to-propose-oa.html)).

51 Australian Research Council, *Discovery Projects Funding Rules for funding commencing in 2008* [www.arc.gov.au/pdf/DP08\\_FundingRules.pdf](http://www.arc.gov.au/pdf/DP08_FundingRules.pdf); National Health and Medical Research Council, *Project Grants Funding Policy for grants commencing in 2008* [www.nhmrc.gov.au/publications/\\_files/profundingpol.pdf](http://www.nhmrc.gov.au/publications/_files/profundingpol.pdf). See

to:

Consider the benefits of depositing their data and any publications arising from a research project in an appropriate subject and/or institutional repository [because in order to] maximise the benefits from research, findings need to be disseminated as broadly as possible to allow access by other researchers and the wider community.<sup>52</sup>

While most of the work on PSI access and re-use in Australia has focused on spatial information (particularly within the context of the development of State/Territory and Australian spatial data infrastructures) and research outputs (publications and data), in developing an Information Policy Framework, the importance of a comprehensive and integrated strategy should not be overlooked. The draft Consultation Paper (p. 4) correctly refers to the social and economic importance of spatial information, providing several examples of advantages to be gained from the use of spatial data and high precision positioning systems. However, it is important that the issues that arise from specific data domains or economic sectors (such as those that arise in the development of an Australian spatial data infrastructure or the development of open access systems for academic publications) are not superimposed over the national Information Policy Framework. Rather, it is submitted that the focus should be on developing a comprehensive and integrated high level Information Policy Framework, within which consideration can be given to specific issues arising in particular sectors or information domains.

## CLARIFYING THE LAW ON THE PROTECTION OF DATA

As well as development of a whole-of-government open access policy, to max-

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also the ARC's response to the Productivity Council's draft research report on Public Support for Science and Innovation (2006), recommending that consideration be given to the funding of institutional open access repositories: Australian Research Council, *Response to the Productivity Commission Draft Research Report – Public Support for Science and Innovation* (2006) [www.arc.gov.au/pdf/response\\_PCdraftresearchreport\\_06.pdf](http://www.arc.gov.au/pdf/response_PCdraftresearchreport_06.pdf).

- 52 Australian Research Council, *Discovery Projects Funding Rules for funding commencing in 2008*, [1.4.5.1] [www.arc.gov.au/pdf/DP08\\_FundingRules.pdf](http://www.arc.gov.au/pdf/DP08_FundingRules.pdf); National Health and Medical Research Council, *Project Grants Funding Policy for grants commencing in 2008*, [16.2]. [www.nhmrc.gov.au/publications/\\_files/profunding-pol.pdf](http://www.nhmrc.gov.au/publications/_files/profunding-pol.pdf).

imise the innovation and economic benefits of Australia's data resources it is also important that steps be taken to clarify the law in relation to the copyright status of data. As the *ICE TV* case<sup>53</sup> currently before the High Court demonstrates, there is currently much confusion and uncertainty regarding the protection afforded to data by Australian copyright law. The 2002 case *Desktop Marketing Systems v Telstra*<sup>54</sup> introduced a broad rule which seemingly moved the boundaries of copyright protection in Australia to require permission to re-use even very small and factual excerpts of data and information. This is out of line with both the historic and international conventions of copyright law, which have traditionally stated that mere facts do not attract copyright protection, and has created much confusion and uncertainty as to when data can be re-used in the Australian context. This uncertainty has, in turn, led to a situation in which corporations and individuals alike are afraid to make use of material, such as mere facts, that should under the traditional boundaries of copyright be part of the public sphere. As a result copyright law is acting to quell innovation and prevent the development of competition in new markets.

The *ICE TV* case has the potential to address this problem by reaffirming the boundaries of copyright protection of data and mere facts. However, should this case fail to sufficiently clarify the situation, the Government may wish to consider stepping in to do so. In particular, amendments should be introduced to the *Copyright Act* to realign Australian law with that of its international contemporaries, such as the US and Canada, by clarifying that:

- mere facts and data are not protected by copyright law; and
- whether the exercise of labour in assembling a compilation of data or facts is in itself sufficient to give rise to rights of exclusion in relation to that compilation (or whether there should be further threshold requirements before such rights arise, such as the exercise of some degree of creativity in how the facts have been selected and arranged).<sup>55</sup>

## ACCESS TO AUSTRALIA'S ARCHIVES

Of equal importance to the issue of public access to government data, but often

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53 *IceTV Pty Ltd & Anor v Nine Network Australia Pty Limited* [2008] HCATrans 308 (26 August 2008).

54 *Desktop Marketing Systems Pty Ltd v Telstra Corporation Limited* [2002] FCAFC 112 (15 May 2002).

55 See also Atkinson, Benedict A. and Fitzgerald, Brian F. (2008) *Copyright as an Instrument of Information Flow and Dissemination: the case of ICE TV Pty Ltd v Nine Network Australia Pty Ltd.*, available at [eprints.qut.edu.au/15208/](http://eprints.qut.edu.au/15208/).



neglected in debates surrounding innovation and market development, is the issue of access to and use of creative material owned by and stored within public archives.

The internet, digital recording devices and the ready availability of content production software have together drastically changed the creative landscape, making it easy for anyone, from everyday bedroom experimenters to professionals, to find and re-use content. As a result, linear models of knowledge and cultural production and commercialisation are rapidly being supplanted by more distributed, collaborative, user-generated and open networking models. In this context the ability to create, access and re-use digital content is paramount. Remixing, recycling and online distribution are integral to the digital environment's creative capacity, and to the economic, educational and cultural benefits that it brings.

Yet Australians have great difficulty gaining access to quality online content about their own culture and history. Unlike countries such as the US and UK, which have led the digital revolution and dominate online content, it is very difficult to locate Australian-specific content online that can be legally and safely viewed and re-used. Cultural institutions such as the ABC, SBS, Screen Australia, the National Film and Sound Archive (NFSA) and the National Library of Australia (NLA) create and preserve large quantities of Australian creative content which could be used to fill this gap. Much of this material is owned by the government, or has fallen into the public domain, and so would be appropriate for public release.

Over the last decade, these institutions have increasingly undertaken small initiatives aimed at testing the viability of releasing material for re-use online. The ABC remix site, Pool,<sup>56</sup> the Powerhouse Museum<sup>57</sup> and the NFSA's Australian Screen Online<sup>58</sup> have all experimented with providing increased access to works from their collections, as have Film Australia<sup>59</sup> and the NLA<sup>60</sup> through their Zero-Fee Licensing and Click and Flick initiatives. The Powerhouse Museum's collaboration with the Flickr Commons project has been particularly successful, with nearly 40,000 views and a 'tonne' of tags added to the released photos in the first month alone.<sup>61</sup> However, to date, strict copyright laws, lack of funding and little policy support from above has led to static archiving practices, which focus on preservation but not access or use. As a result, the vast majority

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56 [www.pool.org.au](http://www.pool.org.au).

57 [www.powerhousemuseum.com/commons](http://www.powerhousemuseum.com/commons).

58 [australianscreen.com.au/](http://australianscreen.com.au/).

59 [www.filmaust.com.au/library/](http://www.filmaust.com.au/library/).

60 [www.pictureaustralia.gov.au/contribute/individual.html](http://www.pictureaustralia.gov.au/contribute/individual.html).

61 [www.powerhousemuseum.com/dmsblog/index.php/2008/05/06/commons-on-flickr-one-month-later/](http://www.powerhousemuseum.com/dmsblog/index.php/2008/05/06/commons-on-flickr-one-month-later/).

of this material remains unused in warehouses and databases, searchable and retrievable only by staff librarians, making little or no contribution to Australia's cultural and economic growth. After all, people cannot seek to license, build upon or add value to material they do not know exists.

Allowing creators to share, repurpose, remix and reinterpret government owned and public domain content held within our cultural institutions would stimulate Australia's creative economy and cultural identity by:

- promoting growth and fostering innovation and skills development in the film, music, art and journalism industries, to name only a few;
- increasing the reach and impact of Australian cultural content;
- providing a pool of 'safe' material that can be readily accessed and used by teachers and parents seeking to engage children and provide them with the skills necessary for the digital age, without risk of encountering inappropriate or illegal content;
- encouraging public research and life-long learning by increasing resources and information;
- assisting with the preservation of our cultural heritage by ensuring material that would otherwise deteriorate and become unusable remains accessible for future generations;
- driving growth in surrounding markets such as broadband deployment, digital technology and e-commerce; and
- promoting awareness and appreciation of the role of Australia's cultural institutions and making more effective use of the tax dollars devoted to them.

Using the ABC as an example, the *Venturous Australia* report had this to say about the provision of public access to content held in Australia's archives:

ABC free to air broadcasts used to be Australian public goods. Today, digital distribution over the internet makes them global public goods. The same could be said for a good deal of information and other content produced and funded by government agencies.

There can be clear benefits in making such content available to all comers globally. Often it will be impossible to foresee all the ways in which others will find or develop value in that content. And there will be negligible costs in making the content available.

Accordingly, both for its direct and indirect benefits to Australia and for the greater global good, Australia should energetically and proudly maximise the extent to which it makes government funded content available as part of the global digital commons.<sup>62</sup>

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To the maximum extent practicable, information, research and content funded by Australian governments – including national collections – should be made freely avail-

The report then went on to recommend that:

To the maximum extent practicable, information, research and content funded by Australian governments – including national collections – should be made freely available over the internet as part of the global public commons. This should be done whilst the Australian Government encourages other countries to reciprocate by making their own contributions to the global digital public commons.<sup>63</sup>

We strongly endorse the *Venturous Australia* recommendation and propose that it form the basis of policy for the provision of public access to content owned by the Australian government and held in our national institutions, making material currently locked within our archives available for both viewing and re-use by the public.

## APPROPRIATE LICENSING TERMS

In most cases, Government material should be made available under the broadest possible licensing terms. As the GILF report<sup>64</sup> recognised, only a very small percentage of material produced by the Australian government is subject to privacy, security or commercial interests that would warrant limiting public access.

In particular, government material should by default be made available under a licence which permits the adaptation and remixing of the material for commercial purposes, such as the Creative Commons Attribution licence. Any limitations on commercial or transformative use will, by their very nature, undermine the

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able over the internet as part of the global public commons. This should be done whilst the Australian Government encourages other countries to reciprocate by making their own contributions to the global digital public commons.<sup>63</sup>

63 *Venturous Australia: building strength in innovation* (Cutler and Co, August 2008) Recommendation 7.14 [www.innovation.gov.au/innovationreview/Documents/NIS\\_review\\_Web3.pdf](http://www.innovation.gov.au/innovationreview/Documents/NIS_review_Web3.pdf).

63 *Venturous Australia: building strength in innovation* (Cutler and Co, August 2008) Recommendation 7.14 [www.innovation.gov.au/innovationreview/Documents/NIS\\_review\\_Web3.pdf](http://www.innovation.gov.au/innovationreview/Documents/NIS_review_Web3.pdf).

64 Queensland Government, Queensland Spatial Information Council (QSIIC), Office of Economic and Statistical Research (OESR), Queensland Treasury *Government Information and Open Content Licensing: an Access and Use Strategy*, Government Information Licensing Framework (GILF) Project Stage 2 Final Report (2006) [www.qsic.qld.gov.au/qsic/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE](http://www.qsic.qld.gov.au/qsic/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE).

goals of using PSI to spur innovation and economic growth. Consistency, accessibility and clarity should also be major goals in licensing of Australian PSI. Using a proven standardised legal framework such as the Creative Commons licensing suite, or a similar standardised suite created by the government itself, will provide legal certainty and ensure that ordinary Australians are readily able to understand their rights and obligations with respect to the material they are accessing, maximising its usability and usefulness.

This finding is supported by a number of national and international reviews, including the previously mentioned GILF report, the UK Power of Information Taskforce report, as well as other reports from the United Kingdom<sup>65</sup> and the Netherlands.<sup>66</sup> More significantly, both the Australian Bureau of Statistics<sup>67</sup> and President Obama's official White House portal<sup>68</sup> have recently chosen to apply these principles, introducing a Creative Commons Attribution-only licence as the default licence for their material.

Notably, the UK Power of Information Taskforce report makes the following recommendations:

### *Recommendation 8*

- Government should ensure that there is a uniform system of release and licensing applied across all public bodies; individual public bodies should not develop or vary the standard terms for their sector
- The system should create a 'Crown Commons' style approach, using a highly permissive licensing scheme that is transparent, easy to understand and easy to use, modelled on the 'Click Use' license, subject to the caveats below.
- OPSI, part of the National Archives, should investigate how source code can be handled within the public sector information framework, and look into appropriate licensing terms drawing on best practice in the open source com-

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65 *The Power of Information* (2007) the Cabinet Office [www.cabinetoffice.gov.uk/upload/assets/](http://www.cabinetoffice.gov.uk/upload/assets/), [www.cabinetoffice.gov.uk/strategy/power\\_information.pdf](http://www.cabinetoffice.gov.uk/strategy/power_information.pdf); see similarly Intrallect Ltd (E. Barker, C. Duncan) and AHRC Research Centre (A. Guadamuz, J. Hatcher and C. Waelde) *The Common Information Environment and Creative Commons: Final Report to the Common Information Environment Members of a study on the applicability of Creative Commons Licenses* (2005) [www.intrallect.com/cie-study/](http://www.intrallect.com/cie-study/); [creativearchive.bbc.co.uk/](http://creativearchive.bbc.co.uk/).

66 Mireille van Eechoud and Brenda van der Wal, *Creative commons licensing for public sector information: Opportunities and pitfalls* (2007) Institute for Information Law, University of Amsterdam [www.ivir.nl/publications/eechoud/CC\\_PublicSectorInformation\\_report.pdf](http://www.ivir.nl/publications/eechoud/CC_PublicSectorInformation_report.pdf).

67 [abs.gov.au/websitedbs/D3310114.nsf/Home/Website+Changes+Coming+Soon](http://abs.gov.au/websitedbs/D3310114.nsf/Home/Website+Changes+Coming+Soon).

68 [www.whitehouse.gov/copyright/](http://www.whitehouse.gov/copyright/).

munity.

- The Government should report on the options for these three recommendations by end 2009 and if required, statutory measures should be brought forward not later than the 2009/2010 session.

### ***Recommendation 12***

OPSI should begin a communications campaign to re-present and improve understanding of the permissive aspects of Crown Copyright along the lines of creative commons by end June 2009. This should be combined with ‘permission to scrape’ being given over Crown Copyright data, removing any risk of prosecution under the Computer Misuse Act. This might fall under the banner of a ‘Crown Commons’ brand. OPSI should begin a communications campaign to that end by end June 2009.<sup>69</sup>

## ADDITIONAL INFORMATION

There is already an enormous amount of excellent work that has been undertaken on the issues raised in this submission. Some of this material has been highlighted in the footnotes. In particular, we would encourage the Department to examine the following documents:

### ***In relation to access to government material and PSI specifically –***

Fitzgerald, A Policies and Principles on Access To and Re-use of Public Sector Information: a review of the literature in Australia and selected jurisdictions (2008, ongoing) [www.aupsi.org/publications/reports.jsp](http://www.aupsi.org/publications/reports.jsp); Chapter 1: Australia and Chapter 2: New Zealand available at [eprints.qut.edu.au/15649/](http://eprints.qut.edu.au/15649/); Chapter 6: Canada available at [eprints.qut.edu.au/17067/](http://eprints.qut.edu.au/17067/); Chapter 3: International available at [eprints.qut.edu.au/17560/](http://eprints.qut.edu.au/17560/) (Note – please check [www.aupsi.org/publications/reports.jsp](http://www.aupsi.org/publications/reports.jsp) for further chapters and new versions).

Queensland Government, Queensland Spatial Information Council (QSIC), Office of Economic and Statistical Research (OESR), Queensland Treasury *Government Information and Open Content Licensing: an Access and Use Strategy*, Government Information Licensing Framework (GILF) Project Stage 2 Final Report (2006)

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<sup>69</sup> *Power of Information Taskforce Report*, (released in beta form in February 2009; final report released on 4 March 2009), pp. 6–7, available at [poit.cabinetoffice.gov.uk/poit/](http://poit.cabinetoffice.gov.uk/poit/).

[www.qsic.qld.gov.au/qsic/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE](http://www.qsic.qld.gov.au/qsic/QSIC.nsf/CPByUNID/BFDC06236FAD-B6814A25727B0013C7EE)

Fitzgerald, B, Fitzgerald, A, Middleton, G, Lim, Y and Beale, T (2007) *Internet and E Commerce Law* LBC/Thomson Sydney, pp. 260–69 (and 191–92)

Fitzgerald, B et al. *Open Content Licensing: Cultivating the Creative Commons* (2007) [eprints.qut.edu.au/6677/](http://eprints.qut.edu.au/6677/), in particular the section on Government and Creative Commons, pp 67–92, which includes the chapters: Lavarch, L ‘The Government’s Role in Supporting Creative Innovation’ and Cunningham et al. ‘Why Governments and Public Institutions Need to Understand Open Content Licensing’

Robinson, Yu, Zeller and Felten, ‘Government Data and the Invisible Hand’ 11 *Yale J.L. & TECH.* 160 (2009) available from SSRN [papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1138083](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1138083).

### ***In relation to open access generally –***

These publications address open access to research publications and data. However, there is a large overlap between the open access to research initiative and open access to PSI, as a large percentage of the research produced by academic institutions is government-funded.

Fitzgerald, B. et al. *Creating a Legal Framework for Copyright Management of Open Access within the Australian Academic and Research Sectors* (2006) [www.oaklaw.qut.edu.au](http://www.oaklaw.qut.edu.au)

Fitzgerald, A. and Pappalardo, K. *Building the Infrastructure for Data Access and Re-use in Collaborative Research: An Analysis of the Legal Context* (2007) [eprints.qut.edu.au/8865/](http://eprints.qut.edu.au/8865/)

Fitzgerald, A. and Pappalardo, K. *Practical Data Management: A Legal and Policy Guide* (2008) [eprints.qut.edu.au/14923/](http://eprints.qut.edu.au/14923/)

Pappalardo, K. *Understanding Open Access in the Academic Environment: A Guide for Authors* (2008) [eprints.qut.edu.au/14200/](http://eprints.qut.edu.au/14200/)

### ***In relation to copyright and other applicable laws –***

Fitzgerald, B. ‘Copyright 2010: The Future of Copyright’ [2008] *European Intellectual Property Review* 43 [eprints.qut.edu.au/archive/00013305](http://eprints.qut.edu.au/archive/00013305)

Fitzgerald, B., Fitzgerald, A., Middleton, G., Lim, Y. and Beale, T. (2007) *Internet and E Commerce Law* LBC/Thomson Sydney, in particular chapters 1, 4 and 12 on copyright reform, chapter 10 on privacy reform, chapters 7 and 8 on e-transactions and reform and chapter 13 on future directions.

## CONSULTATION TOPIC 4: ENSURING

## AUSTRALIA'S REGULATORY FRAMEWORK ENABLES THE DIGITAL ECONOMY

Reform of Australia's copyright regime is vital to ensuring the full potential is wrought from our digital services. For too many years Australian copyright law has been out of step with technological developments and the reasonable expectations of ordinary Australians. Over the past decade the careful balance struck by copyright law between the rights of copyright owners and users has been tipped sharply in favour of owners.

Legislative amendments introduced by the *US Free Trade Agreement Implementation Act 2004* and the *Copyright Amendment Act 2006* widened the gap between ordinary consumer behaviour and the operation of Australian copyright law. As the Labor Party noted in its dissenting report for the Senate Committee for Legal and Constitutional Affairs Inquiry on Provisions of the Copyright Amendment Bill 2006, these amendments created 'difficulties from the perspectives of both copyright holders and consumers ... [and did] not solve the fundamental and ongoing problem of Australian copyright law's inability to recognise rapid changes in technology and the use of new technology by consumers'. Furthermore, they did little to address a number of fundamental inequities within our law, such as the fact that content funded by the public purse is not available for public use, or the fact that a use that is permissible if it is humorous or satirical will be illegal if it is done for the purpose of serious political, social or artistic commentary.

As a result, Australian citizens are at a significant disadvantage to their peers in the United States where the broad 'fair use' doctrine allows the law to adapt more flexibly, ensuring that innovative and unanticipated uses of copyright material by ordinary consumers will be permitted as long as they remain 'fair' to the copyright owner. It also promotes copyright infringement by fostering public disregard for the law. To quote the Hon Ms Roxon MP, 'if the laws are out of touch with personal practice then they do end up being treated with contempt and they do not encourage the purchase of legitimate materials and their lawful use'.<sup>70</sup>

## CARRIAGE SERVICE PROVIDER LIABILITY

Clarification of the law in relation to liability of online service providers for actions undertaken by their users is one area in which reform is necessary to ensure that Australian copyright law does not hinder the flow of ideas and full use of new technologies. In particular, as the paper suggests, it is important that the safe

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70 Hansard (House of Representatives, 1 November 2006).

harbours currently provided for carriage service providers be clarified to ensure they include other service providers who merely act as a conduit for the actions of others, such as user-generated content and social networking sites.

## CRIMINAL LIABILITY OF CARRIAGE SERVICE PROVIDERS

The so-called ‘safe harbour’ provisions<sup>71</sup> of the *Copyright Act 1968* limit the civil remedies available to copyright owners against ‘carriage service providers’ for copyright infringement. While these provisions are to be applauded, no such safe harbours are available to the same carriage service providers that immunise them from criminal prosecution.

Many of the new criminal provisions enacted by the *Copyright Amendment Act 2006* are strict liability offences, which means that the more traditional mechanism for ensuring innocent agents are not criminally liable for offences – a *mens rea* element to the crime – will not protect carriage service providers. In many cases, common activities undertaken by intermediaries in the digital environment open up the potential for civil and criminal liability. That the civil liability has been limited by a clearly understood and sound policy, while criminal liability remains for the similar activity, is an anathema. We have undertaken work to identify and chart this inconsistency between policy and the criminal law<sup>72</sup> and submit that this issue should be addressed without delay.

## OTHER AMENDMENTS

Other legislative reforms that would go a long way to restoring the balance in Australian copyright law and making Australia a leader in copyright and innovation policy include:

1. clear rights for consumers to re-use copyright material in circumstances where the use is ‘fair’;
2. new exceptions that permit transformative uses of copyright material, such as in works of art or as part of political commentary;
3. rights for Australians to re-use Crown copyright and publicly funded research material for, at a minimum, non-commercial purposes;

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<sup>71</sup> *Copyright Act 1968* (Cth), s118AG.

<sup>72</sup> See further Gething, S. and Fitzgerald, B. ‘The Criminalisation of Copyright Law: Where Do Intermediaries Stand?’ (forthcoming). For more information contact Steven Gething or Brian Fitzgerald at Queensland University of Technology.



4. legislative clarification that fundamental user rights such as the fair dealing and library and archive provisions cannot be over-ruled by private contract;
5. reform of the *Copyright Act's* criminal provisions at very least to the point of limiting the disproportionate penalties that apply to ordinary consumer behaviour;
6. the extension of the current scheme for the compulsory deposit of all printed publications with the relevant national or state institutions to include audio-visual and electronic materials;
7. the introduction of a scheme to allow for the reasonable use of 'orphaned works' i.e. works for which permissions cannot be obtained because the author is either unidentifiable or untraceable; and
8. clarification of the application of the fair dealing exception for research and study to the publication of material online.<sup>73</sup>

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73 See generally: Fitzgerald et al. *Creating a Legal Framework for Copyright Management of Open Access within the Australian Academic and Research Sectors* (2006) Chapter 6, at [www.oaklaw.qut.edu.au](http://www.oaklaw.qut.edu.au).

# CHAPTER TWENTY-FOUR

## VENTUROUS AUSTRALIA: RE- PORT CHAPTER 7 – INFORMATION AND MARKET DESIGN\*

In examining the enabling role of government, we consider two primary issues. ~~First, while designing regulations, defining property rights, promoting standards~~ and, indeed the terms of market interactions, governments can encourage innovation by ensuring that pioneer firms and entrepreneurs can receive the appropriate reward in the market-place from their innovative efforts. Second, *good information* is crucial to the efficiency of markets and to the ability of discerning consumers to drive innovation by providers. Governments can promote good information flows both by finessing the ‘rules of the game’ in markets and by ensuring that the information and other content that they fund is widely and freely available to be used by consumers, and to be re-used and transformed into new value-added products by firms further down the production chain.

### MARKET FORMATION

Markets in which people compete for private gain can only come into existence against a backdrop of shared practices and expectations. Because these ‘rules of the game’ are a public good, governments are unsurprisingly involved in their provision and enforcement. Often the most efficient and innovative solution to an emerging problem is to develop a market – as we are doing with emissions trading.

Governments may actively create new markets, as the Australian Government is seeking to do through the establishment of an emissions trading scheme. As the *Garnaut Climate Change Review* draft report identifies<sup>1</sup>, clear, credible and consistent policy frameworks that provide investors

In forming new markets, governments can play an active role in focussing

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1 *Garnaut Climate Change Review*, Draft Report, p. 424, 2008.

\* First published as Chapter 7 in *Venturous Australia – building strength in innovation*, by the Innovation System Review Committee/Cutler and Co. A version is available

the direction of innovative activity. For instance, by making carbon emissions a ‘scarce resource’, governments raise the return to activities that economise on those emissions. When developing new technologies innovators will look to the future carbon price and the ability to economise on carbon expenditures. Consequently, care, expertise and commitments are guiding principles of the effective formation of markets to drive innovation.

In this regard, governments can play a role in facilitating industry-led movements to identify problems and effectively price them. It is often the case that those who understand the nature of innovations they would like to adopt lack the technical expertise to come up with the information themselves. Consequently, the two sides of the innovation coin may not be effectively matched and opportunities might be missed. As noted by Professor Joshua Gans:

There is a role for government in promoting the use of industry bodies to gather firms together and agree upon problems that they have a common interest in resolving. The bodies could articulate these problems and also enable market-based mechanisms to generate innovative solutions: for instance, by offering prizes and advanced purchased commitments. Where government and industry have common interests, a sharing arrangement could be entered into that funds these mechanisms.

In this way, *the government could act as an honest broker in the marketplace for ideas; bringing together those with problems and those with technical know-how and the ability to find solutions.*<sup>2</sup>

This highlights the potential role of governments in the formation of markets both

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at [www.innovation.gov.au/innovationreview/Pages/home.aspx](http://www.innovation.gov.au/innovationreview/Pages/home.aspx) and is licensed under a Creative Commons Attribution-NonCommercial-No Derivative Works 2.5 Australia licence. Note the disclaimer and acknowledgements in the original report at page ii.

The expert panel members of the Innovation Review Committee were Dr Terry Cutler (Chair), Principal of Cutler & Company; Dr Nicholas Gruen, CEO of Lateral Economics; Professor Mary O’Kane, Executive Chairman of Mary O’Kane & Associates; Ms Narelle Kennedy, Chief Executive of the Australian Business Foundation; Professor Glyn Davis AC, Vice-Chancellor and Principal of the University of Melbourne; Ms Catherine Livingstone AO, Director–Future Directions International, Macquarie Group Ltd, WorleyParsons Ltd, Telstra Corporation Ltd, Macquarie Graduate School of Management Pty Ltd; Dr Megan Clark, Vice President, HSEC & Sustainability, BHP Billiton; Professor John Foster, Head of the School of Economics, University of Queensland; Dr Jim Peacock AC (ex-officio), Chief Scientist; Ms Patricia Kelly (ex-officio), Deputy Secretary of the Department of Innovation, Industry, Science and Research.

2 Gans, Joshua – Submission No. 70, p. 23 (emphasis in original).

on their own terms and also by industry participants. Prizes, which were an important arm of innovation policy in previous centuries have fallen into disuse, and are only now being reconsidered. This is an untapped opportunity for systematic policy consideration and the Australian Government should run some modest experiments to get some experience with prizes as a means of promoting innovation.

*Recommendation 7.1* The Australian Government should experiment with the use of prizes to stimulate innovation. Funding should be modest – say \$5 million over two years with an external evaluation after three years.

## INTELLECTUAL PROPERTY

As discussed in Chapter 4, markets do not generate ideal incentives for the creation and dissemination of information and know-how. Firms may not invest sufficiently in the production of new information and know-how because, once discovered, it is difficult to prevent those who have not paid for the creation of information or know-how from benefiting from it. As a result some investment in information and know-how which it would be socially beneficial to generate goes ungenerated for lack of sufficient incentive to generate it.

One response to this has been to create property-like rights such as copyright and patents. This can help in creating incentives to invest in the generation of intellectual property, but at the same time, the monopoly rights instilled in the owners of the intellectual property (IP) generally allow them to price it at above the marginal costs of its provision, which is often near zero.

Though we can recognise such a solution as ‘second best’ in some sense, if patents and copyright increase the production of IP, this will generally be better than the alternative of not having the IP. As the Productivity Commission has compellingly argued with regard to infrastructure pricing, given the regulator’s inevitable ignorance of the exact point at which price is optimal, it is important to err on the side of too high a price than too low a one.<sup>3</sup> The consequences of a somewhat too high a price will be some (usually relatively small) reduction in demand. The consequence of too low a price will be inadequate incentives to invest in new facilities. Where these facilities are facilities of national significance like airport runways, the absence of such investment can lead to huge congestion costs.

Similar logic can be applied to IP. But there is a caveat which is increasingly important: The development of intellectual property is *cumulative*. In the words of Sir Isaac Newton, we stand on the shoulders of giants. Because new knowledge

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3 See e.g. Productivity Commission, *Review of National Competition Policy Reforms*, pp. 295–302. 2005.

always builds on old knowledge, the property rights we have erected to encourage innovation can actually obstruct it.

This is particularly so where intellectual property rights are too easily granted, and where they are ambiguously defined, so that innovators are uncertain as to what innovations might be subject to the prior claims of patent holders. There have been some worrying trends in this regard in recent years. In the last three decades judges have overturned important ‘gatekeeping’ principles of the patent system that existed until the early 1980s. Thus it had been held that software and business methods could not be the subject of patents. But this has been overturned. Likewise the tests of non-obviousness and ‘analogous use’ have become much less stringent – as some have argued, to the point of vacuity.

There is mounting evidence that this is impeding rather than stimulating innovation. There is widespread anxiety about whether a ‘patent thicket’ has developed in software as a result of software patenting with many large firms consciously developing ‘patent pools’ with which to defend themselves against others’ patent claims. Alas a patent pool does not defend against ‘patent trolls’ who may be relatively small companies with little to lose and much to gain in threatening large firms with patent infringement suits. A recent study found that the more patents held in a market, the less likely new firms were to enter and the greater the delays they faced in obtaining finance.<sup>4</sup>

Software patents and patents on business methods – particularly methods of finance – each of which has burgeoned in the wake of judicial reinterpretation of previous taboos on such patents, are unusually liable to litigation. Intellectual property scholars James Bessen and Michael J. Meurer conclude from their extensive research that:

software patents are four times more likely to be litigated than are chemical patents; business methods patents are twelve times more likely to be litigated; finance patents are 49 times more likely.<sup>5</sup>

Though these results are for the US, they raise important concerns. Indeed as IP Australia stated in its submission:

The Australian High Court has recognised that the level of invention required to obtain a patent in Australia is lower than elsewhere.<sup>6</sup>

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- 4 See Cockburn, I. M., and MacGarvie, M. J., *Patents, Thickets and the Financing of Early-Stage Firms: Evidence from the Software Industry*. Boston University and National Bureau of Economic Research, [people.bu.edu/mmacgarv/fin\\_nov07.pdf](http://people.bu.edu/mmacgarv/fin_nov07.pdf) and commentary at [www.researchoninnovation.org/WordPress/?p=92](http://www.researchoninnovation.org/WordPress/?p=92).
  - 5 Bessen, J., and Meurer, M. J., *Patent Failure: How Judges, Bureaucrats, and Lawyers put Innovators at Risk*, Princeton University Press, March 2008.

At the very least in the interests both of harmonisation<sup>7</sup> and better public policy the hurdle for registering a patent in Australia should be as stringent as other countries.

The issue of patentable subject matter is currently before the Advisory Council on Intellectual Property. However it is not clear that a revision of patentable subject matter can address the fundamental problems. Our international obligations under the Trade Related Aspects of Intellectual Property Rights (TRIPS) code and Australia-United States Free Trade Agreement (AUSFTA) constrain the options available to us as Australia has agreed under these instruments not to excise specific areas of technology from the patent system. Hazel Moir's submission proposes that we could:

add codification proportions and development cost minima as new threshold tests for patentability. While far more complex and thus riskier (who knows what the courts would read into such limitations), this would be a TRIPS-compliant approach to limiting the scope of patents to those areas of innovation where patent policy is likely to enhance rather than reduce welfare.<sup>8</sup>

As Moir points out, one of the major problems here is that intellectual property policy is being managed as a legal issue, whereas although this area like any other must operate through the legal system, intellectual property policy is most fundamentally an aspect of economic policy. Before the economic reforms of the last two decades what we now know as competition policy – which was then known as 'trade practices' policy fell within the portfolio of the Attorney General's Department. Given its economic significance it is now located within the Treasury portfolio. Today copyright policy is handled within the Attorney General's Department whilst patents are handled within the Innovation portfolio. Nevertheless the consideration of policy with regard to both is dominated by IP practitioners and by the beneficiaries of the IP system. We need the expertise of lawyers in this as in many other areas of policy but it is imperative that IP policy make the transition that competition policy made over a decade ago now, from a specialist policy area dominated by lawyers, to an important front of micro-economic reform.

Finding: Currently, the ease with which patents are being granted in areas such as software and business methods is very likely hampering innovation.

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6 IP Australia – Submission no. 537 p. 52, citing *Lockwood Security Products Pty Ltd v Doric Security Products Pty Ltd* (No. 2) [2007] HCA 21 and *Aktiebolaget Hassle v Alphapharm Pty Ltd* [2002] HCA 59.

7 *ibid.* p. 43.

8 Moir, Hazel – Submission no. 513, p. 18

*Recommendation 7.2* Patent law should be reviewed to ensure that the inventive steps required to qualify for patents are considerable, and that the resulting patents are well defined, so as to minimise litigation and maximise the scope for subsequent innovators.

*Recommendation 7.3* Professional practitioners and beneficiaries of the IP system should be closely involved in IP policy making. However IP policy is economic policy. It should make the same transition as

## THE COSTS OF ENFORCING IP RIGHTS.

A further important problem in our intellectual property regime is the high and rising cost of enforcing intellectual property rights. In the words of the Attorney General Robert McClelland, in some areas the adversarialism of court procedure has been ‘a disaster’.

It is becoming increasingly evident that modern litigation is no longer an efficient model of dispute resolution when confronting complex business transactions.<sup>9</sup>

Many Australian innovators feel an acute lack of access to cost effective dispute resolution in the Australian system. Thus for instance the IP Australia submission reports that:

One of the main issues associated with IP rights enforcement is the costs associated with taking enforcement action. There is also a view within the small business community that litigation is about who has the greater financial resources rather than whether the IP right is valid or infringed. Such practices can lower confidence in the IP system and limit the benefits of IP protection to those who have large financial resources.<sup>10</sup>

The panel endorses the initiatives discussed in IP Australia’s submission to use IP Australia’s resources to help encourage litigants to make less use of litigation and be more responsible in its use. However such moves will only have limited affect where larger firms are using IP litigation in a strategic way to take advantage of their size in disputes with smaller firms. It is important that legal procedure more fully internalise the principle that legal costs should be proportionate to the

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9 McClelland, R, Australian Financial Review Legal Conference, 17th June 2008, available at [www.attorneygeneral.gov.au/www/ministers/RobertMc.nsf/Page/Speeches\\_2008\\_17June2008-AustralianFinancialReviewLegalConference](http://www.attorneygeneral.gov.au/www/ministers/RobertMc.nsf/Page/Speeches_2008_17June2008-AustralianFinancialReviewLegalConference).

10 IP Australia – Submission no. 537, p. 40.

amounts at issue in specific legal disputes.

It is to be hoped that the Attorney-General's initiatives will substantially streamline civil procedure. There are also initiatives within some states and territories to do likewise. It will be important for those interested in innovation to make the case for such streamlining strongly. However there is a long history of modest outcomes from reviews of legal procedure. It is to be hoped that at least in some specialised areas more radical experiments might be tried, for instance stronger steps towards the level of case management typical of some of Europe's more efficient civil law systems. It would be very much in keeping with the spirit of innovation if some experiments of this kind could be undertaken in the area of IP litigation.

In the meantime there is a simple procedural rule that could be introduced into intellectual property litigation that would 'level the playing field' somewhat between large and small firms and so lead to a fairer and more efficient IP system. A right to opt out of 'appellate double jeopardy' would give each party to a dispute the right to elect not to appeal the finding of the court of first instance, except where the appellant funded the costs of both itself and its opponent. Wherever either side had exercised such a right, both parties would be bound by it; that is neither party could appeal the decision of the court of first instance without meeting all their opponents' costs.

*Recommendation 7.4* Firms asserting or defending intellectual property should have a right to opt out of 'appellate double jeopardy'.

## IMPROVING INFORMATION FLOWS

Information is central to the functioning of the economic system. As Friedrich Hayek pointed out, markets have the advantage that they use information wherever it exists in an economy, whereas governments with their central decision making find this difficult if not impossible. On the other hand as Joseph Stiglitz points out, 'information economics does not agree with Hayek's assertion that markets act efficiently'.<sup>11</sup>

With neither markets nor governments being ideal institutions for optimising the generation and handling of information, the best outcome is likely to be produced by some appropriate hybrid of the two.

One of the perennial problems of markets is 'asymmetric information' where one party to a transaction knows more than another. For this reason all developed countries regulate minimum levels of disclosure in a range of transactions, for instance in the case of consumers and investors. Such regulation has nevertheless

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11 *Information*, by Joseph E. Stiglitz at [www.econlib.org/library/Enc/Information.html](http://www.econlib.org/library/Enc/Information.html).



often had disappointing results, not least because of the complexity of disclosure that has been mandated and its tendency to swamp people with information.

Amid a range of relatively disappointing results from mandatory disclosure regulation there have been some important and suggestive success stories – see Box 3.

**Box 3: Some examples and principles of targeted transparency**

In their book *Full disclosure: the perils and promise of transparency* American scholars Archon Fung, Mary Graham and David Weil outline a range of regimes that mandate disclosure to consumers which were designed to improve information flows. The two most successful examples of what they call ‘targeted transparency’ demonstrate the link between good information flows, demanding customers and innovation.

Los Angeles required restaurants to display prominently on their front window the rating they had received for hygiene from the government regulatory regime. Importantly the rating was to be displayed as a simple ‘A’, ‘B’ or ‘C’ classification which was easily understood by consumers. With this information so prominently available to consumers, consumers were more easily able to demonstrate their preferences. Virtue in such matters became its own reward; and perhaps more pointedly, vice became its own punishment. The public’s unsurprising distaste for bad hygiene kicked off a vigorous race to the top with restaurants striving to move up the ladder, particularly from a ‘C’ grading with a range of beneficial impacts, not least lower admissions to hospitals for food poisoning.

Regulations identifying sports utility vehicles’ (SUVs) stability at speed also struck an important blow for road safety with the less stable SUVs suffering a sharp fall in demand and car makers responding with improved product safety.

In addition to these examples, the authors also show how such disclosure regimes can fail, for instance because of their complexity, as in the case of pollution reporting.

Fung et al.’s conclusions about transparency might be summarised as follows:

- Targeted transparency must be user centred.
- Successful policies focus on the needs and interests of users. They should also be focused on the capacities and inclinations of disclosing organisations. They should seek to embed new information in the decision making routines of users and to embed user responses into the decision making of disclosers.
- The policies must be politically sustainable.

The success stories however illustrate an important point: where a demand for better information is met, consumers of goods and services will become more discriminating and this will produce premiums for those goods and service providers (newly) discovered to be of superior quality. As Michael Porter points out, demanding customers often drive a culture of innovation and excellence within the industry servicing such customers. And the industries which learn from the most demanding consumers often become world leaders.

Governments can drive this through mandatory disclosure requirements. For example, the draft report of the Garnaut review proposes mandatory energy efficiency labelling of refrigerators and probably the fuel efficiency or emissions intensity of cars<sup>12</sup>. Greater mandatory disclosure is often attractive to policymakers aware of some problem or other but wary of the pitfalls of too heavy-handed regulation. Requiring greater mandatory disclosure in such circumstances can meet the need for something to be done about some perceived problem or other without risking any major policy error.<sup>13</sup> But as we have seen, for instance, with disclosure on investments, it is not without its pitfalls.

There may be scope to make substantial progress in improving information flows in markets without compulsion. Note that the examples of mandatory disclosure above, such as the energy efficiency of fridges and vehicles, all involve the reporting against an auditable standard which provides a means by which people can compare the relative performance of different products.

In other areas one might ask what information flows might be facilitated by the emergence of an auditable standard according to which results might be reported voluntarily. And what might be required to have an auditable standard emerge? Here no firm in an industry may have sufficient incentive to establish the standard. This is because any firm adopting the standard would have to promote it heavily to bring it to the market's attention. Firms that did not perform as well, but which were disadvantaged by the first mover's promotion of its own results, would retain the option to report their own results against some other standard which produced more favourable results for it.

In such circumstances, a standard might emerge from some leadership if it were possible to get 'buy in' from a sufficient number of market participants. This might be possible if governments acted as the catalyst. Thus for instance a government might invite the best firms in an industry to develop an auditable standard against which to report. These firms have an incentive to facilitate the emergence of such a standard as it will help them demonstrate their high performance to the market.

This idea was developed not with regard to consumers but with regard to em-

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12 *Garnaut Climate Change Review* (2008), Draft Report, p. 454.

13 See Gruen, Nicholas, 'Life in the Farce Lane: The steady creep of regulatory burdens'. *IPA Review*, pp. 11–12. April 2006.

ployee satisfaction in one recommendation of the 2020 Summit:

Windows on workplaces: Empower employees to choose their preferred workplaces by facilitating the dissemination of information about employment experience, for example work-life-balance and family friendliness.

Such a scheme might be commenced in the manner outlined above, with governments doing no more than initiating a process by which high performing employers were drawn together, either publicly or privately, with a view to their developing an auditable standard against which to report. Governments could also use their own influence in markets to help the standard emerge, both by mandating that, where relevant, their own agencies report against the standard and by encouraging or requiring those firms with which it does business to report against the standard.

A potential problem is that even if the group of firms establishing the standard were of well above average standard, those firms ending up at the bottom of the list of high performers could be invidiously interpreted to be poor performers.

To guard against this problem it may be appropriate to commission the ABS to determine average performance with a randomised survey of firms more generally. Firms' performance could then be reported against the backdrop of appropriate Australian or industry wide averages.

The appeal of this approach is that, while it does not cover the whole market, it is entirely consensual and so can be done at minimal risk of imposing substantial costs. And despite its absence of coercion, it may nevertheless sufficiently improve the flow of information in markets to generate strong rewards for the best performers and so spur the most innovative and excellent firms to renew their efforts to further excel.

*Recommendation 7.5* Explore the potential of facilitating the emergence of auditable standards to encourage better comparative voluntary reporting of the quality of firm performance.

- Areas where substantial gains seem likely include:
- the quality of workplaces as proposed at the 2020 Summit;
- the quality of clinical units in hospitals that wish to participate; and
- the performance of educational institutions at all levels in raising students' academic scores.

Governments can also play an important role in enhancing information flows to encourage the formation of new markets that can facilitate the development and use of new emerging and enabling technologies.

Enabling technologies have widespread applications in many fields of science, industry, environment, agriculture and social outcomes like health. Their responsible use and management involves an uncommon degree of complexity

and uncertainty and because they don't fit into existing industry categories, there is a lack of statistics and other metrics. Current examples of enabling technologies are ICT, nanotechnology, and biotechnology but other technologies can emerge in the future with similar or greater potential.

Governments need to be informed about enabling technologies and aware of potential issues and problems to develop appropriate policies and regulation. Regulation plays an important role in contributing to the community's confidence in a new technology, therefore facilitating acceptance and diffusion into the broader economy and society. Regulation based on sound scientific evidence can stimulate, not hinder, innovation.

The community also needs to have access to balanced and objective information from trusted sources so that they can make informed choices. Where the risks and opportunities are not clear, views can become polarised, regulation can be risk-averse and the community can develop unrealistic expectations about opportunities.

There is a role for Government in:

- providing support where there are information asymmetries and large spillovers;
- providing the community with balanced and factual information;
- supporting the science and metrology essential to underpin effective regulation; and
- ensuring regulation supports the adoption of innovative services and products.

*Recommendation 7.6* Facilitate favourable conditions for the development and use of new and emerging technologies by establishing appropriately funded enabling technologies strategies that:

- adapt or build regulatory frameworks to support the responsible and safe use of innovative services and products;
- support the science and metrology required to underpin effective regulation and capitalise on opportunities;
- foster public awareness and community engagement; and
- collect data and develop metrics to support evidence based policy development, monitoring and evaluation.

## UNLOCKING PUBLIC INFORMATION AND CONTENT

Governments and public agencies are centrally involved in the provision of research, information and content across a very broad range of activities. For some years now, both commercial and policy focus has turned towards the economic and social benefits flowing from open access to these resources, and by con-

trast, the potential costs and ‘value damming’ that can be involved in ‘business as usual’ models where content is more tightly held.

Much work has been done by other national governments and international organisations on the development of policies and systems to enable public sector information access and re-use.<sup>14</sup>

Open access requirements are increasingly being introduced by research funding organisations and research institutions worldwide.<sup>15</sup> To date progress in Australia has been patchy and lacking the comprehensiveness and boldness of leading countries such as the UK. Australian activities aimed at enabling information access and re-use have largely focused on two key areas: spatial data and publicly funded research outputs (whether in the form of publications or data). Much of the impetus for access to public sector materials has come from the spatial community. The most advanced policy on data access is the *Spatial Data Access and Pricing Policy* (2001) developed by the Office of Spatial Data Management<sup>16</sup> which forms the basis of the free data download services offered by Geoscience Australia.<sup>17</sup>

Along with the rise in support for access to information has come a growing recognition of the need for users to be able to search and interact with data and content. Legal frameworks must also be developed to facilitate access and re-use. This points to the need for an Australian National Information Policy (or Strategy) that optimises the generation and flow of ideas and information in the Australian economy. As the National Competition Policy (NCP) involved systematically scanning Australian institutions to optimise the operation of competition to enhance outcomes so National Information Policy would scan Australian institutions to optimise the generation and dissemination of information for social and economic benefit.<sup>18</sup>

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- 14 Houghton, J., Steele, C. and Sheehan, P., *Research Communication Costs in Australia: Emerging Opportunities and Benefits*. DEST. 2006, at [www.dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST\\_Research\\_Communications\\_Cost\\_Report\\_Sept2006.pdf](http://www.dest.gov.au/NR/rdonlyres/0ACB271F-EA7D-4FAFB3F7-0381F441B175/13935/DEST_Research_Communications_Cost_Report_Sept2006.pdf). Houghton, Steele and Sheehan concluded in their 2006 report that open access models of scholarly communication have the potential to increase the economic and social returns from public investment in R&D.
- 15 For an international listing of open access mandates, see ROARMAP at [www.eprints.org/openaccess/policysignup/](http://www.eprints.org/openaccess/policysignup/). Some of the most significant initiatives have occurred in the European Union and in the United Kingdom.
- 16 See [www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf](http://www-ext.osdm.gov.au/osdm/policy/accessPricing/SDAP.pdf) and generally [www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx](http://www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx).
- 17 See [www.ga.gov.au/products/servlet/controller?event=DEFINE\\_PRODUCTS](http://www.ga.gov.au/products/servlet/controller?event=DEFINE_PRODUCTS).
- 18 See Gans, J., Caught short: Information controls kill opportunities, *The Age*, 5th

Support for development and implementation of a National Information Policy was expressed at forums held during the public consultation round table as well as in several written submissions with the spatial information industry being particularly supportive. Further government funded ‘content’ is generally in the same category as government funded information. Thus for instance, unless it seriously undermines its commercial objectives of sale of product, the ABC should err on the side of making its content available over the internet unless this has large opportunity costs. The presumption against free availability might be overcome where it would involve the foregoing of substantial commercial revenue from the sale of the content or there are large costs of hosting the necessary internet bandwidth (although in this latter case, peer to peer means of distribution should also be explored as should the diversion of funding from other activities and/or additional funding).

Australia is behind many other advanced countries in establishing institutional frameworks to maximise the flow of government generated information and content.

*Recommendation 7.7* Australia should establish a National Information Strategy to optimise the flow of information in the Australian economy.

The fundamental aim of a National Information Strategy should be to:

- utilise the principles of targeted transparency and the development of auditable standards to maximise the flow of information in private markets about product quality; and
- maximise the flow of government generated information, research, and content for the benefit of users (including private sector resellers of information).

*Recommendation 7.8* Australian governments should adopt international standards of open publishing as far as possible. Material released for public information by Australian governments should be released under a creative commons licence.

## NATIONAL COLLECTIONS

To drive cumulative knowledge creation researchers and others must have access

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August 2008, who argues that information such as the location of public toilets ([toiletmap.gov.au](http://toiletmap.gov.au)), fuel price information, bus and train schedules, and television programming information be available for repackaging using the latest technologies. Led by Cabinet Office Minister Tom Watson MP, the UK has established a ‘Power of Information Taskforce’ for this purpose. ([www.cabinetoffice.gov.uk/reports/power\\_of\\_information.aspx](http://www.cabinetoffice.gov.uk/reports/power_of_information.aspx)) In Australia, Hansard information made available has led to re-packaging and dissemination ([www.openaustralia.org](http://www.openaustralia.org)).

to high quality data and information on developments not just in their field but beyond. For instance, Jeff Furman and Scott Stern have calculated that Biological Resource Centres that are repositories of biological materials (including cell lines, microorganisms and DNA material) have boosted cumulative scientific knowledge by three times more than alternative institutional structures.<sup>19</sup>

Australian physicist Michael Nielsen has stressed the importance of unlocking scientific information in scientific journals to make it more easily discoverable, searchable and useable to enable the cross-disciplinary search for knowledge:

We should aim to create an open scientific culture where as much information as possible is moved out of people's heads and labs, onto the network, and into tools which can help us structure and filter the information. This means everything – data, scientific opinions, questions, ideas, folk knowledge, workflows, and everything else – the works. Information not on the network can't do any good.<sup>20</sup>

He goes on to recommend a change in basic infrastructure of science as well as mind-sets and culture:

Ideally, we'll achieve a kind of extreme openness. This means: making many more types of content available than just scientific papers; allowing creative re-use and modification of existing work through more open licensing and community norms; making all information not just human readable but also machine readable; providing open APIs [application programming interfaces] to enable the building of additional services on top of the scientific literature, and possibly even multiple layers of increasingly powerful services. Such extreme openness is the ultimate expression of the idea that others may build upon and extend the work of individual scientists in ways they themselves would never have conceived.

This sense was reflected in the many submissions that emphasised that national collections are a necessary foundation for research and innovation. National collections<sup>21</sup> are essential resources for researchers in all fields, from basic scientific

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19 Furman, J. and Stern, S., *Standing Atop the Shoulders of Giants: The Impact of Institutions on Cumulative Research*, National Bureau Economic Research Working Paper. 2004.

20 [michaelnielsen.org/blog/?p=448](http://michaelnielsen.org/blog/?p=448).

21 These include cultural, geological, historical and zoological collections. They go under a number of different names, including archives, galleries, research repositories, libraries, museums, Indigenous knowledge and keeping places.

research to the social sciences, humanities and creative arts. They play a vital role for educators (from pre-school to postgraduate) and for the broader community in building scientific, historical and artistic knowledge and literacy and in fostering cultural knowledge, identity and cohesion. Importantly, Australia has a number of unique and valuable assets, including marine, flora and fauna resources and indigenous collections that allow us to draw on the distinctive features of the Aboriginal and Torres Strait Islander traditional knowledge systems.

The Review has examined challenges in the provision, funding and maintenance of national infrastructure facilities and collections and identified the steps required to ensure their ongoing vitality and contribution to the national innovation system over the coming decades.

*Recommendation 7.9* Funding models and institutional mandates should recognise the research and innovation role and contributions of cultural agencies and institutions responsible for information repositories, physical collections or creative content and fund them accordingly.

*Recommendation 7.10* A specific strategy for ensuring the scientific knowledge produced in Australia is placed in machine searchable repositories be developed and implemented using public funding agencies and universities as drivers.

*Recommendation 7.11* Action should be taken to establish an agreed framework for the designation, funding models, and access frameworks for key collections in recognition of the national and international significance of many State and Territory collections (similar to the frameworks and accords developed around Australia's Major Performing Arts Companies).

*Recommendation 7.12* Funding agencies should consider eligibility for cultural and collecting agencies in gaining access to contestable research funding programs.

*Recommendation 7.13* The role of institutions such as the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) should be broadened and strengthened in recognition of the special importance of preserving indigenous collections and the unique value of indigenous traditional knowledge and practices within Australia's innovation system.

## AUSTRALIA, INNOVATION AND THE GLOBAL PUBLIC COMMONS

ABC free to air broadcasts used to be Australian public goods. Today, digital distribution over the internet makes them global public goods. The same could be said for a good deal of information and other content produced and funded by government agencies.

There can be clear benefits in making such content available to all comers globally. Often it will be impossible to foresee all the ways in which others will



find or develop value in that content. And there will be negligible costs in making the content available.

Accordingly, both for its direct and indirect benefits to Australia and for the greater global good, Australia should energetically and proudly maximise the extent to which it makes government funded content available as part of the global digital commons.

Further, it should lead globally by engaging other countries in a similar agenda.

Likewise in the area of prizes, Australia should encourage other countries to join it in funding international prizes for specific innovations. For instance it could be a particularly effective way of addressing aid objectives to initiate a process where many countries funded a prize of substantial value for important technical breakthroughs with medical or other benefits.

*Recommendation 7.14* To the maximum extent practicable, information, research and content funded by Australian governments – including national collections – should be made freely available over the internet as part of the global public commons. This should be done whilst the Australian Government encourages other countries to reciprocate by making their own contributions to the global digital public commons.

*Recommendation 7.15* In a similar spirit the Australian Government should initiate a process whereby countries come together to fund prizes for innovations of international significance with a particular focus on the needs of the developing world.

# CHAPTER TWENTY-FIVE

## OECD RECOMMENDATION OF THE COUNCIL FOR ENHANCED ACCESS AND MORE EFFEC- TIVE USE OF PUBLIC SECTOR ORGANISATION FOR ECONOMIC CO-OPERATION INFORMATION

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies. The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD.

### FOREWORD

This Recommendation was developed by the OECD Committee for Information, Computer and Communication Policy (ICCP Committee), and particularly by its Working Party on the Information Economy. Work on its principles was initiated in 2007 on the basis of prior analytical work. The Recommendation was adopted by the OECD Council at its 1172nd Session on 30 April 2008.

OECD RECOMMENDATION OF THE COUNCIL  
FOR ENHANCED ACCESS AND MORE EFFECTIVE

## USE OF PUBLIC SECTOR INFORMATION

### *The Council*

- Having regard to Article 5 b) of the Convention on the Organisation for Economic Co-operation and Development of 14 December 1960;
- Having regard to the Recommendation of the Council concerning Access to Research Data from Public Funding [C(2006)184] and the Recommendation of the Council on Broadband Development [C(2003)259];
- Having regard to the aim to increase returns on public investments in public sector information<sup>1</sup> and increase economic and social benefits from better access and wider use and re-use,<sup>2</sup> in particular through more efficient distribution, enhanced innovation and development of new uses;
- Having regard to the aim to promote more efficient distribution of information and content as well as the development of new information products and services particularly through market-based competition among re-users of information;
- Considering the usefulness of collectively agreed principles for enhanced access and more effective use and re-use of public sector information for both the public and the private sector;
- Recognising that efforts to improve the access and use of public sector information need to take into account legal requirements and restrictions, including intellectual property rights and trade secrets, effective and secure management of personal information, confidentiality and national security concerns, and fundamental principles including democracy, human rights and freedom of information and that, consequently, certain principles contained in this Rec-

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\* This was first published as a report titled OECD Recommendation of the Council for Enhanced Access and More Effective Use of Public Sector Information by the OECD Committee for Information, Computer and Communication Policy (ICCP Committee). The original report is available at: [www.oecd.org/dataoecd/0/27/40826024.pdf](http://www.oecd.org/dataoecd/0/27/40826024.pdf)

1 ‘Public sector information’ is broadly defined for purposes of this Recommendation as ‘information, including information products and services, generated, created, collected, processed, preserved, maintained, disseminated, or funded by or for the Government or public institution’, taking into account the legal requirements and restrictions referred to in the last paragraph of the preamble of this Recommendation.

2 This includes use by the original public sector generator or holder or other public sector bodies and further re-use by business or individuals for commercial or non-commercial purposes. In general, the term ‘use’ implies this broad spectrum of use and re-use.

ommendation regarding in particular openness and re-use, can be applied to a different extent to different categories of public sector information;

## ON THE PROPOSAL OF THE COMMITTEE FOR INFORMATION, COMPUTER AND COMMUNICATIONS POLICY

*Recommends* that, in establishing or reviewing their policies regarding access and use of public sector information, Member countries take due account of and implement the following principles, which provide a general framework for the wider and more effective use of public sector information and content and the generation of new uses from it:

- *Openness.* Maximising the availability of public sector information for use and re-use based upon presumption of openness as the default rule to facilitate access and re-use. Developing a regime of access principles or assuming openness in public sector information as a default rule wherever possible no matter what the model of funding is for the development and maintenance of the information. Defining grounds of refusal or limitations, such as for protection of national security interests, personal privacy, preservation of private interests for example where protected by copyright, or the application of national access legislation and rules
- *Access and transparent conditions for re-use.* Encouraging broad non-discriminatory competitive access and conditions for re-use of public sector information, eliminating exclusive arrangements, and removing unnecessary restrictions on the ways in which it can be accessed, used, re-used, combined or shared, so that in principle all accessible information would be open to re-use by all. Improving access to information over the Internet and in electronic form. Making available and developing automated on-line licensing systems covering re-use in those cases where licensing is applied, taking into account the copyright principle below
- *Asset lists.* Strengthening awareness of what public sector information is available for access and re-use. This could take the form of information asset lists and inventories, preferably published on-line, as well as clear presentation of conditions to access and re-use at access points to the information
- *Quality.* Ensuring methodical data collection and curation practices to enhance quality and reliability including through cooperation of various government bodies involved in the creation, collection, processing, storing and distribution of public sector information
- *Integrity.* Maximising the integrity and availability of information through the use of best practices in information management. Developing and implementing appropriate safeguards to protect information from unauthorised

modification or from intentional or unintentional denial of authorised access to information

- *New technologies and long-term preservation.* Improving interoperable archiving, search and retrieval technologies and related research including research on improving access and availability of public sector information in multiple languages, and ensuring development of the necessary related skills. Addressing technological obsolescence and challenges of long term preservation and access. Finding new ways for the digitisation of existing public sector information and content, the development of born-digital public sector information products and data, and the implementation of cultural digitisation projects (public broadcasters, digital libraries, museums, etc.) where market mechanisms do not foster effective digitisation
- *Copyright.* Intellectual property rights should be respected. There is a wide range of ways to deal with copyrights on public sector information, ranging from governments or private entities holding copyrights, to public sector information being copyright-free. Exercising copyright in ways that facilitate re-use (including waiving copyright and creating mechanisms that facilitate waiving of copyright where copyright owners are willing and able to do so, and developing mechanisms to deal with orphan works), and where copyright holders are in agreement, developing simple mechanisms to encourage wider access and use (including simple and effective licensing arrangements), and encouraging institutions and government agencies that fund works from outside sources to find ways to make these works widely accessible to the public
- *Pricing.* When public sector information is not provided free of charge, pricing public sector information transparently and consistently within and, as far as possible, across different public sector organisations so that it facilitates access and re-use and ensures competition. Where possible, costs charged to any user should not exceed marginal costs of maintenance and distribution, and in special cases extra costs for example of digitisation. Basing any higher pricing on clearly expressed policy grounds
- *Competition.* Ensuring that pricing strategies take into account considerations of unfair competition in situations where both public and business users provide value added services. Pursuing competitive neutrality, equality and timeliness of access where there is potential for cross-subsidisation from other government monopoly activities or reduced charges on government activities. Requiring public bodies to treat their own downstream/value-added activities on the same basis as their competitors for comparable purposes, including pricing. Particular attention should be paid to single sources of information resources. Promoting non-exclusive arrangements for disseminating information so that public sector information is open to all possible users and re-users on non-exclusive terms
- *Redress mechanisms.* Providing appropriate transparent complaints and ap-

peals processes

- *Public private partnerships*. Facilitating public-private partnerships where appropriate and feasible in making public sector information available, for example by finding creative ways to finance the costs of digitisation, while increasing access and re-use rights of third parties
- *International access and use*. Seeking greater consistency in access regimes and administration to facilitate cross-border use and implementing other measures to improve cross-border interoperability, including in situations where there have been restrictions on non-public users. Supporting international co-operation and co-ordination for commercial re-use and non-commercial use. Avoiding fragmentation and promote greater interoperability and facilitate sharing and comparisons of national and international datasets. Striving for interoperability and compatible and widely used common formats
- *Best practices*. Encouraging the wide sharing of best practices and exchange of information on enhanced implementation, educating users and re-users, building institutional capacity and practical measures for promoting re-use, cost and pricing models, copyright handling, monitoring performance and compliance, and their wider impacts on innovation, entrepreneurship, economic growth and social effects.

### INVITES:

Member countries to disseminate this Recommendation throughout the public and private sectors, including governments, businesses and other international organisations to encourage all relevant participants to take the necessary steps to enhance access and promote more effective use of public sector information; Non-Member economies to take account of this Recommendation and collaborate with Member countries in its implementation.

### INSTRUCTS:

The OECD Committee for Information, Computer and Communications Policy to promote the implementation of this Recommendation and review it every three years to foster enhanced access and more effective use of public sector information.

# CHAPTER TWENTY-SIX

## BORDERS IN CYBERSPACE: CONFLICTING PUBLIC SECTOR INFORMATION POLICIES AND THEIR ECONOMIC IMPACTS\*

### I. BACKGROUND AND INTRODUCTION

*Peter Weiss1*

Many nations are embracing the concept of open and unrestricted access to public sector information – particularly scientific, environmental, and statistical information of great public benefit. Federal information policy in the US is based on the premise that government information is a valuable national resource and that the economic benefits to society are maximised when taxpayer funded information is made available inexpensively and as widely as possible. This policy is expressed in the Paperwork Reduction Act of 1995 and in Office of Management and Budget Circular No. A-130, ‘Management of Federal Information Resources’.<sup>2</sup> This policy actively encourages the development of a robust private sector, offering to provide publishers with the raw content from which new information services may be created, at no more than the cost of dissemination and without copyright or other restrictions.

In other countries, particularly in Europe, publicly funded government agencies treat their information holdings as a commodity used to generate short-term revenue. They assert monopoly control on certain categories of information to recover the costs of its collection or creation. Such arrangements tend to preclude other entities from developing markets for the information or otherwise disseminating the information in the public interest.

In the US, open and unrestricted access to public sector information has resulted in the rapid growth of information intensive industries particularly in the

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1 *U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service. The views expressed in this paper are those of the author and do not necessarily represent those of the U.S. National Weather Service. Contract support from Yvette Pluijmers, Pricewaterhouse Coopers, is gratefully acknowledged.*

2 Respectively, 44 United States Code Chapter 35, and 61 Federal Register 6428 (February 20, 1996).

geographic information and environmental services sectors. Similar growth has not occurred in Europe due to restrictive government information practices. As a convenient shorthand, one might label the American and European approaches as ‘open access’ and ‘cost recovery’, respectively. The cost recovery model is now being challenged on a variety of grounds:

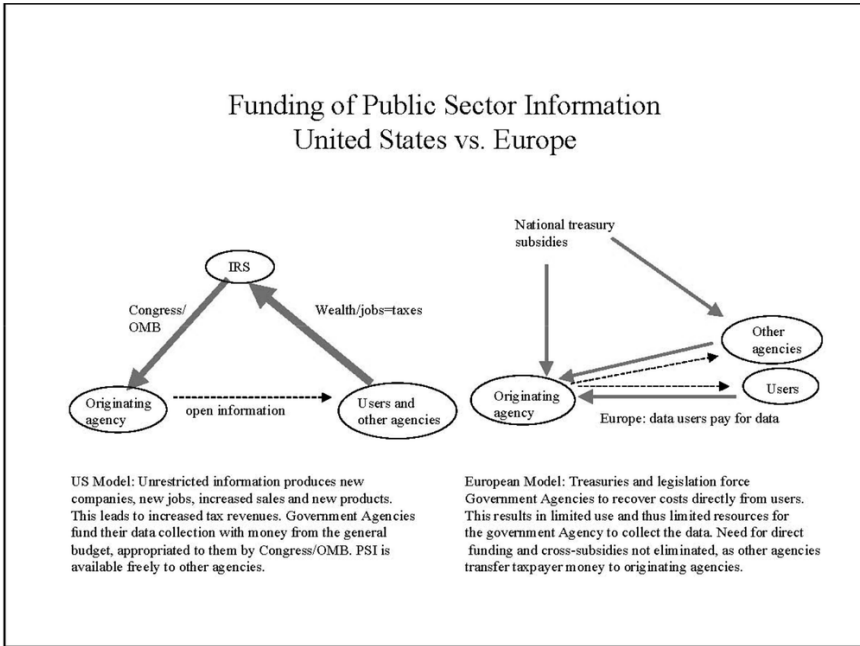
- Economists argue that the benefits to the American Treasury that accrue from corporate and individual taxes from the secondary publishing and service activities stimulated by open access policies far exceed any revenues that might be generated through cost recovery policies;
- Cost recovery policies often mean that budgetary constraints prevent some government agencies from acquiring information that has already been created or collected by another part of government, resulting in agencies either doing without or using inferior alternatives;
- No one supplier, public or private, can design all information products required to meet the needs of all users in a modern information-based economy. Private sector intermediaries are increasingly important players in the rapidly developing information economy;
- European information service providers are increasingly frustrated at the competitive advantages enjoyed by their American counterparts;
- A recognition that efforts to build transnational data sets, be they meteorological or environmental (where serious problems have already arisen), statistical or cartographic, are hampered by national agencies bent on preserving intellectual property to pursue local cost recovery policies;
- A growing understanding of the wealth creating possibilities (‘prosperity effects’ in the words of one Dutch study) that arise from a common information base (e.g. US street mapping) or software standard (e.g. the World Wide Web).

This report examines fundamental differences in the policy and funding models for public sector information (PSI) in the US as compared to Europe. The following figure illustrates these differences.

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\* This was first published as a report titled *Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impacts* by Peter Weiss. The original report is available at: [www.epsiplatform.eu/psi\\_library/reports/borders\\_in\\_cyberspace](http://www.epsiplatform.eu/psi_library/reports/borders_in_cyberspace)





This report seeks to demonstrate the economic and societal benefits of open access and dissemination policies for public sector information, particularly as compared to the limitations of the ‘cost recovery’ or ‘government commercialisation’ approach.

It focuses primarily on the conclusions of recent economic and public policy research in this area, as well as examples of failed or limited cost recovery experiments in the US and Europe. Emerging European thinking on the issue of government competition with the private sector, and recent developments at the European Commission level and in selected European countries are briefly summarised.<sup>3</sup>

## 2. RECENT RESEARCH

The vast economic potential of public sector information has only recently begun to be recognised in the economics and public policy literature. Recent significant

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<sup>3</sup> This summary report is accompanied by a longer monograph that includes as Appendices a primer on the economics of information, a point-by-point refutation of arguments commonly made in support of cost recovery, and suggestions for further research. They are not summarised here.

research, much of it originating in Europe, documents the effect that governmental information policies have on the economy in general and on particular sectors.

## THE POTENTIAL OF EUROPEAN PUBLIC SECTOR INFORMATION

With respect to the growing challenge from economists, the European Commission's Directorate General for the Information Society commissioned a study from PIRA International on the *Commercial Exploitation of Europe's Public Sector Information*. ('the PIRA study')<sup>4</sup>. The PIRA study attempts to quantify the economic potential of public sector information in Europe and the extent to which it is being commercially exploited, and suggests policy initiatives and good practices. Although some of the qualitative data had to be extrapolated, the study should be sufficient to persuade policymakers of the need for serious rethinking of European information policy and its high priority. PIRA states:

Cost recovery looks like an obvious way for governments to minimize the costs related to public sector information and contribute to maximizing value for money directly. In fact, it is not clear at all that this is the best approach to maximizing the economic value of public sector information to society as a whole. Moreover, it is not even clear that it is the best approach from the viewpoint of government finances. [...] Estimates of the US public sector information market place suggest that it is up to five times the size of the EU market.

The PIRA study went on to observe that the fledgling European market would not even have to double in size for governments to more than recoup in extra tax receipts what they would lose by ceasing to charge for public sector information. The problem is that these positive macro-economic effects are masked by the adaptation of European markets to cost recovery policies, by which both individual agencies and partner publishers have grown adept at extracting monopoly rents from captive markets to their own benefit but to the detriment of the economy at large. Furthermore, as the study noted with understatement:

The concept of commercial companies being able to acquire, at very low cost, quantities of public sector information and resell it for a variety of unregulated purposes to make a profit is one that policymakers in the EU find

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4 PIRA International (2000) *Commercial Exploitation of Europe's Public Sector Information*. Final Report for the European Commission, Directorate General for the Information Society.

uncomfortable.

The amounts of money involved are significant. PIRA distinguished between government investment in public sector information ('Investment Value') and the value added by users in the economy as a whole ('Economic Value'). Economic Value could not be directly obtained, so aggregated data was used. PIRA estimated the Investment Value of public sector information for the entire European Union at 9.5 billion EURO/year. The Economic Value was estimated at 68 billion EURO a year. By comparison, the Investment Value for the United States is 19 billion EURO/year and the Economic Value is 750 billion EURO/year. To summarise:

Economic Potential of PSI in Europe and US		
In EUROs	EU	US
Investment value	9.5 billion	19 billion
Economic value	68 billion	750 billion

This contrast points to both opportunities and challenges for European companies and their governments. PIRA's main conclusions are:

- Charging for public sector information may be counter-productive, even from the short term perspective of raising direct revenue for government agencies;
- Governments should make public sector information available in digital form at no more than the cost of dissemination;
- The fledgling EU market would not even have to double in size for governments to more than recoup in extra tax receipts what they would lose by ceasing to charge for public sector information;
- Governments realise two kinds of financial gain when they drop charges:
- Higher indirect tax revenue from higher sales of the products that incorporate the public sector information; and
- Higher income tax revenue and lower social welfare payments from net gains in employment.

## PROSPERITY EFFECTS OF OPEN ACCESS POLICIES

A study commissioned by the Dutch Ministry of the Interior examined both qualitative and quantitative prosperity effects of different pricing models for public sector information<sup>5</sup>: no cost, marginal cost and full cost recovery. Its main conclusions:

- Prosperity effects will be maximised when data is sold at marginal cost. Marginal cost is defined as all costs related to the dissemination of public sector information. This includes shipping, promotional costs, personnel and information technology costs
- Enormous additional economic activity can be expected by extrapolating the study's results to all public sector information.

## RESOLVING CONFLICTS ARISING FROM THE PRIVATISATION OF ENVIRONMENTAL DATA

A U.S. National Academy of Sciences study<sup>6</sup> which examined the practices of commercialised government agencies in Europe and experiences with privatisation of environmental data in the US concluded:

'...[c]ountries that exercise intellectual property rights over government data...limit the extent to which government-collected data can be used, even in international collaborations. By making it more difficult to integrate global data sets and share knowledge, such a commercialization policy will fail to achieve the maximum benefits provided by international collaboration in the scientific endeavor'.

For example, basic research on monsoon prediction at the India Institute of Technology is hampered by the unaffordable prices for historic atmospheric model data from the European Centre for Medium-Range Weather Forecasting. As a result, the researchers are not able to integrate the European data with freely available US data.<sup>7</sup>

Thus, the Academy recommended:

- Environmental information created by government agencies to serve a public purpose should be accessible to all. To facilitate further distribution, it should be made available at no more than the marginal cost of reproduction, and

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5 Berenschot and Nederlands Economisch Instituut (2001) *Welvaartseffecten van verschillende financieringsmethoden van elektronische gegevensbestanden*. Report for the Minister for Urban Policy and Integration of Ethnic Minorities.

6 *Resolving conflicts arising from the privatization of environmental data*, Committee on Geophysical and Environmental Data. Board on Earth Sciences and Resources. Division on Earth and Life Studies. National Research Council. Washington, DC. National Academy Press, 2001.

7 Goswami, et al. *Association between quasi-biweekly oscillations and summer monsoon variabilities*, Indian Meteorological Society (March 2001).

- should be usable without restriction for all purposes
- The practice of public funding for data collection and synthesis should continue, thereby focusing contributions of the private sector primarily on value-added distribution and specific observational systems.

## ECONOMIC BENEFITS OF OPEN ACCESS POLICIES FOR GEOGRAPHIC INFORMATION

A study<sup>8</sup> commissioned by the private sector members of the Dutch Federal Geographic Data Committee attempts to quantify the economic effects of open access policies for spatial data. The main conclusions are:

- Consumers as well as private business can profit significantly from freely accessible public sector information;
- Growth potential for the geographic information industry: lowering the price of public sector geographic data by 60% would lead to a 40% annual turnover growth plus employment growth of approximately 800 jobs. Companies that pay a much lower price for public sector information will invest these savings in the development of new products, thereby expanding the potential market.

## POLICY COMPARISON IN THE DISSEMINATION OF SPATIAL DATA

A North American-European comparative study on the impact of government information policies, which focused on databases from national mapping agencies,<sup>9</sup> concluded that:

- A direct association exists between pricing and its effects on public access and commercialisation of government agency information. Current pricing problems are having a deleterious effect on the affordability of spatial data in Canada, France, and the United Kingdom;
- A direct association exists between the application of intellectual property rights and the degree of public access and commercialisation of government

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8 Ravi Bedrijvenplatform (2000) *Economische effecten van laagdrempelige beschikbaarstelling van overheidsinformatie*. Publication 00–02.

9 Lopez, Xavier R. (1998) *The dissemination of spatial data: a North American-European comparative study on the impact of government information policy*. Ablex Publishing Corporation. See also: Lopez, Xavier R. (1996) *The impact of government information policy on the dissemination of spatial data*. PhD Thesis. University of Maine, Department of Spatial Information Engineering.

agency information. The greater the restrictions on access, the less successful dissemination programs will be;

- Reducing prices and relaxing intellectual property restrictions on government datasets are significant factors improving opportunities for access and commercialisation for stakeholders in the geographic information community.

## THE IMPACT OF DATABASE PROTECTION LEGISLATION IN EUROPE

A study prepared for the Canadian government examined the European Database Directive, which does not exclude governments from using the database protection right and gives European governments an extra argument for cost recovery policies.<sup>10</sup> Therefore, its findings are important in the debate on public sector information policies:

- During its first year, the new protection right seems to have produced a one-time boost in database production and the number of new firms entering the industry. Since 1999, however, growth rates have returned to previous low levels
- The European database protection regime has also produced side effects ('negative externalities' in economic parlance) including:
  - Excessive protection for certain databases (e.g. phone directories, environmental observations);
  - New barriers to data aggregation;
  - New opportunities for dominant firms to harass competitors with threats of litigation;
  - Increased transactional gridlock due to so-called 'anti-commons' effects; and
  - Inadvertent impediments and disincentives for non-commercial database providers, e.g. universities and other research institutes.

## THE ECONOMICS OF METEOROLOGICAL

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10 Maurer, Stephen M. (2001) *Across Two Worlds: Database Protection in the US and Europe*. A paper prepared for Industry Canada's Conference on Intellectual Property and Innovation in the Knowledge Based Economy. May 23–24, 2001. See also: Stephen M. Maurer, P. Bernt Hugenholtz, and Harlan J. Onsrud. Intellectual Property: Europe's Database Experiment. *Science* 2001 October 26; 294: 789–90. (In: Policy Forum).

## INFORMATION

John Zillman, Director of the Australian Meteorological Department and John Freebairn of the University of Melbourne recently performed extensive theoretical research on the economics of meteorological information.<sup>11</sup>

Their main conclusions are:

- Direct government funding and free provision to all are favoured with their contribution to national welfare maximised at the point where marginal benefits equal marginal costs
- ‘Private and Mixed Goods’ (i.e. ‘value added’) meteorological services are most economically produced and provided through market forces.

### COMPARING WEATHER RISK MANAGEMENT AND COMMERCIAL METEOROLOGY MARKETS IN THE US AND EUROPE

The Weather Risk Management Association, representing an emerging economic sector which uses weather and climate data to mitigate commercial risk, commissioned PricewaterhouseCoopers to study the rapid growth of this industry.<sup>12</sup> The study shows that the weather risk management industry is booming in the United States (9,696 million USD in contract value in 5 years ending March 2002) compared to the small European market (721.3 million USD in the same 5 years)

Notional Value by Contract Coverage Period and Region, All Contract Types (in thousands of US Dollars)						
Coverage Period	North America	Europe	Asia	Australia	Other	Total
1997	169,410	0	0	0	0	169,410
1998	1,835,238	320	0	0	300	1,835,858

11 Zillman, J.W. and J.W. Freebairn (2000). *Economic Framework for the Provision of Meteorological Services*. Also see the background papers: Freebairn, John W. and John W. Zillman (2000). ‘Economic Benefits of Meteorological Services’. *Meteorological Applications* (2002). And Freebairn, John W. and John W. Zillman (2000). ‘Funding meteorological services’. *Meteorological Applications* (2002).

12 PricewaterhouseCoopers (2002) *The weather risk management industry: survey findings for November 1997 to March 31, 2002*. Prepared for the Weather Risk Management Association, June 2002. Website: [wrma.cyberspace.com/library/public/file345.doc](http://wrma.cyberspace.com/library/public/file345.doc).

1999	2,882,423	70,690	4,360	0	1,689	2,959,162
2000	2,409,185	49,329	45,067	2,523	10,541	2,516,645
2001	2,400,000	90,000	90,000	25,000	1,190,001	4,306,000
Total	9,696,256	721,339	139,427	27,523	1,202,530	11,787,075

A comparison of US and European commercial meteorology activity also illustrates a significant disparity. The prosperous commercial meteorology activity in the US has resulted in a tenfold difference in the number of firms, revenue, and job creation.<sup>13</sup>

Given that the US and EU economies are approximately the same size, the primary reason for the European weather risk management and commercial meteorology markets to lag so far behind the US is the restrictive data policies of a number of European national meteorological services.

### 3. GOVERNMENT COMPETITION WITH THE PRIVATE SECTOR – WHAT IS THE APPROPRIATE ROLE OF GOVERNMENT?

The larger public policy issue behind public sector information policies is whether or not commercial government activities that compete with the private sector are proper for a government agency funded primarily by the taxpayers. In 1995, European national meteorological services prevailed in the World Meteorological Organization on the issue of replacing the organisation's previous policy of full and open exchange of meteorological information with a procedure (WMO Resolution 40, CgXII), which sanctions charging and use restrictions on broad categories of data. In the words of the National Academy's 'Privatization' study, summarised above:

The change of policy was aimed at preventing private sector entities from competing with national meteorological services in Europe, which recoup costs through sales of data and services... WMO Resolution 40 substantially decreased the amount of data member nations made freely available.<sup>14</sup>

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13 Sources: Commercial Weather Services Association, Association of Environmental Data Users of Europe.

14 National Research Council (2001). *Resolving conflicts arising from the privatization of environmental data*. National Academy Press.



Three recent examples illustrate the Academy's point.

- In Switzerland, a commercial meteorology firm alleged that the Swiss national meteorology office was engaging in price discrimination by offering discounted, nominal prices to its own commercial arm. The Swiss competition authority held:

– Anyone engaging in the sale of meteorological [data] as well as providing sovereign activities, is acting as an independent party in the commercial process and, as a public undertaking, is subject to the provisions of the Antitrust Act ... In the Swiss market, [the Swiss Meteorological Institute] has a market-dominating position. It must make available to interested third parties on a non-discriminatory manner all the data and products which it uses for its own services<sup>15</sup>

- In Germany, the leading news magazine *Der Spiegel* recently published an expose of the German meteorological service, Deutscher Wetterdienst (DWD)<sup>16</sup>. It claimed that the DWD was also engaging in price discrimination in an attempt to drive its newly emerging commercial weather service 'competitors' out of business. DWD was said to be offering completely produced and ready to air weather forecasts to television and radio stations at prices equal or lower than charged the commercial meteorological firms for the raw data on which to base their competing broadcast forecasts. According to atmospheric sciences professor Dr Michael Sachweh of the Ludwig-Maximilians University in Munich:

– This is for sure no fair competition ... The commercial companies are pushed to the wall

- In an apparent attempt to drive commercial weather companies out of business, the Finnish Meteorological Institute (FMI) deliberately degraded its radar images between June 1999 and December 1999 when delivering them to the Scandinavian Composite consisting of radar images for Finland, Sweden and Norway, which is sold to private sector commercial weather services. The degraded radar images contained false radar signals ('clutter') which users mistook for rain. In its own operations, the FMI used the high-quality radar observations.

The Finnish Competition Authority found that the FMI abused its dominant

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15 Swiss Competition Commission (November 16, 1998). The case is being appealed on other grounds.

16 *Der Spiegel*, Issue 47 at p. 230, (November 19, 2001).

position in the national meteorological data market and recommended an infringement fine of FIM 200,000 (33,500 Euro) on the FMI for its breach of competition legislation. To remedy this situation, the Finnish government has announced plans to separate and privatise the commercial arm of FMI as a self-sustaining private sector entity without government subsidy, and retain its ‘public purpose’ functions in a taxpayer funded government agency subject to open data policies.<sup>17</sup>

In addition to Finland, two other European countries are actively reconsidering the wisdom of such policies and practices.

In Sweden, the Agency for Administrative Development’s (Statskontoret) seminal report ‘The State as Commercial Actor’ identified a range of issues associated with government entities entering the commercial field and the effects on the private sector<sup>18</sup>. For example, they found that the National Land Survey:

- Had an unfair competitive advantage over emerging commercial firms;
- Was the dominant player in the geographic information market;
- Is the ‘preferred’ provider in the market due to its ‘official’ status;
- Has access to taxpayer-funded ‘strategic infrastructure’, including government owned information technology assets;
- Has copyright and other rights over public sector data;
- Is partly funded by taxpayer Kronor and enjoys monopoly rents from other entities;
- Obscures the demarcation between government and private activities.

In light of these findings the Statskontoret recommended that the commercial arm of the National Land Survey be completely privatised, subject to open public audit and oversight, and its data holdings placed in the public domain for access by the general public and competing private sector entities.

As follow-on to ‘The State as Commercial Actor’, the Statskontoret was asked to examine the operations of the Swedish Meteorological and Hydrological Institute (SMHI), and has reached similar conclusions.<sup>19</sup> It recommended that the commercial functions of SMHI be split off into a private corporation, and the essential government functions of SMHI be retained in a government agency with an open and unrestricted data policy. The study went one step further by recommending that the practice of ‘cross-subsidisation’ of SMHI by ‘assignment’ work from other government agencies should cease. Validated requirements of agencies responsible for roads, fisheries, forestry, etc. would either be put out to bid, or would be designated as inherently governmental and specifically autho-

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17 Interview with Finnish Competition Authority, September 2001.

18 *The State as Commercial Actor* (2000). Available only in Swedish.

19 *Prognos för SMHI - myndighet, bolag eller både och?* (‘Forecast for the SMHI - authority, company or both?’) 11 January 2002. Available only in Swedish.

rised to be performed by SMHI under direct appropriations. The Statskontoret recognised, as argued elsewhere in this paper, that transfer payments from other government agencies have usually been counted by national meteorological services as part of their ‘commercial’ revenues, and touted as part of their success at ‘commercialisation’. An effective date for the separation of SMHI into private and governmental arms has yet to be established.

In the Netherlands, the Ministry of Economic Affairs published a report on unfair government competition with the private sector in the specific context of public sector information.<sup>20</sup> The main conclusions were:

- Public sector databases should be made available to third parties on a non-discriminatory basis at uniform prices;
- The public sector should not make unnecessary modifications to databases to create unfair competition. In other words, information services directly linked with the ‘public task’ are allowed, and all other (commercial or ‘value added’) services are forbidden;
- Additional (commercial) information services may only be provided by the public sector when there is a public need for such services, and no private sector company is already providing that service and it is unlikely that any private sector company is going to pursue it in the near future.

Based on this report, the Dutch government separated the commercial arm from the Dutch Royal Meteorological Institute into a commercial entity.

The Swedish and Dutch studies agree generally with consensus views in the US, which are restated by Stiglitz, et al., ‘Role of Government in a Digital Age’<sup>21</sup>. The Computer and Communications Industry Association commissioned Nobel Laureate and former chair of the US Council of Economic Advisors, Joseph Stiglitz, to analyse the role of government in a digital age, with particular emphasis on public-private competition issues through a number of agency case studies. With regard to the National Weather Service partnership with the private sector and the balance between public and private roles, the report concluded: ‘The National Weather Service seems to strike this balance well’.

An opposite viewpoint remains prevalent among commercialised European government agencies, particularly among national mapping and meteorological agencies. It has been articulated formally in the United Kingdom, where Ministries actively encourage government bodies to develop value-added services charged at market prices:

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20 Ministry of Economic Affairs (1997). *Markt en Overheid; spelregels voor gelijke concurrentieverhoudingen tussen overheidsorganisaties en private ondernemingen*.

21 Stiglitz, et al. (2000). *Role of Government in a Digital Age*. Computer and Communications Industry Association. October 2000.

All government bodies will be free to offer value added products and services providing this is done in a transparent manner in a level playing field among all market participants.<sup>22</sup>

We agree, however, with the central conclusions of both the Swedish and Dutch governments that a level playing field without unfair competition and cross subsidisation is impossible in the case of government agencies providing both commercial and public interest services. Two recent significant experiments in the UK will test this conclusion.

In December 2001, the UK government preliminarily decided to transfer the entire Ordnance Survey from a 'Trading Fund' to a government-owned public limited company (PLC) with the government owning 100% of the shares. By contrast, in Sweden (land office and met office, SMHI), the Netherlands (met office, KNMI) and soon Finland (met office, FMI), the approach is privatisation of the 'commercial arm' while retaining the 'public interest' arm in the government. The belief in Sweden, Holland and Finland is that the basic observing systems and the official forecasts and warnings generated from their data are inherently governmental, as are the public interest mapping and land registration functions of the Swedish land office. This approach inevitably leads to an open data policy since the new 'spin off' will need to fend for itself against competition, and the only way to guarantee a 'level playing field' is through an open data policy.

In the Ordnance Survey situation, as pointed out by the Swedish Statskontoret in the context of the analogous Swedish agency, if the entity performs both governmental and commercial functions it will tend to have a natural monopoly position due to economies of scale and other factors, and will continue to need infusions of taxpayer funds (even if under contract rather than as a direct appropriation) as 'commercial' revenues will not be adequate to fund the 'public interest' aspect. If this is accompanied by the right to control the underlying data, funded in part by the taxpayers, healthy competition from other private entities and the overall growth of that economic sector will be impeded.

Using a different model, the UK Met Office has recently entered into a joint venture with private sector interests to create a new entity, Weather Exchange Ltd., which will carry out the functions of the Met Office's commercial arm, and seek to develop and market a range of value added products. The private interests will contribute capital and staff, and the Met Office will contribute data and staff. Outstanding questions are whether this new entity will have any of the competitive advantages cited by the Swedish Statskontoret in the context of publicly owned commercial entities, and whether the Met Office will adopt a completely open data policy. How these questions are answered will determine whether the

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22 Department of Trade and Industry (2000) *Click-Use-Pay – Hewitt*. News Release September 6, 2000, P/2000/602.

commercial meteorology and weather risk management industries in the UK begin to expand, and at what rate.

#### 4. FAILED EXAMPLES OF COST RECOVERY IN THE UNITED STATES

There have been a number of examples of failed cost recovery experiments in the United States at both the Federal and State levels, which demonstrate concretely the practical effects of restrictive data policies.

- The ‘Automated Tariff Filing and Information System’ (ATFI) was created by the US Federal Maritime Commission (FMC) to collect, manage and disseminate data on tariffs filed by common carriers, including information on cargo types, shipping destinations and service contract terms. In November 1992, Congress passed the ‘High Seas Driftnet Fisheries Enforcement Act’, Public Law 102–582, which included a requirement that FMC collect user fees from anyone directly or indirectly accessing ATFI data. The goal was to raise \$810 million over three years by charging 46 cents per minute to retrieve the information directly or indirectly. However, the actual user fees collected were \$438,800, which was only 0.05% of the original mandate.<sup>23</sup> This dramatic failure can be attributed to (1) optimistic assumptions about the perceived inelasticity of tariff data, and (2) failure to consider the possibility that users may obtain tariff data from other sources
- The United States Geological Survey (USGS) in the early 1980s attempted to move towards cost recovery by increasing prices for data products including maps. As a result, demand dropped so precipitously that the USGS was forced to quickly reduce prices to recapture the previous market. After reducing the charges to previous levels, sales took three years to return to their earlier level. After this failed attempt towards aggressive cost recovery, the USGS struggled for several years to find a balanced method to recover dissemination costs, suggesting that recovering dissemination costs only is not always easy. USGS has recovered close to 100% of its dissemination costs for the past 4 years, which they now realise is the practical upper bound of cost recovery<sup>24</sup>
- A spectacular example of the failure of cost recovery for data comes from the State of California.<sup>25</sup> California encouraged State level agencies to charge fees

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23 United States General Accounting Office, Accounting and Management Division, March 10 1995 GAO/AIMD-95-93R ATFI User Fees. Also see: *Washington Post* Editorial, August 4 1992, ‘Boats, Budgets and a Bad Idea’.

24 Blakemore, Michael and Gurmukh Singh (1992) *Cost Recovery Charging for Government Information. A false economy?* pp. 30–34; updated by USGS staff.

to local levels of government within the state for products derived directly from base data provided by these same local levels of government. This cost recovery policy resulted in several problems. First, some local governments could no longer afford to pay for the same products they once obtained at no cost, leading to a disincentive for these local governments to continue providing updated data to the State. Second, some local governments retaliated against the State-level agencies by charging their own user fees. While the State of California has since returned to the ‘free’ system, some local governments continue to charge user fees. Now, due to local government assertion of intellectual property rights, the State cannot include information in public documents obtained from local governments that charge user fees for that information. This has led to incomplete datasets, and State regional plans have a ‘swiss cheese’ appearance, with some areas containing significantly more detail than others. These incomplete and internally inconsistent maps can be particularly troubling during public emergencies when complete, accurate, and easily accessible data is essential. Recognising the failures of cost recovery policies, California has begun to move towards a state-wide open data policy

- A tale of two counties. An unintended controlled experiment in cost recovery was performed by two counties in Wisconsin.<sup>26</sup> Clark County adopted a cost of dissemination policy for its digitised aerial photographs (digital orthophotos); and Brown County adopted a full cost recovery policy for its identical products. The inexpensive data in Clark Co. led to widespread use by individuals who might not otherwise have even tried using the data. People invested in CAD/GIS software and availed themselves of the County data for a broad range of applications. People got ‘hooked’ on using the data and kept coming back for more. The contrast with Brown County was striking. The cost recovery pricing did not discourage a small number of specialised users such as professional surveyors or others who have site-specific projects where only one section or two of data was needed. However, those needing much larger areas, e.g. entire townships or cities, were deterred by the high pricing. As the county program manager stated:

– Some of the responses from people requesting data is, ‘I can’t afford that! That blows the entire budget for this project’. So they choose not to buy ANY of the data, hang up the phone, and generally go away

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25 National States Geographic Information Council (2001) *Fees for Data discussion*. Informal email discussion.

26 This would include, for example, the removal of specific fields or records. However, in considering appropriate treatments, agencies should avoid unduly compromising the potential value of the data that may be derived.

with a bad taste about the entire program. I don't think we're generating much support this way. When people choose not to use our data because it is too expensive, what are the implications? Most people who want to use the data are doing something to the land which affects the community that we all live in. Without good, accurate data, are these people able to make the best decisions? I've seen it from both sides of the fence, and I plan to work on revising our policy.

## 5. LIMITATIONS ON COST RECOVERY IN EUROPE

We believe the perceived benefits of cost recovery have generally been overstated by commercialised European government agencies. The following five examples support this point:

- The Ordnance Survey (OS) of the United Kingdom was chartered as a semi-independent Executive Agency in 1990, and is required to maximise its reliance on revenue from customer entities. However, OS does not approach full cost recovery. Of the £100 million annual OS revenues, only £32 million comes from commercial product sales. The remainder comes from other central, regional and local government departments and agencies as well as from entrenched usage of large scale maps by the recently privatised utilities. These remaining revenues cannot reasonably be characterised as 'commercial', but rather are a combination of monopoly rent and reallocation of public money from one public sector ledger to another, with no net benefit to the taxpayer or the Treasury
- Similarly, the UK Meteorological Office gets 50% of its 'commercial' revenue as a transfer payment of taxpayer funds from the Ministry of Defence, and reportedly another 20% of its revenue from other UK government agencies.<sup>27</sup> The Met Office recently decided to make significant categories of basic observational (surface) data available for free due to negligible revenue from data sales and a growing recognition of the benefits of open access policies
- The Deutscher Wetterdienst (DWD) was reorganised in a 1998 statute that explicitly authorised its commercial activities with a mandate that it minimise reliance on general state funding. However, an audit report issued October 25, 2000 by the German Federal Accounting Office (Bundesrechnungshof), shows that this cost recovery policy has not met expectations.<sup>28</sup> Also, in spite of years

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<sup>27</sup> See 'It's raining weathermen', *The Financial Times* (April 23.2001).

<sup>28</sup> Bundesrechnungshof (2000) *Gebühreneinnahmen aus Flugwetterdienstleistungen des Deutschen Wetterdienstes und Entwicklung der Ausgaben und Einnahmen des Deutschen Wetterdienstes*.

of expensive consulting assistance, DWD has been unable to set up transparent accounting standards. Data sales recover less than 1% of total expenditures. In sum, DWD has yet to minimise the expenditures that are not covered by income and decrease the burden on the general budget. The report finds that without significant new revenue sources, for example new charges on regulated aviation users of meteorological data, DWD will not achieve its statutory cost recovery mandate

- The European Centre for Medium-Range Weather Forecasting is losing private meteorology firm customers for its operational model outputs due to unaffordable prices required to be charged by its national meteorological service sponsors. The emerging European commercial meteorology industry is rapidly taking advantage of increasingly inexpensive computational capacity to run their own localised versions of freely available US atmospheric models, and are using freely available US data to initialise those models
- Météo-France is among the most secretive (French taxpayers cannot obtain access to the details of its expenditures and revenue sources under existing freedom of information law)<sup>29</sup> and aggressive (only one French commercial meteorology firm has been identified) of the European meteorological services. A recent WMO report disclosed, however, that Météo France has come to an understanding with the French treasury that it would endeavour to achieve a cost recovery rate of 10% of its total expenses.<sup>30</sup> Beyond data sales, this presumably includes revenue from specialised products for broadcasting and individual clients. In addition, it has established a separate office 'Météo-France International' to encourage developing nations to emulate its government commercialisation and restrictive data policies.

## 6. OTHER RECENT DEVELOPMENTS IN SELECTED COUNTRIES

### THE NETHERLANDS

- Three documents under consideration in the Lower Chamber will impact the policy framework for making government information available in the new millennium. The plan 'Towards the optimum availability of government information', has developed an ambitious agenda, and declares that government

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29 Statement of Charles DuPuy before the Swedish Meteorology Society, October 2000.

30 WMO Regional Office for the Americas, Regional Seminar on Marketing for NMHSs (September 2001).



information must be easily and widely accessible and available. It contains a clear analysis of the judicial framework concerning the use of government information. As far as effectiveness is concerned, the plan has a certain degree of 'try not to step on anyone's toes' especially in the category of 'remaining information'

- The Netherlands completed a comprehensive policy review under its Electronic Government Action Programme, 'Towards Optimum Availability of Public Sector Information'. This brings the information policies of the Netherlands into close harmony with those of the United States. However, implementation may be less than smooth. The policy objective pursued by the Action Programme is to ensure that public sector information is as widely accessible and available to citizens as possible. First, citizens need that information in order to participate in the democratic process. Secondly, the economy will benefit from public sector information being made available in an open and unrestricted manner. The Action Programme expressed concern that public sector bodies had been reserving copyright and database protection rights on a large scale, and that this was contrary to the spirit of Dutch FOI law. It proposed that no license fee should be charged for the use of public databases, and that copyright and database-right required conditions should only be set for external use to protect the public interest and third party rights
- The 'Government and Markets' Directive,<sup>31</sup> specified that public sector databases could be made available to third parties only on a non-discriminatory basis and at uniform prices. It also indicated that the public sector should not make unnecessary modifications to databases to create unfair competition. This report led to the separation of the commercial arm of the Royal Netherlands Meteorological Institute (KNMI) in 1999 as a limited liability corporation (no public sector employees) into a company called Holland Weather Service. Since then, the Dutch government has implemented the following policies:
  - Stepwise designation of all meteorological data as 'essential' under WMO Resolution 40;
  - Adoption of an 'open and unrestricted' data dissemination policy with charges limited to distribution costs only.

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31 Directive on market activities conducted by government departments, *Dutch Official Journal* 1998, no. 95.

## UNITED KINGDOM

- The UK government has accepted the general principle of providing government data at marginal costs
- However, Trading Funds, e.g. the Ordnance Survey and the Met Office, are specifically excluded from this principle. In general, trading funds have the most interesting public sector datasets when it comes to opportunities for the private sector and the scientific and research communities.<sup>32</sup> The Trading Funds are, however, to 'improve' (i.e., make transparent) pricing and dissemination policies
- A trend within the UK towards making basic data available is illustrated by a freedom of information law that was enacted in November 2000 and will be implemented starting fall 2002. However, a counter trend towards increasing commercialisation of government agencies still exists, particularly in the cases of the Ordnance Survey and the Met Office, discussed above
- Financial targets for Trading Funds are set by the Treasury, and reflect the cost of assembling data, not its value. The problem this creates is illustrated by the decision to make 2001 Census Data free of charge when it became clear that public sector bodies wouldn't budget to buy the data, which costs £250 million to assemble. In addition, the UK Meteorological Office is now openly disseminating categories of meteorological observations which are of potentially great public benefit, but which did not generate significant revenue for the agency.

## FINLAND

- The 1999 Publicity Act provides for a general right of access to legally defined administrative documents created, sent, or received by a government agency, including electronic records, on condition that the document is in the public domain. A public authority can collate various databases and make them available. Data from various public sources can be combined and re-used. The authorities also are to promote public access to information and they are expected to pro-actively publicise their activities and to ensure all relevant documents are readily available.

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32 See e.g. Lopez, Xavier points out the importance of National Mapping data for commercial purposes.

## GERMANY

- No Federal freedom of information law exists in Germany, but one is being considered. As regards access to public sector information, an official statement on the intent of the law under consideration is that, 'People should be able to access original documents at any time on-line and perform transactions which are important for their daily lives with the administration via the Internet. The public authorities need to make increasing use of the technical possibilities now available to make their administration work transparent for everyone'. However, data policies and commercial re-use of government information do not seem to be under consideration
- In July 2001, a potentially significant competition case in the information field arose in Germany.<sup>33</sup> The European competition Commissioner ordered the German company IMS Health to license its geographical 'brick' system to competitors due to abuse of its dominant market position. The 'bricks' are geographic grids that break down countries and cities into meaningful geographical units for analysing public health related geographical patterns e.g. doctors' prescriptions, drug sales and public health trends. In the view of the Commissioner, the 'bricks' constitute a de facto industry standard in Germany, also known as an 'essential facility' in antitrust law, and for there to be fair competition IMS health must license its copyright on reasonable terms. The decision, which is being challenged in German courts, indirectly implicates the question of what types of public sector information may form an 'essential information infrastructure'. In short, is compulsory licensing of essential government databases on equitable terms necessary to foster a competitive private sector information industry?

## 7. CONCLUSIONS

- The consensus of recent research is that charging marginal cost of dissemination for public sector information will lead to optimal economic growth in society and will far outweigh the immediate perceived benefits of aggressive cost recovery. Open government information policies foster significant, but not easily quantifiable, economic benefits to society
- Over the long term, the cost recovery goal of European governments' commercialisation approach cannot succeed, because:

– The private user base that can be charged is not large enough to

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33 *The Economist* August 25th 2001. 'Battling over bricks. A growing row over intellectual property rights'. p. 54.

support recovery of the full costs of a comprehensive, unsubsidised information service;

- Charging other government users merely shifts the expenses from one agency to another rather than actually saving the national treasury any money;

- Due to some of the fundamental economic characteristics of information (high elasticity of demand, public good characteristics) one must question whether any governmental entity can successfully raise revenue adequate to pay not only for the dissemination of its information but also for the costs associated with creating the information for governmental purposes in the first instance

- High prices for information ultimately lead to predatory and anticompetitive practices, like price dumping, and the creation of government owned corporations or joint ventures with preferred private sector entities that may serve to exclude others from the market.

- The most sensible solution is to separate commercial activities into truly commercial entities separate from the government and adopt open access policies. Separation of commercial activities would be the basis not only for an open market in accordance with European competition law, but also guarantee market structures with maximum overall economic potential
- Some government agencies are willing to liberalise their policies, but fear that they will suffer budget consequences. Therefore, the relevant government Ministries must come to understand that open data policies will create wealth and tax revenues more than adequate to offset the short term ‘losses’, and that they need to fully fund agency information activities.

In sum, recognition is slowly emerging in Europe that open access to government information is critical to the information society, the scientific endeavour, and economic growth. However, recent trends towards more ‘liberal’ policies face opposition. This comes from treasuries as well as from entrepreneurial civil servants in charge of ‘government commercialisation’ initiatives, who are sometimes tempted to engage in anti-competitive practices. Therefore, these issues require consideration at the highest policy making levels of government.

Recognising the scale of the opportunity presented, and the speed of enabling technological change, the US and the EU should commit to move forward together to take the practical steps necessary to establish internationally harmonised open and unrestricted data policies for all public sector information.

# CHAPTER TWENTY-SEVEN

## INQUIRY INTO IMPROVING ACCESS TO VICTORIAN PUBLIC SECTOR INFORMATION AND DATA: EXECUTIVE SUMMARY AND RECOMMENDATIONS\*

~~The Committee's Terms of Reference required it to examine the potential for open source licensing to be applied to Victorian Government information. The Committee determined to examine two areas of inquiry encompassed by the Terms of Reference – the application of open content licensing to Government information and data, and the use of open source licensed software by the Government.~~

The Inquiry responds to increasing interest in the private and public sectors, and internationally, in thinking about how information and data held by governments and other public organisations can best be used for the public good.

The use and distribution of public sector information (PSI) touches upon a range of critical issues for government, in which it must balance competing demands for and upon the information and data it holds, while ensuring that it acts appropriately as a custodian of that information and data. The release of PSI by the Victorian Government for re-use may lead to increased commercial activity, provide primary data to researchers in a wide range of disciplines, and increase transparency of government in Victoria.

The Inquiry also examines issues surrounding increased use of open source software (OSS) by the Victorian Government. OSS is software that can be redistributed and modified without the payment of fees or royalties, and for which the source code is made available.

Open source software already comprises a significant part of the global software makeup. The primary interest for users in the development and deployment

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*1 Reproduced by permission of the Honourable Speaker of the Legislative Assembly, Victoria, Australia.*

of OSS is that it can potentially provide similar services to proprietary software at lower cost, as licence fees are not required.

## CHAPTER TWO: A NEW APPROACH TO THE MANAGEMENT OF VICTORIAN PUBLIC SECTOR INFORMATION

Internationally, governments and the public sector are the largest holders of information of all kinds. With the development of information technology, the potential for information held by the public sector to contribute to a range of economic and socially beneficial outcomes has increased.

Recently a number of jurisdictions have introduced measures to improve access to and re-use of PSI, on the premise that doing so will produce economic and social benefits and returns. Quantitative data about economic benefits arising from increased commercial exploitation of PSI does not currently provide clear guidance for policy, but there is a growing view that new commercial enterprises will emerge as access to PSI improves.

The Committee considered evidence that improved access to and re-use of PSI may assist people to make more informed, and better, decisions about their businesses and activities. Improved access to PSI may also help to overcome the ‘silo’ effect in government, where government agencies do not effectively share or disclose the information they hold to other government agencies. In this context, improved access to and re-use of PSI may lead to improved efficiency in government, business, and for the public generally.

The best way for government to realise economic and efficiency gains from PSI is through the development of an overarching government Information Management Framework (IMF). The object of the IMF should be to facilitate access to and re-use of Victorian PSI. This can be achieved by the Government endorsing open access to PSI as its default position, and requiring that the Victorian Government, under the proposed IMF, define and describe conditions under which access to PSI can be restricted, and establish a systematic and consistent

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\* This was first published as a report titled *Inquiry into Improving Access to Victorian Public Sector Information and Data* by the Economic Development and Infrastructure Committee, Parliament of Victoria. The original report is available at: [www.parliament.vic.gov.au/edic/inquiries/access\\_to\\_PSI/final\\_report.html](http://www.parliament.vic.gov.au/edic/inquiries/access_to_PSI/final_report.html)

Members of the Committee were Hon. Christine Campbell, MP (Chair); Mr David Davis, MLC (Deputy Chair); Mr Bruce Atkinson, MLC; Mr Peter Crisp, MP; Mr Hong Lim, MP (from 2 June 2009); Mr Brian Tee, MLC; Mr Evan Thornley, MLC (until 9 January 2009); and Hon. Marsha Thomson, MP.

methodology for categorising and storing information and data. The IMF should be introduced prospectively for Government PSI, applying to information and data generated from now on.

Programs and policies that support improved access to and re-use of PSI will only be effective when government, business and citizens are able to identify what information and data exists. A comprehensive, searchable register of documents and materials held by Government is an essential component of any policy to improve access to PSI.

### CHAPTER THREE: DEFINING THE ‘PUBLIC SECTOR’ FOR THE INFORMATION MANAGEMENT FRAMEWORK

A core task when considering implementation of the IMF for Government is to determine which institutions and agencies the policy will apply to. In the context of PSI, there are a wide range of existing definitions for what could comprise the public sector. These include definitions from relevant legislation in Victoria and the Commonwealth, which may include departments, statutory authorities, educational institutions, hospitals, local government, and so on.

While there are strong arguments in favour of enhancing access to PSI held by most public sector agencies and organisations, the argument for Government compelling all public sector agencies to make their information and data available for re-use is less clear cut. Consequently, the IMF should apply initially only to Victorian Government departments.

### CHAPTER FOUR: CRITERIA FOR DETERMINING THE RELEASE OF PUBLIC SECTOR INFORMATION

The Inquiry’s Terms of Reference required the Committee to consider the types of PSI that would provide the greatest benefit if made more accessible. In recognition of the diverse range of government-owned materials, the Committee suggested that the Victorian Government should encourage departments to identify materials to publish proactively on their websites.

There are a number of valid reasons for restricting access to government-owned information and data. One of the most important reasons for restricting access is in order to preserve a person’s right to privacy, and in particular to prevent the disclosure of identifying information about individuals or groups of individuals. Consequently, certain PSI should not be released except where it is possible to remove personal information from the information or data.

The *Freedom of Information Act 1982* (Vic) protects the disclosure of documents that affect the personal affairs of another person, as well as documents that are commercial-in-confidence; contain information that would undermine law enforcement; or were supplied in confidence. Secrecy considerations also provide sufficient reason for governments to restrict access to PSI. Access to PSI may also be restricted when materials are subject to specific contractual arrangements, and when information and data contained within the PSI is under development or incomplete.

The release of Victorian Government PSI will likely result in instances where errors in information or data, or unintended disclosure, leads to non-government users of PSI or third parties considering legal action against the Government. The Victorian Government will need to seek legal advice and ensure it is fully covered for legal action that may arise in association with the release of PSI.

## CHAPTER FIVE: ISSUES SURROUNDING SELECTED PUBLIC SECTOR INFORMATION

Governments generate and hold a diverse array of PSI, most of which has the potential to be used for economic and social benefit. On this basis, the Committee identified particular categories of PSI to which access could be improved.

The spatial information industry makes a significant contribution to the Australian economy. The Victorian spatial information industry, for example, generated total revenue of \$410 million in 2008. However, the absence of comprehensive policies around quality of data and licensing within and across governments has resulted in ongoing issues with access to spatial information. The Committee identified opportunities to improve conditions for access to and re-use of spatial data in Victoria, and allow this data to contribute to new commercial and public services and research.

Australian governments make a significant contribution to scientific inquiry and research and development (R&D), with the Victorian Government making a major contribution through its Science and Innovation Initiative (STI). Improved access to publicly funded research will likely encourage collaboration and collective learning, and improve the efficiency of government investment in R&D. A number of international and Australian publicly funded research councils now claim to support open access to research findings.

All Australian education departments provide schools, TAFES and universities with resources to support teaching and learning activities. There are few limitations on access to these education materials as they are often made available on government websites. However, costs associated with copying and communicating these materials may act as a barrier to extensive use by schools.



The Committee considered a number of initiatives that promote cost-effective copyright practices, and proposed strategies to simplify current arrangements for the disbursement of fees from schools to Government departments.

## CHAPTER SIX: LICENSING PUBLIC SECTOR INFORMATION

The Committee considered appropriate licensing systems to enhance access to and re-use of Victorian Government PSI, and noted that copyright offers governments a simple and effective way to maintain the quality and authenticity of their materials.

The Committee received evidence that inconsistent licensing systems across and within government obstruct access to PSI. A consistent whole-of-government licensing system is required to achieve greater efficiency in the management of copyright throughout the Victorian Government.

Open content licensing systems can increase access to and re-use of PSI without requiring governments to relinquish IP rights. Open content licences facilitate open access to copyright material by making materials available for re-use on liberal terms. Most evidence received by the Committee supported the application of open content licences to Victorian Government PSI.

A range of open content licences currently exist, with the Creative Commons (CC) licensing model most widely recognised. The Australian model of CC comprises six licences, all of which are non-discriminatory. The Committee noted that momentum for the use of CC by Australian public sector agencies is increasing. The Committee also received evidence that the CC licences can be applied to 85 % of PSI.

Access to and re-use of Victorian Government PSI will be most effectively implemented through the use of CC licences. Adoption of CC by the Victorian Government will help to obtain licence interoperability across the public service, and work towards inter-jurisdictional harmonisation of copyright arrangements across Australia.

The Victorian Government should adopt a hybrid licensing model, comprising the CC licences for most PSI and tailored licences for the remaining PSI where restricted access is warranted. For PSI released under CC, the Victorian Government should attach licensing conditions that facilitate information and knowledge flows, and experimentation with existing knowledge.

## CHAPTER SEVEN: PRICING PUBLIC SECTOR INFORMATION

Four pricing models for application to PSI usually cited in the literature are: no costs; marginal costs; cost recovery; and profit maximising. The Committee considered the application of the first three models to PSI, as profit maximisation is not a common pricing strategy in the Victorian Government. Cost recovery is currently the core pricing strategy of the Victorian Government, with the Victorian spatial information industry also applying cost recovery to the pricing of spatial data.

The application of no cost or marginal cost pricing to information products, in particular those considered part of the Victorian Government's 'basic information product set', is the most effective method to achieve economic efficiency.

While cost recovery pricing reduces reliance on general taxation revenue, the application of no cost or marginal costs to PSI may maximise its economic and social value. No cost or marginal cost pricing facilitates access to PSI within the broader community. Internationally, in response to growing evidence regarding the benefits associated with the marginal cost model, there has been a clear shift in the pricing policies of various countries that have traditionally adopted cost recovery.

Cost recovery can enhance economic efficiency if it is appropriately implemented. For example, cost recovery is appropriate when attached to the provision of products that are additional to the basic information product set at the request of individual users. Cost recovery is inappropriate if those products have public good characteristics and/or produce significant positive externalities.

A shift in the Victorian Government's pricing policy from cost recovery to no costs or marginal costs will likely create more opportunities for the community and private sector to re-use and add value to PSI.

## CHAPTER EIGHT: TECHNICAL INFRASTRUCTURE FOR THE RELEASE OF PUBLIC SECTOR INFORMATION

Technical infrastructure will be required to support implementation of the Victorian Government IMF. A critical feature of the technical infrastructure will be its interoperability, which can be achieved through the adoption of agreed standards for information storage and delivery formats, metadata frameworks and data directories.

The Victorian Government should adopt open standard formats for generation and storage of its PSI wherever possible. This will ensure that the Government minimises the chances of vendor and software 'lock-in', and maximises

opportunities for effective archival storage of Government PSI.

The most effective way for the Victorian Government to make its PSI available for re-use will be through a system of decentralised custodianship. This will ensure that the people or agencies with expertise in particular PSI maintain their role as principle custodians of it. The implementation of department-based and decentralised custodianship will require high level commitment from the Victorian Government to ensure its success.

An effective policy for access to and re-use of PSI will only be successful when people are able to identify what information exists and where it is held. The Victorian Government should require that metadata records be developed for its PSI under an agreed standard, such as the Australia Government Locator Service (AGLS) metadata standard. Maintenance of PSI metadata should also be performed by PSI custodians through a decentralised model.

In order to facilitate discovery, the Victorian Government should develop a searchable, whole-of-government PSI directory. This should draw together the metadata generated by PSI custodians, and be hosted at a single agency.

## CHAPTER NINE: SUPPORTING ACTIONS FOR THE IMPLEMENTATION OF THE INFORMATION MANAGEMENT FRAMEWORK

The Committee recommends that implementation of the Victorian Government IMF be supported by a number of mechanisms. These include the establishment of a whole-of-government steering committee. The steering committee should have responsibility for overseeing, guiding and implementing the Victorian IMF, and be required to report regularly on its progress to the Minister responsible for the IMF.

A key feature of the Victorian Government IMF should be a focus on interoperability, particularly through the adoption of open standards for data generation, documentation, and storage. The value of the IMF will be further enhanced if it is designed to be interoperable with other jurisdictions, nationally and internationally. For this reason, the Victorian Government should liaise with, and if necessary lead, national harmonisation in approaches to access to and re-use of PSI.

The establishment of the Victorian Government IMF will only achieve its full potential when there is high public awareness of the Victorian Government's actions in this area. For this reason, facilities for access to and re-use of PSI should be widely promoted once it is operational.

The effectiveness and value of the IMF will be further enhanced with the establishment of a reporting mechanism. This will allow the IMF to be continually appraised, for public servants and the public to refine the system, and for com-

plaints to be considered.

## CHAPTER TEN: OPEN SOURCE SOFTWARE

OSS is currently used alongside proprietary software in a wide range of environments and for diverse purposes. OSS is generating interest internationally because the licensing model appears to offer opportunities for significant ICT cost savings, while offering comparable security and support to proprietary software.

In practice, a cost comparison of OSS and proprietary software will always be best determined on a case-by-case basis. The Total Cost of Ownership (TCO) for both proprietary software and OSS will be determined by a number of factors, of which licensing conditions comprise only one part.

In order to ensure that the Victorian Government can obtain the best software solutions at least cost, it should ensure that its software procurement processes do not discriminate against either model. The Victorian Government may achieve this by ensuring: that public servants are aware of, and comfortable with, the use of products licensed under both models; and that its requests for tenders do not require the use of proprietary software, standards or formats.

# CHAPTER TWENTY-EIGHT

## ENGAGE: GETTING ON WITH GOVERNMENT 2.0\*

*Government 2.0 Taskforce (Nicholas Gruen, Chair)*

### KEY POINTS

- Government 2.0 or the use of the new collaborative tools and approaches of Web 2.0 offers an unprecedented opportunity to achieve more open, accountable, responsive and efficient government.
- Though it involves new technology, Government 2.0 is really about a new approach to organising and governing. It will draw people into a closer and more collaborative relationship with their government. Australia has an opportunity to resume its leadership in seizing these opportunities and capturing the resulting social and economic benefits.
- Leadership, and policy and governance changes are needed to shift public sector culture and practice to make government information more accessible and usable, make government more consultative, participatory and transparent, build a culture of online innovation within Government, and to promote collaboration across agencies.
- Government pervades some of the most important aspects of our lives. Government 2.0 can harness the wealth of local and expert knowledge, ideas and enthusiasm of Australians to improve schools, hospitals, workplaces, to enrich our democracy and to improve its own policies, regulation and service delivery.

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\* First published as the Executive Summary and Recommendations in Engage – Getting on with Government 2.0 by the Government 2.0 Taskforce, [www.gov2.net.au](http://www.gov2.net.au). The report is available at [www.finance.gov.au/publications/gov20taskforcereport](http://www.finance.gov.au/publications/gov20taskforcereport) and licensed under a Creative Commons Attribution 2.5 Australia [creativecommons.org/licenses/by/2.5/au](http://creativecommons.org/licenses/by/2.5/au).

Members of the Gov 2.0 Taskforce were Dr Nicholas Gruen (Chair), Ms Ann Steward (Deputy Chair), Mr Glenn Archer, Mr Sebastian Chan, Mr Adrian Cunningham, Prof Brian Fitzgerald, Ms Mia Garlick, Mr Peter Harper, Ms Lisa Harvey, Mr Mar-

- Government 2.0 is a key means for renewing the public sector; offering new tools for public servants to engage and respond to the community; empower the enthusiastic, share ideas and further develop their expertise through networks of knowledge with fellow professionals and others. Together, public servants and interested communities can work to address complex policy and service delivery challenges.
- Information collected by or for the public sector — is a national resource which should be managed for public purposes. That means that we should reverse the current presumption that it is secret unless there are good reasons for release and presume instead that it should be freely available for anyone to use and transform unless there are compelling privacy, confidentiality or security considerations.
- Government 2.0 will not be easy for it directly challenges some aspects of established policy and practice within government. Yet the changes to culture, practice and policy we envisage will ultimately advance the traditions of modern democratic government. Hence, there is a requirement for coordinated leadership, policy and culture change.
- Government 2.0 is central to the delivery of government reforms like promoting innovation; and making our public service the world's best.<sup>1</sup>

## EXECUTIVE SUMMARY

### WEB 2.0 AND ITS PROMISE FOR GOVERNMENT

The use of the internet as a platform for collaboration is already transforming our economy and our lives. Whole industries and sectors are being refashioned

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tin Hoffman, Ms Pip Marlow, Mr Alan Noble, Dr Ian Reinecke, Dr David Solomon and Mr Martin Stewart-Weeks.

See also the Federal Government's response to the Government 2.0 Taskforce report, available at [www.finance.gov.au/publications/govresponse20report/index.html](http://www.finance.gov.au/publications/govresponse20report/index.html). The Federal Government generally endorsed 12 of the 13 recommendations, including that the Creative Commons Attribution (BY) licence be the default licence for PSI. The response itself was made available under a Creative Commons Attribution 2.5 Australia licence [creativecommons.org/licenses/by/2.5/au](http://creativecommons.org/licenses/by/2.5/au).

1 Advisory Group on Reform of Australian Government Administration and the Management Advisory Committee project on Advancing Innovation in the Public Sector, see [www.dpmc.gov.au/consultation/aga\\_reform/index.cfm](http://www.dpmc.gov.au/consultation/aga_reform/index.cfm) and [www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx](http://www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx) or [tinyurl.com/nbx6jm](http://tinyurl.com/nbx6jm).

by this phenomenon of Web 2.0. Citizens are being empowered to express themselves, organise and collaborate in myriad new ways.

The tools of Web 2.0 include blogs, wikis and social networking platforms. These tools enable communities of interest to develop rapidly to find people with local knowledge or technical expertise to build understanding of issues and solve problems as they emerge. They enable communities to filter the torrent of information on the internet and identify the most useful parts of it. They enable us to find the most useful contributors in any given subject area, be they a world expert or someone possessing important local or ephemeral knowledge.

Web 2.0 also encompasses the way in which the internet has become a platform for the distribution of vast quantities of data and the way in which it has empowered people and organisations to transform data by ‘mashing it up’, combining it with other data so that it can become useful in new ways.

These new tools and the culture of open collaboration which distinguishes the culture of Web 2.0 present important new challenges and possibilities for government. This offers new opportunities to refresh and deepen the enduring principles and values of modern democratic government and improve the quality and responsiveness of government policy making and service delivery.

## THE TASKFORCE’S GOVERNMENT 2.0 AGENDA

The taskforce came to define its agenda for Government 2.0 in terms of three pillars:

- Leadership, policy and governance to achieve necessary shifts in public sector culture and practice.
- The application of Web 2.0 collaborative tools and practices to the business of government.
- Open access to public sector information (PSI).

Government 2.0 presents challenges to some long held government practices and has the potential to change the relationship between government and its citizens.

## THE PROMISE OF GOVERNMENT 2.0

By embracing Government 2.0 we can:

- make our democracy more participatory and informed
- improve the quality and responsiveness of services in areas like education, health and environmental management, and at the same time deliver these services with greater agility and efficiency
- cultivate and harness the enthusiasm of citizens, letting them more fully con-

- tribute to their wellbeing and that of their community
- unlock the immense economic and social value of information and other content held by governments to serve as a precompetitive platform for innovation
  - revitalise our public sector and make government policies and services more responsive to people's needs and concerns by:
    - providing government with the tools for a much greater level of community engagement
      - allowing the users of government services much greater participation in their design and continual improvement
      - involving communities of interest and practice outside the public sector — which offer unique access to expertise, local knowledge and perspectives — in policy making and delivery
      - more successfully attracting and retaining bright, enthusiastic citizens to the public service by making their work less hierarchical, more collaborative and more intrinsically rewarding.

Government 2.0 will be central to delivering on critical national objectives including delivering on our National Innovation Agenda — including the aspiration for a more innovative public sector.<sup>2</sup> It will be central to addressing the desire of the Advisory Group on the Reform of Australian Government Administration to establish in Australia the world's best public service which puts citizens at the centre of everything it does.<sup>3</sup> It will be an important component of the Department of Human Services service delivery reform agenda.<sup>4</sup> It can improve social inclusion. And it will enable us to make the most of our huge broadband investment making Australia a more connected democracy.

## THE STATE OF PLAY

The enthusiasm of public agencies, public servants and the public themselves are all necessary for Government 2.0 to take root. In this regard Australia is well

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- 2 *Powering Ideas: An Innovation Agenda for the 21st Century*. [www.innovation.gov.au/innovationreview/Pages/home.aspx](http://www.innovation.gov.au/innovationreview/Pages/home.aspx) or [tinyurl.com/6713vm](http://tinyurl.com/6713vm) and Management Advisory Committee, *Advancing Public Sector Innovation* see [www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx](http://www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx) or [tinyurl.com/nbx6jm](http://tinyurl.com/nbx6jm).
  - 3 Advisory Group on Reform of Australian Government Administration. [www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx](http://www.innovation.gov.au/Section/Innovation/Pages/AdvancingPublicSectorInnovation.aspx) or [tinyurl.com/nbx6jm](http://tinyurl.com/nbx6jm).
  - 4 [www.mhs.gov.au/media/speeches-transcripts/091216-service-delivery-reform.html](http://www.mhs.gov.au/media/speeches-transcripts/091216-service-delivery-reform.html).



placed. Some Australian Government agencies have become recognised as international leaders in their embrace of Government 2.0 approaches.

In 2001, the Australian Government's Spatial Data Access and Pricing Policy was one of the first substantial programs in the world in which government data which had previously been sold was made available without charge.<sup>5</sup> Today both the Australian Bureau of Statistics and Geoscience Australia are licensing much of their output using Creative Commons licences which permit others to freely use and remix it. This is an invitation to enhance the value of this public information asset (see Chapter 5).

The National Library of Australia (NLA), National Archives of Australia (NAA) and a number of Museums such as the National Museum of Australia (NMA) and Sydney's Powerhouse Museum<sup>6</sup> have engaged Australia's citizenry in contributing their own time and content to enrich and improve national historical collections of text and visual material. Some government agencies and some individual public officials maintain blogs where they share their expertise and have informal discussions of professional matters of public interest.

There are many other examples. However efforts to date have tended to rely on the interest and enthusiasm of individual agencies. A recent KPMG survey undertaken for the Review of Australian Government Administration found that the Australian Public Service compared favourably with counterpart services elsewhere in a range of areas, but had worse performance than its best peers in the provision of online access to government information and services, mechanisms for cross-agency collaboration and tools and methods for incorporating external advice into the policy development and service design process. These are all things that Government 2.0 can deliver.

Since 2007 the United Kingdom, New Zealand and, more recently, the United States, have recognised the economic and social benefits of Government 2.0 at the highest levels of government. These countries have put in place coordi-

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5 [www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx](http://www.osdm.gov.au/OSDM/Policies+and+Guidelines/Spatial+Data+Access+and+Pricing/default.aspx)

6 In this report we use many examples of information which is generated principally by state or local government agencies. While our direct mandate is from the Australian Government, we have interpreted that mandate broadly. While our recommendations are, strictly speaking, recommendations to the Australian Government, many of the principles developed apply at the state level and all states are exploring the Government 2.0 agenda, though some are further advanced on the journey than others. We feel the use of such examples is useful both because the states control much of the data that affects people's lives most closely and because data collected by state agencies can and should often be the subject of national information agendas (as in the Council of Australian Government's (COAG) agendas in education and health).

nated and centrally driven reforms to advance the Government 2.0 agenda. Until recently, Australia was lagging behind these leaders, but proposed legislation to strengthen access to information and the promulgation of very encouraging new Australian Public Service Commission (APSC) guidelines for online engagement has set the stage for Australia to join the other countries in pioneering Government 2.0.

## THE TASKFORCE'S APPROACH

Accordingly the taskforce's central recommendation is for a Declaration of Open Government to be made at the highest level of government emphasising the role of Web 2.0 tools and approaches in

- achieving a more consultative, participatory and transparent government
- realising the full social and economic value of public sector information (PSI) as a national resource
- asserting the centrality of Government 2.0 in the achievement of the government's broader reform objectives.

For Australia to achieve the aspirations outlined in our terms of reference, it will require stronger, more coordinated governance; policy improvements and a renewed public service culture of openness and engagement. It is essential to find ways that government can adapt to the new paradigm of open and transparent government.

Government 2.0 needs concerted leadership to drive the necessary reforms and bring about the shifts of culture and practice required across the whole of government. For this reason the taskforce's second recommendation is that a lead agency be appointed from within one of the central portfolios — either within Finance and Deregulation or Prime Minister and Cabinet — to take responsibility for Government 2.0 policy and provide leadership, guidance and support to agencies and public servants. The agency's work program should be developed through a Government 2.0 Steering Group of high level officials from relevant agencies.

The lead agency will provide guidance and support to improve the extent and quality of online engagement to promote innovation and share knowledge. Agencies will identify and address barriers to online engagement; and nominate specific projects aimed at enhancing policy making and delivery through the use of online tools within and between agencies across the public sector.

According to a recent survey,<sup>7</sup> governments around the world had the lowest

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Web 2.0 provides public servants with unprecedented opportunities to open up government decision making and implementation to contributions from the community. In a professional and respectful manner public servants should engage in robust policy

deployment of unified communications and collaboration technology across major industries. Currently, few public servants have work access to these building blocks of Government 2.0. The taskforce recommends that agencies provide employees with access to appropriate technology.

In order to achieve these shifts, public servants should be actively encouraged and empowered to engage online. The recently issued APSC guidelines for online engagement are an excellent start. They begin:

Web 2.0 provides public servants with unprecedented opportunities to open up government decision making and implementation to contributions from the community. In a professional and respectful manner public servants should engage in robust policy conversations.

Equally, as citizens, APS employees should also embrace the opportunity to add to the mix of opinions contributing to sound, sustainable policies and service delivery approaches.

Security concerns have been a major inhibitor of collaboration technology adoption in the public sector. Accordingly the lead agency should work with the Defence Signals Directorate to develop appropriate guidance so that agencies can undertake security risk assessments and ensure the effective, efficient and secure use of Web 2.0 tools.

Public agencies should also seek opportunities and provide space for staff to experiment and develop opportunities for greater online engagement and participation with their customers, citizens and communities of interest. Over time it will also be important to report and scrutinise progress, ensure that lessons are learned and reward outstanding practice in the use of Web 2.0 tools to improve agency and program performance. Recognition for outstanding practice will include adoption of WCAG as the minimum accessibility standard for Government 2.0.

The Australian Public Service Commission (APSC)'s annual State of the Service Report will be one instrument by which agencies' progress in implementing these measures can be tracked and reported.

We also need clear, strong and simple policies to deliver the aspiration of the Freedom of Information Amendment (Reform) Bill 2009<sup>8</sup> for public sector information (PSI) to be released by default with secrecy being maintained only where there is good reason to do so. In addition the information must be truly open. This

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conversations.

Equally, as citizens, APS employees should also embrace the opportunity to add to the mix of opinions contributing to sound, sustainable policies and service delivery approaches.

8 [www.pmc.gov.au/consultation/foi\\_reform/index.cfm](http://www.pmc.gov.au/consultation/foi_reform/index.cfm).

means that unless there are good reasons to the contrary, information should be

- free<sup>9</sup>
- easily discoverable
- based on open standards and therefore machine-readable<sup>10</sup>
- properly documented and therefore understandable<sup>11</sup>
- licensed to permit free reuse and transformation by others.

The need for the licensing itself to be machine readable means that the licence should conform to some international standard such as Creative Commons.

The taskforce proposes Creative Commons BY as the default licence.<sup>12</sup> Where third parties are involved, agencies should contract to ensure that government is able to license their work under the default licence. The government should also proceed with a review of copyright in relation to ‘orphan works’<sup>13</sup>. There should also be a process of providing more open licensing to the stock of existing PSI which has been more restrictively licensed in the past.

Because so many of the benefits of Government 2.0 will accrue when state governments are involved, the taskforce proposes that the principles set out in this report be implemented at all levels of government in Australia through a national information policy and that the Commonwealth should provide national leadership towards such a policy by engaging the Council of Australian Governments.

To accelerate progress the taskforce recommends establishing a central portal ([data.gov.au](http://data.gov.au)) that will enable access to and discovery of the data and skills necessary in preparing government information to be released as open PSI. Guidance will be required to assist agencies to protect privacy and confidentiality, including making sure that they can reliably de-identify personal and commercial-in-confidence PSI.

The taskforce endorses the proposed Freedom of Information reforms and recommends that the proposed new Office of the Information Commissioner (OIC) operate to ensure the integrity of the process by which PSI is released by default. PSI should be released unless agencies are following the Information Commissioner’s (IC’s) policies or have the agreement of the IC not to release it.

In addition, the OIC will develop and administer policies to ensure that PSI

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9 Provided at no cost in the absence of substantial marginal costs.

10 The Semantic web involves a vision of a machine-readable web, where intelligent agents would be capable of understanding data presented online by interpreting the accompanying metadata.

11 Supported by metadata that will aid in the understanding the quality and interpretability of the information.

12 [creativecommons.org/licenses/by/2.5/au/](http://creativecommons.org/licenses/by/2.5/au/).

13 Information for which the copyright is held by third parties who cannot be readily identified or located.

that may be considered as holding value is proactively identified and released; and that all options to protect privacy and confidentiality by suppressing certain fields in structured data<sup>14</sup> be explored before an exemption from release is granted. The Commonwealth Copyright Administration (CCA) unit within the Attorney General's Department (AGD) should also be moved to the OIC or the lead agency reflecting their charter to optimise the flow of information.

In order to measure the benefits of releasing PSI, the proposed OIC should develop a common methodology to determine the social and economic value generated from published PSI; require major agencies to report and publish their performance on the release of PSI in their annual report, as well as their contribution to the consolidated value of Commonwealth PSI.

Taskforce supports the model for the information publication scheme set out in the Freedom of Information Amendment (Reform) Bill 2009 and recommends that the proposed OIC provide guidance to the public on their rights to access PSI and guidance for agencies to meet their information publication and reporting obligations.

Some of the most successful experiments in Government 2.0 have been led by not-for-profits in the UK and the US. Here, the taskforce suggest that policymakers facilitate recognition of info-philanthropy<sup>15</sup> as an eligible activity to qualify for deductible gift recipient status and other measures that recognise charitable or philanthropic purposes.

## WHAT IS AT STAKE

The work of government funded or managed agencies pervades and underpins some of the most important aspects of Australian lives. By improving agency operation and their relationship with stakeholders, Government 2.0 gives us the scope to improve:

- the quality of schools
- the quality and safety of hospitals
- the safety and productivity of workplaces
- the convenience of public utility services such as public transport, energy and the maintenance of government infrastructure
- the dynamism, engagement and responsiveness of the public sector, its services and regulatory systems.

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14 'Any data kept in an electronic record, where each piece of information has an assigned format and meaning.' [www.mgrush.com/content/view/70/33/](http://www.mgrush.com/content/view/70/33/).

15 The building of public information goods and platforms for public benefit.

Government 2.0 can enable Australia to achieve all this while deepening democracy and engaging the citizenry so that governments don't just 'consult' their constituents, but draw all those with the enthusiasm, expertise and relevant local knowledge into active collaboration with them.

Getting to Government 2.0 will not be easy or straightforward for it requires co-ordinated leadership, policy and culture change. But as Mike Waller put it in a project for the taskforce 'no country can lay claim to having yet achieved the overall transformation in public sector culture, systems and processes required to deliver a fully articulated Government 2.0 approach'. Having just begun the journey back to world leadership, we should press on secure in the knowledge that a serious effort will see us succeed.

## REPORT RECOMMENDATIONS

### CENTRAL RECOMMENDATION: A DECLARATION OF OPEN GOVERNMENT BY THE AUSTRALIAN GOVERNMENT

Accompanying the government's announcement of its policy response to this report, a declaration of open government should be made at the highest level, stating that:

- using technology to increase citizen engagement and collaboration in making policy and providing service will help achieve a more consultative, participatory and transparent government
- public sector information is a national resource and that releasing as much of it on as permissive terms as possible will maximise its economic and social value to Australians and reinforce its contribution to a healthy democracy
- online engagement by public servants, involving robust professional discussion as part of their duties or as private citizens, benefits their agencies, their professional development, those with whom they are engaged and the Australian public. This engagement should be enabled and encouraged

The fulfilment of the above at all levels of government is integral to the Government's objectives including public sector reform, innovation and using the national investment in broadband to achieve an informed, connected and democratic community.

## RECOMMENDATION 2: COORDINATE WITH LEADERSHIP, GUIDANCE AND SUPPORT

2.1 A lead agency should be established within the Commonwealth public service with overall responsibility for advancing the Government 2.0 agenda, providing leadership, resources, guidance and support to agencies and public servants on Government 2.0 issues. Its work program should be developed in consultation with relevant agencies, for example Department of the Prime Minister and Cabinet, the proposed new Office of the Information Commissioner, Department of Finance and Deregulation, the Australian Public Service Commission, National Archives of Australia, Australian Bureau of Statistics, Department of Broadband, Communications and the Digital Economy, through a Government 2.0 Steering Group<sup>16</sup>.

2.2 The Australian Government should engage other members of the Council of Australian Governments to work with the lead agency to learn from each other and promote their successes in the development of Government 2.0 strategies.

## RECOMMENDATION 3: IMPROVE GUIDANCE AND REQUIRE AGENCIES TO ENGAGE ONLINE

3.1 To make government more consultative, participatory and transparent, the lead agency, in consultation with other relevant agencies, should issue and maintain guidance to improve the extent and quality of online engagement by agencies.

3.2 Using this guidance, in conjunction with the lead agency and within 12 months of the government's response to this report, all major agencies<sup>17</sup> should:

3.2.1 identify barriers within their organisation which inhibit online engagement and document what they will do to reduce these barriers

3.2.2 identify and document specific projects to make use of social networking and 'crowd sourcing' tools and techniques to enhance agency policymaking, implementation and continuous improvement

3.2.3 identify and document specific projects to increase the use of online tools and platforms for internal collaboration within their agency and between agencies that they work with across the public sector.

3.3 The APSC will include in the annual State of the Service Report details of agencies' progress in implementing the above recommendations, covering suc-

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16 This is not to preclude the possibility of one of the listed agencies being or including the lead agency.

17 All departments of state and material agencies see [www.finance.gov.au/publications/flipchart/index.html](http://www.finance.gov.au/publications/flipchart/index.html) or [tinyurl.com/yhkrbe2](http://tinyurl.com/yhkrbe2).

cesses, disappointments and lessons learned.

3.4 Subject to security and privacy requirements, all public inquiries funded by the Australian Government should ensure that all submissions are posted online in a form that makes them searchable, easy to comment on and re-use. The Government 2.0 lead agency should encourage those conducting inquiries to use interactive media such as blogs to publicly discuss emerging lines of thought and issues of relevance.

## RECOMMENDATION 4: ENCOURAGE PUBLIC SERVANTS TO ENGAGE ONLINE

4.1 The taskforce endorses the revised online engagement guidelines for public servants issued by the Australian Public Service Commission (APSC) on 18 November 2009, including the declaration that Web 2.0 provides public servants with unprecedented opportunities to open up government decision making and implementation to contributions from the community. The taskforce agrees that, consistent with APS values and code of conduct, APS employees should be actively encouraged and empowered to engage online.

4.2 The APSC in consultation with the lead agency should regularly review online engagement guidelines, using Government 2.0 approaches to ensure the process is open and transparent.

4.3 The default position in agencies should be that employees are encouraged and enabled to engage online. Agencies should support employee enablement by providing access to tools and addressing internal technical and policy barriers.

4.4 Agencies should support employee-initiated, innovative Government 2.0-based proposals that create, or support, greater engagement and participation with their customers, citizens and/or communities of interest in different aspects of the agency's work. They should create a culture that gives their staff an opportunity to experiment and develop new opportunities for engagement from their own initiative, rewarding those especially who create new engagement/participation tools or methods that can quickly be absorbed into the mainstream practice that lifts the performance of the department or agency.

4.5 The Government 2.0 lead agency should establish an online forum on which agencies can record their initiatives and lessons learned.

## RECOMMENDATION 5: AWARDS

In consultation with relevant agencies, the lead agency should establish awards for individual public servants and agencies that recognise outstanding practice in the use and impact of Government 2.0 tools to improve agency and program per-



formance.

## RECOMMENDATION 6: MAKE PUBLIC SECTOR INFORMATION OPEN, ACCESSIBLE AND REUSABLE

6.1 By default Public Sector Information<sup>18</sup> (PSI) should be:

- free<sup>19</sup>
- based on open standards
- easily discoverable
- understandable<sup>20</sup>
- machine-readable<sup>21</sup>
- freely reusable and transformable<sup>22</sup>.

6.2 PSI should be released as early as practicable and regularly updated to ensure its currency is maintained.

6.3 Consistent with the need for free and open re-use and adaptation, PSI released should be licensed under the Creative Commons BY standard<sup>23</sup> as the default.

6.4 Use of more restrictive licensing arrangements should be reserved for special circumstances only, and such use is to be in accordance with general guidance or specific advice provided by the proposed OIC.

6.5 The proposed OIC should develop policies to maximise the extent to which existing PSI be re-licensed Creative Commons BY, taking account of undue administrative burden this may cause for agencies. To minimise administrative burden, the taskforce envisages that rules could be adopted whereby a large amount of PSI that has already been published could be automatically desig-

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18 The definition was introduced in Chapter 5 of this report. For ease of reference it is as follows: ‘information, including information products and services, generated, created, collected, processed, preserved, maintained, disseminated, or funded by or for the government or public institutions, taking into account [relevant] legal requirements and restrictions’.

19 Provided at no cost in the absence of substantial marginal costs.

20 Supported by metadata that will aid in the understanding the quality and interpretability of the information.

21 The Semantic web involves a vision of a machine-readable web, where intelligent agents would be capable of understanding data presented online by interpreting the accompanying metadata.

22 Not having limitation on derivative uses.

23 [creativecommons.org/licenses/by/2.5/au/](http://creativecommons.org/licenses/by/2.5/au/).

nated Creative Commons BY. This would include government reports, legislation and records that are already accessible to the public. Individuals or organisations should also be able to request that other PSI should be re-licensed Creative Commons BY on application, with a right of appeal should the request be refused, to the proposed new Information Commissioner.

6.6 Where ownership of the PSI data rests with the Commonwealth, data should be released under Creative Commons BY licence. Negotiation with the other party/s will be required to ensure release under Creative Commons BY for PSI which is not owned by the Commonwealth, or is shared with another party/s. New contracts or agreements with a third party should endeavour to include a clause clearly stating the Commonwealth's obligation to publish relevant data and that this be under a Creative Commons BY licence.<sup>24</sup> This policy should become mandatory for all contracts signed by the Commonwealth after June 2011.

6.7 Copyright policy should be amended so that works covered by Crown copyright are automatically licensed under a Creative Commons BY licence at the time at which Commonwealth records become available for public access under the Archives Act 1983.

6.8 Any decision to withhold the release of PSI, other than where there is a legal obligation to withhold release, should only be made with the agreement of, or in conformity with policies endorsed by the proposed OIC and consistent with the government's FOI policy, noting that:

6.8.1 in the case of structured data<sup>25</sup>, agencies must exhaust options to protect privacy and confidentiality before seeking an exemption<sup>26</sup>

6.8.2 agencies must proactively identify and release, without request, such data that might reasonably be considered as holding value to parties outside the agency.

6.9 The Australian Government should engage other members of the Council of Australian Governments, to extend these principles into a national information policy agreed between all levels of government; federal, state, territory and local.

6.10 In order to accelerate the adoption of Government 2.0, in addition to any distribution arrangements they wish to pursue, agencies should ensure that the PSI they release should be discoverable and accessible via a central portal

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24 A consistent clause should be developed by Department of Finance and Deregulation and inserted as a standing requirement of all Commonwealth Contracts — similarly to that used to ensure access and reporting by the Australian National Audit Office (ANAO).

25 Any data kept in an electronic record, where each piece of information has an assigned format and meaning.

26 This would include, for example, the removal of specific fields or records. However, in considering appropriate treatments, agencies should avoid unduly compromising the potential value of the data that may be derived.

(data.gov.au) containing details of the nature, format and release of the PSI.

6.11 Within the first year of its establishment the proposed OIC, in consultation with the lead agency, should develop and agree a common methodology to inform government on the social and economic value generated from published PSI.

6.12 The major agencies<sup>27</sup> under the Financial Management and Accountability Act 1997 (FMA Act) should use the common methodology to report their performance in the release of PSI in their annual reports, commencing from the first of the establishment of the proposed OIC.

6.13 The proposed OIC should annually publish a report outlining the contribution of each agency to the consolidated value of Commonwealth PSI, commencing in the first of the establishment of the proposed OIC. The report should be published online and be accessible for comment and discussion.

6.14 Following government acceptance of the initial Value of PSI Report, the proposed OIC should consider the development of a 'lite' version of the common methodology for use by other FMA Act agencies.

6.15 The taskforce notes the proposed changes to the FOI Amendment (Reform) Bill 2009 to have the proposed OIC issue guidelines to support the future operations of the Act as described in the Explanatory Memorandum for Schedule 2, Section 8.<sup>28</sup> To ensure effective and consistent implementation of access to PSI these guidelines should give due consideration to the concepts outlined above.

## RECOMMENDATION 7: ADDRESSING ISSUES IN THE OPERATION OF COPYRIGHT

7.1 Agencies should apply policy guidance, or seek advice on a case by case basis, on the licensing of PSI either before its release or in administering licences after publication from the proposed OIC.

7.2 The functions currently performed by the Commonwealth Copyright Administration (CCA) unit within the Attorney-General's Department (AGD) relating to pre- and post-licensing of copyright material should be transferred to the either the proposed OIC or the lead agency. Other administrative functions of the CCA unit should be reviewed to identify which of the functions should remain within AGD and those that should transfer to the proposed OIC

7.3 It is recommended that the proposed OIC examine the current state of

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27 All departments of state and material agencies see [www.finance.gov.au/publications/flipchart/index.html](http://www.finance.gov.au/publications/flipchart/index.html) or [tinyurl.com/yhkrbe2](http://tinyurl.com/yhkrbe2).

28 [parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislation%2Fbillhome%2F4163%22](http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislation%2Fbillhome%2F4163%22) or [tinyurl.com/ycqhp83](http://tinyurl.com/ycqhp83).

copyright law with regard to orphan works (including s.200AB), with the aim of recommending amendments that would remove the practical restrictions that currently impede the use of such works.

## RECOMMENDATION 8: INFORMATION PUBLICATION SCHEME

8.1 The taskforce recommends that, in the development, management and implementation of a government information publication scheme, the proposed OIC, once established, take regard of the findings and recommendations contained in the report Whole of Government Information Publication Scheme, Government 2.0 Taskforce Project 7.<sup>29</sup>

8.2 The taskforce supports the model for the publication scheme set out in the Freedom of Information Amendment (Reform) Bill 2009<sup>30</sup> and notes that the Bill incorporates complementary aims. To reinforce its support, the taskforce recommends information publication schemes be developed with the following explicit aims. To:

8.2.1 provide an overall and consistent statutory framework for information publication by all agencies

8.2.2 encourage the widest disclosure of useful government information consistent with the public interest, and thereby greater trust in government

8.2.3 guide agencies in overcoming attitudinal, technological and legal barriers to optimal information disclosure and use, and to improved public engagement

8.2.4 provide a planning framework to assist agencies in their overall information management

8.2.5 provide an integrated and simplified guide for agencies to meet their information publication and reporting obligations

8.2.6 provide clear and understandable guidance to the public on their rights to, and methods of, accessing and using government information, leading to improved service delivery and public engagement in policy development

8.2.7 enable the proposed OIC to monitor schemes, and encourage agencies towards achieving government pro-disclosure objectives through reference to exemplars, and reporting of unsatisfactory progress.

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29 [gov2.net.au/projects/project-7](http://gov2.net.au/projects/project-7).

30 [www.pmc.gov.au/consultation/foi\\_reform/index.cfm](http://www.pmc.gov.au/consultation/foi_reform/index.cfm).

## RECOMMENDATION 9: ACCESSIBILITY

9.1 Significant cultural change is needed to enable greater support for the adoption of accessible Web 2.0 tools, collaboration and online community engagement activities, and PSI delivery projects. The taskforce therefore recommends that:

9.1.1 agency compliance with the Worldwide Web Consortium's Web Content Accessibility Guidelines (WCAG)<sup>31</sup> as the minimum accessibility level for all online community engagement and online PSI provision is required. Data provided on the primary PSI site, [data.gov.au](http://data.gov.au), should be provided in full compliance with WCAG

9.1.2 where an agency is considering a Web 2.0 project where strict compliance with WCAG accessibility guidelines risks preventing a project from proceeding, AGIMO will provide guidance on options to facilitate maximum access for people with disabilities

9.1.3 where an agency elects to proceed with a project that is not fully compliant they must publish an online statement explaining site accessibility, together with an outline of where and why it does not meet a specific WCAG guideline, and what alternative options for accessible access were considered or are provided and plans for compliance within a reasonable timeframe

9.1.4 a central register of accessibility compliance statements should be maintained on [data.gov.au](http://data.gov.au)

9.1.5 in consultation with relevant agencies, the lead agency should establish awards for agencies that recognise outstanding practice in the application of accessibility principles and guidelines impact of Government 2.0 tools to improve agency interactions with citizens, business and community groups.

## RECOMMENDATION 10: SECURITY AND WEB 2.0

10.1 The lead agency, in conjunction with DSD, should develop a better practice guide (or 'how to' guide) to assist agencies in the effective, efficient and secure use of Web 2.0 tools and how to undertake associated risk assessment.

10.2 The Defence Signals Directorate (DSD) should provide guidance to agencies on the appropriate mitigation treatments that could be adopted to address concerns or exposures identified in relation to the use of social networking and related tools. This guidance should take into consideration the different environments in which agencies operate the varying risk profiles that exist and the range

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31 This recommendation avoids specifying which version of wCAG is being referred to as a means of ensuring the recommendation refers to the most current version of the guidelines mandated by the government.

of tools that may be used. DSD should update the Information Security Manual (ISM) accordingly.

10.3 Sensitive and national security data requires special consideration in the context of PSI. To ensure consistency between PSI arrangements in the future and the proposed changes to the FOI Act, the proposed OIC should provide advice to agencies in relation to the treatment of PSI to enable its broadest possible release. Consistent with good practice, and the requirements of the Protective Security Manual (PSM), agencies must avoid the over classification of data so as to limit the need to review or pre-process data to enable its release.

## RECOMMENDATION 11: PRIVACY AND CONFIDENTIALITY

11.1 To protect the personal information of individuals included in PSI, the Privacy Commissioner should develop guidance on the de-identification of PSI before it is released.<sup>32</sup>

11.2 To protect the commercial-in-confidence information of businesses included in PSI, the proposed OIC should develop guidance on the de-identification of PSI.

## RECOMMENDATION 12: DEFINITION OF COMMONWEALTH RECORD

12.1 The taskforce recommends that government agencies wishing to use third party sites for the purposes of collaboration, service delivery or information dissemination, ensure that copies of records so generated are retained in the possession of the Commonwealth such that they satisfy the definition of Commonwealth Record in the Archives Act 1983. The government reviewed the property-based definition of Commonwealth Record in the Archives Act 1983, with a view to replacing it with a definition that defines Commonwealth records as any information created or received by the Commonwealth in the course of performing Commonwealth business.

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32 The Privacy Act 1988 provides for the Privacy Commissioner to prepare and publish guidelines on privacy under s 27(1)(e). The taskforce understands, however, that responsibility for this function would transfer to the Information Commissioner following proposed amendments to the Privacy Act and proposed new legislation to establish an Office of the Information Commissioner. In this event, responsibility for the preparation of guidance on de-identification of PSI as outlined in this recommendation should transfer to the Information Commissioner.

12.2 To enable and assist the discovery, sharing and reuse of PSI, agencies should deploy endorsed metadata standards such as the AGLS Metadata Standard (AS 5044) together with whole of government taxonomies such as the Australian Government's Interactive Functions Thesaurus (AGIFT) as outlined in the Australian Government's Information Interoperability Framework. Wherever not being able to meet such standards would produce any appreciable delay of release, the data should be released provisionally and then updated with compliant metadata. Whenever not being able to meet such standards would appreciably delay the release of PSI, agencies should release non-compliant data until such time as they are able to comply with the standards.

### RECOMMENDATION 13: ENCOURAGE INFO-PHILANTHROPY

Australian policy-makers should minimise obstacles to info-philanthropy being treated as an eligible activity to qualify for deductible gift recipient and other forms of legal status which recognise charitable or philanthropic purposes. Some of the most successful experiments in Government 2.0 have been fuelled by not-for-profits in leading countries such as the UK and the US. As part of their policy approach to recognise volunteers in the community, they should also ensure that online volunteers are appropriately recognised.

# BIOGRAPHIES

## **Richard Allan**

Richard Allan joined Facebook from Cisco in June 2009 to lead the company's public policy work in Europe. From 2008 to 2009 he was Chair of the UK Cabinet Office's Power of Information Task Force to improve the government's use of data. Richard was elected as Member of Parliament for Sheffield Hallam in 1997 and re-elected in 2001 before giving up his seat in 2005. Richard specialised in technology issues in Parliament and was Chair of the Information Committee and a member of the Public Accounts and Liaison Committees. He has a degree in Anglo-Saxon, Norse and Celtic Studies with Archaeology and Anthropology, and an MSc in Information Technology.

## **Keitha Booth**

Keitha Booth is a Senior Advisor at the State Services Commission specialising in the development of all of government information policy. She has post graduate qualifications in librarianship and information systems.

## **James Boyle**

James Boyle is William Neal Reynolds Professor of Law and co-founder of the Center for the Study of the Public Domain at Duke Law School. He is the author of *The Public Domain: Enclosing the Commons of the Mind*, *Shamans, Software and Spleens: Law and Construction of the Information Society* and *The Shakespeare Chronicles*, a novel about the search for the true author of Shakespeare's works. He is the co-author of *Bound By Law* (Duke U.P. 2008), an educational comic book on fair use, and is the editor of *Critical Legal Studies* (Dartmouth/NYU Press (1994)), *Collected Papers on the Public Domain* (Duke: L&CP 2003), and the co-editor of *Cultural Environmentalism @ 10* (with Larry Lessig.) Professor Boyle was one of the original board members of Creative Commons, and was also a co-founder of Science Commons, which aims to expand the Creative Commons mission into the realm of scientific and technical data.

## **Jessica Coates**

Jessica Coates is the Project Manager of the Creative Commons Clinic, a program of the ARC Centre of Excellence for Creative Innovation at Queensland Uni-



versity of Technology. The Clinic aims to promote and examine the use of the international open content licensing scheme, Creative Commons, in Australia. Jessica joins the Clinic from the Commonwealth Department of Communications, Information Technology and the Arts (DCITA), where she worked as a policy officer with the Intellectual Property Branch, the National Broadcasting Section and the Collections Development Branch. Jessica has a Bachelor of Laws from the Australian National University, and a Masters in Law from the University of Melbourne.

#### **John S Cook**

John S Cook, BSurv (UQ), BA (UQ), BEcon (UQ), PhD (QUT). John has fifty years of experience in private sector, academic and public sector employment. His interests are in systems theory, cybernetics, history and economics applied to understanding the evolution of complex socio-economic systems; and governance arrangements that try to cope with the complexity.

#### **Christopher Corbin**

Christopher Corbin is currently an Advisor to the European Public Sector Information Platform funded by the European Commission to monitor and support the re-use of PSI. ([www.epsiplatform.eu](http://www.epsiplatform.eu)) Over the period 2006 through to 2009 he was an Analyst within ePSIplus Thematic Network that supported the implementation of the European Directive on Public Sector Information Re-use. Over the past 10 years he has also been involved and contributed to a number of European PSI projects and initiatives that included GINIE (Geographic Information Network in Europe), MEPSIR (Measuring European Public Sector Information Resources). He has also contributed to the OECD initiatives on PSI policy principles.

#### **Terry Cutler**

Dr Terry Cutler is an industry consultant and strategy advisor in the information and communications technology sector. Terry Cutler has authored numerous influential reports and papers on the Digital Economy and innovation. During 2008 he chaired the Australian Government's Review of the National Innovation System which culminated in the Report, *Venturous Australia*. He is currently the Deputy Chairman of Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Chairman of the Advisory Board, Centre of Excellence for Creative Industries and Innovation, among other appointments. From 1996 to 1997 he was Chairman of Australia's Information Policy Advisory Council. While chairman of the Industry Research and Development Board from 1996 to 1998, Cutler spearheaded key initiatives in promoting venture capital and industry innovation.

#### **Edward W Felten**

Edward W. Felten is Professor of Computer Science and Public Affairs, and Director of the Center for Information Technology Policy, at Princeton University. His research interests include computer security and privacy, civic technologies,

and technology policy.

### **Anne Fitzgerald**

Professor Anne Fitzgerald is a Brisbane-based intellectual property and e-commerce lawyer. She is a Professor of Law Research at QUT Law School where she has worked as a principal researcher in the OAK Law and Legal Framework for E-Research projects. Anne has been teaching, researching and writing in the fields of intellectual property, internet and e-commerce law since the early 1990s. She was a consultant to the review of Australia's innovation system (*Venturous Australia: Building strength in innovation* (2008)) and the Government 2.0 Taskforce (*Engage: Getting on with Government 2.0* (2009)). In 2002 Anne was awarded the JSD degree (Doctor of the Science of Law) by Columbia University New York and also has a LLM from London University (University College). She graduated in law LLB (Hons) and welfare law (Grad. Dip. Welfare Law) from the University of Tasmania. She is a member of the Queensland Bar.

### **Professor Brian Fitzgerald**

Brian Fitzgerald studied law at the Queensland University of Technology graduating as University Medallist in Law and holds postgraduate degrees in law from Oxford University and Harvard University. He is well known in the areas of Intellectual Property and Internet Law and has worked closely with Australian governments on facilitating access to public sector information. Brian is also a project lead of Creative Commons Australia. From 1998–2002 he was Head of the School of Law and Justice at Southern Cross University in NSW, Australia and from January 2002 – January 2007 was appointed as Head of the School of Law at QUT in Brisbane, Australia. Brian is currently a specialist Research Professor in Intellectual Property and Innovation at QUT and a Chief Investigator in the ARC Centre of Excellence for Creative Industries and Innovation. He is also an Honorary Professor of Law at the City University of London UK and a Barrister of the High Court of Australia. In 2009 Brian was appointed to the Australia Government's 'Government 2.0 Taskforce' by Ministers Tanner and Ludwig and to the Advisory Council on Intellectual Property (ACIP) by Minister Carr.

### **Nicholas Gruen**

Nicholas Gruen is trained in History, Statistics, Law and Economics. He has published internationally on a range of economic policy issues, is a regular newspaper columnist, a board member of Sustainability Victoria, and is a substantial contributor to Australia's thriving policy blog scene. He is Chairman of Online Opinion, a not-for-profit site hosting news and cultural opinion and Kaggle, a Melbourne based global platform for data competitions. Dr Gruen was a member of the Panel reviewing Australia's Innovation System chaired by Terry Cutler. He is a member of an advisory committee guiding innovation in the Victoria Public Service and worked with the Federal Department of Innovation on its report to the Management Advisory Committee on innovation in Government. In 2009 Dr Gruen chaired the Federal Government's Government 2.0 Taskforce.

**Neale Hooper**

Neale Hooper LLM, LLB, BA (Qld) is the principal lawyer for the Queensland Government's Government Information Licensing Framework (GILF) Project and has led the project's legal work since its inception in 2005. Neale is a leading IP and ICT lawyer with over 20 years experience with Queensland Crown Law, providing specialist law services in these areas. Presently he is on secondment to the Department of Environment and Resource Management and is a lead researcher on the CRC-Spatial Information Project 'Enabling Real-Time Information Access in Both Urban and Regional Areas'. Neale has a Master of Laws from University of Queensland, and has been an adjunct lecturer at QUT law school since 2003.

**Tracey P Lauriault**

Ms. Lauriault is a researcher at the Geomatics and Cartographic Research Centre at Carleton University. She was the Research Leader for the Pilot Atlas of the Risk of Homelessness, part of the Project Management Team for the *Cybercartography and the New Economy Project* and lead researcher of the Cybercartographic Atlas of Antarctica Case Study for the *International Research on Permanent Authentic Records in Electronic Systems (InterPARES) 2 and General Study of Archival Policies of Science Data Archives/Repositories*. Her PhD dissertation is on mapping data access discourses in Canada. She is co-founder of CivicAcces.ca, ogWiFi.ca and co-author of datalibre.ca.

**Ed Mayo**

Ed Mayo is Secretary General of Co-operatives UK, which promotes the interests of co-operatives and provides a strategic voice for the movement. Ed has worked in the non-profit and the private sector and was the strategist behind the world's most successful anti-poverty campaign, Jubilee 2000. Ed helped to start a range of public interest initiatives, including the Fairtrade Mark, the London Rebuilding Society and the cultural charity, MERRY. In June 2003, Mayo took up the role of Chief Executive of Consumer Focus. That year The Guardian nominated him as one of the top 100 most influential figures in British social policy and in November 2004 commented that 'from cancelling third world debt to justice for working-class consumers, Ed Mayo is a key figure in social innovation.'

**Hugh McGuire**

Hugh McGuire is an entrepreneur, technologist, and a builder of open web (and non-web) communities. He is the founder of the free, public domain audiobook project, LibriVox.org, once called 'perhaps the most interesting collaborative cultural project this side of Wikipedia.' In addition he has founded or co-founded: bitesizeedits.com, bookoven.com, BookCampToronto, earideas.com, and datalibre.ca. Hugh speaks and writes frequently about media, publishing, the web, technology, mass collaboration, online community-building, open culture, and copyright. He lives in Montreal, Canada.

**Kylie Pappalardo**

Kylie Pappalardo is a PhD Candidate in the QUT School of Law. She holds a Bachelor of Laws degree with First Class Honours, a Bachelor of Creative Industries (Creative Writing) degree and a Masters of Law degree from QUT. From 2010 to 2011, she will be completing a Masters of Law at Georgetown University Law Center in Washington D.C. Since 2006, Kylie has worked as a research officer for the Open Access to Knowledge (OAK) Law Project. She is a co-founder (together with Professor Brian Fitzgerald) of the QUT/QPILCH Intellectual Property and Technology Law Clinic.

#### **Rufus Pollock**

Dr. Rufus Pollock is the Mead Fellow in Economics at Emmanuel College, University of Cambridge and a Director of the Open Knowledge Foundation which he co-founded in 2004. He has worked extensively, as a scholar, coder and activist on the technological, social and legal issues surrounding access and sharing of knowledge.

#### **David G Robinson**

David G. Robinson is a J.D. candidate in the class of 2012 at Yale Law School. Before arriving at Yale, David helped launch Princeton's Center for Information Technology Policy, serving as the Center's first Associate Director. He holds an A.B. in Philosophy from Princeton, and a B.A. in Philosophy and Politics from Balliol College, Oxford, where he was a Rhodes Scholar.

#### **Stephen Saxby**

Professor of IT Law and Public Policy, Faculty of Business and Law, University of Southampton UK. Editor, *The Computer Law & Security Review - The International Journal of Technology Law and Practice* (Elsevier) [www.elsevier.com/locate/clsr](http://www.elsevier.com/locate/clsr); Editor, *The Encyclopedia of Information Technology Law* (Sweet & Maxwell); Director ILAWS - Institute for Law and the Web at University of Southampton [www.soton.ac.uk/ilaws/](http://www.soton.ac.uk/ilaws/); Associate GeoData Institute, University of Southampton; Programme Committee Chair - Legal, Security and Privacy in IT Law - conference series of the International Association of IT Lawyers [www.lspi.net](http://www.lspi.net).

#### **Fiona Stanley**

Fiona Stanley AC is the Founding Director of the Telethon Institute for Child Health Research; Chair of the Australian Research Alliance for Children and Youth; and Professor, School of Paediatrics and Child Health at the University of Western Australia. Trained in epidemiology and public health, her major contribution has been to establish the Telethon Institute for Child Health Research. She has over 300 publications, books and book chapters and was named Australian of the Year in 2003.

#### **Tom Steinberg**

Tom Steinberg is the founder and director of mySociety, a non-profit, open source organisation that runs many of the best-known democracy websites in the UK. These include the Parliamentary transparency website TheyWorkForYou

and the somewhat self-explanatory FixMyStreet. mySociety's missions are to build websites which give people simple, tangible benefits in the democratic and community aspects of their lives, and which teach the public and voluntary sector how they can use technology better to help citizens.

**Carol Tullo**

As a Director at The National Archives, Carol heads up the Information and Policy Directorate, which includes the responsibilities discussed in the UK chapter, and which provides professional leadership in information policy areas across government and the wider public sector. Carol retains official titles under Letters Patent for the management of Crown copyright and database rights, publication of legislation and provision of official publishing guidance.

**Paul Uhlir**

Paul F. Uhlir, J.D., is director of the Board on Research Data and Information at the National Research Council in Washington, D.C. His work focuses on the intersection of science, technology, and law, specifically on issues relating to public research information policy, management, and applications.

**Peter Weiss**

Mr. Weiss began work with the Strategic Planning and Policy Office of National Oceanographic and Atmospheric Administration, National Weather Service, in March 2000. His responsibilities included domestic and international data policy issues, with a view towards fostering a healthy public/private partnership. As a Senior Policy Analyst/Attorney in the Office of Information and Regulatory Affairs, Office of Management and Budget, Mr. Weiss was primary author of the information policy sections of OMB Circular No. A-130, 'Management of Federal Information Resources'. Mr. Weiss held a B.A. from Columbia University and a J.D. from the Catholic University of America, Columbus School of Law. The information policy community lost an international scholar when Mr Weiss passed away in 2005.

**Frederika Welle Donker**

Born and raised in Rotterdam, The Netherlands, after leaving high school Frederika emigrated to Sydney, Australia, where she worked as a technical officer at CSIRO and at the University of Sydney. Frederika returned to The Netherlands in 1998 and completed her MSc. at the Faculty of Technology, Policy & Management of Delft University of Technology in 2001. Since 2005 Frederika has been a researcher at the OTB Research Institute for the Built Environment, Delft University of Technology. In 2008 she started a PhD study into the impact of the European Union framework on the free flow of geo-information and geo services.

**Harlan Yu**

Harlan Yu is a Ph.D. student in Computer Science and the Center for Information Technology Policy at Princeton University. His research is in information security, privacy, and technology public policy.

**William P Zeller**

## BIOGRAPHIES

William P. Zeller is a Ph.D. student in Computer Science and the Center for Information Technology Policy at Princeton University. His research interests include Internet application security, privacy, and electronic voting systems.

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