



THE UNIVERSITY OF
SYDNEY
—
Business School



MONASH
University

Key Centre Annual Report 2023

The Commonwealth Key Centre
of Teaching and Research
in Transport Management

Institute of Transport Studies
Monash University

<https://www.monash.edu/engineering/its>

Institute of Transport and Logistics Studies
The University of Sydney

<http://sydney.edu.au/business/itls>

Institute of Transport and Logistics Studies
University of Sydney Business School
The University of Sydney
NSW 2006

March 2024

Centres Coordinator
Australian Research Council
GPO Box 2702
Canberra ACT 2601

Dear Centres Coordinator,

I hereby present to you, in accordance with the Australian Research Council's requirements for continued Key Centre status, the report of the proceedings and outputs for the Commonwealth Key Centre of Teaching and Research in Transport Management (established 1995) for the year ended 31 December 2023.

As showcased in this document, 2023 might best be described as a year with many awards for our staff, both within the University and across the community. The award spree began in January with the news that I was made a recipient of the Award of Member of the Order of Australia (AM). I also received recognition from the University of Sydney Business School (USBS) regarding my many years of contribution. At this same event Mike Bell received the USBS Excellence in Research Award and Rico Merkert the HDR Supervisor Award. Kapila, the ITLS Executive Officer, was recognised through the professional staff Outstanding Team Award. Mike Bell was also honoured in Japan with the top ISST award (also known as the Japanese Nobel prize in transportation!)

We continue to win many research grants and congratulations to Michiel Bliemer and John Rose for their ARC-DP success. John Nelson has led a number of highly successful iMOVE and ARC-Linkage projects which will be active for at least the next two years, while there has been the provision of research funding for team members including Matt Beck, John Nelson, Corinne Mulley, Wen Liu, Camila Balbontin and Edward Wei.

Andrea Pelligrini joined ITLS in February as the Neil Smith Lecturer in Mobility and Accessibility and Chinh Ho was promoted to Associate Professor. Liton Kamruzzaman joined Monash-ITS as an Associate Professor and Alexa Delbosc was promoted to Associate Professor.

The growth in our short course portfolio is outstanding, especially the two new micro-credentials and I anticipate a roll out of a new program in 2024. These courses are an essential feature in the future of ITLS.

I commend this Annual Report to all readers who will seek the breadth and depth of the contributions from Sydney and Monash.



A handwritten signature in black ink, appearing to read 'D Hensher', enclosed in a thin black rectangular border.

Professor David Hensher AM

Key Centre Director
Director, Institute of Transport and Logistics Studies

Contents

Constitution	3
ITLS Board of Advice.....	4
Monash ITS Board of Advice	5
Teaching and Learning	6
Monash in Malaysia.....	8
Professional Development ITLS.....	9
Student Awards	11
Research and Consultancy.....	12
Australian Research Council Discovery Project Grants.....	12
Other External Research Funding	12
Significant Continuing Research Funding	13
University Research Grants.....	14
Engagement	15
Committees	17
Awards	19
Industry Sponsored PhD Scholarships - Monash.....	20
Media	21
Centre Outputs	22

Constitution

The primary object of the Key Centre is to undertake graduate teaching, executive programs, grant and contract research and development in the fields of transport, logistics and supply chain management studies.

The work of the Key Centre also has the following objectives:

- To provide a focus for University work in areas of transport and logistics management and to establish an ambience attractive to those committed to excellence in graduate transport, logistics and supply chain management programs and research.
- To collaborate, to the fullest extent possible, with other parties having an interest in transport, logistics and supply chain management studies and its applications.
- To offer specialised training courses, workshops, short courses and seminars on topics of interest in the area of transport, logistics and supply chain management.
- To seed the development, in Australia, of innovative ideas in transport, logistics and supply chain policy and professional practice in which the Key Centre plays a role.

These objectives are achieved by the Key Centre through:

- developing and offering graduate transport and logistics management programs, industry programs, certificates, executive programs and short courses;
- bringing high quality transport, logistics and supply chain management programs to people outside Sydney and Melbourne (both nationally and globally), as well as widening the offerings of courses within Melbourne and Sydney, through access to courses provided by both IITLS-Sydney and Monash ITS;
- contributing to Australia's growing participation in the Asia Pacific region in a leadership role in transport, logistics and supply chain management;
- widening the range of courses available for middle level professional managers in critical areas of transport, logistics and supply chain management not currently served;
- equipping managers in all disciplines (i.e., engineering, economics, planning), the small business sector and local government to succeed in the face of technological, economic and institutional change;
- building on the recognised need for stronger links between education of engineers, planners, policy analysts and managers in transport, logistics and supply chain management;
- undertaking research to develop state-of-the-art management practices and technical methods; and
- transferring the knowledge developed through research to client groups through the Key Centre's publications, workshops, conferences, seminars, and by participation in networks of transport, logistics and supply chain stakeholders.

ITLS Board of Advice

The ITLS [Board of Advice](#) actively supports the continued development and utilisation of ITLS as a centre of excellence adding value to the community. The academic and commercial membership of the Board gives a broad network for the sharing of expertise and experience. In 2023, the Board underwent a review to ensure that the existing knowledge and know-how of the membership mapped against what the Institute requires now and into the future. We welcomed eight new local members and three new international members to the team. We also said farewell to a number of committed members whose tenure had come to an end and we thank them for their valued contributions.

New members

Emily Bobis
Co-Founder, Compass IoT

Julie Gee
Executive Director, Transport Strategy at Transport for NSW

Professor Mark Hickman
Chair and Professor Transport Engineering, University of Queensland

Simon Hunter
Chief Transport Planner, Transport for NSW

Maria Palazzolo
Executive Director and CEO, GS1 Australia

Andrew Petersen
CEO, Business Council for Sustainable Development Australia

Neil Smith
Kelsian Group Ltd

Sue Tomic
Board Chair, Supply Chain and Logistics Association of Australia

Dr Jake Whitehead
Head of Policy, Electric Vehicle Council

Professor Elisabetta Cherchi
Future Mobility Group, Newcastle University, UK

Professor Elise Miller-Hooks
George Mason University, USA



Board of Advice meeting, November 2023

Monash ITS Board of Advice

From a strategic perspective 2023 was a significant year in the evolution of Monash Institute of Transport Studies. The institute broadened its focus to address the range of transport, mobility and related urban development challenges that Melbourne (like Sydney) faces in responding to the projected rapid doubling of population in the coming decades, while struggling to respond to a severe housing crisis.

Recognising that outward sprawl is unsustainable, and that increased population density will be essential in sustainably accommodating rapid population growth, the integration of transport and mobility planning with urban planning in practice, and education and research is essential. Monash ITS developed, with the active support and collaboration of our Monash ITS Advisory Committee, a new Master of Transport and Mobility Planning, in an urban planning context, at the same time as the Victorian Government merged its transport and urban planning functions, creating the Department of Transport and Planning.

Adding further to this complexity are the challenges of electric vehicles, of increased active transport, of rapid growth in new forms of micromobility, and the potential of autonomous vehicles. Where once transport planning was based on vehicle movement, transport and mobility planning is now based on data-driven, end-to-end personal trip mobility. Our education and research must respond to these complex challenges, reflecting Monash University's *Impact 2030* commitment to Addressing Climate Change and Creating Thriving Communities.

We are increasingly multidisciplinary and are moving from engagement to collaboration in engaging with key stakeholders. Associate Professor Liton Kamruzzaman joined Monash ITS from Monash Art, Design and Architecture (MADA). He will be a significant contributor in our multidisciplinary approach to transport and mobility planning and its integration with urban planning. Liton's research interests include integrated transport and land use planning, transit-oriented development, future of transport and travel behaviour, GIS / remote sensing applications in transport planning, machine learning, AI in transport planning and cities and sustainability.

Members of Monash ITS Advisory Committee

Michael Hopkins (Chair)
Chief Executive and Commissioner
National Transport Commission

Paul Carter
Associate Principal
Arup

Robin Reed
State Manager, Victoria
Mott MacDonald

Peter Kartsidimas
Director, Research & Policy
Infrastructure Victoria

Niall McDonagh
Director, Sustainability, Assets and Leisure
Glen Eira City Council

Laura Aston
Senior Consultant
Movement & Place Consulting

Leigh Furness
Director,
Traffix Group

Teaching and Learning

Award Programs

Undergraduate

Monash ITS strengthened our multidisciplinary approach to transport education in 2023, introducing a new Transport Minor, focusing on transport as an essential component of achieving sustainable, economic and social outcomes for cities, focusing on how transport systems can be shaped to reduce emissions, have a positive impact on cities, embracing cutting-edge technologies. The Transport Minor will provide students with the skills to tackle the complex challenges of modern, sustainable transport systems.

Postgraduate Coursework

Master of Transport and Mobility Planning: Monash ITS's Master of Transport and Mobility, approved in 2023, is a comprehensive program designed to equip students with the necessary skills and knowledge to tackle the complex challenges of integrated transport and mobility planning, in an urban planning context. Through a combination of theoretical coursework and practical applications, students will develop a sound understanding of the interrelationships between the social, economic and environmental factors that drive the need for transport and mobility policy, infrastructure, land use and services.

The course covers a range of key topics including planning urban mobility futures, exploring the links between urban land use planning and transport, and how those relationships are challenged by emerging trends and technologies to inform solutions to project-based real-world case studies. The course emphasises the integration of innovation and technology into urban planning to influence positive system change and improve mobility options.

The MTMP offers a well-rounded curriculum that combines theoretical foundations with practical applications. Graduates will be well prepared to pursue careers as transport and mobility planners, urban mobility consultants, policy analysts, and researchers in the public and private sectors, contributing to the development of sustainable and efficient transport and mobility solutions in cities worldwide.

In 2023, ITLS-Sydney continued to offer a suite of postgraduate units of study in Logistics and Supply Chain Management, Transport and Infrastructure. The Master of Logistics and Supply Chain Management launched in 2021 with a suite of new units including more emphasis on resilient and sustainable supply chains. In the Master of Commerce, ITLS-Sydney offers a specialisation in Global Logistics, which has a strong managerial focus. ITLS also offers the Master of Transport in conjunction with the Faculty of Engineering and the Faculty of Architecture, Design and Planning. Our programs are designed to allow students to tailor their learning experience, with the ability to enter at Graduate Certificate, Graduate Diploma or Masters level. Students can also choose from a range of online and part time friendly units. ITLS academics also teach an undergraduate unit on Managing Food and Beverage Supply Chains and also teach into the highly ranked Master of Management and Master of Business Administration (MBA) programs.

Postgraduate Research

The Key Centre has the largest higher degrees by research program in the transport and/or logistics field in Australia. Monash ITS had 29 continuing student enrolments. At ITLS, there were six PhD graduations with 30 continuing students.

Enrolments

Degree	Enrolments
Institute of Transport Studies, Monash University	
Doctor/Master of Philosophy	21
Master of Advanced Engineering (Transport)	35
Master of Transport Systems	80
Institute of Transport and Logistics Studies, University of Sydney	
Doctor/Master of Philosophy	30

Master of Commerce	
Specialisation in Global Logistics	42
Specialisation in Global Logistics (Extension)	112
Master of Logistics and Supply Chain Management	167
Master of Transport	23
Graduate Diploma in Transport	2
Graduate Certificate in Transport	2
Graduate Diploma in Logistics and Supply Chain Management	14
Graduate Certificate in Logistics and Supply Chain Management	5

Unit of study	Enrolments
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Institute of Transport Studies, Monash University	
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Undergraduate:	
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Traffic and Transport Engineering (CIV2282) (Clayton and Malaysia Campuses)	320
Road Engineering (CIV4287) (Clayton and Malaysia Campuses)	260
Traffic Systems (CIV4284) (Clayton)	39

Postgraduate:	
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Traffic Engineering and Management (CIV5302)	62
Intelligent Transport Systems (CIV5304)	51
Planning Urban Transport Systems (CIV5314)	16
Road Engineering (CIV5177)	14
Intelligent Tsp Systems: Eng. and Management (CIV5318)	80
Quantitative Methods (CIV5319)	80
Case Studies in Transportation Systems (CIV5320)	80
Modelling Transportation Systems (CIV5406)	80
Sustainable Tsp Systems Planning (CIV5321)	80
Urban Public Transportation Systems (CIV5322)	80

Institute of Transport and Logistics Studies, University of Sydney	
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Undergraduate:	
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Managing Food & Beverage Supply Chains (ITLS2000)	19
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Postgraduate:	
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Production and Operations Management (ITLS5020)	91
Introductory Supply Chain Analysis (ITLS5050)	87
Transport & Infrastructure Foundations (ITLS5100)	65
Foundations in Global Logistics (ITLS5250)	92
Supply Chain Planning and Design (ITLS6002)	96
Humanitarian Logistics (ITLS6007)	13
Logistics and Supply Chain Management Systems (ITLS6010)	93
Managing Supply Chain Distribution (ITLS6015)	85
Logistics and Future Cities (ITLS6016)	25
Logistics & Supply Chain Project (ITLS6090)	82
Transport Modelling and Forecasting (ITLS6102)	14
Transport, Sustainability and Health (ITLS6103)	9
Spatial Analytics (ITLS6111)	83
Global Distribution Strategy (ITLS6201)	194
Sustainable Logistics and Procurement (ITLS6202)	150
Analytic Methods for Logistics (ITLS6203)	16
Maritime Management and Logistics (ITLS6300)	40
Aviation Management and Logistics (ITLS6410)	66
Decision Making on Mega Projects (ITLS6500)	24
Infrastructure Financing (ITLS6501)	22
Global Logistics Capstone (ITLS6600)	31

Monash in Malaysia

Our affiliate at Monash University in Malaysia is currently developing a specialisation under the master of applied engineering master program. It is called Master of Applied Engineering Specialisation in Smart and Sustainable Mobility.

In research Dr Susilawati is a part of the [Urban Transformation Network \(UTN\)](#). UTN is a pioneering cross-campus network that aims to nurture and grow collaboration, engagement, and research focusing on the global challenges of climate adaptation and thriving communities. In December 2023, UTN received one of two Deputy Vice-Chancellor Research (DVCR) Bolster grants, part of Monash University's Incubator funding for Impact 2030 mission-based research that promotes research collaboration between Monash Australia, Monash Malaysia and Monash Indonesia.

Partnerships with the government and business:

Several NDAs between Monash University Malaysia and industry partners have been signed, including:

- South Klang Valley Expressway Holdings Sdn Bhd (SKVE Holdings Sdn Bhd) is a highway authority in Malaysia. The NDA facilitates the ASEAN China Cooperation Fund (ACCF) International and ASEAN-IVO grant applications, respectively. The proposals were submitted in October 2023 and January 2024 and are currently under review.
- HODOS Media Limited. This NDA facilitates the Global Explorers Innovate UK grant application. The proposal successfully passed the Expression of Interest stage, and now we are preparing for complete proposal submission.

Professional Development ITLS

Bus and Coach Accreditation Scheme Online Training Course

Transport for NSW is responsible for the regulation of public passenger bus services in NSW (including long distance, tourist and charter services). Under the Passenger Transport Act 2014, all operators of public passenger bus services must be accredited to be able to provide services legally in NSW. This online course, directed by Professor John Nelson, is approved by Transport for NSW as meeting the accreditation requirement of competency to operate bus and coach services; applicants must pass the course examination. The course includes four modules: i) Accreditation; ii) Management Information System; iii) Vehicle Maintenance Management System; and iv) Safety Management Systems. The training is delivered through online learning materials including notes, case studies, online quizzes and a discussion board. The Bus and Coach Operator Accreditation Scheme (BOAS) Online Training Course attracted 149 registrations in 2023, marking a return to pre-COVID levels.

Discrete Choice Analysis: Models, Estimation and Applications

Almost without exception, everything human beings undertake involves a choice. In recent years there has been a growing interest in the development and application of quantitative statistical methods to study choices made by individuals or groups with the purpose of gaining a better understanding both of how choices are made and of forecasting future choice responses. Courses in discrete choice modelling and choice experiment design have been offered by ITLS-Sydney since 2006 and are presented by world experts in the field: Professor David Hensher, Professor John Rose, Professor Michiel Bliemer and Dr Andrew Collins. In 2023 the curriculum was updated with the course running across four days in July. We welcomed **33 participants** from across Australia and around the world, including New Zealand and Vietnam.

Certificate of Railway Planning and Operations

The Railways Planning and Operations Program which introduces students to the key elements of railway planning and operations was launched in 2018. In 2023 we offered a three-day course in November prepared and delivered in person by Dr Nigel Harris, one of Britain's leading railway planners, with coursework managed by Professor John Nelson. Topics covered included management and business planning, understanding the railway market/environment, passenger behaviour, infrastructure design and timetabling. The course attracted **25 enrolments** from across Australia.

Travel Demand Management Course

The Travel Demand Management (TDM) short course was postponed and will be running in early 2024. The course showcases the latest developments in TDM and enables participants to develop an appreciation of the techniques available in the TDM toolkit and gain an integrated understanding of key concepts, techniques and trends in TDM. The course is directed by Professor John Nelson.

Infrastructure

The Infrastructure Short Course designed by our Adjunct Professor Martin Locke was run across three days in October. Through guest speakers, panel discussions and group exercises the participants got the opportunity to increase their knowledge on everything from the structure and key elements of a business case to understanding important fundamentals when making an investment decision and how to successfully manage and deliver operating projects. The course attracted **14 participants**.

Certificate of Transport Management

Our popular Certificate of Transport Management short course was run in July attracting **50 student enrolments**. This program has been designed by the Institute of Transport and Logistics Studies, in close co-operation with Transport for NSW and BusNSW enlisting the wisdom of over ten leading experts in various transport industries to enhance participants knowledge and skills for operating in the bus and coach industry in NSW. As well as the speaker presentations, the course delivered engaging panel discussions, gathered the team for a networking event and rounded off the last day with an interactive Networking Planning exercise allowing the students to put theory to paper. The course is directed by Professor John Nelson.

Micro-credential Courses in Industrial Automation

In 2023, ITLS was selected as the preferred provider for two [New Education and Training Model \(NETM\)](#) micro-credential courses on industrial automation. These micro-credentials are short, interactive certification courses that allow people to learn new professional skills very quickly as an alternative learning option for those who don't have the time or money to enrol in a longer qualification. The courses are funded by the NSW Government through the NETM scheme to the value of \$100,000 and are free of charge, with priority given to residents or those employed in Western Parkland City areas. The courses were run in June and November

- [Foundations of Intelligent Supply Chain Management](#) (Industry Partner: SCLAA): Coordinated by Professor Behnam Fahimnia. The June cohort attracted 25 registrations and 20 in November.
- [Introductory Data Science and AI for Supply Chain Management](#) (Industry Partner: GS1): Coordinated by Dr Jyoti Bhattacharjya. The June cohort attracted 24 registrants and 20 in November.

Student Awards

The Key Centre recognises the achievements of its students and alumni through industry and government sponsored prizes that are presented at annual award ceremonies where our students and alumni joined our Board members, industry partners, and the sponsors of prizes to celebrate the success of our students.

ITS-Monash's awards include:

- Ramisa Bhuiyan (Undergraduate CIVIL - 2024 – Outstanding Paper Award – 103rd Annual Meeting of the Transportation Research Board Reynolds J, Bhuiyan R, Currie G and Johnson M (2024) " Tram Bike Crash Risks: A Cyclist Market Survey" 103rd Transportation Research Board Annual; Meeting, 7-11 Jan 2024

ITLS-Sydney's 2023 Awards Presentation Evening was held on 27 May and the following prizes were awarded:

- Ting Xu: Mrs Ma Ching Prize to an international student for the highest academic achievement in a transport, infrastructure and/or logistics and supply chain management specialisation in the Master of Commerce
- Monica Basuki: Peter Koning Memorial Award for the domestic student with the highest academic achievement in a transport, infrastructure and/or logistics and supply chain management specialisation in the Master of Commerce.
- Patrick Lopez: The Wendy and Christopher Adam Prize (HDR Students)
- Thomas Astrum: GS1 Australia Prize for the highest academic achievement in the Contemporary Procurement unit of study (ITLS6010)
- Boyu Hu: GS1 Australia Prize for the highest academic achievement in the Production and Operations unit of study (ITLS6201)
- Thomas Astrum: Supply Chain & Logistics Association of Australia Award for Excellence for the highest academic achievement in the Master of Logistics and Supply Chain Management
- Christopher Day: ITLS Studies Prize for excellence in postgraduate research in transport, logistics or supply chain management.



Prize winners receive their awards from our sponsor representatives.

All images: Nicole Bailey

Research and Consultancy

FUNDING AWARDED OR ANNOUNCED IN 2023

Australian Research Council Discovery Project Grants

Community Self-determination in the era of automated home delivery systems (2023-27, AU\$515,000)

Professor John Nelson (led by University of NSW)

Urban environments in Australia and internationally are on the cusp of major disruption resulting from impending proliferation of home delivery services using autonomous vehicles in the form of trucks, shuttles, bots and drones. As witnessed in the case of ride-share services, socio-technical changes can permeate society before effective regulation is introduced unless swift anticipatory action is taken. The aim of this project is to deliver the critical information inputs required to empower and protect communities in a future characterised by the widespread use of automated product deliveries. Outputs will include modelled scenarios and negotiated policy recommendations that reflect meaningful community consultation.

Safe and efficient eco-driving using connected and automated vehicles (2024-28, AU\$687,578)

Professor Michiel Bliemer (led by University of Queensland)

This project aims to solve the paradox of trading off liveability for mobility by simultaneously reducing traffic congestion, vehicle energy consumption, and emission. This project is expected to generate fundamental knowledge and powerful tools on utilising connected and automated vehicles to help individuals become green drivers. Expected outcomes include ground-breaking models capable of holistically optimising traffic efficiency, energy consumption and emission, and innovative control strategies and policies that focus on energy efficiency and environment protection. This research will bring a wide range of substantial national benefits related to mobility, public health, environmental protection, and energy security.

Integrating land use, market equilibrium and transport for city planning (2024-27, AU\$491,742)

Professor John Rose (led by University of NSW)

This project is significant because it offers a comprehensive travel demand modelling platform that provides realistic, robust, and self-consistent metrics for transport infrastructure planning addressing contemporary changes in the transport system. The expected outcomes of the platform are incorporating recent advances in activity-based methods for travel demand modelling, developing a dynamic and integrated system for modelling short- and long-term household decisions, and creating a systematic calibration mechanism to handle the large-scale model. The benefits of this platform to the Australian transport industry and authorities will be demonstrated in use cases to design and optimise pricing for a multiplayer transport network.

Other External Research Funding

Prof John Nelson, Prof David Hensher, Prof Corinne Mulley, Dr Chinh Ho, Dr Edward Wei, Dr Camila Balbontin **Establishing a Framework of Support to Scale in Mobility as a Service (2023-2025)**

iMOVE CRC with TMR, Queensland
\$600,000

Prof Michael Bell, Dr Supun Perera

TRIPS – A tool for curating land use trip/parking generation surveys and travel plan monitoring (2023-2025)

iMOVE CRC with TMR, Queensland
\$600,000

Prof John Nelson, Prof David Hensher, Prof Corinne Mulley, Dr Edward Wei **Impact of long distance and regional trips on service delivery (2023-2024)**

Transport for NSW
\$75,000

Prof John Nelson, Prof David Hensher, Prof Corinne Mulley, Dr Edward Wei

Review distribution of trip outputs (2024)

Transport for NSW

\$25,000

Prof John Nelson, Prof Rico Merkert, Dr Geoffrey Clifton

Strategic Advisory Services (2023-2024)

Infrastructure Australia

\$20,000

Prof John Nelson

Provision of electric vehicle owners behavioural research (2023)

Evenergi Pty Ltd

\$41,800

Dr Jyoti Bhattacharjya

Development of an Inherent Risk Identification Tool (IRIT) for NSW public entities

Office of the Anti-slavery Commissioner

\$63,452

Associate Professor Chinh Ho

Mobility as a Service for rural and regional areas: how to go from a blueprint to in-field trials and commercial offers (2023-2024)

IMaSS (Institute of Materials and Systems for Sustainability)

JPY 1,000,000

Professor Graham Currie

Modelling Risk Factors and Mitigation Effectiveness in Tram 'Off Road' Incidents - for Yarra Trams

Long Term Impacts of COVID-19 on Travel in Perth (2023) for the Public Transport Authority of West Australia

Zero Emissions Bus Project with DoT CDC Victoria Consortium

Strategies to improve fare evasion reductions – Transport for Greater Manchester UK

Significant Continuing Research Funding

iMOVE Co-operative Research Centre (CRC)

(2017-2026)

The Federal Government has granted a group of nearly fifty leading industry and research organisations known as the iMOVE Co-operative Research Centre (CRC), a total of \$55 million over ten years to explore intelligent transport systems including self-drive vehicles. Key members of the iMOVE CRC include Institute of Transport and Logistics Studies (ITLS) and the University of Sydney's Faculty of Engineering and IT.

In 2023, ITLS continued to work on the following iMOVE projects:

- **Promoting Sustainable University Travel Choices (PSUTS) (AU\$200,000)**
Professor John Nelson, Professor David A Hensher, Professor Matthew Beck, Dr Camila Balbontin
- **Design of a Regional Town and Rural Hinterland (RTRH) MaaS Blueprint (AU\$300,000)**
Professor John Nelson, Professor David Hensher, Dr Chinh Ho, Dr Camila Balbontin, Professor Emerita Corinne Mulley

Healthy, Equitable and Sustainable Urban Mobility

(2022-25, AU\$520,487)

Professor John Nelson (with the Australian National University and Transport for NSW)

This Project is implementing an evaluation framework to explore the extent to which the implementation of “pop-up” cycleways and other measures to promote Active Travel, including as part of journeys by public transport, in both green field and established locations, and explore how it may result in long-term behaviour change and bring public health benefits.

Improving Cardiovascular Health Through Increased Transport-Related Physical Activity: A Codesigned Randomised Controlled Trial for the Commonwealth of Australia MRFF Cardiovascular Health Mission (2022-2025, AU\$767,132)

Professor Stephen Greaves (with University of Tasmania)

Regular physical activity plays a key role in cardiovascular disease and stroke prevention, yet over one third of Australians are insufficiently active. This project aims to establish the impact on physical activity of a novel incentives-based strategy to increase public transport use through a single-blinded parallel group randomised controlled trial. Findings will provide public health and transport authorities with evidence to inform decisions around the use of incentives-based strategies.

Who Benefits from the Sharing Economy? Disruption in Australian Cities (ARC DP 2020-2024, AU\$115,000)

Professor Rico Merkert (with University of Queensland)

Technological disruption has created new possibilities for employment and social interaction in cities yet comes with many associated challenges for policymakers. This project aims to formulate a critical understanding of the sharing economy as a disruptive social, economic, and political process in Australian cities. The project team will apply advanced spatial analytics and theoretical approaches to three distinct facets of the sharing economy, providing new empirical evidence to explain transformative change in cities. It applies a geographical lens to create to new knowledge regarding who benefits from the sharing economy, and how progressive regulation can enhance the outcomes of disruptive technologies.

Shared E-Scooter Trial Evaluation for Transport for NSW (2022-2023, AU\$240,000)

Professor John Nelson, Professor Emerita Corinne Mulley, Miguel Loyola, Yuting Zhang

This project has developed an innovative evaluation framework which clearly maps the objectives of the trial to measurable indicators thus ensuring the evaluation process provides the evidence required. The outcome of this project will provide a clear and succinct picture of the implementation of the trial on shared E-Scooters as part of the transport system into the future with reference to social and sustainability impacts and any effects on safety and driver behaviour that may be attributable to the trial.

University Research Grants

Business School Early Career Researcher Funding Scheme: Micromobility parking facilities at key interchange train stations: A study in Sydney, Australia (2024-2025 \$9,400)

Dr Yuting Zhang

University Accelerator Pitch Program: Improving the urban mobility and health of older Australians (2023, AU\$10,000)

Professor Stephen Greaves

Business School Pilot Research Grant: Towards a fair and equitable road pricing scheme in Australia (2023-2024, \$36,806)

Professor Matthew Beck and Professor Michiel Bliemer

Engagement

Public Lectures and Seminars

ITLS Leadership and Policy Seminar Series and Research Seminar Series

Established in 2003, the ITLS-Sydney Leadership and Policy Seminar Series benefits from leading national and international experts (CEOs, Visiting Professors etc.) speaking on topical transport and logistics issues relevant to business and academia. The seminar series attracts a broad audience from industry, government and academia as well as our own faculty and research students. The seminar conveners are Professors Rico Merkert and John Nelson.

Established in 2018, the ITLS-Sydney Research Seminar Series brings leading national and international research experts to share their current and most exciting research projects. The seminar series attracts a broad audience from industry, government and academia as well as faculty and research students. The seminar convener is Professor Michael Bell.

The following presentations were given in 2023. All sessions were held in a hybrid format:

Interactive Data Visualization for Agent-Based Transport Models

20 February 2023

William Charlton, TU Berlin, Germany

Optimization and Machine Learning in Urban Transportation Under a Sharing Economy

22 February 2023

Professor Elise Miller-Hooks, George Mason University, USA

Human-machine Interaction in Demand Forecasting

28 February 2023

Professor Kai Hoberg, Kuhne Logistics University, Germany

The Potential for Persuasive Messaging to Increase Active Travel in Transport and Health Apps

1 March 2023

Dr Kate Pangbourne, ITS, University of Leeds, UK

The German 9-Euro-Ticket: Just a Summer Dream?

16 March 2023

Dr Allister Loder, University of Munich, Germany

Future Mobility – The City of Tomorrow

3 May 2023

Willem Snel, Mott MacDonald

Mobility-as-a-Service Equilibrium Models

4 May 2023

Associate Professor Francesco Viti, University of Luxembourg

Membership and Bundles Choice in Mobility-as-a-Service

10 May 2023

Associate Professor Francesco Viti, University of Luxembourg

Supply Chain Modernisation – Key Supply Chain Responses to Disruption

17 May 2023

Tim Heron, ALDI, Australia

Airport Surface Access and the Role of Public Transport: A UK Perspective

16 August 2023

Professor Stephen Ison, De Montfort University, UK

Unlocking a Sustainable, Inclusive and Prosperous Future for Our Cities and Regions

6 September 2023

Simon Hunter, Chief Transport Planner, Transport for NSW

Measuring Walking Accessibility

25 September 2023

Professor Hong Lo, Hong Kong University of Science and Technology

Public Transport Fates: Different Dimensions and Insurance Fares as a Network Reliability Indicator

27 September 2023

Associate Professor Jan-Dirk Schmoker, Kyoto University, Japan

MaaS Data Infrastructure for Sustainable Mobility: Providing Affordable, Fast and Green Mobility in a Zero-Emission Mega-City

28 September 2023

Dr Andy Zheng, Founder, PAIR CITY

What Makes Bonza, so Bonza?

18 October 2023

Tim Jordan, Founder and CEO, Bonza

The Long Road to Behaviourally Meaningful Data Driven Methods for Travel Demand Analysis

1 November 2023

Professor Stephane Hess, ITS, University of Leeds

Get Me Out of This Hole: A New Approach to Identifying and Avoiding Poor Local Optima in Choice Models

8 November 2023

Professor Stephane Hess, ITS, University of Leeds

Transport Research Association of NSW(TRANSW) Annual Symposium

9 November 2023

The 6th Annual Symposium of the Transport Research Association for NSW took place at the University of Wollongong Business School Sydney CBD Campus on November 9, 2023. The event hosted more than 150 delegates from government, industry, and academia, with over 50 oral and poster presentations given by research students and post-doctoral researchers from the University of Sydney, UNSW, UTS, and the University of Wollongong. In each of the three streams, early career researchers had the opportunity to engage in fruitful discussions and receive feedback/suggestions to improve their research study. Erik Heller, Partner EY, and Prof. Mark Hickman, TAP Chair and Professor of Transport Engineering at The University of Queensland, delivered inspiring keynote speeches highlighting the potential challenges that the transport sector will face in the next years on the pathway to a greener mobility.

ITLS HDR Supply Chain Symposium

6 December 2023

This year's event involved six presentations covering a range of topics including value creation in the global EV battery supply chain and last mile logistics.

Monash Ogden Lecture – Transport and land use planning for Melbourne's rapid population growth: Challenges and opportunities

10 November 2023

Presented by Professor Eric Miller from the University of Toronto

Committees

- **Dr Matthew Beck**
United States Transportation Research Board Committees: Stated Response (Chair)
- **Prof Behnam Fahimnia**
IEEE Technology & Engineering Management Society, Board Member; Supply Chain Association of Australia, Director and Board Member
- **Professor Michael Bell**
International Symposium on Transport Network Reliability Scientific Committee (Chair, International Advisory Committee); United States Transportation Research Board Committee: Intermodal Freight; Member of International Advisory Committee, Hong Kong Society for Transport Studies (HKSTS)
- **Professor Michiel Bliemer**
International Scientific Committee of the Dynamic Traffic Assignment Conference, Chair of the Transport Research Association for NSW, Member of the organising committee of the TRANSW Symposium 2022, Director Future Transport Research Group, Director Travel Choice Simulation Laboratory
- **Dr Geoffrey Clifton**
Member Australasian Transport Research Forum – Public Transport Research Committee
- **Professor Graham Currie**
United States Transportation Research Board Committee: Light Rail Transit Systems (Chair); Land Transport Authority of Singapore, International Advisory Board Member; K2 Swedish National Centre for Research and Education on Public Transport - International Advisory Board Member, Conference Organising Committee - National Streetcar and Light Rail Conference, New Jersey USA; Track Chair - Public Transport – President, Australasian Transport Research Forum, Committee for Melbourne - Transport Task Force
- **Associate Professor Alexa Delbosc**
Member, Women and Gender in Transportation
- **Professor Stephen Greaves**
Travel Survey Conference International Steering Committee; Australasian Transport Research Forum Executive Committee
- **Professor David Hensher**
Advisory Board, Institute of Transport and Logistics Studies (Africa), South Africa; International Conference Series on Competition and Ownership in Land Passenger Transport, International Steering Committee (Chair), Partner, Volvo, Educational and Research Foundation Centre of Excellence in Bus Rapid Transit, Chile
- **Dr Chinh Ho**
Permanent Scientific and Technical Committee, Cooperation for Urban Mobility in the Developing World
- **Dr Marilyn Johnson**
Amy Gillett Foundation Research and Policy Committee, Australasian College of Road Safety (Victorian Chapter), Australasian Road Safety Conference (Organising Committee, Scientific Committee (Chair)), CLOCS-A National Working Group, Road Safety Education Scientific Advisory Committee
- **Martin Locke**
Board member, Infrastructure Partnerships Australia, Australia
- **Professor Rico Merkert**
United States Transportation Research Board Committees: Air Cargo, Aviation Economics

- **Professor Corinne Mulley**
Partner, Volvo, Educational and Research Foundation Centre of Excellence in Bus Rapid Transit, Chile; Executive Board, World Symposium of Transport and Land Use Research (former Chair), Member, International Transport Forum (ITF) Working Group on Funding Public Transport (OECD, Paris)
- **John Nelson**
ITS Australia, MaaS National Reference Committee; Chair, Mobility Working Group, Business Council for Sustainable Development Australia; Member, American Society of Civil Engineers (ASCE) Mobility Innovation Committee (USA); Member Australasian Transport Research Forum – Public Transport Research Committee; Member Australasian Transport Research Forum – Executive Committee; Member, International Committee, International Symposium on Travel Demand Management series.
- **Professor Geoff Rose**
Australasian Transport Research Forum: National Executive Committee; United States Transportation Research Board Joint Sub-committee: Emerging Vehicles and Low Speed Transportation
- **Professor John Kenneth Stanley**
Member, Advisory Committee, Institute of Transport Studies, Monash University, Australia, 1995 - present.
- **Dr Susi Susilawati**
United States Transportation Research Board Committees: Geographic Information Science and Applications (Friend); United States Transportation Research Board Committees: Urban Transportation Data and Information Systems (Friend); Indonesia: International Symposium on Transportation Studies for Developing Countries
- **Professor Hai L. Vu**
United States Transportation Research Board Committees: Artificial Intelligence and Advanced Computing Applications: ABJ70 (Member), ACM, JSAT

Awards

- **ITLS**
 - ASCLA Supply Chain Training and Education Award, Supply Chain and Logistics Association of Australia (accepted by Dr Geoffrey Clifton and Professor Ben Fahimnia)
- **Professor Michael Bell, ITLS**
 - Excellence in Research Award for an Established Researcher, University of Sydney Business School
 - Kometani-Sasaki Prize, Kometani-Sasaki Foundation, Japan
 - Google Scholar Citation Milestone of 15,000+
- **Professor Michiel Bliemer, ITLS**
 - USS Award for Teaching (Semester 2, 2022), University of Sydney Business School
 - Google Scholar Citation Milestone of 10,000+
- **Associate Professor Alexa Delbosc, ITS**
 - Outstanding Paper Award in Traffic Law Enforcement, 102nd Annual Meeting of the Transport Research Board, 2023
 - PhD Supervisor of the Year nomination
- **Professor Ben Fahimnia, ITLS**
 - USS Award for Teaching (Semester 2, 2022), University of Sydney Business School
 - Google Scholar Citation Milestone of 10,000+
- **Dr Wynita Griggs, ITS**
 - International collaboration network award on renewable and EV-grid integration, 2023
- **Professor David Hensher, ITLS**
 - Appointed a Member (AM) of the Order of Australia (OA)
 - Special Recognition Award, University of Sydney Business School
 - Google Scholar Citation Milestone of 70,000+
- **Dr Chinh Ho, ITLS**
 - USS Award for Teaching (Semester 2, 2022), University of Sydney Business School
 - USS Award for Teaching (Semester 1, 2023), University of Sydney Business School
- **Professor Rico Merkert, ITLS**
 - Excellence in Research for HDR Supervision, University of Sydney Business School
 - USS Award for Teaching (Semester 2, 2022), University of Sydney Business School
- **Kapila Patel, ITLS**
 - The Outstanding Team Award for Discipline Executive Officers, University of Sydney Business School
- **John Rose, ITLS**
 - Google Scholar Citation Milestone of 20,000+
- **Veronica Schulz, ITLS**
 - FFT Award for Tutoring (Semester 2, 2022), University of Sydney Business School
 - Best Oral Presentation, Stream 2, TRANSW Symposium
- **Professor John Stanley, ITLS**
 - Contribution to the Transport Profession Award, Institute of Transportation Engineers, Australia and NZ
- **Ze Wang, ITLS**
 - FFT Award for Tutoring (Semester 2, 2022), University of Sydney Business School

Industry Sponsored PhD Scholarships - Monash

IP-GRIP Program (Bus Association Victoria)

Ha Anh Nguyen

Exploring the Safety Impacts of Bus Asset Ownership Models

Industry Sponsored PhD Scholarships – University of Sydney

Thales

Syed Mujtaba Hussain

An empirical analysis of drone ecosystems in 4PL logistics involving warehouse and last-mile delivery operations

Air New Zealand

David Li

Adopting blockchain technology for enhancing airline sustainability and supply chain/customer confidence

Centre Outputs

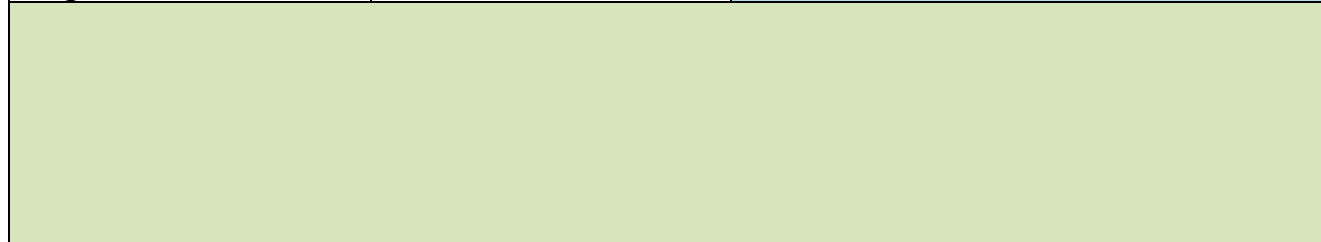


Australian Government

Australian Research Council
ARC Centres of Excellence

Centre Outputs and Detailed Income and Expenditure
Report
(CODIE)

Centre Name:		ARC Centre of Excellence of Teaching and Research in Transport Management
Centre ID: (eg CE1100006)		NO95/08214
Calendar Year Reported:		2022
Centre Admin. Organisation:		The University of Sydney



CENTRE OUTPUTS AND DETAILED INCOME AND EXPENDITURE REPORT (CODIE) GUIDE

CODIE data from individual Centres is for use within the ARC and will not be published. Consolidated figures may be published, used for evaluation purposes or to promote the overall achievements and/or outcomes of the ARC Centres.

The ARC is interested in tracking the development of the Centre as a focal point for research and as an attractive destination for high-quality researchers. The Outputs categories align Centre outputs with the outputs of other ARC schemes.

Reporting requirements

- Centres **receiving** ARC centre funding must submit a completed CODIE (Certification, Outputs, Income, Expenditure, In kind, Personnel and Other ARC grants worksheets) along with five (5) copies of the Annual Report
- Centres **no longer receiving** ARC centre funding, but retaining their title, must submit a completed Outputs worksheet only from this CODIE along with one (1) copy of the Annual Report.

To be noted when completing the CODIE:

- The CODIE is NOT a balance sheet. The total income does not necessarily have to balance the total expenditure.
- Headings should not be modified. New headings must only be entered under the "Other" category.
- Leave blank any rows that are not applicable to your Centre.
- New rows may be added to tables if more entries are required.
- All data must be for the 2023 calendar year ONLY.
- Insert Centre Details on sheet 1 (Title Page) before completing the remainder of the CODIE. These details will auto-fill across the worksheet.
- Example worksheets are provided. Please note the data in these examples are illustrative only and do not represent indicative amounts.

Submitting your CODIE (due by 31 March each year)

To submit your CODIE please:

- Check the Centre name below is correct.
- Print this page and sign the Certification below.
- Print one (1) copy of each worksheet.
- Post this with the signed Certification page and five (5) paper copies (one for Centres no longer receiving ARC Centre funding) of the Centre's Annual Report to:
Centres Coordinator
Australian Research Council
GPO Box 2702
Canberra ACT 2601
- [Email an electronic copy of this file to centres@arc.gov.au](mailto:centres@arc.gov.au)

Certification

To be signed by an authorised officer of the Centre.

I hereby certify that the following sheets are an accurate representation of the outputs, income and expenditure of the:

ARC Centre of Excellence of Teaching and
Research in Transport Management

covering the calendar year 2023 and that I am authorised to approve their submission.

Certified by:

Signature



Print Name

Professor David Hensher

March 2024

Instructions

- **Include outputs for ALL Centre activities (including those arising from Centre staff not named as Cis or PIs).**
- **Do not include any outputs from other ARC-funded projects or from work predominately completed before commencement of the Centre.**
- **If you are unable to differentiate between Centre outputs from other ARC-funded projects, these may be included in Column A. In these cases, the (double counted) outputs should also be acknowledged in Column D.**
- **Include only 2023 accepted and in-print books/articles. Do not include outputs that were listed in the 2023 CODIE.**

Code	Type of Output	A Number of Centre outputs	B Number of outputs in Column A that included overseas involvement (i)	C Number of outputs in Column A that involved personnel external to the Centre (ii)	D Number of outputs in Column A also attributed as outputs of other ARC Projects (iii)
A1	Book – authored research	1	0	1	0
A2	Book – authored other	0	0	0	0
A3	Book – edited	0	0	0	0
A4i	Book – revision/new edition	0	0	0	0
A4	Book - translation	0	0	0	0
B	Book chapter	6	1	0	0
C1	Journal article – articles in scholarly refereed journal	94	46	57	3
C2	Journal article – other contribution to refereed journal	1	1	1	0
C3	Journal article – non-refereed article	0	0	0	0
C4	Journal articles – letter or note	0	0	0	0
C5	Unpublished reports (including commercial consultancies)	0	0	0	0
D	Major review	0	0	0	0
E1	Conference – full written paper-refereed proceedings	37	13	21	2
E2	Conference – full written paper-non-refereed proceedings	0	0	0	0
E3	Conference – extract of paper	2	2	2	0
E4i	Conference – edited volume of conference proceedings	0	0	0	0
E4	Conference – unpublished presentation	0	0	0	0
F	Audio-visual recording	0	0	0	0
G	Computer software (including digital maps, data, web outputs)	0	0	0	0
H	Designs	0	0	0	0
H2	Technical drawings	0	0	0	0
I	Patents - filed	0	0	0	0
I2	Patents - pending	0	0	0	0
J1i	Other creative works – major written or recorded work	0	0	0	0
J2i	Other creative works – minor written or recorded work	0	0	0	0
J3i	Other creative works – individual exhibition or original art	0	0	0	0
J4i	Other creative works – representation of original art	0	0	0	0
J1	Major creative works	0	0	0	0
J2	Creative work including in group exhibition, performance, recording or anthology	0	0	0	0
J3	Exhibition curatorship	0	0	0	0
K	Number of national collaborating institutions (iv)	7/11	0	0	0
L	Number of international collaborating institutions	31/25	0	0	0
M	Number of countries involved in collaboration	17/16	0	0	0
N	Number of countries from which international visitors originated	6/5	0	0	0
O	Number of international visitors	10/5	0	0	0
P	Number of overseas visits by Centre personnel	4/5	0	0	0
Q	Number of countries visited by Centre personnel	4/7	0	0	0
R1i	Training programs/teaching packages conducted	7/9	0	0	0
R1	Number of PhD students graduated	6/0	2	0	0
R2	Number of Masters students graduated	133/0	0	0	0
R3	Number of Honours students graduated	N/A	0	0	0
S1	Number of PhD students enrolled	30/21	14/20	0	0
S2	Number of Master students enrolled	344/130	260/130	0	0
S3	Number of Honours students enrolled	N/A	0	0	0
T	Number of early career researchers (within 5 years of PhD completion)	2/3	1/3	0	0

- (i) Outputs with overseas involvement – e.g., #journal articles with international co-authors, # international students enrolled/graduated
(ii) Outputs with involvement from outside the Centre – e.g. # journal articles with co-authors not affiliated with the Centre
(iii) Outputs which have been attributed elsewhere in ARC reporting, - e.g. Linkage Project final reports
(iv) Codes K-Q = Sydney/Monash