Convergence Behaviour of Bystanders:
An Analysis of the 2016 Munich Shooting

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Open-Minded

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Agenda

1 Introduction

2 Background
- Crisis Communication on Social Media
- Crisis Convergence Behaviour

3 Research Design

4 Findings

5 Discussion

6 Conclusion and Outlook

1. Introduction
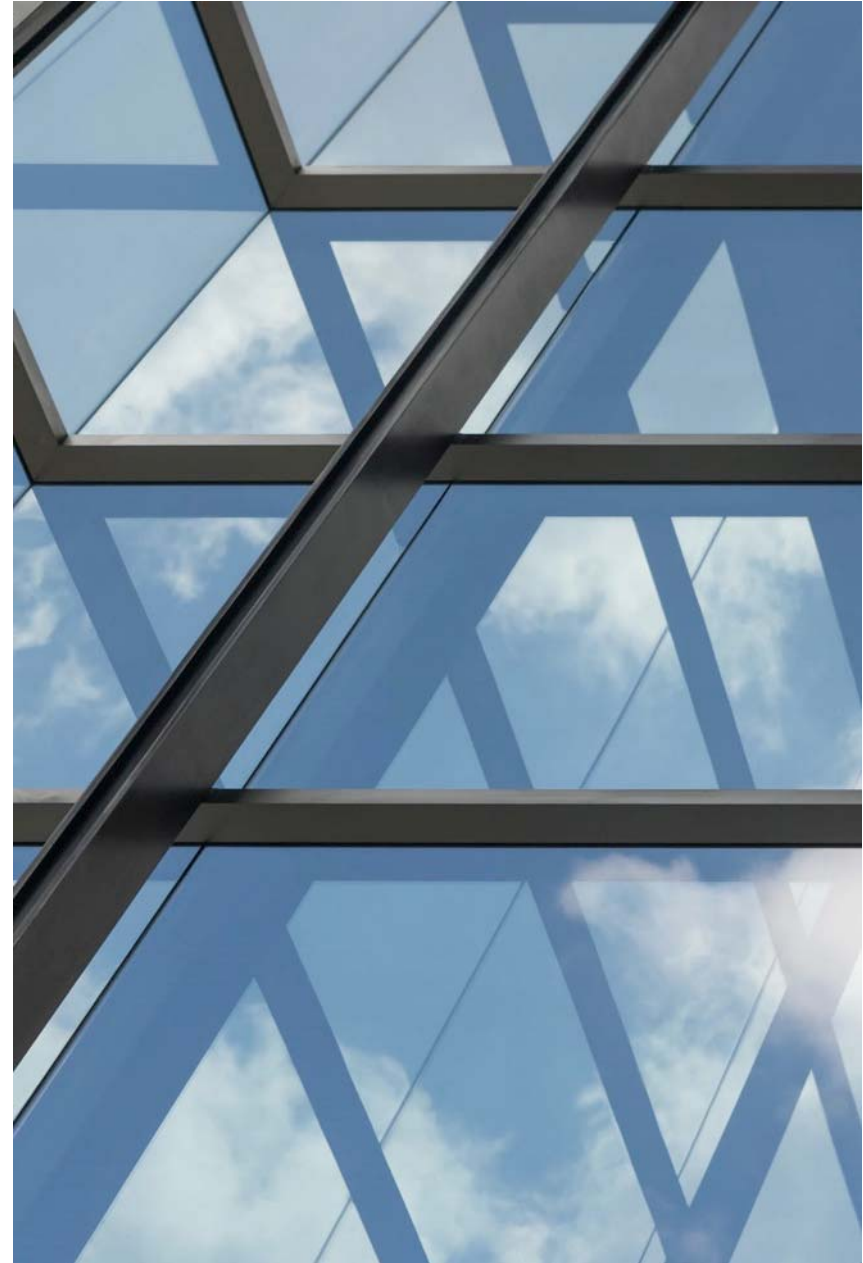
Social Media
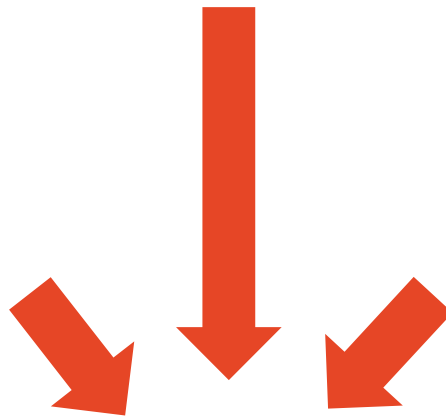
- revolutionised ways to communicate
- important source of information for crisis management (Palen, 2008, Pee, 2012)

Convergence Behaviour

- the spontaneous mass movement of resources towards an event
- Active (those impacted) and passive (bystanders) characteristics

Crisis Communication/ Management

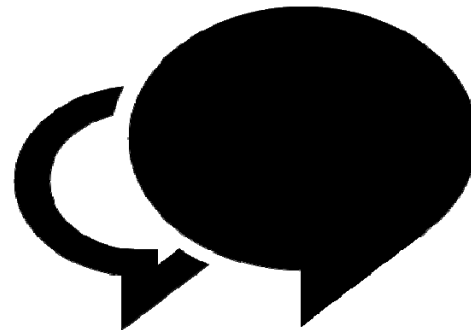- extreme events and crises exhibit highly complex communications patterns and behaviours

1. Communcation and collaboration
(Arif et al. 2016; Oh et al. 2013; Olteanu et al. 2015)

2. Real-time dissemination
(Raue et al. 2012; Zhao and Rosson 2009)

3. Social Media analytics

Red River Flood and the Oklahoma Fires in 2009 (Starbird and Palen 2010), the **Queensland Flood 2011** (Bruns et al. 2012; Cheong and Cheong 2011; Shaw et al. 2013), **the 2011 Tunisian Revolution** (Kavanaugh et al. 2016) **the Haiti Earthquake 2011** (Oh et al. 2010**), the 2011 Norway Siege** (Eriksson 2016), **the 2011 Egypt Revolution and uprisings** (Oh et al. 2015; Starbird and Palen 2012), **Hurricane Sandy in 2012** (Gupta et al. 2013), **the Boston Marathon Bombing 2013** (Cassa et al. 2013; Ehnis and Bunker 2013; Starbird et al. 2016), **Typhoon Haiyan in the Philippines 2013** (Takahashi et al. 2015), and in context of the **Sydney Siege 2014** (Archie 2016; Arif et al 2016; Starbird et al. 2016)

Background

1 2 3 4 5 6

12/03/18

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Active crisis involvement

The returnees
(Fritz and Matthewson 1957)

The detectives
(Subba and Bui 2010)

The helpers
(Fritz and Mathewson 1957)

The manipulators
(Bunker and Sleigh 2016)

The exploiters
(Fritz and Matthewson 1957)

Background

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Passive crisis bystanders

The anxious
(Fritz and Matthewson 1957)

The fans or supporters
(Kendra and Wachtendorf 2003)

The mourners
(Kendra and Wachtendorf 2003)

The curious
(Frith and Matthewson 1957)

Background

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12/03/18

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Table 1. Convergence Behaviour Archetypes – Bunker and Sleigh (2016)

- originally adapted from Subba and Bui, 2010

Authors	Convergence Behaviour Archetype	Characteristics
Fritz and Matthewson, 1957	The returnees	Strong sense of legitimacy to enter a disaster area e.g. evacuated residents, friends and family of residents, property owners - many and strong motivations to return.
Fritz and Matthewson, 1957	The anxious	Fall into 2 categories - anxious close associates of those directly impacted by the disaster, generally anxious about those affected by the disaster. Sub-categorized as information *seekers* and *responders*.
Fritz and Matthewson, 1957	The helpers	Volunteer to help disaster victims and fall into sub-categories of formal (PSA) and informal (everyone else).
Fritz and Matthewson, 1957	The curious	Minimal personal concerns i.e. "sightseeing".
Fritz and Matthewson, 1957	The exploiters	Looking for personal gain, detachment from or non-sympathetic identification with the victims. Manifesting in scamming, looting, stealing, giving misleading information etc.
Kendra and Wachtendorf, 2003	The fans or supporters	Encourage or express gratitude to rescuers.
Kendra and Wachtendorf, 2003	The mourners	Memorialize and mourn the dead.
Subba and Bui, 2010	The detectives	Official and unofficial intelligence gatherers who watch over activities and take appropriate action.
Bunker & Sleigh 2016	The manipulators	Looking to promote self and project personal characteristics of power, intelligence, physical attractiveness, sense of entitlement and uniqueness. Manifests in attention seeking behaviour and creating or seeking roles of perceived importance in the management of the disaster.

How do crisis event "bystanders" such as the: anxious; curious; fans (or supporters); and mourners, utilise social media platforms to communicate during a crisis and does this have the potential to impact and influence an event?
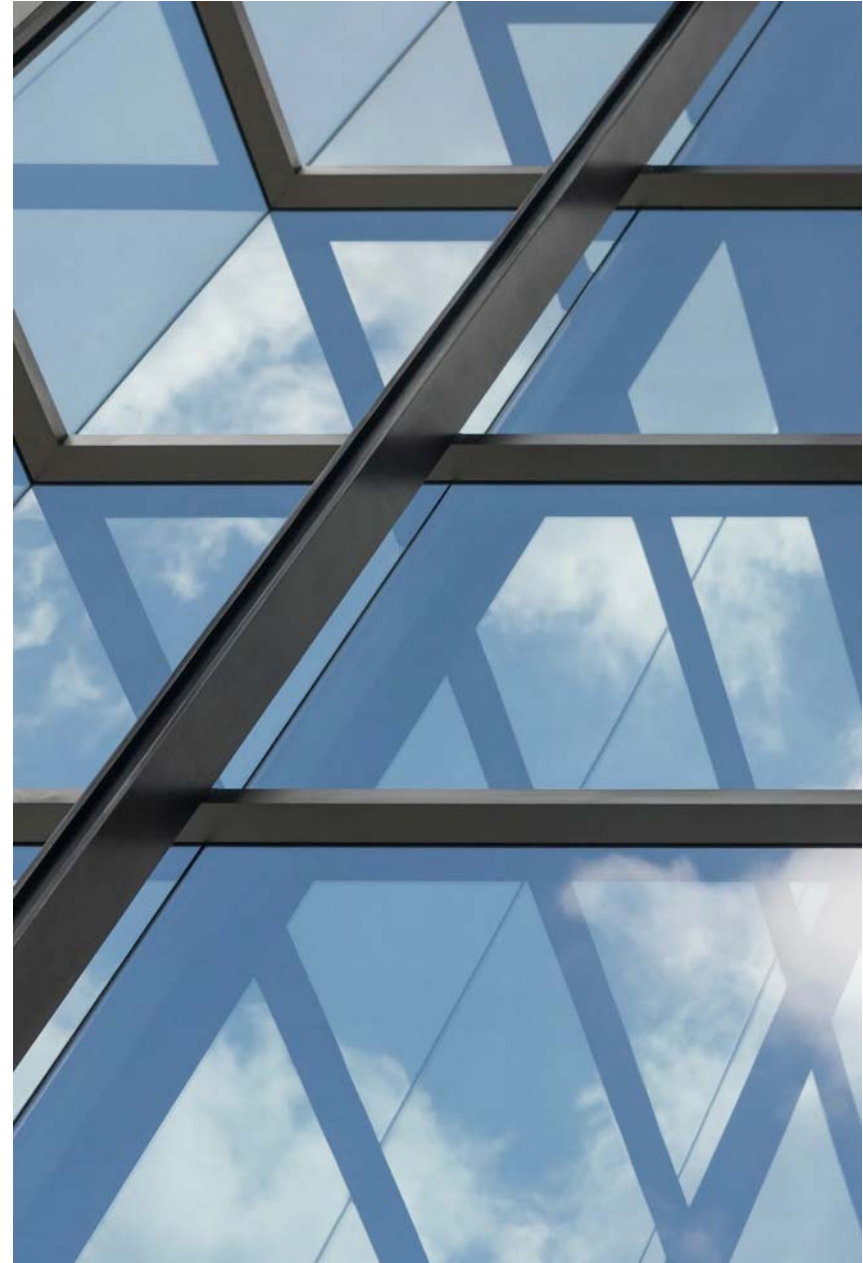
Background

1 2 3 4 5 6

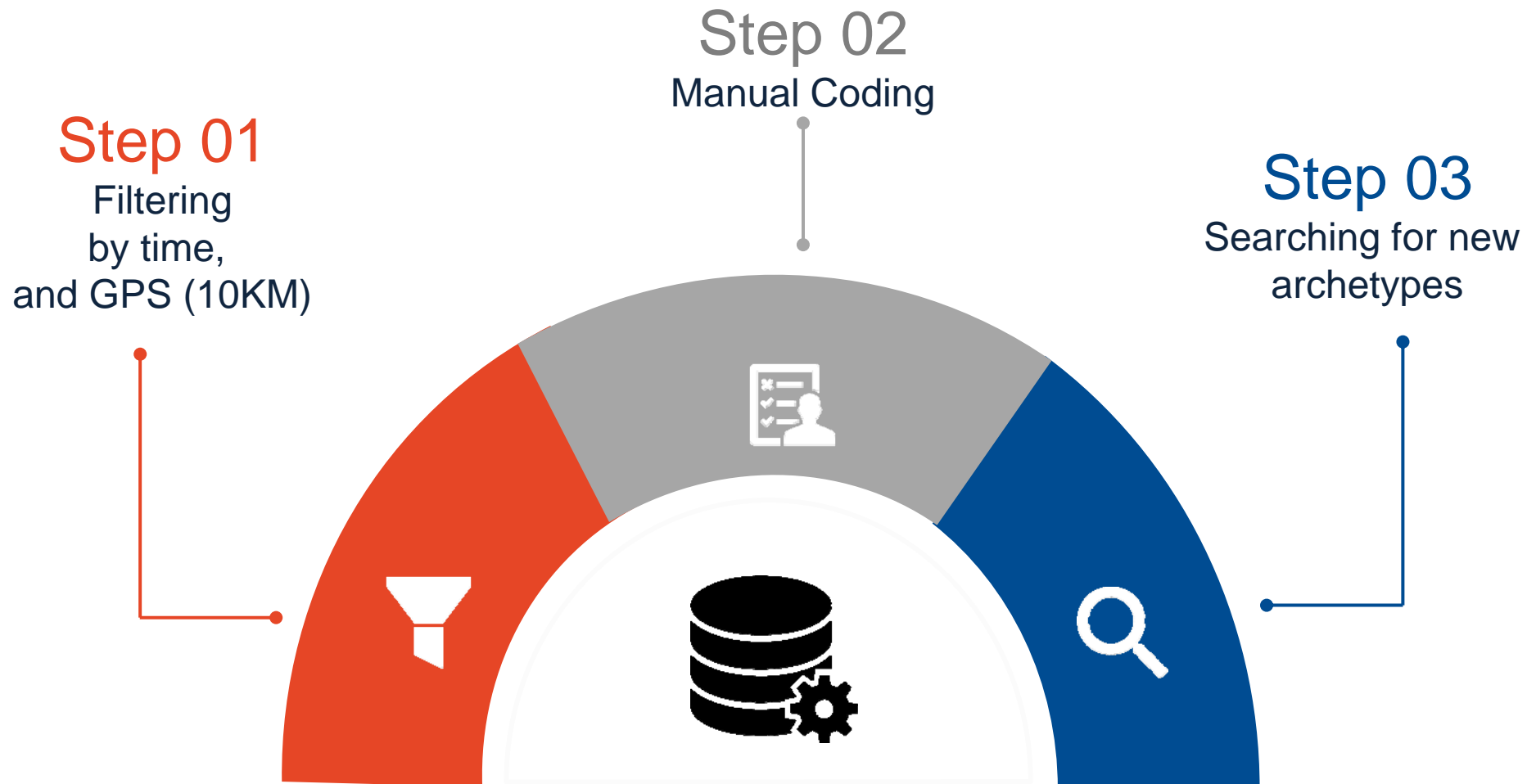# 2. Research Design

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Research Design

- **Incident**: Munich Shooting on 22 July 2016

- **Source**: Microblogging platform Twitter

- **Keywords**: münchen, prayformunich, munich, oez

- **Timeframe**: 22 July 2016 0 am UTC – 25 July 2016 0 am UTC

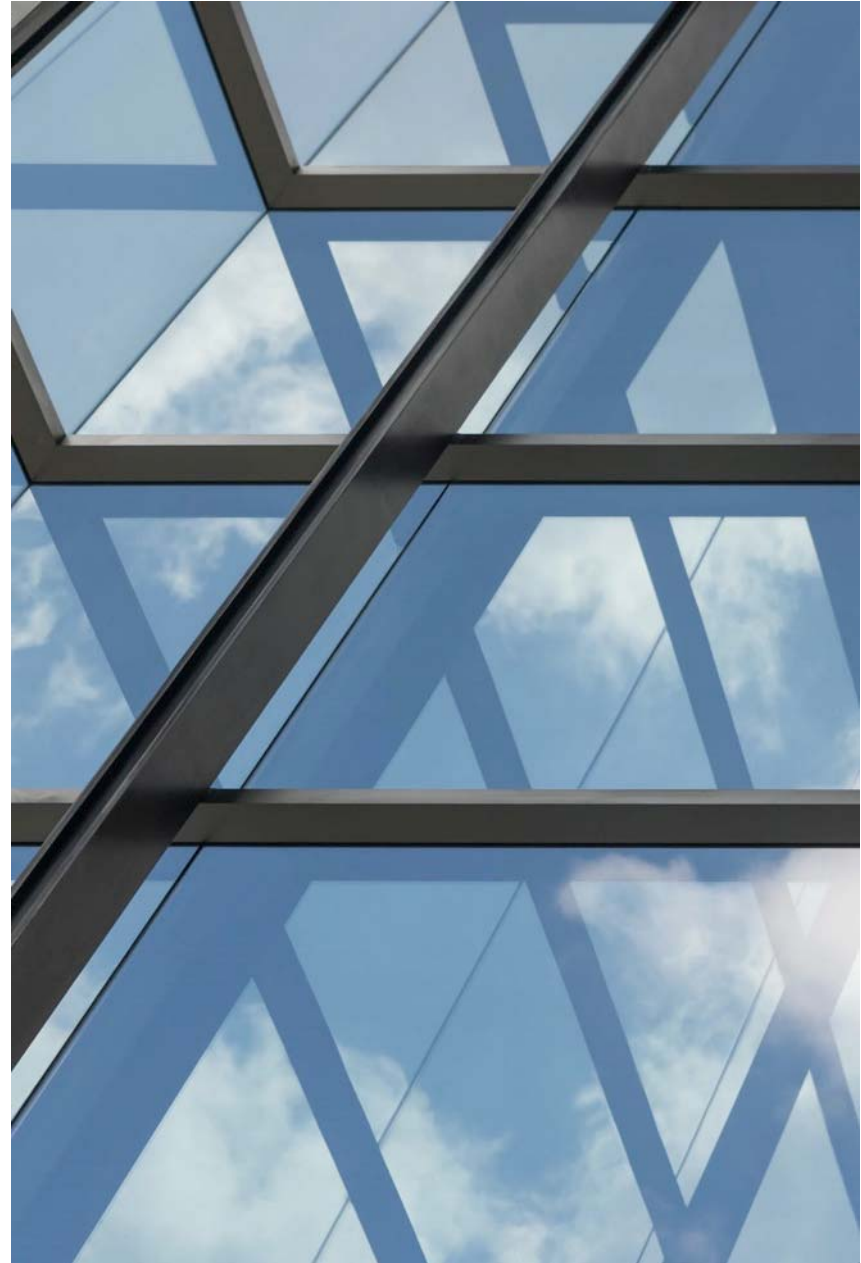- **Language**: german tweets

- **Dataset** size: 672,871 tweets

Step 02
Manual Coding

Step 01
Filtering
by time,
and GPS (10KM)

Step 03
Searching for new
archetypes

Research Design

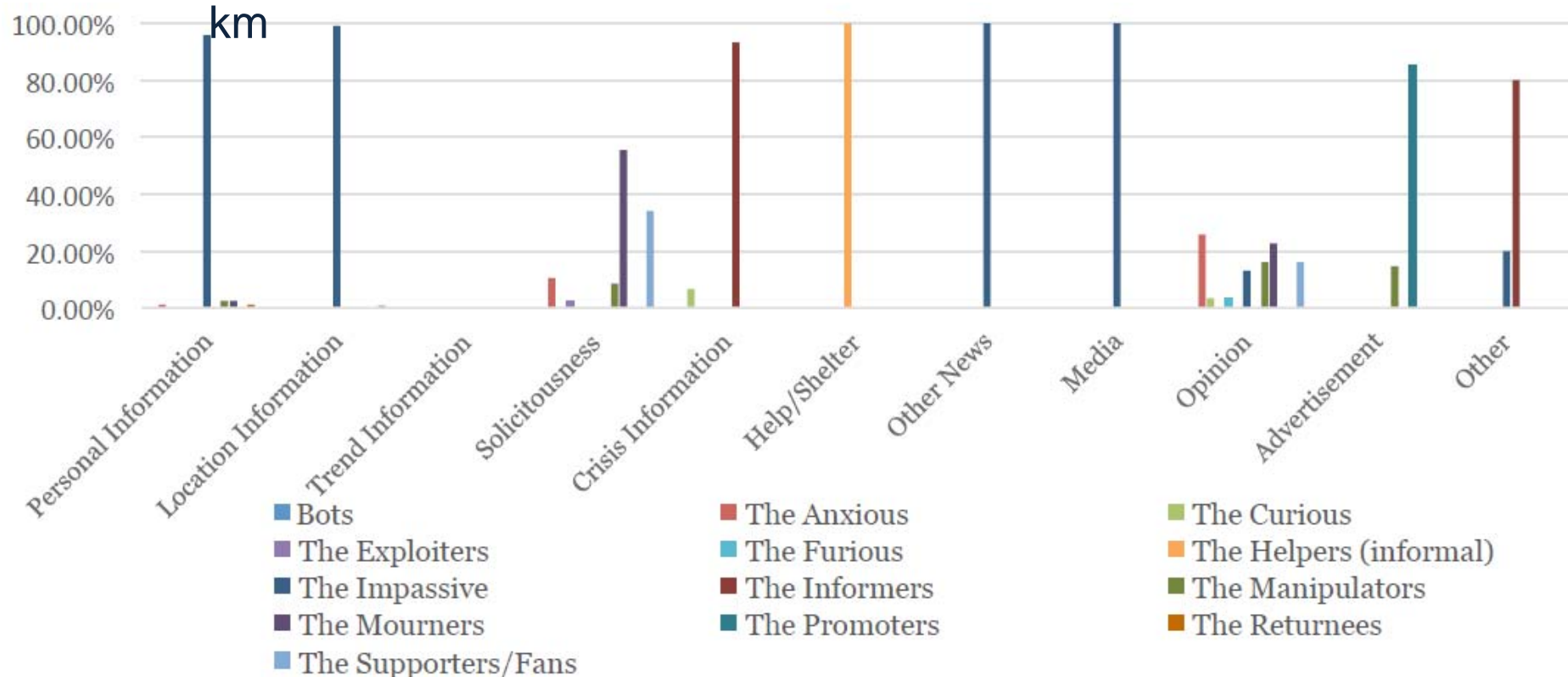1 2 3 4 5 6

12/03/18

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3. Findings

- **The Furious**: users who express their anger/annoyance about the situation and/or organizations/other people
- **The Impassive**: people who don't take part in the crisis communication and mostly tweet about personal things or just share their location
- **The Promoters**: Mainly advertisements
- **The Exploiters → Bots**: Looking for personal gain, detachment from or non-sympathetic identification with the victims. Manifesting in scamming, looting, stealing, giving misleading information etc.
- **The Informers**: mostly news organisations, they don't show any emotion and only share news about the crisis

- The Anxious (passive)
- The Curious (passive)
- The Exploiters (active)
- The Helpers (active)
- The Manipulators (active)
- The Mourners (passive)
- The Returnees (active)
- The Supporters/Fans (passive)
- The Detectives (active)
- Exploiters/Bots (active)
- The Furious (passive)
- The Impassive (passive)
- The Informers (active)
- The Promoters (passive)

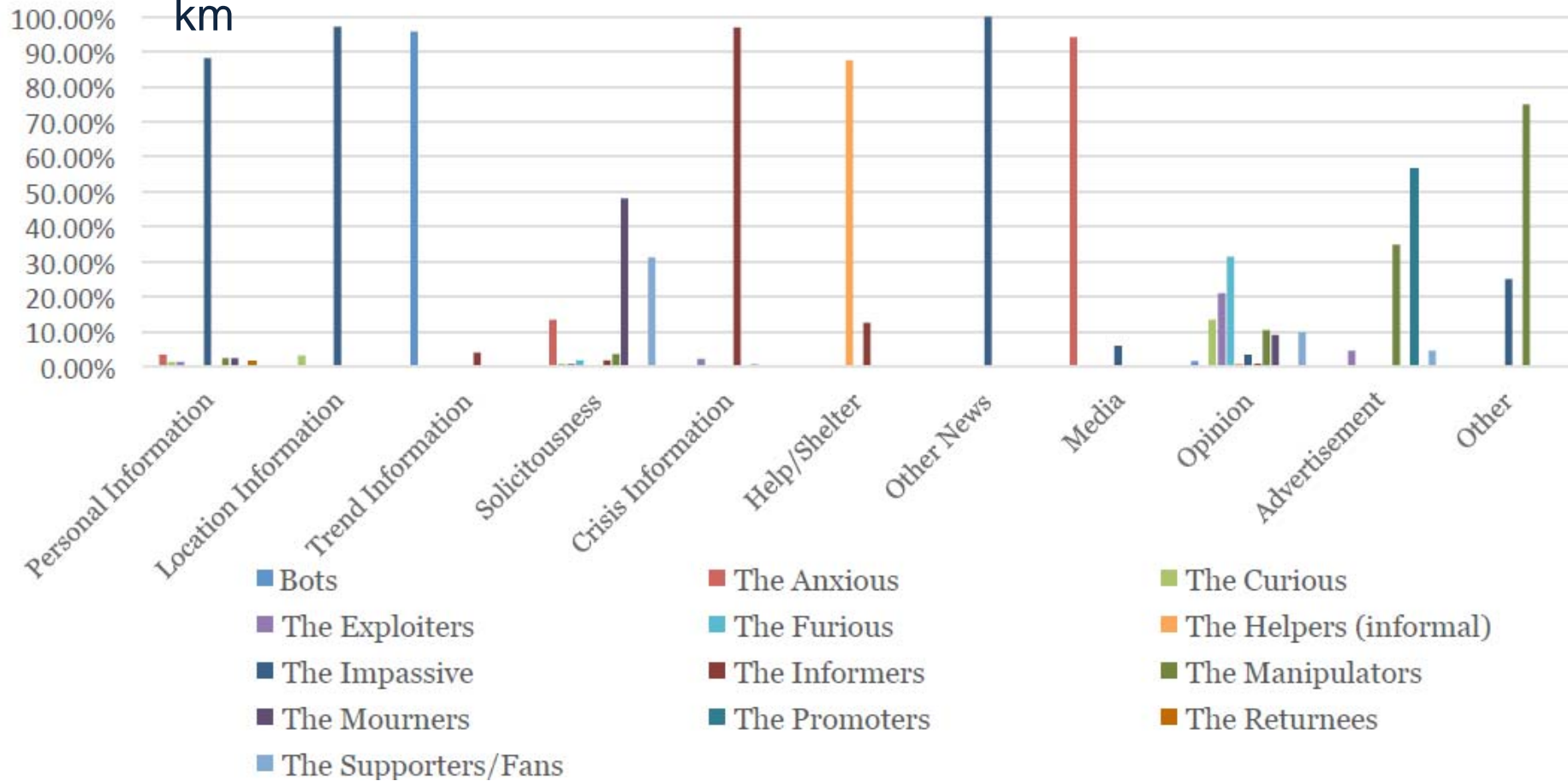## Frequencies of Archetypes according to their distance to the incident
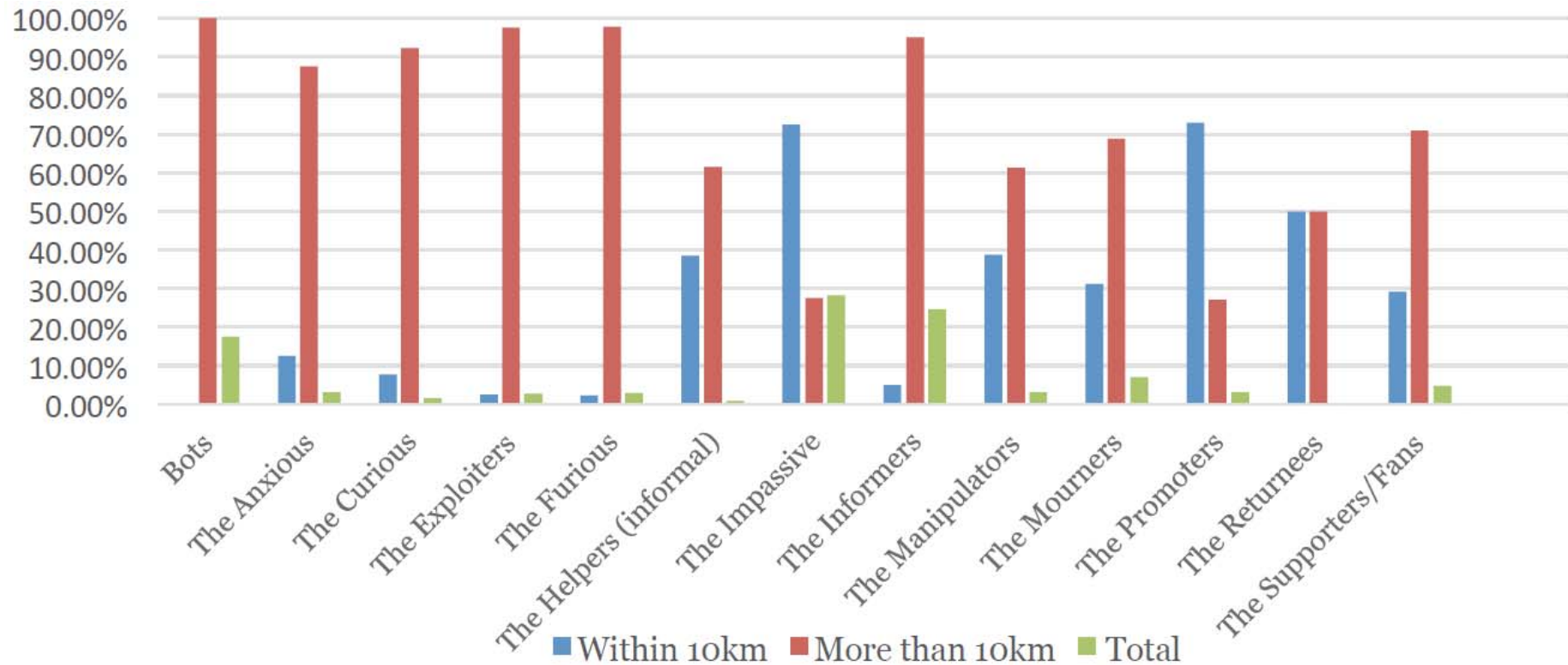
Archetypes and Types of Information inside of a radius of 10 km

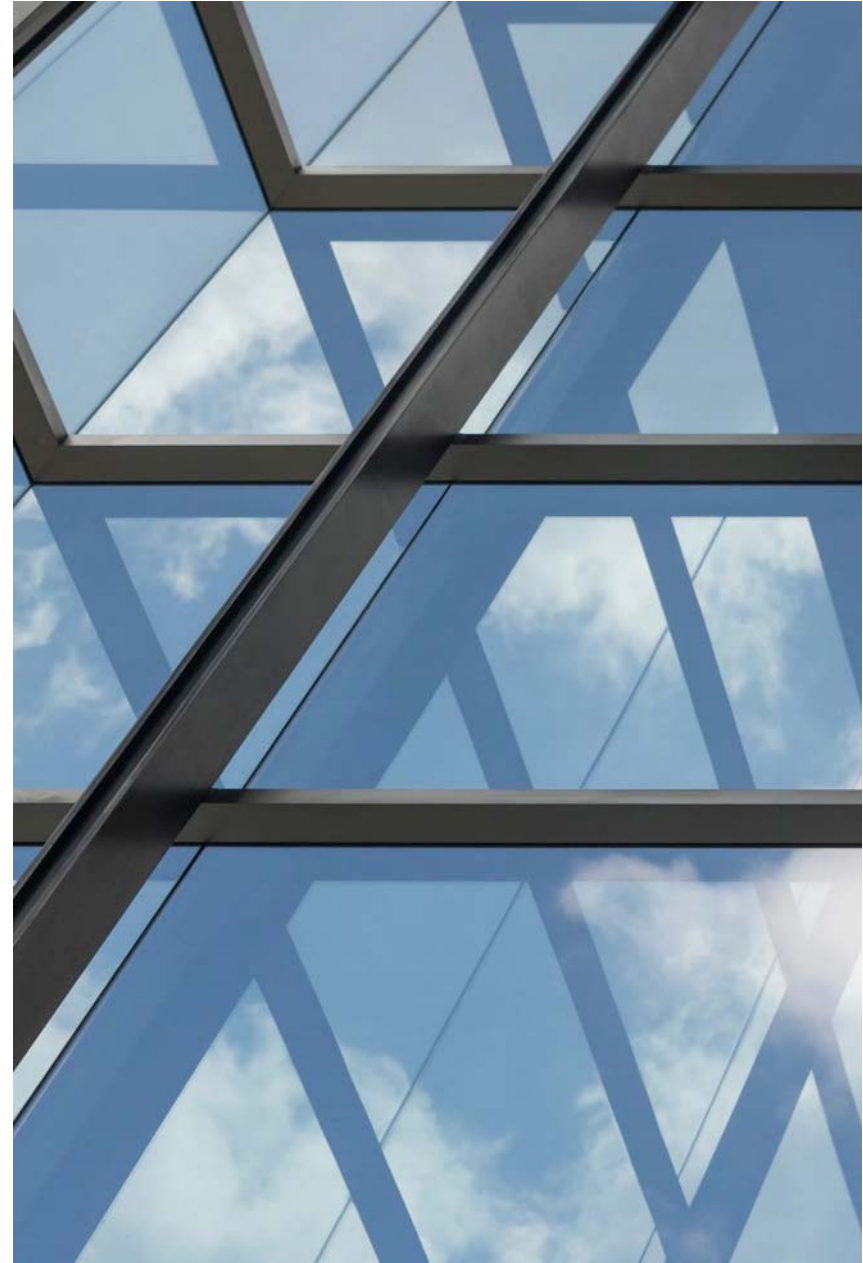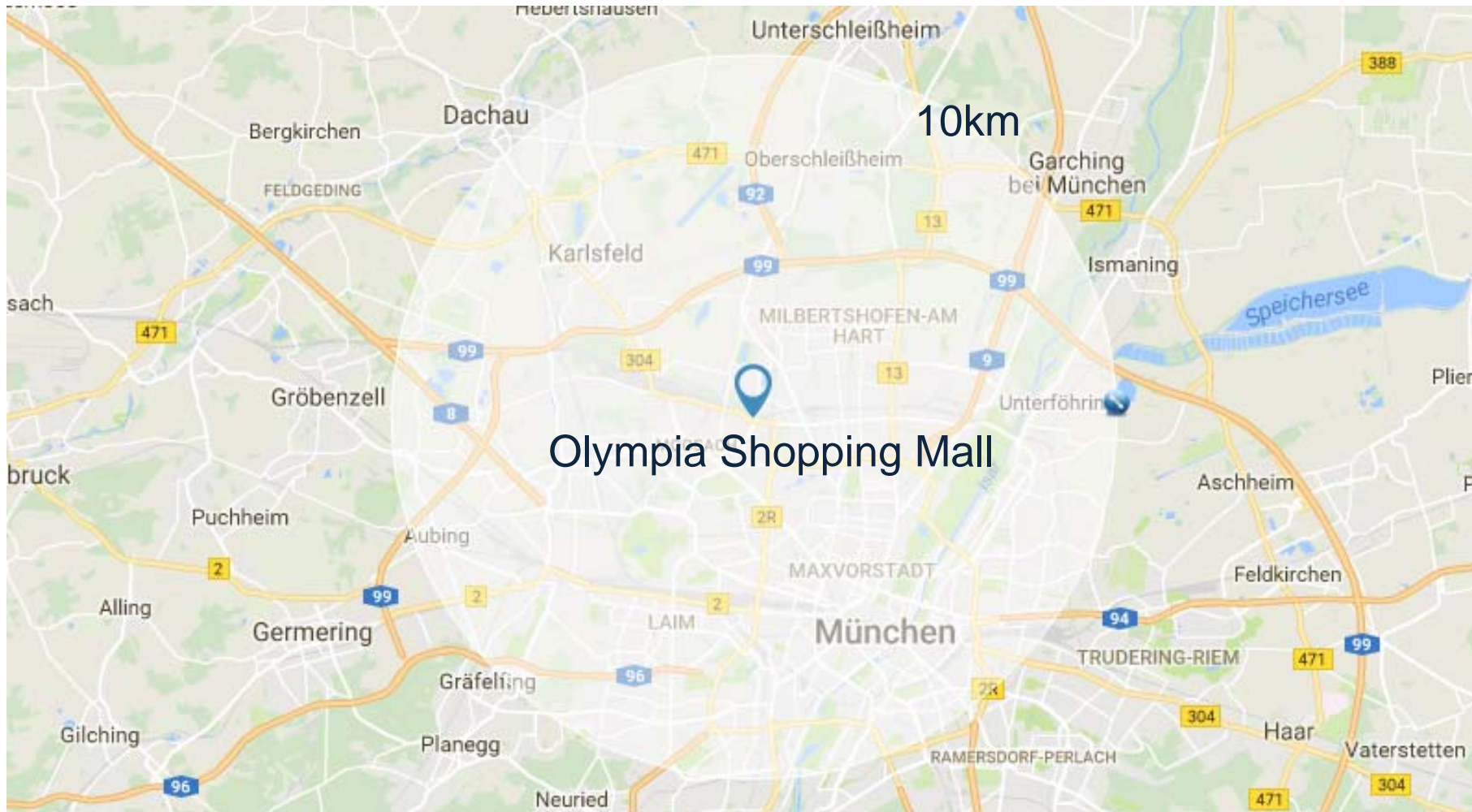Archetypes and Types of Information outside of a radius of 10 km

4. Discussion and Conclusion

10km

Olympia Shopping Mall

Conclusion

Conclusion


Limitations

Further Research

Conclusion
and Outlook

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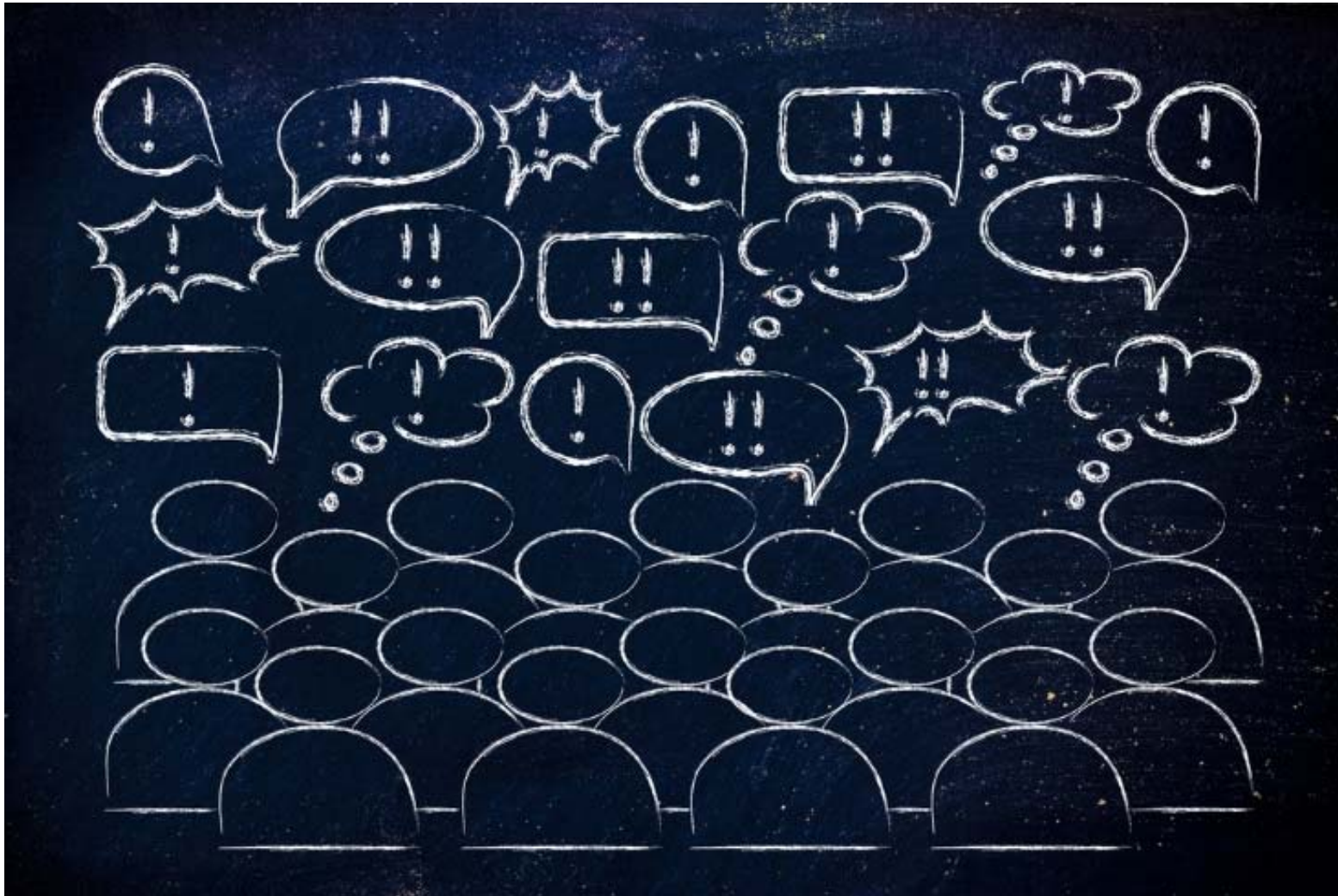
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