



The Healthy Older Worker (HOW) Toolkit

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The project

Led by **Edith Cowan University** and in partnership with NSW Government's **Centre for Work Health & Safety**, this project involved an extensive literature review and surveys to understand the types and causes of injuries in older workers. We then developed a toolkit to help identify and assess the impact of an ageing workforce on WHS systems, and guide the design of a healthy, safe and sustainable systems of work for older workers.

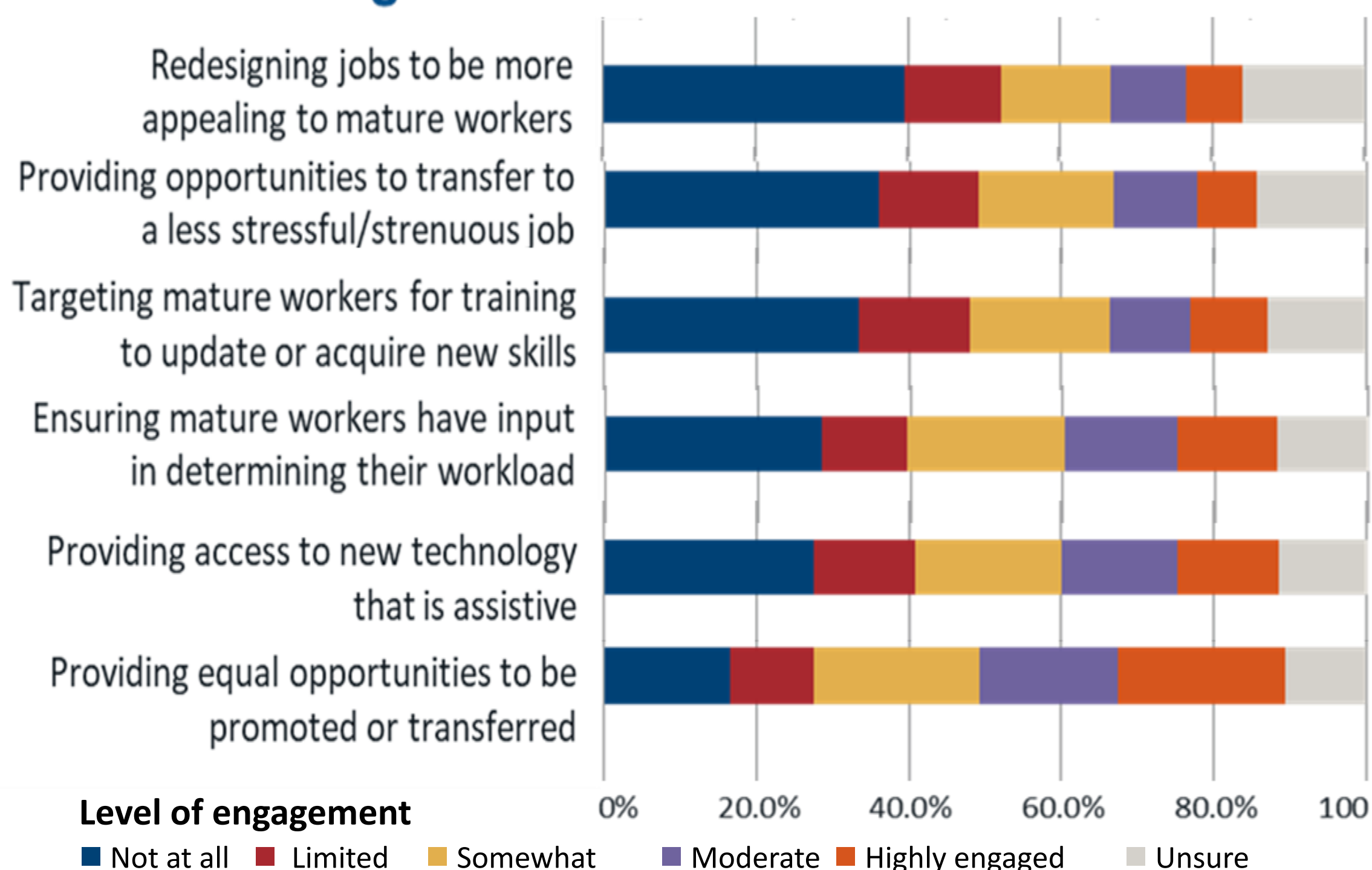
The step-by-step toolkit helps identify psychosocial hazards and physical hazards associated with work-related musculoskeletal disorders (WMSD)/strains and sprains affecting older workers, and the context in which those hazards expose workers to harm. The toolkit was piloted by steering groups in five different types of workplaces to see if it could help them improve the work experience of older workers.

Survey

1,026 older workers responded

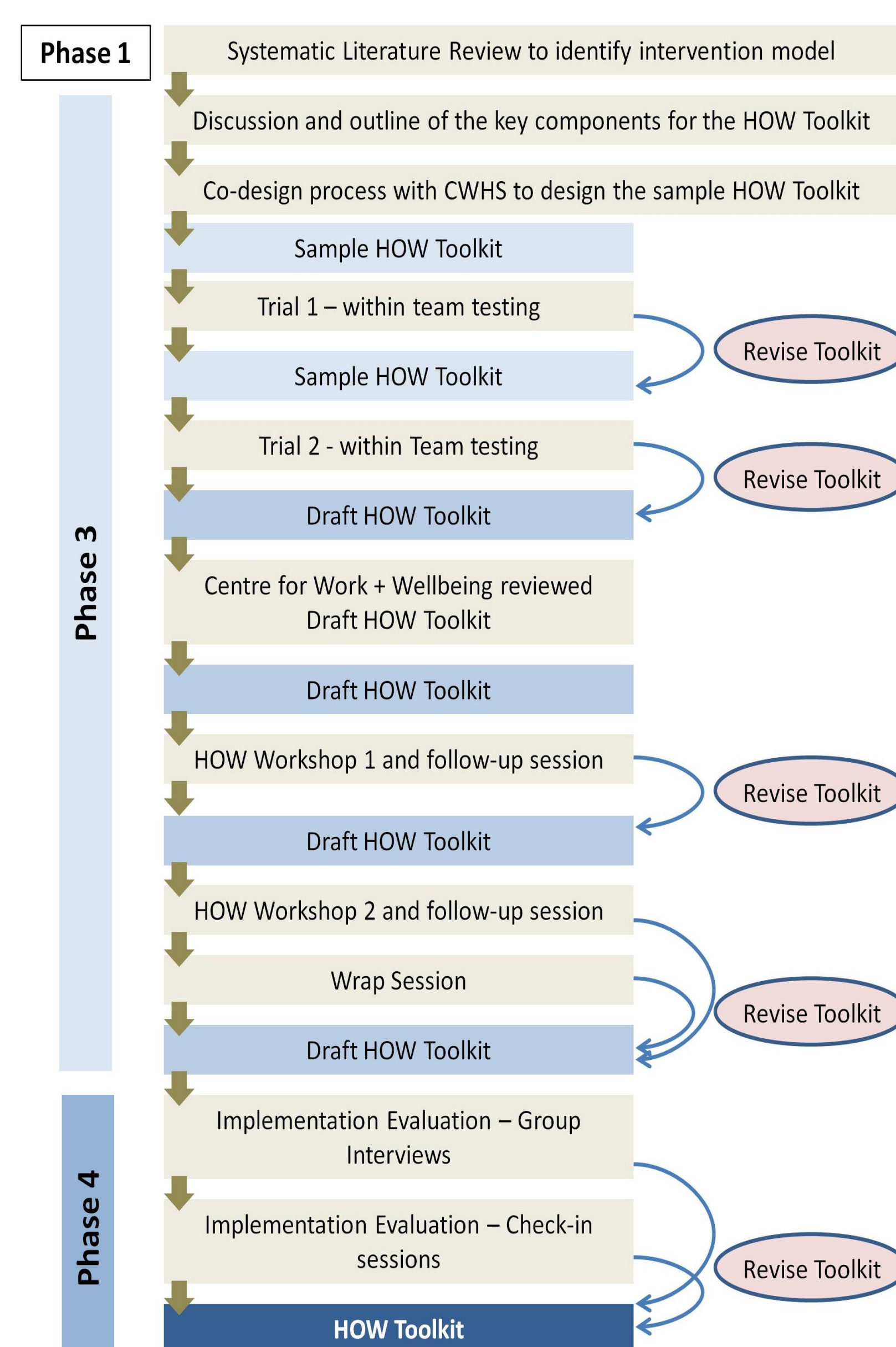
Factors driving psychological and MSD injury and intention to leave for mature workers: stress, age discrimination, exertion and poor HR practices.

Job Design to Accommodate Older Workers



Results highlighted a need for organisations to tailor work design to the needs of older workers

Research process



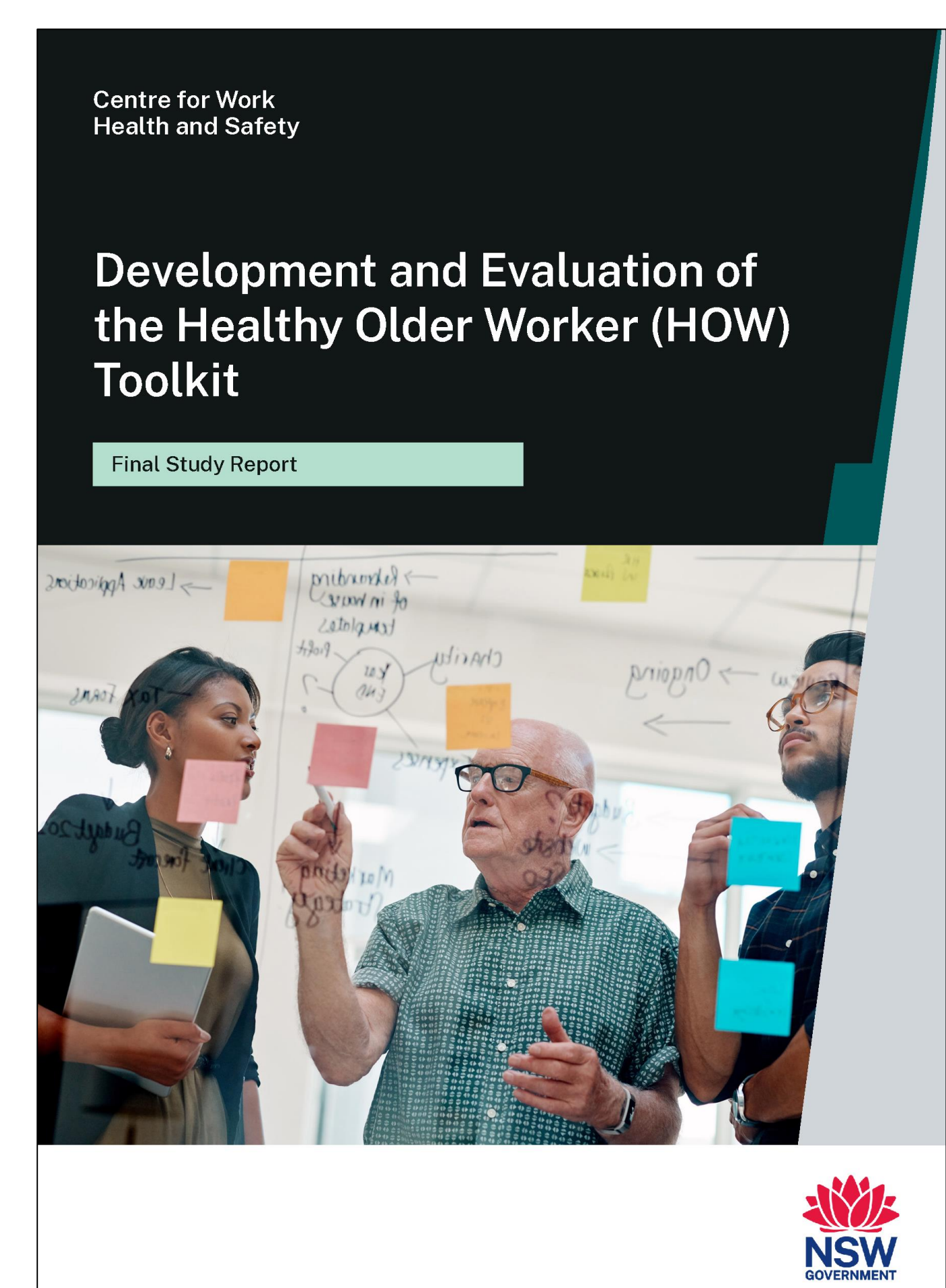
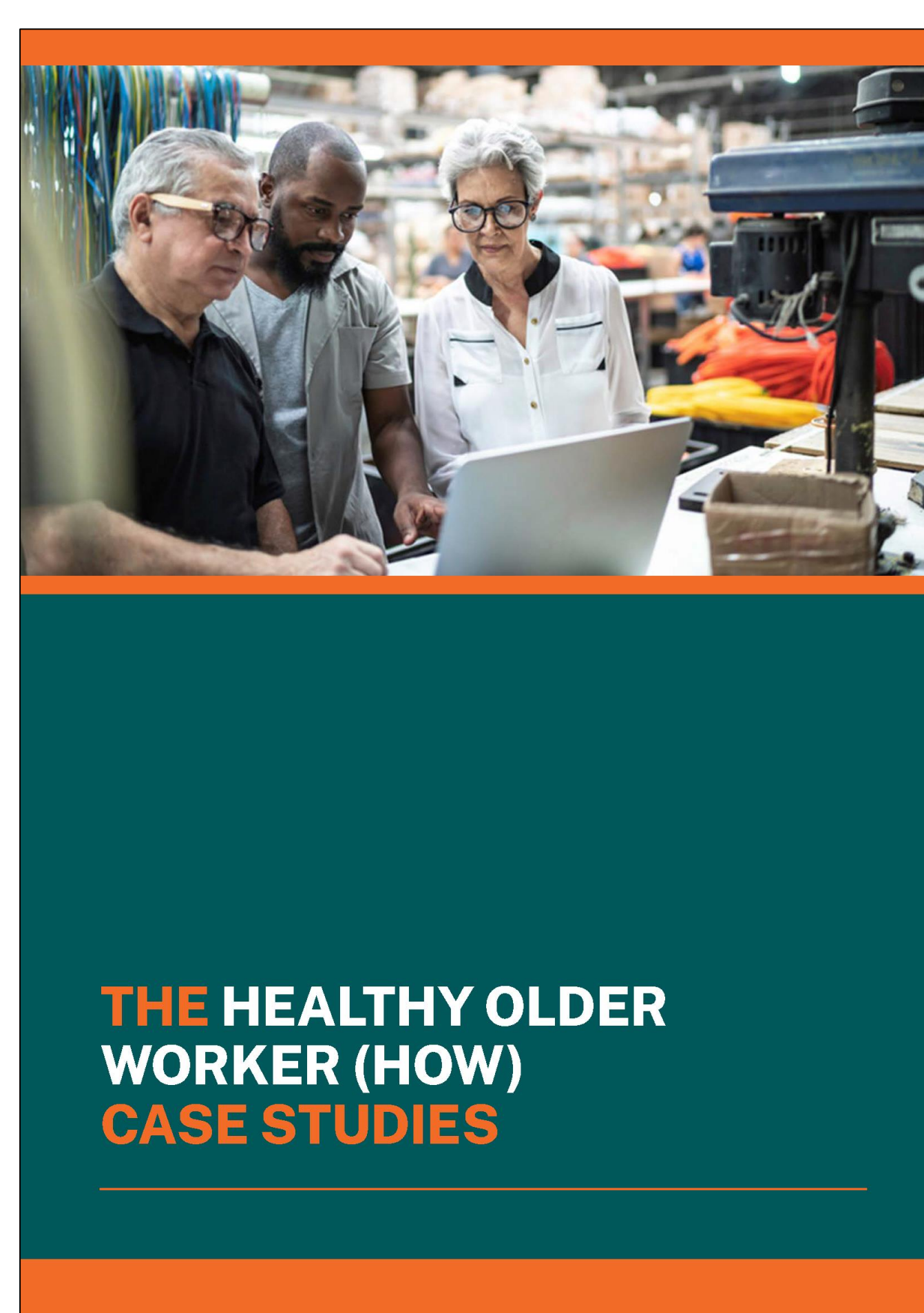
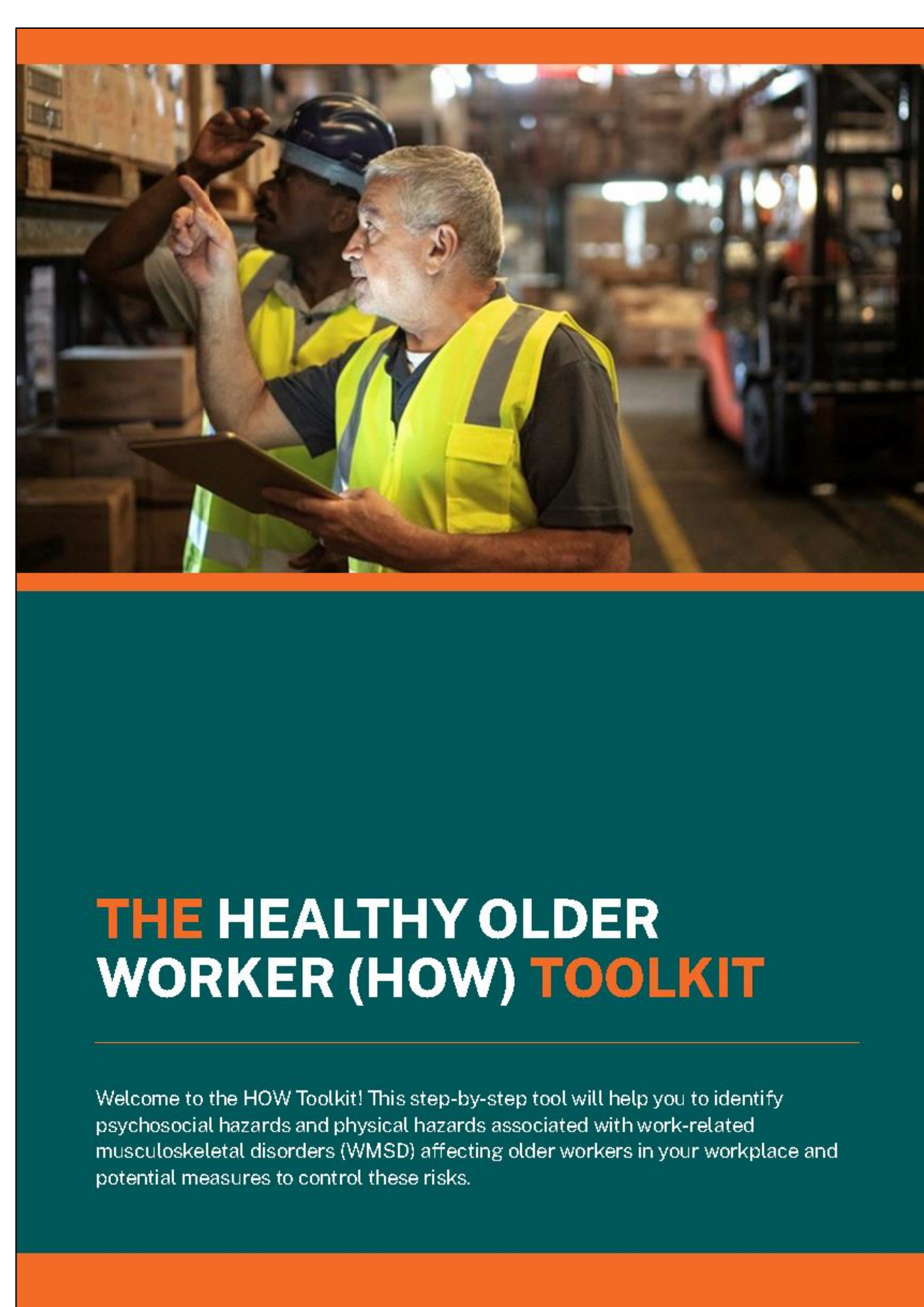
Testing the toolkit: intervention and evaluation

Steering groups were supported by online workshops and support meetings.

Interventions targeted manual labour (manual handling, lifting, overhead reaching), compassion fatigue, burnout & techno-stress.

Better results were achieved by those steering groups who:

- were able to devote more time to the project, and
- included older workers, people with WHS expertise and greater diversity of roles, experiences, and perspectives.



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to find out more

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UNSW
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School of Business



Strengthening the priority of WHS for business leaders

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The project

Led by **Edith Cowan University** and in partnership with NSW Government's **Centre for Work Health & Safety**, **UNSW Canberra** and **Southern Cross University**, this project explores the factors that motivate business leaders to prioritise WHS in their workplaces. Leaders' commitment to improving WHS sets the tone for a company's safety culture. While the health and safety benefits are clear, there is now considerable evidence demonstrating that commitment to WHS has a positive impact on a business' bottom line, customer retention, reputation, quality of services and output, and workforce (attraction, engagement, retention). Pro-social practices are recognised as being beneficial for business and are increasingly incorporated into the 'triple bottom line' – profit, people, and the planet.

Yet despite the multitude of benefits associated with WHS commitment, studies show many business leaders fail to prioritise WHS. How can we ensure ongoing and increased commitment to WHS at the corporate level?

1: Literature review

Literature review reveals commercial and business drivers of WHS priority centre around stakeholder relationships, mediated through reputation and business benefits such as collaboration, co-opetition, benchmarking, consumer preferences and stakeholder activism. Prosocial behaviours were shaped by board's WHS competencies and limited primarily to reporting ESG commitment.

2: Sustainability Report & ESG report study

Documentary analysis of ASX200 sustainability and ESG reports revealed that leaders' statements of commitment to WHS were prevalent in voluntary corporate disclosure; primarily framed around ESG / CSR and responding to welfare concerns and customer and employee expectations.

A quantitative analysis of ASX200 companies over a 12-year period found links between executive compensation and ESG performance and identified that Board-level CSR committees were antecedents of WHS commitment.



3: Interviews with business leaders

Interviews with 43 CEOs and board members from a range of industry sectors revealed:

- WHS and commercial factors are perceived as both competing and well-aligned
- Concern for workers, leaders' WHS expertise, reputational consequences and regulation are key drivers of WHS prioritisation
- Director networks are useful for sharing WHS information and building WHS commitment.

4: Next steps

An intervention phase is now seeking to examine ways of promoting education and knowledge-sharing about WHS issues amongst senior business leaders.

To find out more (or for business leaders who wish to register their interest to participate), please follow the QR code below.



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Bullying, retribution and (the absence of) employee voice on workplace safety

A/Prof. S. O'Neill (UNSW Canberra) and Prof. L. Thornthwaite (MQU)

Funded by:

TEACHO LTD
Transport Education Audit Compliance Health Organisation



The ability of employees to speak freely about safety concerns is critical to timely identification of workplace risk and proactive injury prevention effort. This study contributes to research on employee voice and silence, and a conceptual understanding of relationships between bullying, industry structure, gender and silence, by examining employees' perceptions and experiences in speaking up about health & safety concerns in a high-risk industry characterised by regulatory mechanisms and employer systems to enable and protect employee voice.

Voice and silence in the heavy vehicle road transport industry

The heavy vehicle road transport (HVRT) industry is a high-risk industry where significant rates of serious injury and illness result from a wide range of occupational hazards - despite formal work health and safety systems underpinned by regulatory provisions for consultation and reporting, and legal protections for those raising safety concerns.

A survey of **559 Australian HVRT truck drivers** examined perceptions of voice on unsafe practices the regulatory protections and employer investments in safety systems. Interacting to construct a culture of silence were management cultures of injustice and deaf ear syndrome, a hyper-masculine workplace culture and complex supply chain dynamics and precarious work.

Why drivers are reluctant to raise safety issues	
41%	Fear of retribution
17%	No point, no one listens
9%	Fear of being caught up in legal processes
8%	Drivers don't care
2%	Fear of looking like a trouble-maker
1%	Don't have time to stop and report
4%	Other

Identified forms of retribution

54%	Black-banned, terminated, sacked
31%	Reduced hours of work
25%	Less desirable work allocations
15%	Teasing, harassment or assault

Only **33%** of respondents believed truck drivers were **very likely** to report serious safety problems (9% likely to report) despite only 15% of drivers having experienced or witnessed retribution after a safety issue was raised

Drivers told us that if you voice safety concerns in the workplace:

- Then the work dries up. There are fewer trips for you to do in the next weeks
- Nobody wants to know – they don't do anything to fix it
- You get sacked; no more work for you, you're fired!
- You WILL be targeted by middle management; they make it very hard on you
- You lose work or get given crappy loads; they just give your jobs to someone else
- No-one backs you up, other drivers say you are 'weak', have "No balls", "no guts"
- You end up with a shit lifestyle, they sack you, or make your life hard
- No longer get holidays when you want, and you get ignored; bullied; victimised



This research shows bullying cannot be understood simply as an interpersonal problem but is firmly based in organisational and industry characteristics. It highlights the strong association between bullying and a work environment involving high job demands, substantial stress and low worker control; in this case exacerbated by widespread job insecurity and relational powerlessness.

Overall, the findings reveal the industry's public face, regulatory mechanisms for employee voice and employer safety systems heavily reliant on safety training and consultation, co-exist alongside a contradictory culture of injustice, retribution and silence, whether perceived or actual. Rather than concealed and symbolic, this 'retribution culture' is a visible industry phenomenon, normalised through various forms of psychological and economic mistreatment, and broadly feared even when not experienced directly. As one stakeholder observed:

It is much more complex that saying the macho driver in the blue singlet doesn't want to look like a weak man ... This is not just a story of men taking on the world. It's a world of partnerships. It is always about the family, the family investment, and working together as a family".

As such, formal avenues for employee voice on unsafe practices were undermined by commercial pressures and concerns as supervisors, mid-level managers, and even drivers, choose between safety and economic security; between employee voice and silence.



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find out more

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Working from Home and the Ideal Worker

Sue Williamson, Helen Taylor and Vindhya Weeratunga



Method

In 2021 we surveyed almost 5,000 public servants about working from home.

We used a mixed methods approach and focused on women, women with caring responsibilities and disabled women as variables of interest.



Conclusions

- Women, women carers and disabled women could be considered ideal workers.
- This suggests that a new, multi-dimensional ideal worker norm is emerging.
- The ideal worker norm may lose currency if various groups of employees can become ideal workers.
- This is positive, as the ideal worker norm impedes gender equality, and promotes harmful workplace behaviours.

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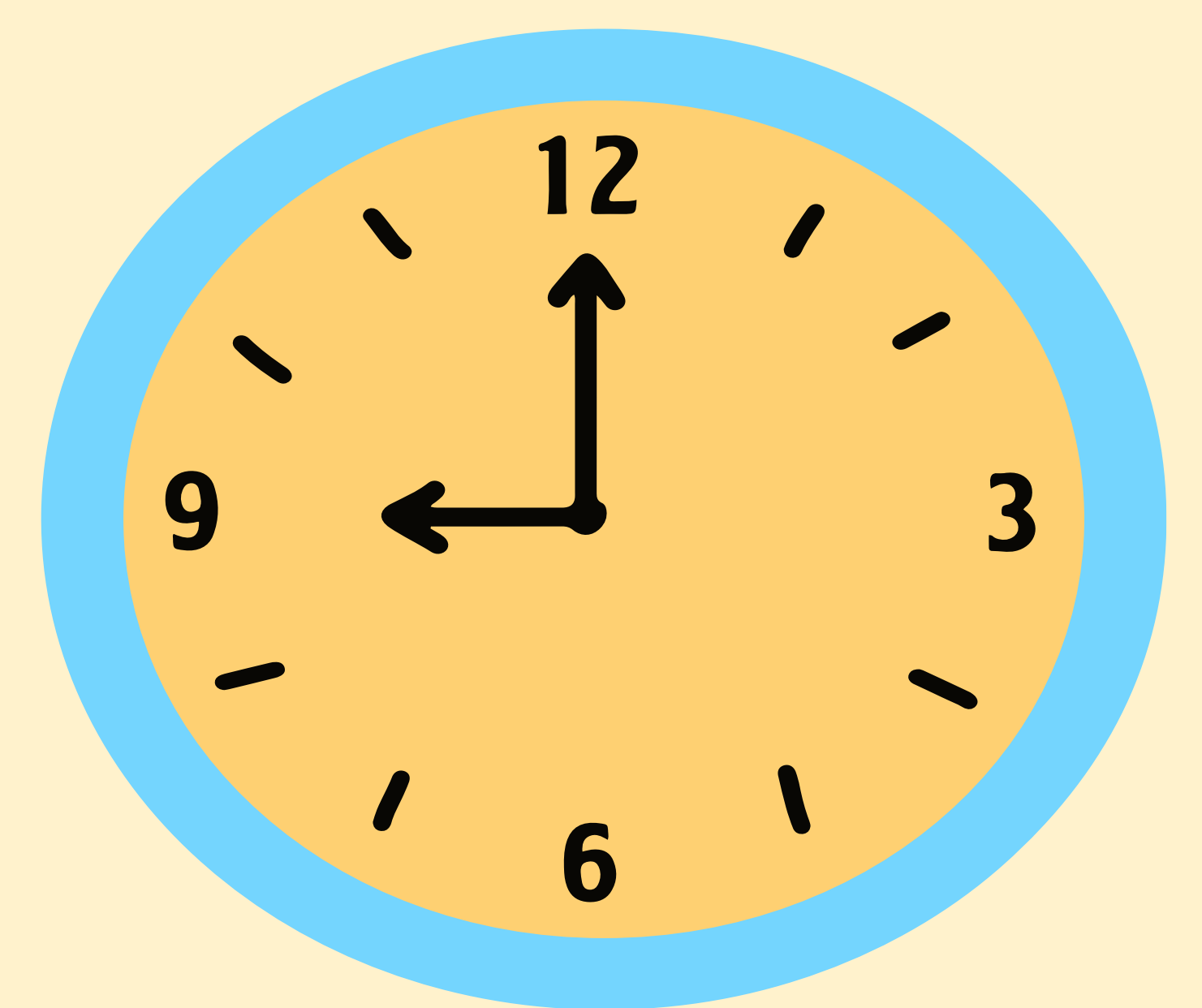
The ideal worker

The ideal worker is a man who works long hours, is constantly available and highly productive. Some researchers have queried whether the shock of the pandemic was enough to disrupt the ideal worker norm.

We asked:

Did working from home during the pandemic impact the ideal worker norm?

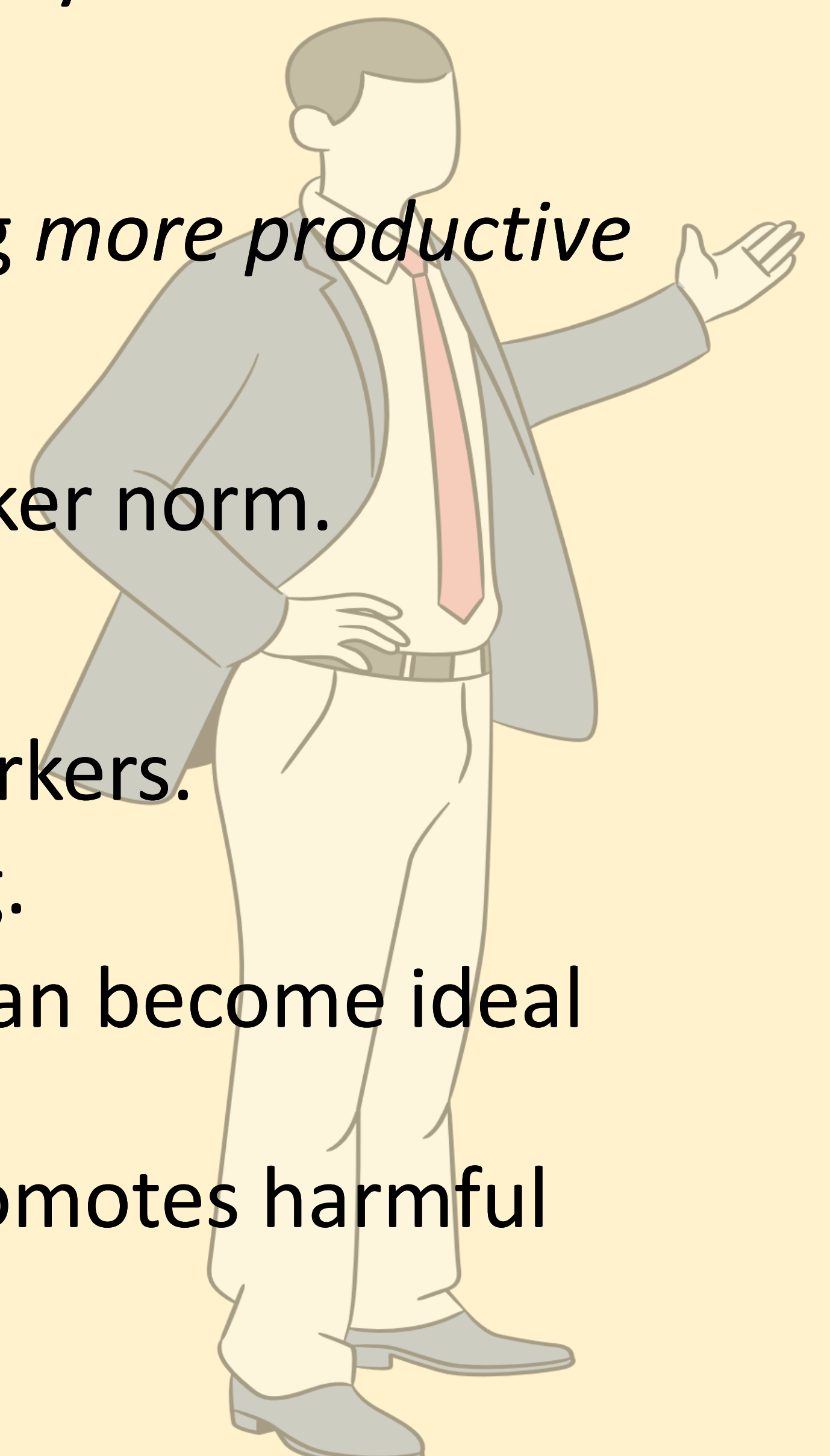
We examined working hours and productivity as key elements of the ideal worker norm.



Findings

- Women (particularly women carers) *worked longer hours* than pre-pandemic, often losing track of time while working.
- The majority of women carers and disabled women worked the same span of hours as pre-pandemic, suggesting *availability*.
- Women in all categories indicated fewer interruptions when working from home. This also meant they had *increased availability*.
- Women in all categories reported being *more productive* when working from home.

All these features align with the ideal worker norm.



An Inter-Contextual Trust Recommendation System for Social Internet of Things

Marius Becherer, Omar Hussain, Yu Zhang, Frank den Hartog, Elizabeth Chang

Introduction

The Social Internet of Things (SIoT) – a self-sustainable network management approach

One promising solution to overcome scalability concerns in Internet of Things (IoT) is to integrate social networking paradigms to form SIoT (Figure 1) characterised by:

- Autonomous relationship management, facilitating self-sovereign interactions between devices without centralised governing authorities.
- Resilient network capabilities, eliminating reliance on a single point of component which cannot provide required services.
- Network scalability, enabled by its distributed architecture of independent and communicating devices.

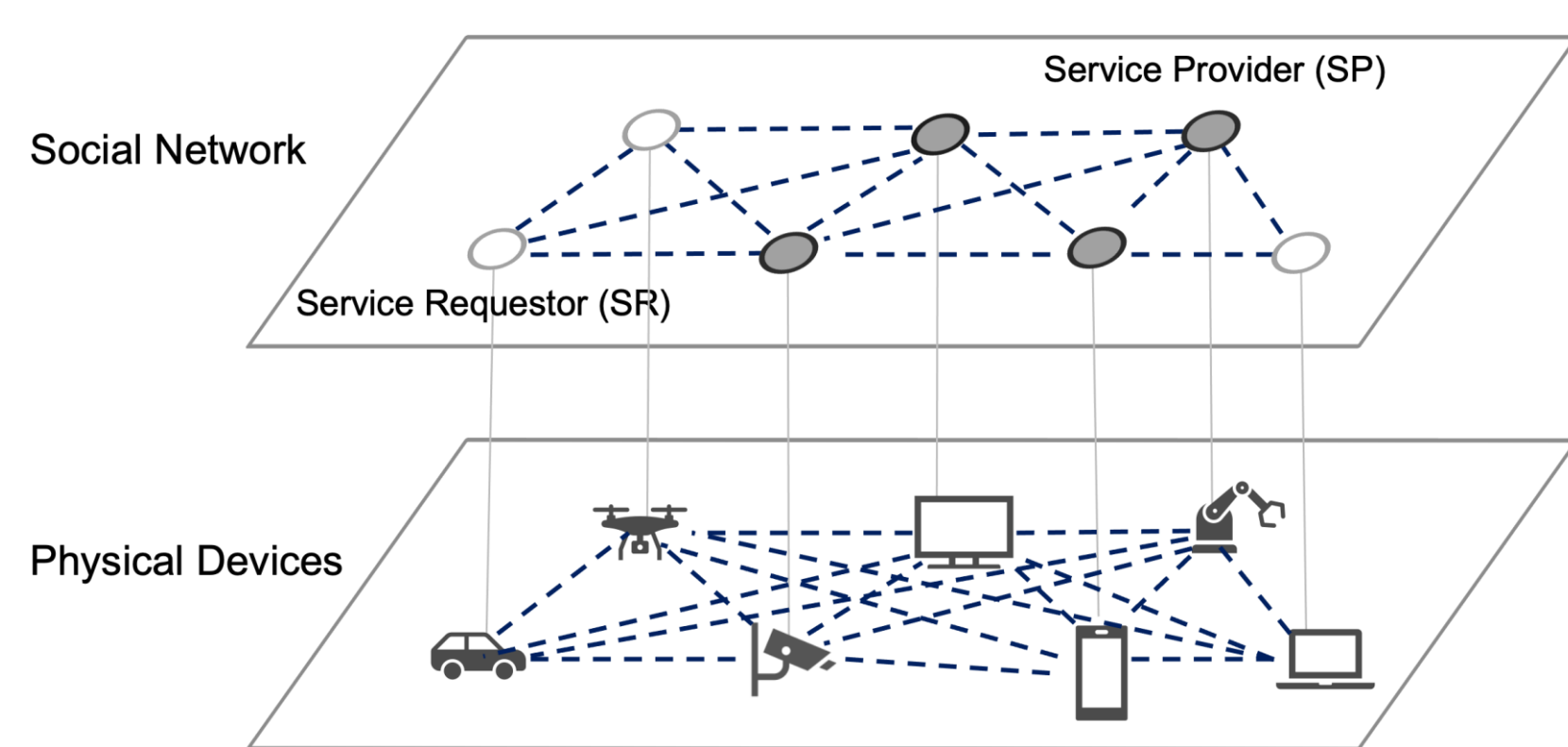


Figure 1: Illustration of interconnected physical devices socialising to form the SIoT network

Problem Statement

Challenges of trust recommendations

Trust recommendations represent a highly complex task due to various constraints of the information environment.

1. The absence of historical interaction information of new devices disables traditional social network-based trust inference approaches (Figure 2).

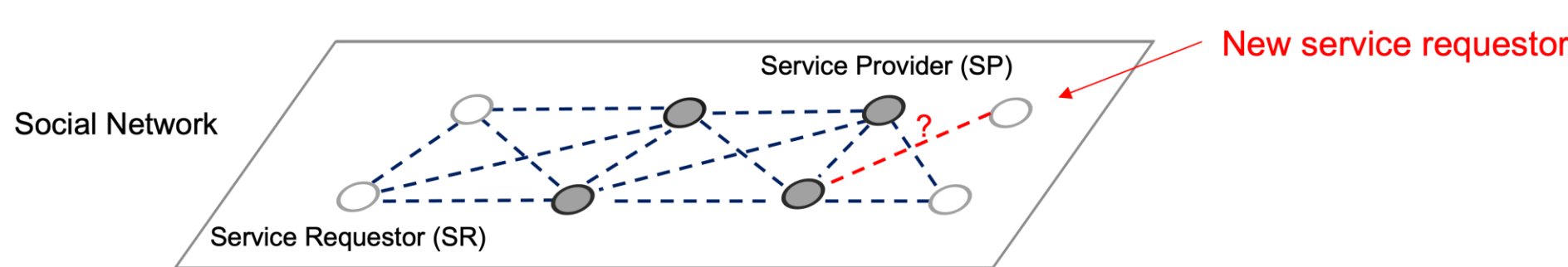


Figure 2: Lack of context-dependent trust features impede trust bootstrapping

2. The dynamic IoT environment results in a continuously changing network topology that complicates trust-related decision-making due to the uncertain information environment (Figure 3).

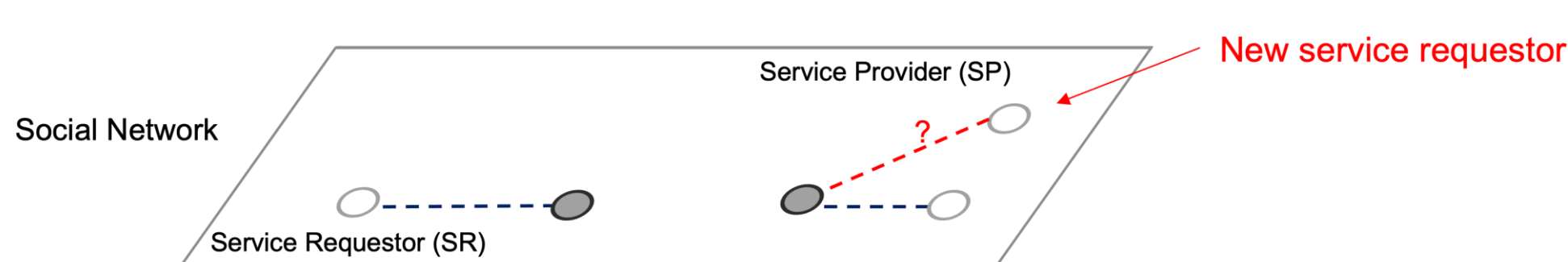


Figure 3: Uncertain dynamics in IoT environments complicates trust bootstrapping

3. Existing trust recommendation models are domain-specific with limited flexibility and scalability (Figure 4).

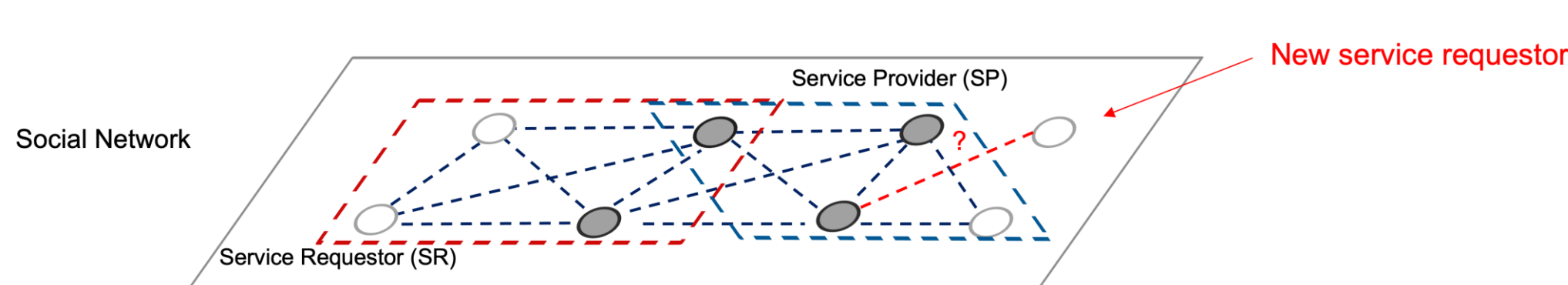


Figure 4: Scenario-constraint trust models with limited application

Challenges within the SIoT

- Securing the integrity of SIoT network
- Managing the relationships between devices

Trust Recommendation as an enabler for a trustworthy SIoT

An encouraging approach to overcome those issues is to utilise the concept of trust from social networks.

“Trust in SIoT refers to the confidence that a device has in another device’s ability to perform its requested function properly.”

Therefore, trust recommendations establish trust between devices in SIoT, which can support trust-related decision-making procedures to:

- Trust recommendations can define new relationship between devices.
- Trust recommendations can delegate tasks to the most suitable service provider.
- Trust recommendations can identify and connect inherently trusted IoT communities.

Our Research

This research proposes an Inter-Contextual Trust Recommendation System (ICTRS) for the Social Internet of Things (Figure 5). Powered by the usage of ontology engineering, this research develops novel trust recommendation models to overcome existing challenges of trust bootstrapping.

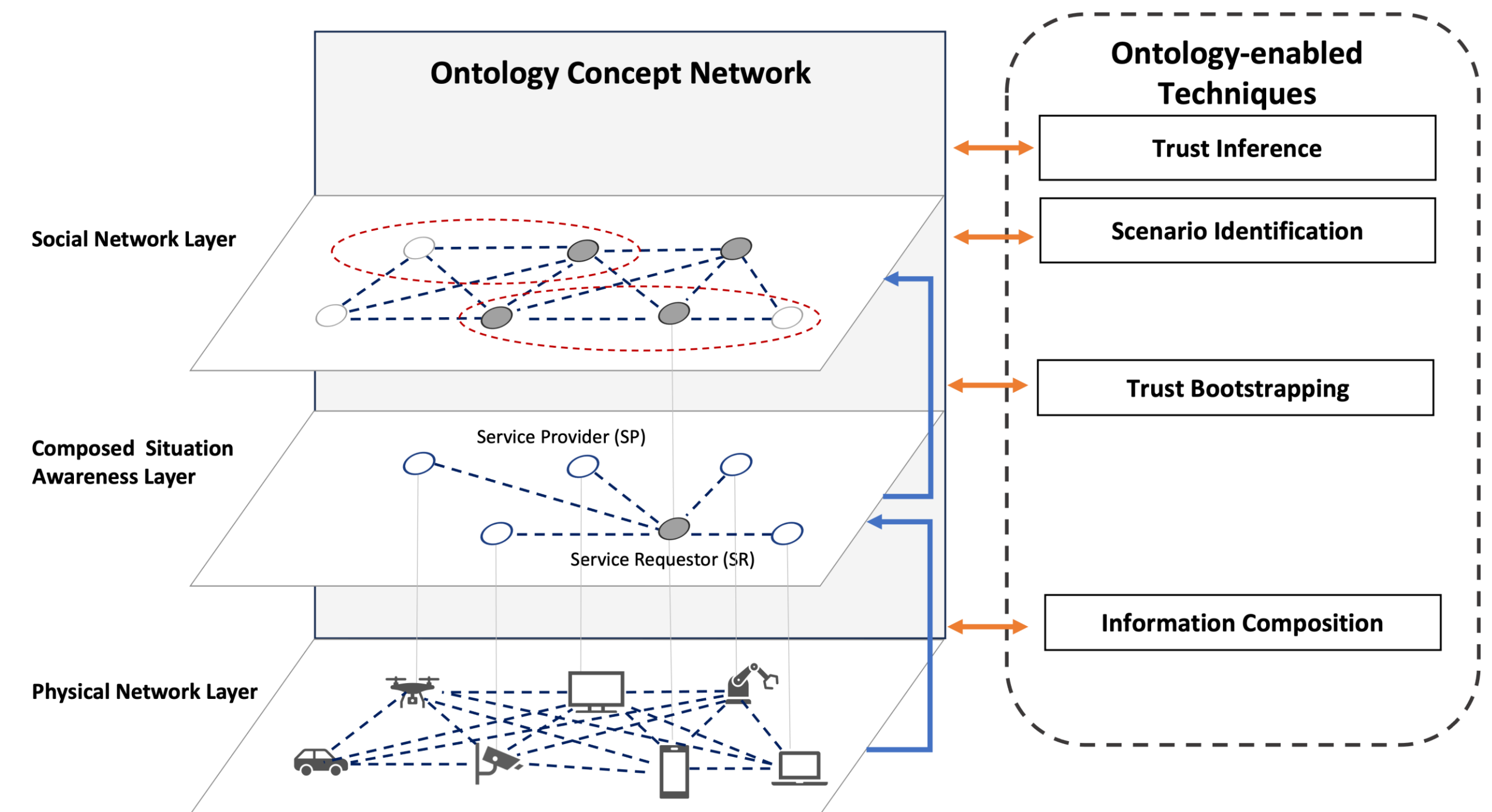


Figure 5: Overall conceptual research model

This research organises knowledge for trust agents, represented in the Smart Appliance Reference for Trust Agents (SAREF-TA) ontology, and the knowledge on the Trust Recommendation for Social Internet of Things (TRE-SIoT) ontology. The developed ontologies are used for novel reasoning techniques in the areas of trust bootstrapping, scenario identification and trust inference.

Impact of the Research

- Our research sheds light on the connection between social and physical networks from the perspective of trust, which can improve the flexibility and scalability of SIoT networks and ensure trustworthy collaboration between SIoT devices.
- Our research can facilitate innovation in industries ranging from smart cities over healthcare to manufacturing by enabling devices to collaborate with confidence, which will enhance efficiency, improve decision-making, and ensure safety and security.



Scan the code to find out more about Marius' research

PGAE: A Provenance-enabled Graph Autoencoder for Unsupervised Intrusion Detection

Michael Zipperle, Yu Zhang, Saiful Islam, Elizabeth Chang, Tharam Dillon, Omar Hussain

Introduction

Recently the number of cyber-attacks, particularly more sophisticated attacks such as advanced persistent threats, has increased significantly. A detection solution is to use provenance data which represents system entities and operations as direct acyclic graph and enables causality analysis for such anomaly detection. Provenance-based Intrusion Detection Systems (PIDS) improves upon traditional host-based intrusion detection systems by increasing detection accuracy and reducing false alarm rate.

Problem Statement

Existing PIDS approaches suffer from the following limitations:

1. Lack of generalization capabilities due to the use of manually selected features.
2. Lack of sophisticated node feature embedding techniques.
3. Lack of robustness due to insufficient benign provenance graph variants.
4. Lack of robustness due to the use of a manually selected threshold for anomaly detection.

Contribution

This research proposes a Provenance-enabled Graph Autoencoder (PGAE) for unsupervised intrusion detection, which learns from benign graph instances and classifies unseen ones into benign or malicious based on their reconstruction error. The contributions of PGAE include:

1. A graph autoencoder with high generalization capabilities.
2. A modified version of Sentence-BERT for node feature embedding.
3. A context-aware graph augmentation technique to generate benign graph variants.
4. An adaptive threshold selection technique based on the context of benign instances, making it adaptable to ever-changing real-world environments.

Impact

PGAE presents an exceptional opportunity to revolutionise future cybersecurity for both enterprises and individuals, yielding the following key benefits:

1. Enhanced protection for potential targets of cyber attacks, mitigating the impact of such malicious activities.
2. A significant reduction in the workload of cybersecurity professionals by lowering the rate of false alarms, thereby enabling a more focused approach to genuine threats.

Provenance-enabled Graph Autoencoder (PGAE)

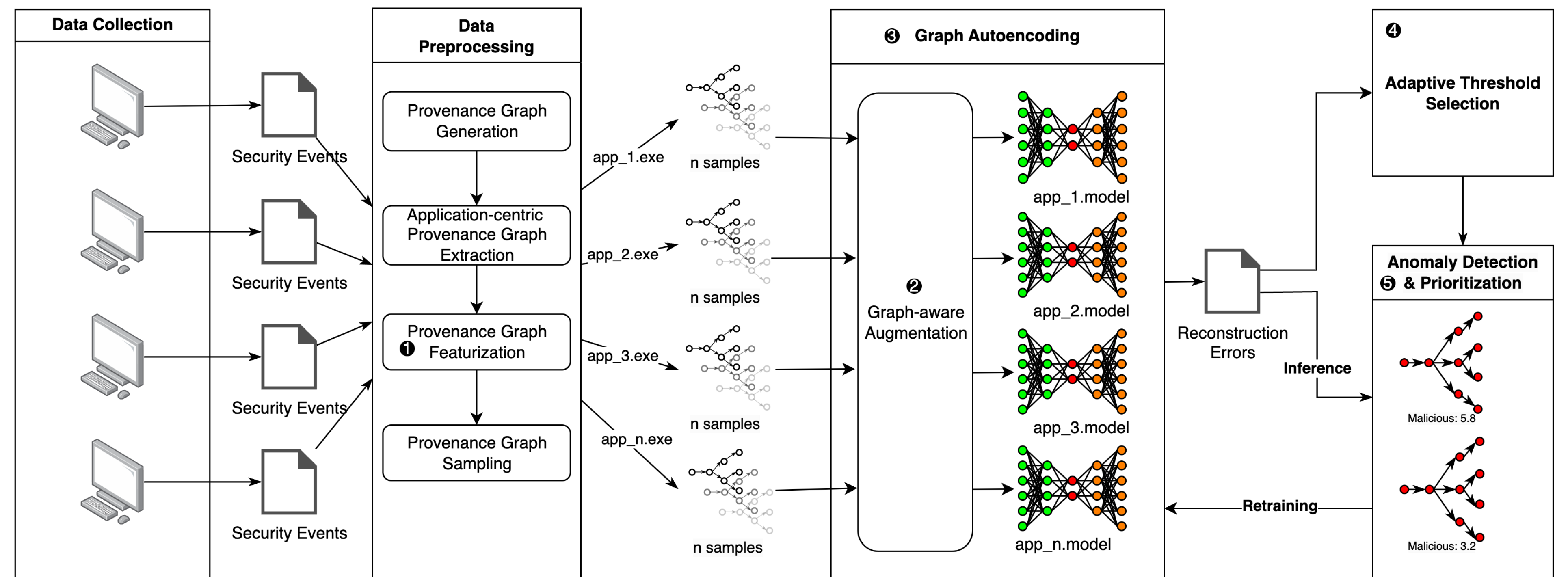


Figure 1. PGAE Framework Overview

1. Featurisation and Augmentation

- Node types are one-hot encoded.
- Edge types are labelled encoded.
- Context- and graph-aware node dropping by considering each graph in a batch and the node types.
- Context-aware node label perturbation by considering the node types.

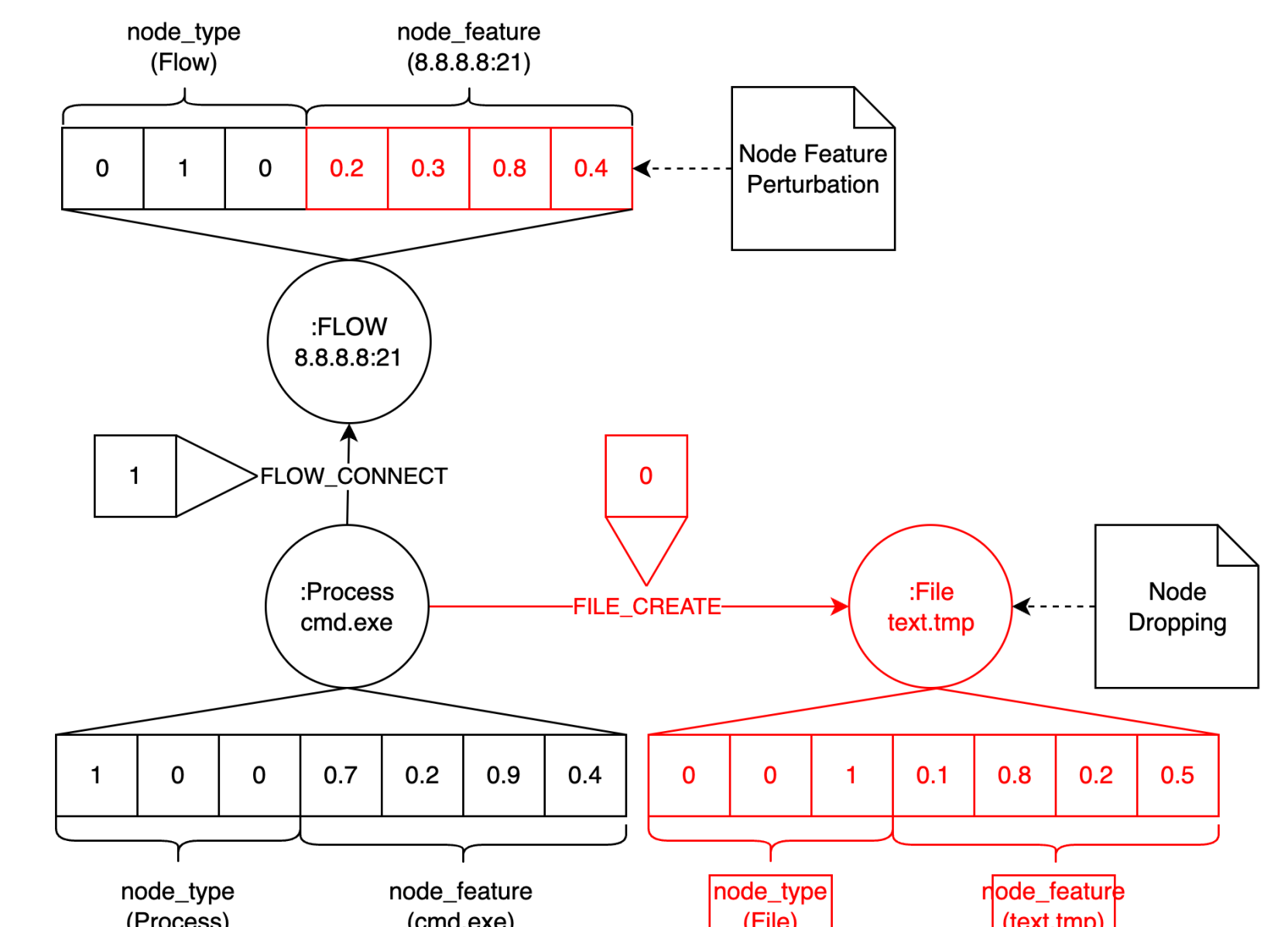


Figure 2. Featurisation and Augmentation

2. Graph Autoencoder (GAE)

- Graph U-Nets can learn graph structures while considering local and global features, are robust against various graph sizes and structures.
- We replace the Graph Convolutional Network (GCN) Layers with Relational Graph Convolutional Network (RGCN) layers to support message passing while considering edge types.

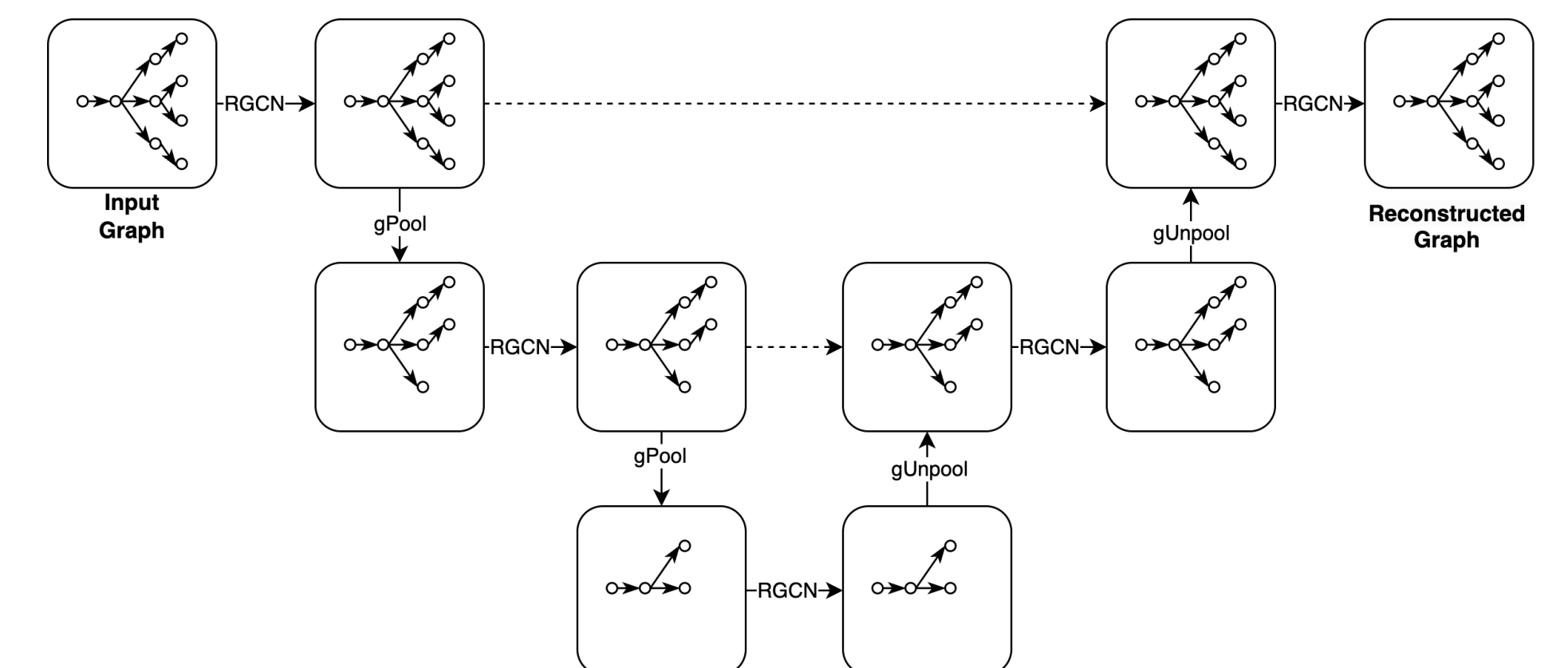


Figure 3. GAE Overview

3. Adaptive Threshold Selection

For each application, PGAE is trained on a set of benign graphs, and uses the resulting reconstruction error distribution $d \in \{e_1, \dots, e_n\}$ to calculate the upper bound threshold t :

$$Q_1 = \text{median}(e_1, \dots, e_{n/2})$$

$$Q_2 = \text{median}(e_{(n+1)/2+1}, \dots, e_n)$$

$$t(d) = Q_2 + 1.5 \cdot (Q_2 - Q_1)$$

4. Anomaly Detection & Prioritization

PGAE calculates the reconstruction error of each graph in the test set.

- PGAE classifies each graph into benign or malicious based on its reconstruction error and the threshold t .
- PGAE prioritizes graphs classified as malicious based on their reconstruction error.

Evaluation Results

We evaluated PGAE on the Darpa OpTC datasets (the latest datasets available for PIDS research). The results (reported in Table 1) show that PGAE outperform state-of-the-art approaches in terms of accuracy and false alarm rate, as well as the effectiveness of the proposed graph augmentation.

Table 1: Evaluation results on the Darpa OpTC datasets

Approach	Year	Accuracy	Recall	FPR
Anubis	2021	0.993	1	2.8%
DeepTaskAPT	2021	0.9854	0.882	1.1%
TapTree	2022	N/A	1	2.9%
PGAE – no_aug	2023	0.993	0.97	0.7%
PGAE – with_aug	2023	0.995	1	0.5%



Political influences on complex government procurements

Daniel D Prior, Supply Chain Sustainment Research Group, UNSW Canberra, d.prior@unsw.edu.au

Background

Some government procurements can involve long-term engagements between suppliers and their government customers. For example, the procurement of the AUKUS submarines is estimated to cost more than \$360 billion and require at least ten years for their initial construction. Such procurements involve many knowledge-intensive interactions between stakeholders which are technically sophisticated and are highly dynamic. Government procurements are also subject to more constraints than those that occur in commercial settings. One such constraint is from the political agenda set by the government of the day. Very little systematic research exists into the impacts of politics on complex government procurements.

The aim of this study

To develop a framework to describe the impacts of political (ideology-based) decisions on complex government procurements. Create a framework for assessing the impact of digital solutions on the resilience of agri-food SCs.

Literature Review

Complex government procurements involve a series of relational processes (where groups of stakeholders interact to achieve a set of pre-defined goals or milestones) to implement large-scale, complex, and customised product/ service bundles (Töllner et al., 2011; Tuli et al., 2007). Stages include:

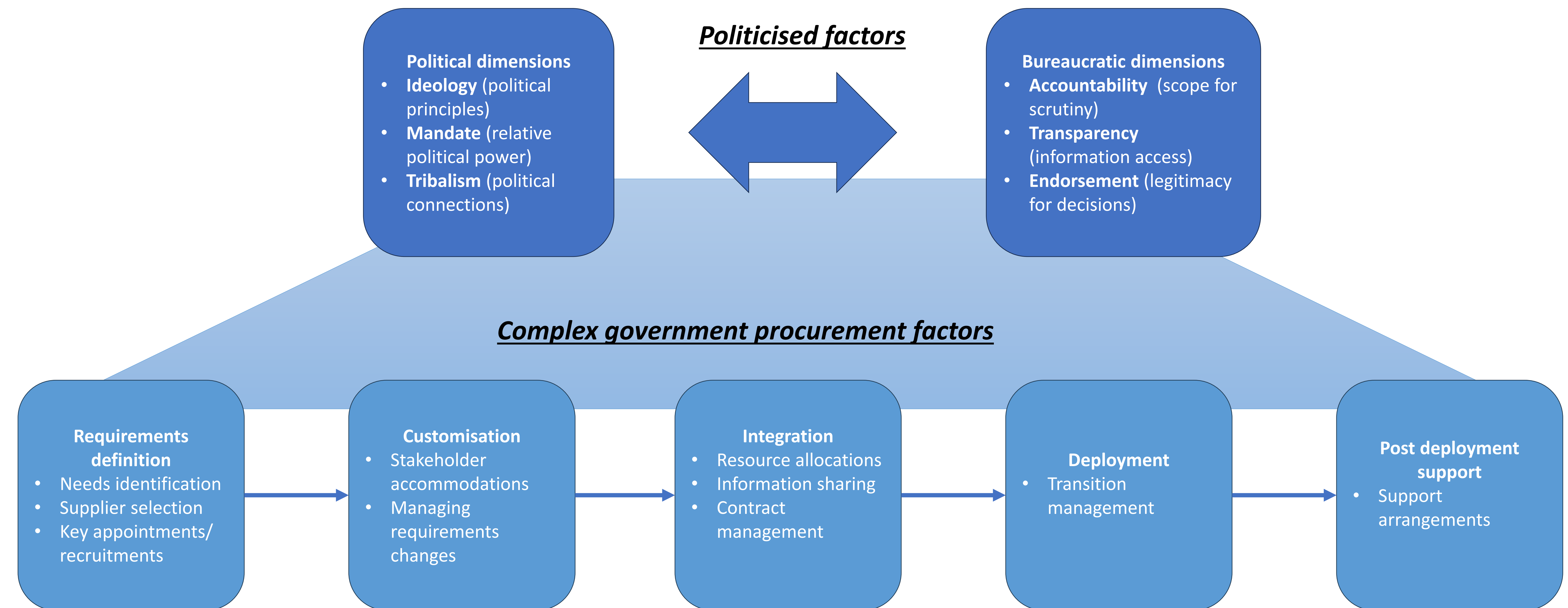
- Requirements definition
- Customisation
- Integration
- Deployment
- Post deployment support

At each stage, there is scope for considerable variation in outcomes. This is partially due to the working relationships between stakeholders and partially due to the nature of the tasks at hand. Each relational process requires resources for its completion. In the case of complex government procurements, resource availability often depends on project governance, including its scoping. There are also instances where resource redeployments occur. Complex government procurements can be subject to added political scrutiny by the government of the day. While governments may have a variety of motives, the extent to which government interventions impact complex government procurements is not yet understood fully.



Scan the code to find out more
about Daniel's research

Figure 1. A Preliminary Framework



Methods

Our study draws on a large-scale case study of the Australian Defence sector, conducted between 2011 and 2019.

1. 85 interviews with representatives of government buyer representatives and supplier firm representatives
2. 24 meeting observations
3. document analyses on approximately 2,030 pages of email correspondence, project planning documents, project output documents, as well as documents relevant to the Australian Defence sector such as the Defence White Paper 2016 and the Defence Industry Policy Statement 2017

The dataset includes seven cases of complex government procurements.

We used thematic, axial and selective coding to analyse the data and to develop the framework in Figure 1.

Results

The analysis revealed two major politicised factors (which are those which can change based on the preferences of the government of the day). These include political dimensions such as *ideology*, *mandate*, and *tribalism*. Bureaucratic dimensions include *accountability*, *transparency* and *endorsement*.

We see that these have various effects on each stage of the complex government procurement implementation process. This is particularly the case in the early stages (requirements definition). It is also the case that a change in government can lead to a sudden need for further customization, so this can force stakeholders to revisit earlier stages to accommodate customisations that become necessary. The larger the scale, the higher the complexity and the more attention the complex procurement attracts from the media increase the chances of government interventions.

Conclusion

This is one of the first studies to systematically investigate the implications of complex government procurements on each stage of complex government procurements, particularly in terms of how they affect the underpinning relational processes that shape the process. The findings could help when identifying opportunities for efficiency in complex government procurement implementation and in terms of the likely effects that government interventions will have on stakeholders. They are of most interest to policymakers that seek to improve government procurement processes, for procurement managers in government departments that seek to understand how and when political decisions affect their work, and for taxpayers that seek transparency and accountability in government processes.

References

- Töllner, A., Blut, M., & Holzmüller, H. H. (2011). Customer solutions in the capital goods industry: Examining the impact of the buying center. *Industrial Marketing Management*, 40(5), 712-722. <https://doi.org/10.1016/j.indmarman.2011.06.001>
- Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking Customer Solutions: From Product Bundles to Relational Processes. *Journal of Marketing*, 71(3), 1-17. <https://doi.org/10.1509/jmkg.71.3.1>



Digital Solutions and Agri-Food Supply Chain Resilience in Australia

Firouzeh Rosa Taghikhah 1,2*, Daniel D Prior 2, Reza Hafezi 3,2, Derek Baker 4

Background

The existing incorporation of digital solutions in agri-food supply chains (SC) is often insufficient and disjointed due to a lack of comprehensive understanding about their role in boosting resilience (Sundmaeker et al., 2020). This problem is acute in agri-food chains and is noticeable when examining supply chain shocks.

This study aims to:

1. Create a framework for assessing the impact of digital solutions on the resilience of agri-food SCs.
2. Develop a method that integrates analytical hierarchy process (AHP), network analysis, and system dynamics (SD) to analyse the complex interplay of factors affecting SC resilience and to help prioritize the adoption of identified digital solutions.

Literature Review

Agri-food supply chain resilience

SC resilience refers to the capability of in-time reaction or even be proactive to potential future challenges.

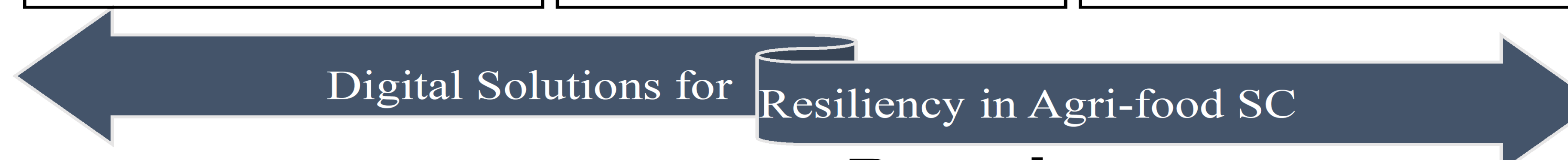
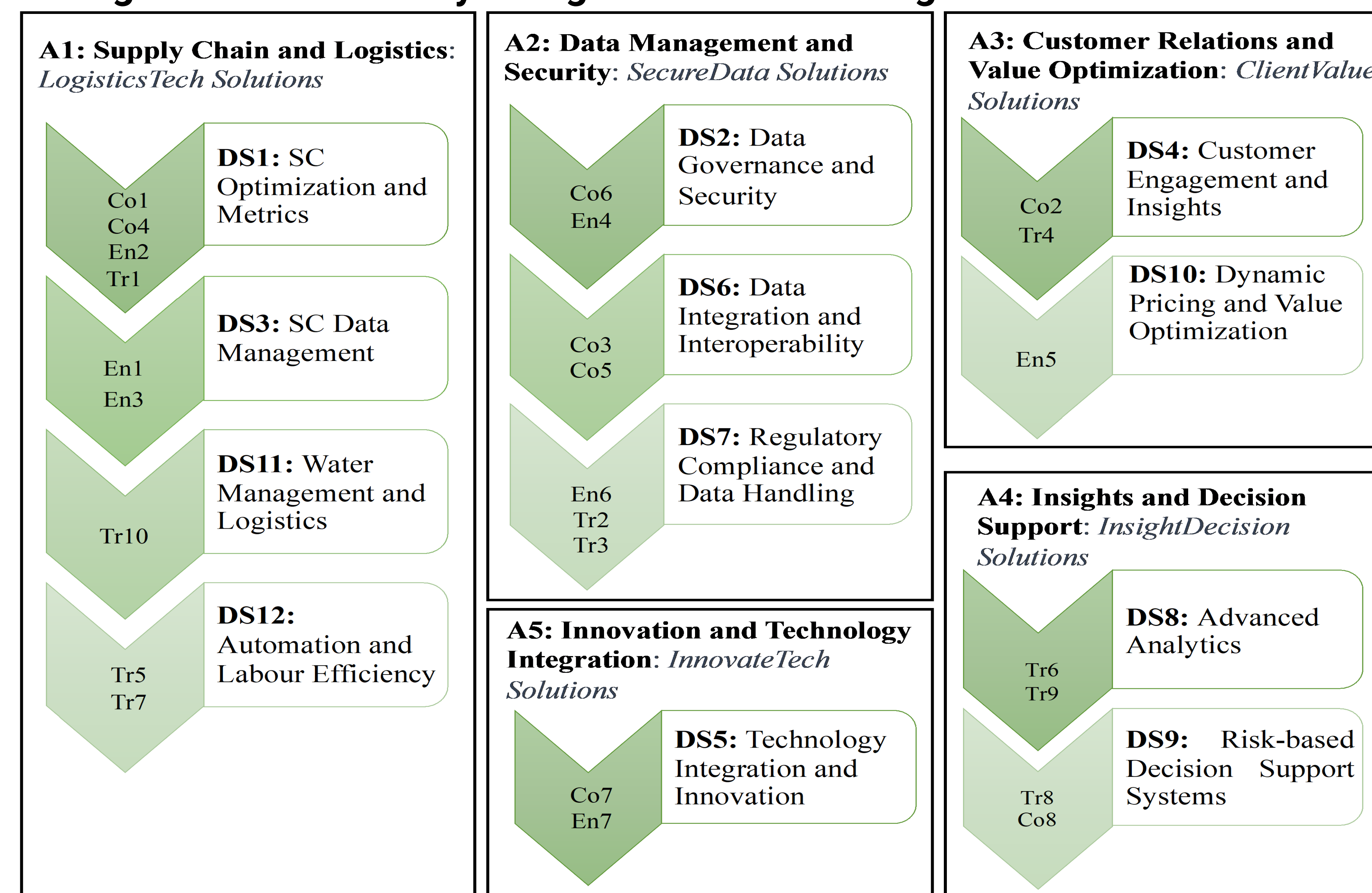
- The global agri-food SC, faces unique challenges due to its complex and interconnected nature with additional uncertainties related to freshness and food safety, shelf life, specific requirements for fresh food logistics, and product-dependent cleaning and processing times.
- Several frameworks exist for assessing agri-food supply chain resilience, such as the input-output model (Miller & Blair, 2009), Sheffi's (2005) resilience index, the SCOR Model (Hohenstein et al., 2015) and Stone and Rahimifard's (2018) more recent framework.

Between them, existing approaches do not account sufficiently for supply chain dynamism, only focus on logistical or operational challenges, or are yet to be fully validated.

Digital solutions for agri-food supply chain resilience

Several studies have explored the applications and benefits of these technologies in the agri-food SC, including increased traceability, transparency, efficiency, and responsiveness to disruptions. While there are many options, there is currently not a single framework understanding their joint and individual effects on agri-food supply chain resilience in the wake of supply chain shocks.

Figure 1. A Taxonomy of digital solutions for agri-food SC resilience



Methods

1. A narrative literature review to identify 21 potential indicators
2. A panel of 8 expert informants from the agri-food sector voted on the indicators, which led to the development of the development of a comprehensive, relevant, and practicable set of criteria and sub-criteria for measuring resilience in agri-food supply chains. Interviews were used to further refine these insights.
3. Analytical hierarchy process-network analysis was used, drawing on 16 additional industry experts to prioritise digital solutions.
4. Systems dynamics modelling to capture dynamic behaviour and time-dependent effects.

Results

Interestingly, while the AHP analysis and the network analysis both point to the importance of digital solutions for data management, customer relations, and decision support, the network analysis emphasizes the importance of InsightDecision Solutions across all sectors, possibly because it captures the interdependencies among the solutions.

Resilience indicator saw an increase ranging between 40% and 60% across all sectors upon the adoption of digital solutions.

The AHP analysis showed that SecureData (A2) Solutions are the most consistent digital solution associated with SC resilience in Grains, Dairy and Seafood SCs, whereas ClientValue solutions (A3) is ranked first in Red Meat, InsightDecision Solutions (A4) is ranked first in Wine, and InnovateTech Solutions (A5) was ranked in Horticulture SCs.

Table 1. Ranked digital solutions for each sector based on AHP analysis

	Definition	Grains		Red meat		Dairy		Seafood		Horticulture		Wine	
		Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
A1	LogisticsTech Solutions	0.17	3	0.14	4	0.15	4	0.15	4	0.13	5	0.14	5
A2	SecureData Solutions	0.26	1	0.21	2	0.23	1	0.23	1	0.20	4	0.22	2
A3	ClientValue Solutions	0.17	3	0.24	1	0.21	2	0.21	2	0.21	3	0.20	4
A4	InsightDecision Solutions	0.24	2	0.21	2	0.21	2	0.20	3	0.22	2	0.23	1
A5	InnovateTech Solutions	0.15	4	0.20	3	0.20	3	0.21	2	0.24	1	0.21	3

Table 2. Top ranked digital solution for each sector based on network analysis

	Definition	Grains		Red Meat		Dairy		Seafood		Horticulture		Wine	
		Wigh Avg	Rank	Wigh Avg	Rank	Wigh Avg	Rank	Wigh Avg	Rank	Wigh Avg	Rank	Wigh Avg	Rank
A1	LogisticsTech Solutions	4.8	3	4.69	4	4.7	5	4.74	4	4.66	4	4.3	5
A2	SecureData Solutions	4.93	2	4.65	5	4.78	4	4.72	5	4.57	5	4.53	4
A3	ClientValue Solutions	4.72	4	4.98	2	4.9	2	4.82	3	4.85	3	4.81	2
A4	InsightDecision Solutions	5.2	1	5.06	1	5.09	1	4.97	1	5.12	1	5.2	1
A5	InnovateTech Solutions	4.59	5	4.82	3	4.8	3	4.89	2	5.05	2	4.79	3

If we consider the systems dynamic modelling, which aims to capture longer-term effects, we see that InsightDecision Solutions (A4) is ranked first for all SCs.

Conclusion

Our findings show that the impacts of respective digital solutions vary in the short-term. While SecureData Solutions (A2) was the most frequently cited with the AHP analyses for three of the agri-food SCs under investigation, there was variance. This shows that data management and security is more likely to gain attention in the short-term as necessary for maintaining SC resilience.

The network analysis, on the other hand, shows that InsightDecision Solutions (A4) are important to SC resilience across the board. Since the network analysis attempts to account for SC dynamism over the long-term, we can say that this insights and decision support are more important to ensure long-term and sustainable SC resilience.



Scan the code to find out
more about the Supply Chain
Sustainment Research Group

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Translating Climate Strategies into Action: Sustainable, Green, and Resilient Cities

Dr Adrian Robert Bazbauers

Climate change has exposed significant urban vulnerabilities in the Global North and South, leading to calls for sustainable, green, and resilient (SGR) cities.

The multilateral development banks (MDBs) have responded by devising a suite of SGR advisory services and lending products to prepare cities for future climate change impacts.

I have analysed 124 SGR city action plans and 65 companion lending operations approved by several MDBs between 2009 and 2021.

The research finds that multilateral interventions targeting climate change expanded greatly during the 2010s.

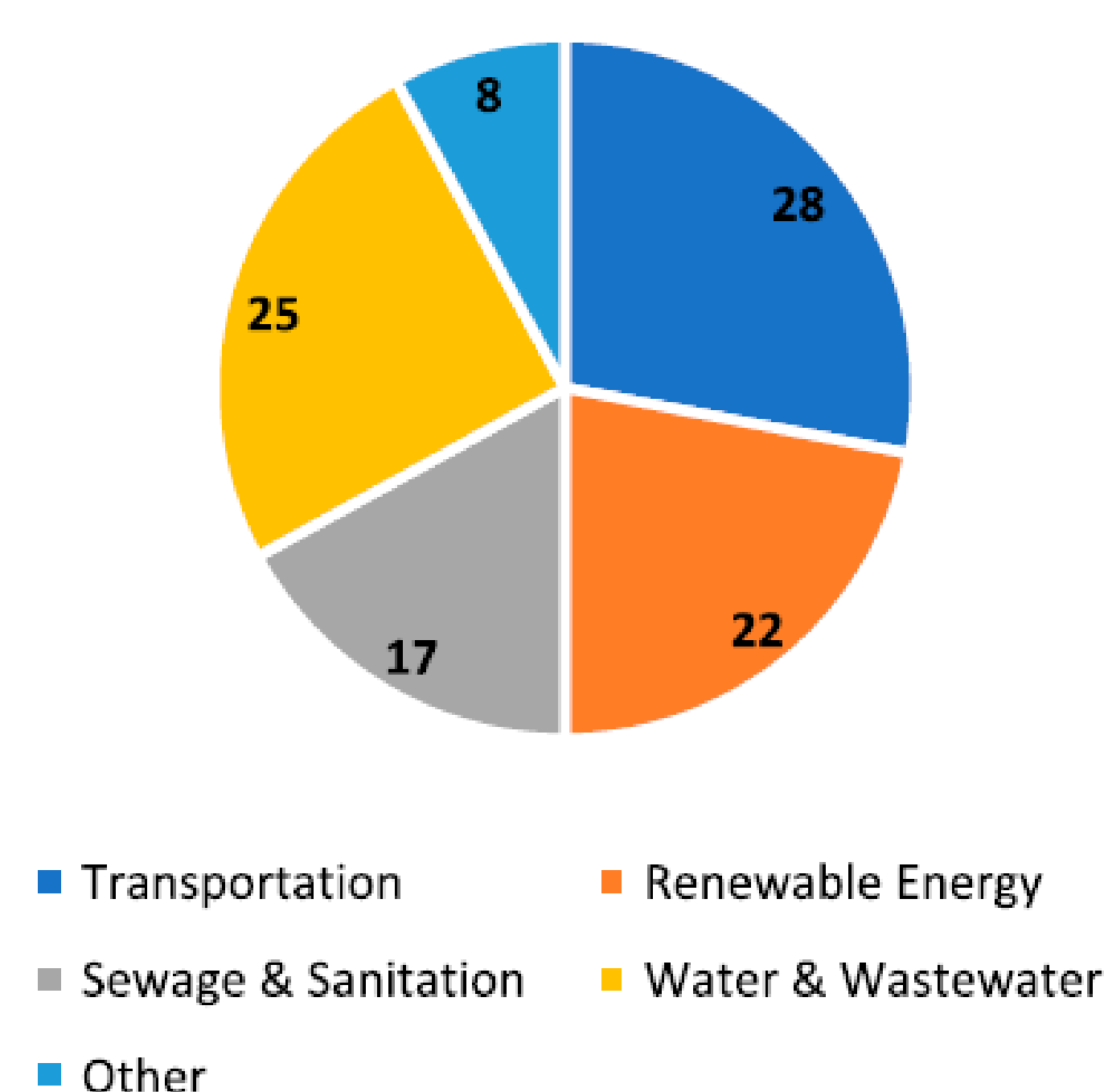
Yet, priority focus remains project-based infrastructural investments financing climate mitigation and resilience actions over more substantive climate adaptation initiatives.

The articles show that SGR city action plans hold great potential to enact robust and inclusive climate responses but have so far been stymied by the conservatism of project-based investment lending.

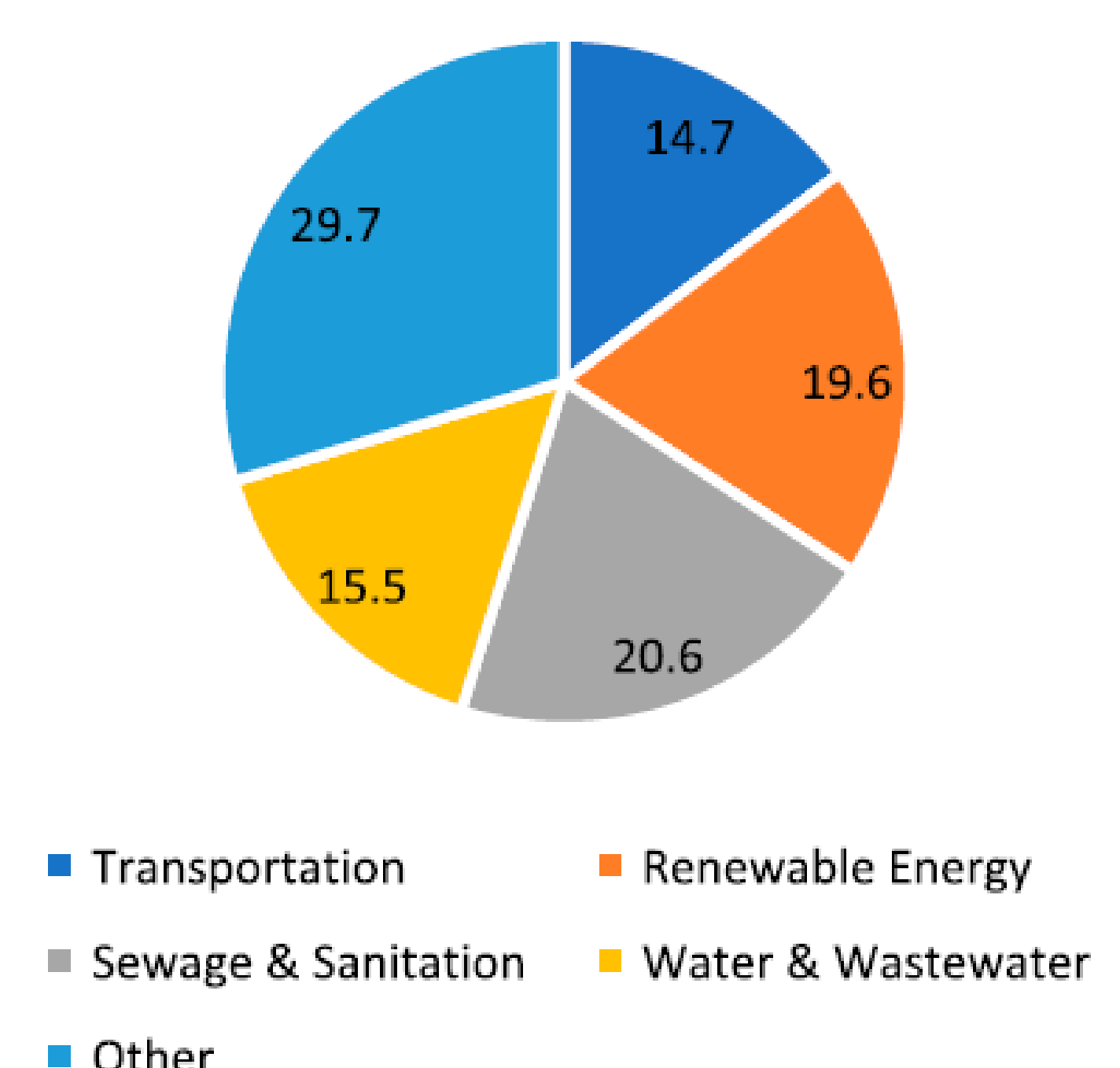
MDB SGR city action plan priority sectors and themes

Sector	Themes
Culture	• Cultural heritage site preservation and restoration • Historic site preservation and restoration • Nature tourism promotion • Entertainment and shopping diversification
Disaster	• Climate impact risks and analysis • Natural disaster resilience • Natural disaster risk management • Natural disaster preparedness planning • Flood protection and risk management • Infrastructural upgrades and resilience
Economy	• Commercial and industry competitiveness • Private sector investment opportunities • Local economy development • Employment creation and training • Human capital development
Energy	• Energy efficient public buildings • Energy efficient technology investments • Electricity substation upgrades • Solid fuel-based heating • Renewable urban lighting
Environment	• Biodiversity conservation • Coastal zone management • Soil degradation • Human-nature connections • Protection environmentally fragile areas • Eco-friendly urban development
Governance	• Municipal financial and fiscal management • Municipal service provision • Public management modernisation • Taxes and financial autonomy • Good governance
Participation	• Citizen engagement • Community empowerment • Participatory public management
Pollution	• Air quality • Noise pollution
Sanitation	• Solid and liquid waste management • Household waste collection • Circular economy • Recycling centres and networks
Social	• Child development • Education • Health • Domestic violence • Public safety and crime • Urban poverty and inequality • Vulnerable community resilience • Low-income housing • Access of the poor to social services • Vulnerable urban groups • Vulnerable community resilience • Housing disenfranchisement • Empowered and inclusive urban development
Transport	• Sustainable urban mobility • Transit-oriented development • Arterial road connectivity • Green public transport • Traffic congestion
Urban Planning	• Green spaces and corridors • Green-blue infrastructure and networks • Human settlement footprints • Urban environment improvements • Urban expansion management • Urban landscape rejuvenation • Urban beautification • Urban growth to higher elevation areas • Land use management • Spatial planning
Wastewater	• Wastewater collection and redistribution • Road drainage upgrades
Water	• Water supply systems • River catchment management • Improved water quality

% Total Number of Projects



% Total Cost of Projects



Percentage Total Number and Cost of SGR City Projects per Infrastructure Streams.

Related research articles:



Translating climate strategies into action: An analysis of the sustainable, green, and resilient city action plans of the multilateral development banks



Sustainable, green, and climate-resilient cities: an analysis of multilateral development banks

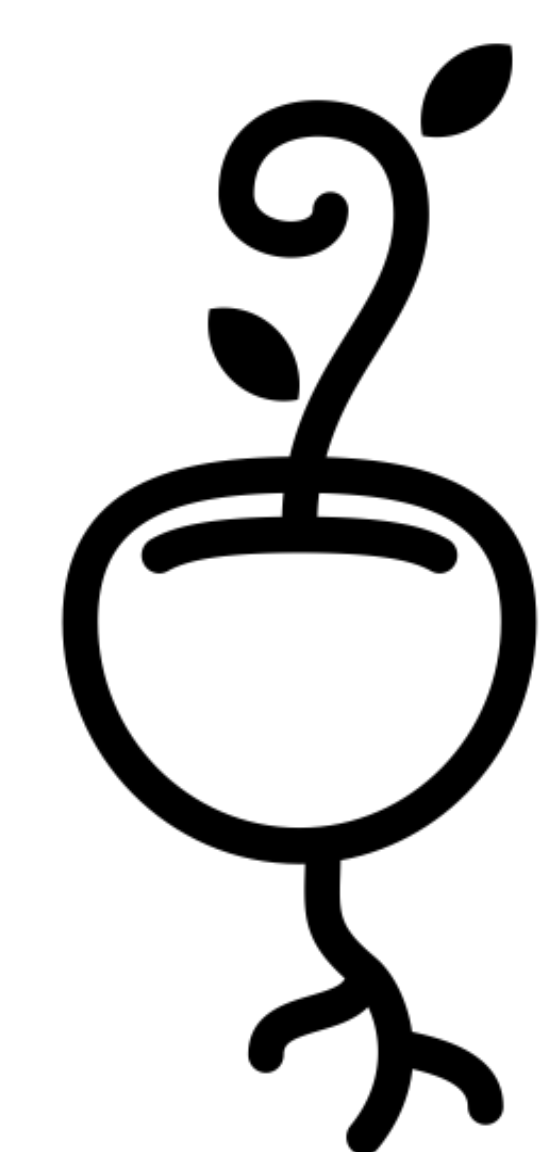


Scan the code to find out more about Adrian's research

Wellbeing in disaster recovery: unsticking systems

Using System Traps to understand where recovery gets 'stuck'

Deborah Blackman, Girish Prayag, Hitomi Nakanishi, Jo Chaffer



Hold the thought!

Wellbeing is...the idea that we feel equipped and empowered to both have a good life and one which is worth living.

Wellbeing is an **emergent property** - we can't build it or plan it, instead we monitor for it and act iteratively to keep the system moving to support its emergence.

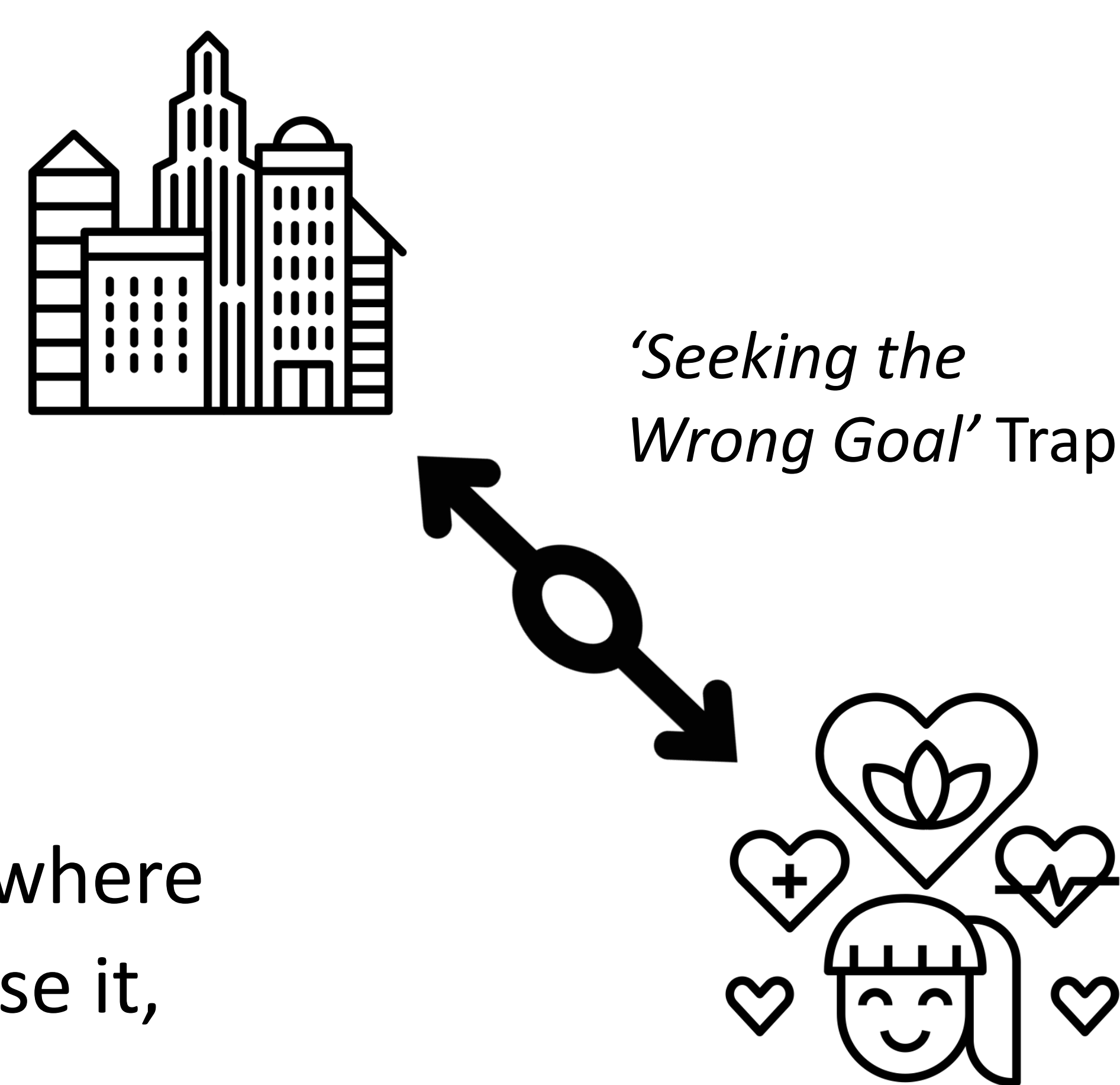
Disasters break communities, their complexities of place, wellbeing, interconnections etc, such that they are unable to sustain themselves. As communities are multifaceted, so is **recovery**. It requires a healthy recovery system, one which not only enables infrastructure rebuild but also supports the emergence of wellbeing.



Disaster recovery in Christchurch, NZ following the 2010-11 earthquakes was slow, inequitable and for a long time, insufficient – the recovery system had become 'stuck'.

The more that was done to resolve the 'stuck' the worse recovery got – this implied **System Traps** at play, that is underlying problems that prevented wellbeing emergence.

Analysis revealed three System Traps in the Christchurch context each leading to deeper problems at play. For example, the more effort on infrastructure rebuild the worse life felt for many disaster-affected. This Trap indicated that the recovery system had different goals than those stated and those needed by communities.



Having identified System Traps, the way to escape them, i.e., where and how to intervene in the recovery system in order to release it, becomes much clearer.

We suggest System Traps are a useful analytical tool for those undertaking disaster recovery and seeking to better support the development of community and individual wellbeing.



Scan the code to view related article: *Wellbeing in disaster recovery: Understanding where systems get stuck*. International Journal of Disaster Risk Reduction, Vol 95, Sep 2023. <https://doi.org/10.1016/j.ijdr.2023.103839>

Join the conversation: Deborah Blackman, Girish Prayag, Hitomi Nakanishi, Jo Chaffer. Contact via jo.chaffer@adfa.edu.au

Exploring integrity in Australian Public Services: A method to benchmark Public Service Codes of Conduct

Katie Moon , David Brunoro, James Connor, Helen Dickinson, Twan Huybers

Objective: A Code of Conduct (CoC) is typically defined as a written set of norms that outlines virtuous or desired behaviours, often creating or linking to sanctions for violations. We developed and applied a method to compare the monitoring, reporting and review of CoCs across Australian jurisdictions. using specific assessment criteria. Our method serves both as the basis for the analysis of the effectiveness of CoCs over time, and as an assessment of how jurisdictions are currently reporting on their compliance with their own CoCs.

Method development and assessment criteria

Element	What	Assessment criteria
a) Monitoring and reporting		
Staff surveys	Staff surveys collect employee statistics and opinions about working for the public service, including on CoC matters. Staff surveys are generally not legislated but are common practice in jurisdictions. It is common practice for Public Service Commissioners to hold legislated powers to request data from agency heads.	The staff survey element consists of two assessment criteria: staff survey data for the reporting year and staff working knowledge assessment data.
Investigat-ions data	Investigations data comprises the numbers of employees investigated for suspected CoC breaches.	Investigations data is assessed at three levels: whole-of-service, agency and the individual case.
Training data	Code of Conduct training is often provided as a sub-element of integrity or ethics training, sometimes mandated for new staff, with variations in on-going training for staff.	The training data element comprise the percentage and number of staff completing CoC/integrity training per year, both in total and for senior executive service staff separately.
Time series data	Staff CoC perceptions, investigations and training can be reported for a current year only or be supplemented with historical data.	The publication of time series is assessed separately for data on staff surveys, investigations and training.
b) Review		
Recency of review	‘Recent’ is defined as within a five-year term, which is a reasonable amount of time for planning, implementation and further review.	CoC or integrity system review published within the last five years.
History of regular reviews	The repeated review history is defined as the undertaking of multiple formal reviews of the CoC over time.	The extent of past reviews.
Evidence-based review	Defined as those that draw upon multiple datasets including, but not limited to, stakeholder consultations (i.e., meetings, workshops, submissions with or from individuals or groups) and analysis of monitored data (e.g., surveys, investigations data).	The extent to which the review undertook consultations and analysis of staff survey, investigation, and training data.
Review granularity	Granularity is defined as the level of disaggregation of the review both in terms of organisational level and the CoC element. Regarding the organisational level, this applies to either whole-of-service or agency level.	Assessment of review at both the organizational and CoC element levels.
Outcome focus of review	An outcome focused review would have clearly articulated findings and recommendations with a commitment to their implementation, supported by future review/reporting against the recommendations.	The degree to which CoC/integrity reviews are outcomes focused.

Application of the method

Element	Criteria	APS	NSW	VIC	Qld	WA	SA	TAS	ACT	NT
Staff survey data	Staff Survey data for reporting year	●	●	●	●	●	●	●	●	●
	Staff working knowledge assessment data	●	●	●	●	●	●	●	●	●
Investigations data	Whole-of-service investigations data	●	●	●	●	●	●	●	●	●
	Agency level investigations data	●	●	●	●	●	●	●	●	●
	Individual case level investigations data	●	●	●	●	●	●	●	●	●
Training data	Percentage & number of total staff completing CoC/integrity training per year	●	●	●	●	●	●	●	●	●
	Percentage & number of total senior executive service staff completing CoC/integrity training per year	●	●	●	●	●	●	●	●	●
Timeseries data	Staff survey timeseries data	●	●	●	●	●	●	●	●	●
	Investigations timeseries data	●	●	●	●	●	●	●	●	●
	Training timeseries data	●	●	●	●	●	●	●	●	●
Recent review conducted	review published within last five years	●	●	●	●	●	●	●	●	●
Repeated review history	Repeated CoC/integrity reviews conducted	●	●	●	●	●	●	●	●	●
Review evidence-based	Evidence-based CoC/integrity reviews	●	●	●	●	●	●	●	●	●
Review granularity	Granularity of CoC/integrity reviews	●	●	●	●	●	●	●	●	●
Reviews are outcome focused	Outcomes focused CoC/integrity reviews	●	●	●	●	●	●	●	●	●

Findings:

- Substantial inconsistency in data collected, reported and reviewed
- Depth and transparency of data extremely poor



This work was funded by the UNSW Canberra School of Business and the Public Service Research Group – Ethics Stream
Scan the code to find out more



Scan the code to read more about Dr Katie Moon and related publications

Background

Despite the critical role of leaders during crises, some lack the confidence or ability to respond effectively. Crisis leadership is complicated by the fact that expected behaviours may depend on the type of crises faced. Our understanding of how leaders respond to various types of crises is underdeveloped, establishing the need for a review of current available scholarship.

In this review, we apply Coombs & Holladay (1996) crisis typology based on attribution theory (Weiner, 1986) in order to organize the extant literature on crisis leadership. Figure 1 shows this useful typology.

Our review covered the following: (1) thematic analysis of research themes within the various crisis types, (2) methodological quality review of research methods used in crisis leadership studies, and (3) evidence-based practical recommendations and future research directions.

Crisis Typology

Drawing from attribution theory, Coombs & Holladay’s (1996) crisis typology (see Figure 1) classifies crises as events that originate either externally or internally; and arise either intentionally or unintentionally. This typology results in a 2x2 crisis typology useful for categorizing crisis types allowing for the systematic analysis of themes within each crisis type.



Method

Our systematic review covered database search (i.e., PsychInfo & Web of Science) using relevant keywords (e.g., “crisis”, “disaster”, “scandal”, etc. AND “leader*”, “manage*”, etc) and appropriate delimiters (e.g., studies from a key seminal review article).

An inclusion criteria (i.e., topic relevance, crisis definition, empirical) was applied to identify studies to review. The final number of included articles was 69.

Findings

The themes that emerged from were as follows: (1) external–unintentional crises - leaders as shepherds; (2) external–intentional crises - leaders as saints; (3) internal–unintentional crises - leaders as spokesperson; and (4) internal–intentional crises - leaders as sinners.

These themes emerged from the common findings within each quadrant and are descriptive, in that they reflect what leaders have been observed to do empirically in response to each type of crisis. A more in-depth discussion of the themes is available in the full paper.

For the methodological review, we used best practice guides (e.g., Aguinis & Solarino, 2019; Antonakis, 2017; Hill et al., 2021) to complete a rigorous methods critique of the reviewed studies. For qualitative papers, there is need to ensure that basic expectations for transparency and replicability are established (e.g., saturation point, clear data analysis steps, power imbalances, etc.). For quantitative studies, endogeneity issues, measurement error, reverse causality, omitted variables, and unrealistic experimental conditions were identified as areas for improvement. A complete critique with recommendations is available in the full paper.

The 4 S’s: How leaders behave when faced with various crisis types

Source of the Crisis			
Crisis Intentionality	Unintentional	External	Internal
		Leaders as beacons of hope-- Saints Leaders comfort and support their followers, as they are victims who may still be fearful of the external threat. Leaders empower followers to help them return to a sense of normalcy.	Leaders as apologizing Spokespersons Leaders repair trust by communicating openly and honestly with stakeholders about the crisis. Leaders with superior relational skills will be more trusted by stakeholders.
	Intentional	External	Internal
		Leaders as guiding Shepherds Leaders guide and protect their followers and organization through sensemaking and rapid decision making. Leaders use their power and charisma to guide and protect their followers and organization.	Leaders as atoning Sinners Leaders who have done wrong seek forgiveness by apologizing. Leader status and power will determine if they can atone for their sins.

Key Takeaways

The review offered an evidence-based understanding of how leaders respond to different crisis types. Specifically, the review identified important leadership themes reflected in the crisis leadership literature. The methods critique also allows for improvements in future research designs when investigating crisis leadership.

On a practical note, the 4’S’s of Crisis Leadership can be incorporated in the design of crisis leadership programs.

Contact

For more information about this research, please contact:



Dr. Catherine Deen
UNSW Canberra



Dr. Michael Collins
University of
Queensland



Scan to view the related article:
Traversing the storm: An interdisciplinary review of crisis leadership.



Psychosocial Hazard Work Re-design Tool (PHReD-T)

A/Prof. C. Caponecchia¹, Dr E. Mayland², Prof. T. Bentley³, A/Prof. B. Farr-Wharton³, Dr R. Coman⁴, Dr V. Gopaldasani⁴, T. Jokic⁵, D. Manca⁵, A/Prof. S. O'Neill¹, Dr V. Huron¹, Dr L. Onnis³, Dr N. Green⁶

¹ University of New South Wales, ² Western Sydney University, ³ Edith Cowan University, ⁴ University of Wollongong, ⁵ JK Corporate Resourcing, ⁶ Massey University

Background

Poor mental health at work is a significant concern for workers, businesses, and governments.

Psychosocial hazards can contribute to mental ill-health, but businesses can work proactively to support and address mental health in the workplace, but often need help to identify how best to go about this.

Project

Fig. 1

Over the past decade, there has been a global shift from focusing on the mental health risks of individual workers to implementing broader approaches that seek to ensure a mentally healthy workplace.

Informed by the NSW Mentally Healthy Workplaces Strategy 2018-22, the project was led by **UNSW** in partnership with **NSW Centre for Work Health & Safety, University of Wollongong, Edith Cowan University, Western Sydney University & JK Corporate Resourcing.**

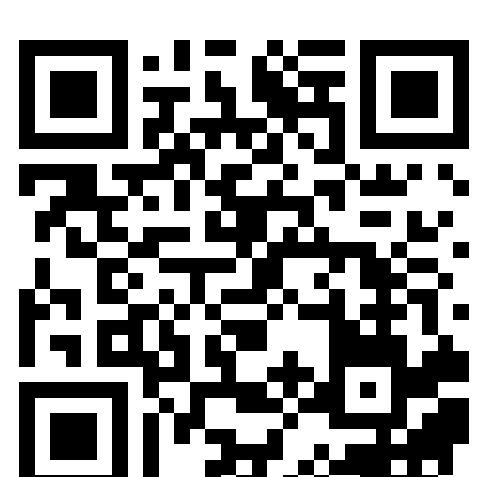
The research team worked with **representatives of four target sectors** to develop, test and refine a new tool (see Fig. 1) for helping to build confidence and skills in redesigning work for improved management of psychosocial risks.

A literature review of interventions, followed by a qualitative study of facilitators and barriers found most interventions currently implemented by organisations focus on individuals, rather than addressing organisational sources of harm, and identified important elements of work design. Together these revealed an opportunity to shift the focus to the prevention of psychosocial harm associated with **how work is done.**

PHReD-T tool

The **Psychosocial Hazard Work Re-Design Tool (PHReD-T)** assists users to develop skills and confidence in work-redesign to identify, prevent and manage psychosocial risks, based on elements of work design (Fig 2). This self-paced tool was supported by a range of case studies, guidance material and support from the project team during the 8-week pilot phase. The materials can now be freely accessed and used.

"It's triggered my brain, the system - this structured process, step one, step two, step three, although it's in depth, it's also really structured, and it gives me a structure in relation to how to work. .. I've already got the idea. It's just, it's following that structure to cement my ideas, .. and I feel like it can be done... I could just do it. As I'm walking around, as I'm discussing with people, you know... I think it's also a mindset, not only a formal... template - it becomes a mindset". (Participant Org. D)



Scan the code
to find out more

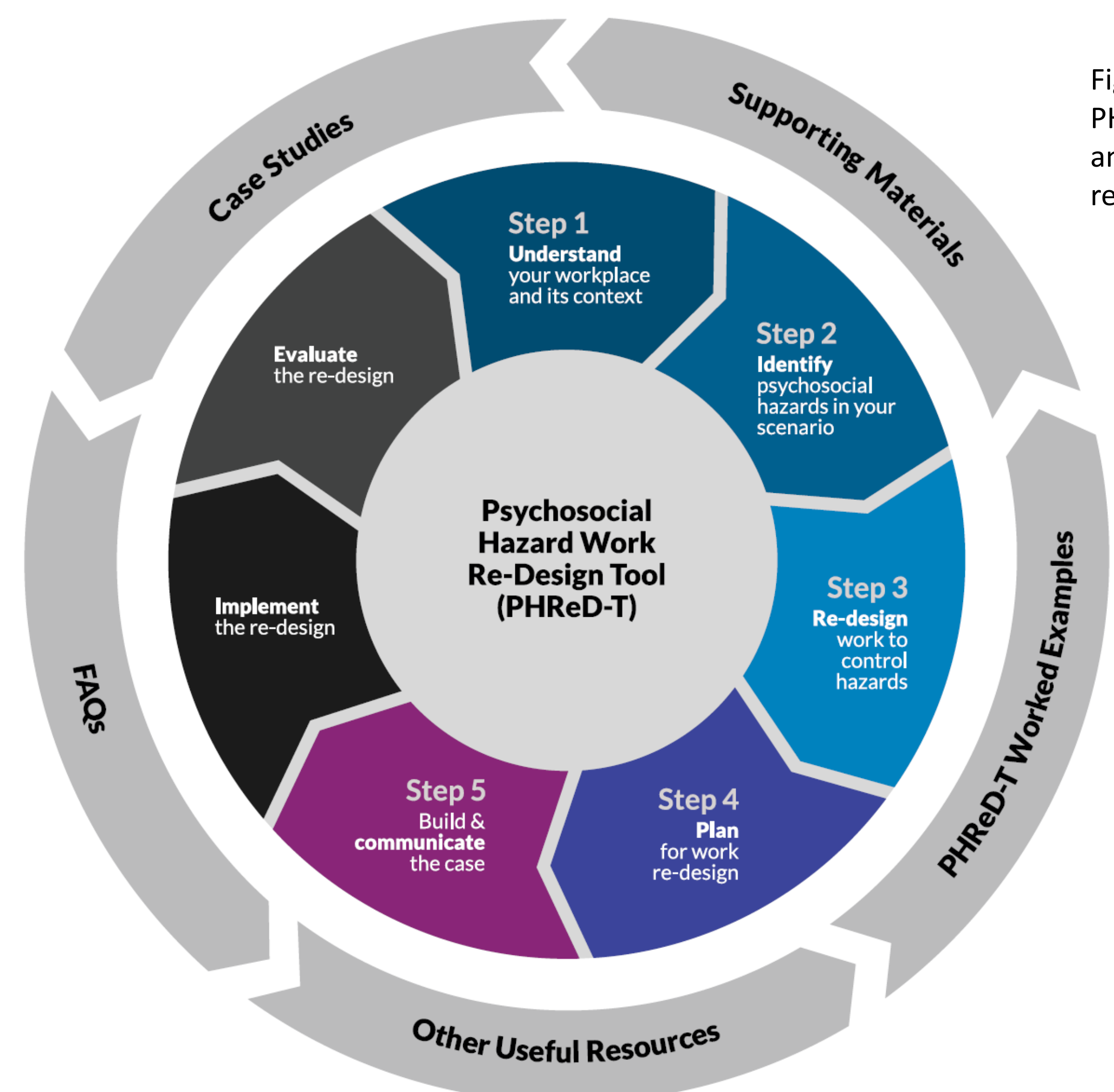


Fig. 1 The PHRED-T steps and related resources

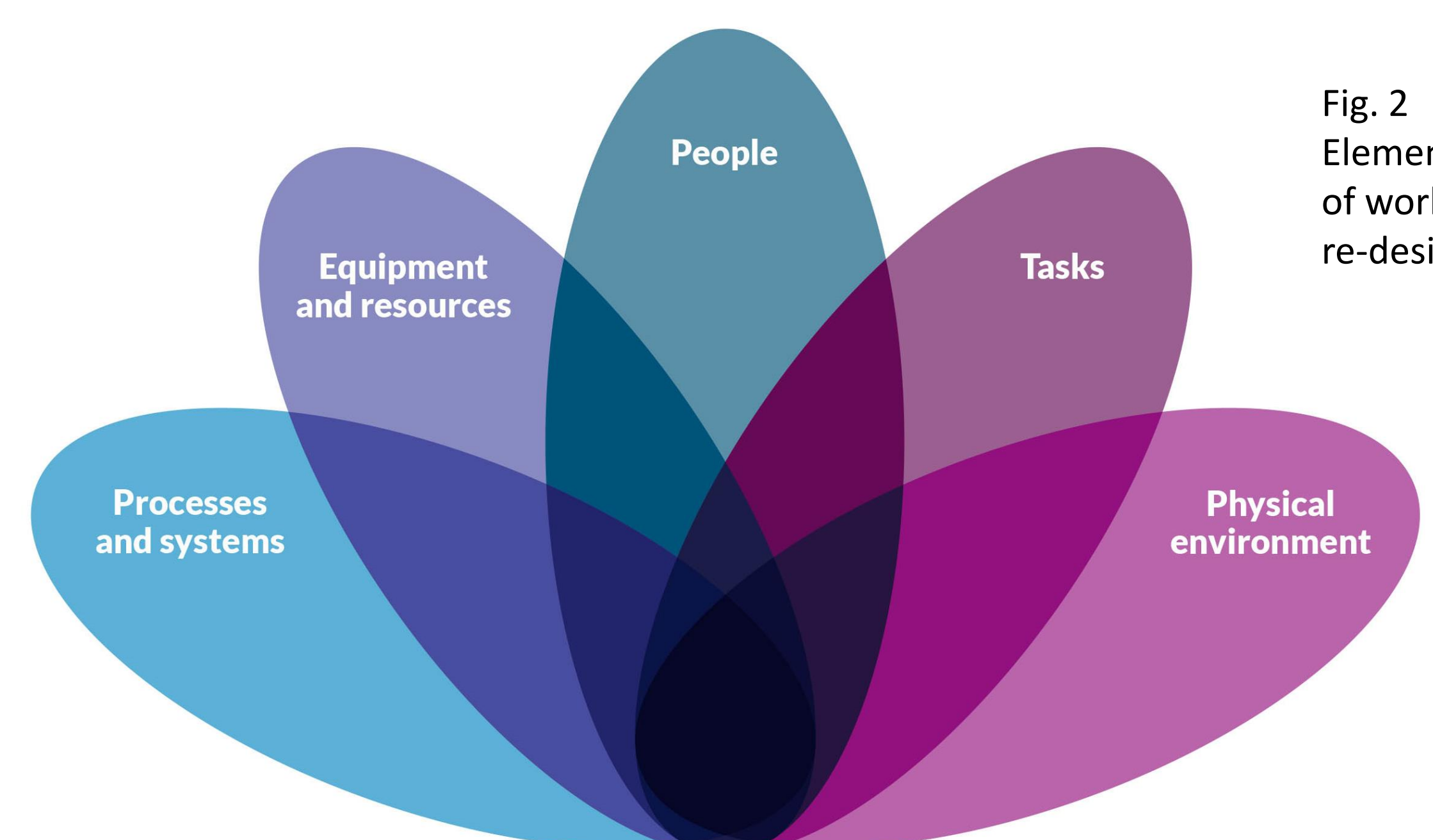


Fig. 2 Elements of work re-design

Results

Positive feedback was provided about the tool's:

- quality and usefulness of the content and resources
- multi-model format, pitch and layout.

Significant improvement pre- to post- intervention was observed in participant's ratings of confidence in relation to:

- identifying psychosocial risks
- identifying and undertaking work re-design
- managing mental health at work

Contact:

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Care and risk during COVID-19: government support for the Family Day Care (FDC) sector



Lessons for public policy implementation from the effects of state and federal government responses to COVID on the Family Day Care sector

Findings from the FDC experience

Primary sector concerns:

- Financial risks and insecurity
- Health risks
- Compliance heavy
- Lack of communication and consultation
- Stress, anxiety, trauma



The burden of risk and compliance was devolved to individual FDC providers and educators, who were working on the frontline of the COVID crisis.

COVID management was complicated by state and federal government decisions that individuals had little power to influence or change.

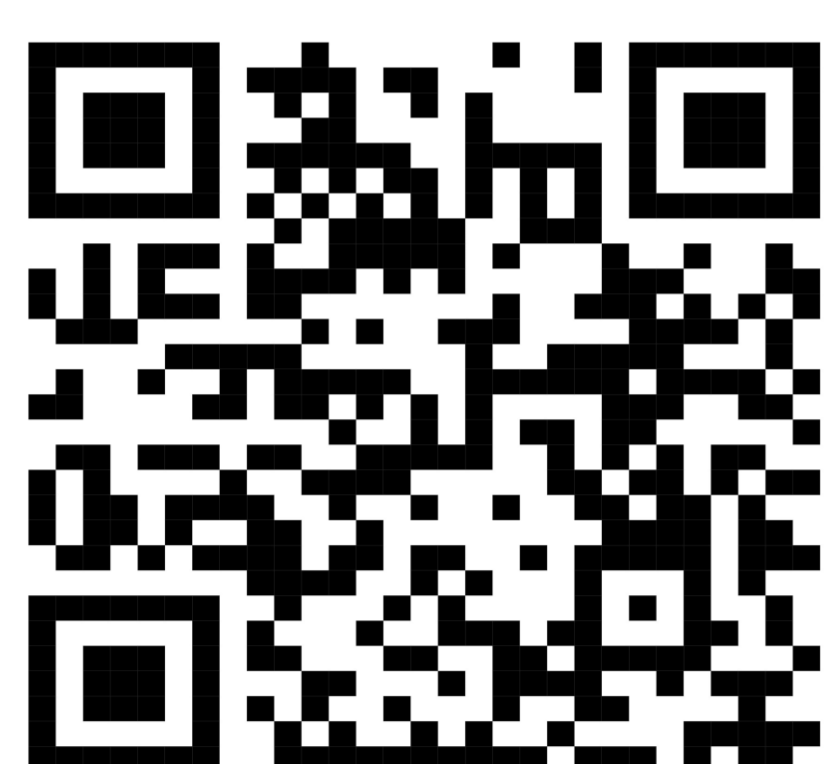
The narrative that 'we're all in this together' was not the FDC experience as they worked to identify and manage health, safety, and financial risks during COVID.

Outcomes and Implications

Shifting responsibility for managing risk to individuals necessitates increased regulation, compliance, and monitoring.

A heavy focus on compliance with a lack of communication and consultation about the effect of childcare support packages left FDC educators and providers struggling to manage financial and health risks in their work.

Compliance gap – providers and educators were left in the position of enacting policies into procedures with little support or guidance about how to do so. This left them vulnerable to and in fear of inadvertent compliance breaches.



Dr Vanessa McDermott
Dr Penelope Bergen
A/Prof James Connor



Respite Care for QBN



Yvonne Cuschieri House in Queanbeyan will be the first purpose-built non-clinical respite care facility in Australia for people aged 18-60.

UNSW's evaluation shows YCH fills an urgent need in the community. It will reduce the burden on the health system, give carers a much-needed break and address carers' psycho-social needs.

Respite improves outcomes for carers' mental health, quality of life, family functioning & socio-emotional wellbeing, and provides dignity for those navigating chronic and/or life-limiting illness



Respite is an essential service. It reduces burnout, psychological & physical distress, social isolation, anxiety & depression.

Queanbeyan is home to about 4500 unpaid carers

There is an acute lack of fit-for-purpose respite services for people aged 18-60*

89% of carers have not used respite services*

50% of carers suffer from high psychological distress**



Informal care in Australia is worth about \$78 billion**



Non-clinical respite can relieve 50% of the overall cost burden from public hospital admissions, ambulance costs, and cost as little as 10% of the cost of an emergency department visit^{oo}



The relationship between human and organisational systems: culturally diverse workplace cultures and their impact on policy outcomes and community development



What are the factors that define the culture of a group in a culturally diverse workplace?

FACTORS

INDIVIDUAL

values, motivations, personal histories

SOCIAL

adaptation processes, social capital, group homogeneity, individuals' interaction and how alliances are formed, normalising institutional behaviour

ORGANISATIONAL

policies, type of governance structures, leadership quality, in-situ networks, training, aims or goals, job descriptions

CONTEXTUAL

history of policy and place, geographical/ situational placement of the group, other influencing factors such as other cultures with whom they interact



Individuals' responses to these factors determines what kind of culture the group will form



How does workplace culture affect policy and other outcomes for the community?



Recognition of a unique workplace culture creates the opportunity for the development of contextually appropriate policy design. This influences the adaptability and sustainability of community outcomes.

RESULTS



IMPACTS

Rural Roundtable Report on health service access

Context: Access to health care is one of 7 health care rights in Australia

Individuals: Rural & remote consumers identified 6 key areas to address their own disparity in health care access

Systems & policy: Include consumers in the NHRC's advisory group; recommendations for policy & practical change

Develop a national health literacy framework

Context: Map the policies, programs & services that support health consumers, clinicians & PHNs, to improve health outcomes

Organisational: Specify & communicate responsibilities in preventive health; aim to benefit MBS costs, lower clinician workloads

Individuals: Improved health outcomes & greater health consumer engagement

A national peak body for Remote Area Workers

Contextual & organisational:

Accommodates remote desert networks without flattening diversity

Individual & social: Supports professional networking, collaboration, training & development, organisational memory & data collection for improvements in staff recruiting & retention

A designation for Remote Area Workers (in remote Aboriginal communities)

This classifies and has the potential to designate standards, skills, practices, regulations & external frameworks supporting workers & ultimately communities



Passionate projects: practitioner reflections on emotion management in projects

Dealing with people and their feelings
is *the* fundamental challenge
for project management.

Project management practices
tend to neglect the role of emotions
and emotional reflexivity.

Emotional states are framed by factors
specific to project management,
including organisational change, project
constraints, project methodologies and
dealing with stakeholders.

Explicitly managing emotions improves
team engagement and project
performance by acting as a catalyst for
engaging in reflective practice and
intuitive decision making.

Emotional reflexivity in practice, which is widely acknowledged yet
tends to be ignored, is an essential part of a project manager's
toolkit.

**“The over-rational portrayal of both change management and managerial
activity has obscured the emotional experience of the manager.”**

Clarke et al 2007



Practical implications

Given the widely held misconception of emotion as maladaptive, project management
education must focus on empathy in communication and leadership if practitioners
are to master valuable soft skills. Techniques for emotional reflection
and learning feeling lessons must be incorporated into practice.

A/Prof James Connor, Dr Vanessa McDermott and Wilma Gillies



Published Paper



Misuse of antibiotics in a developing country: The viewpoint of physicians in Bangladesh

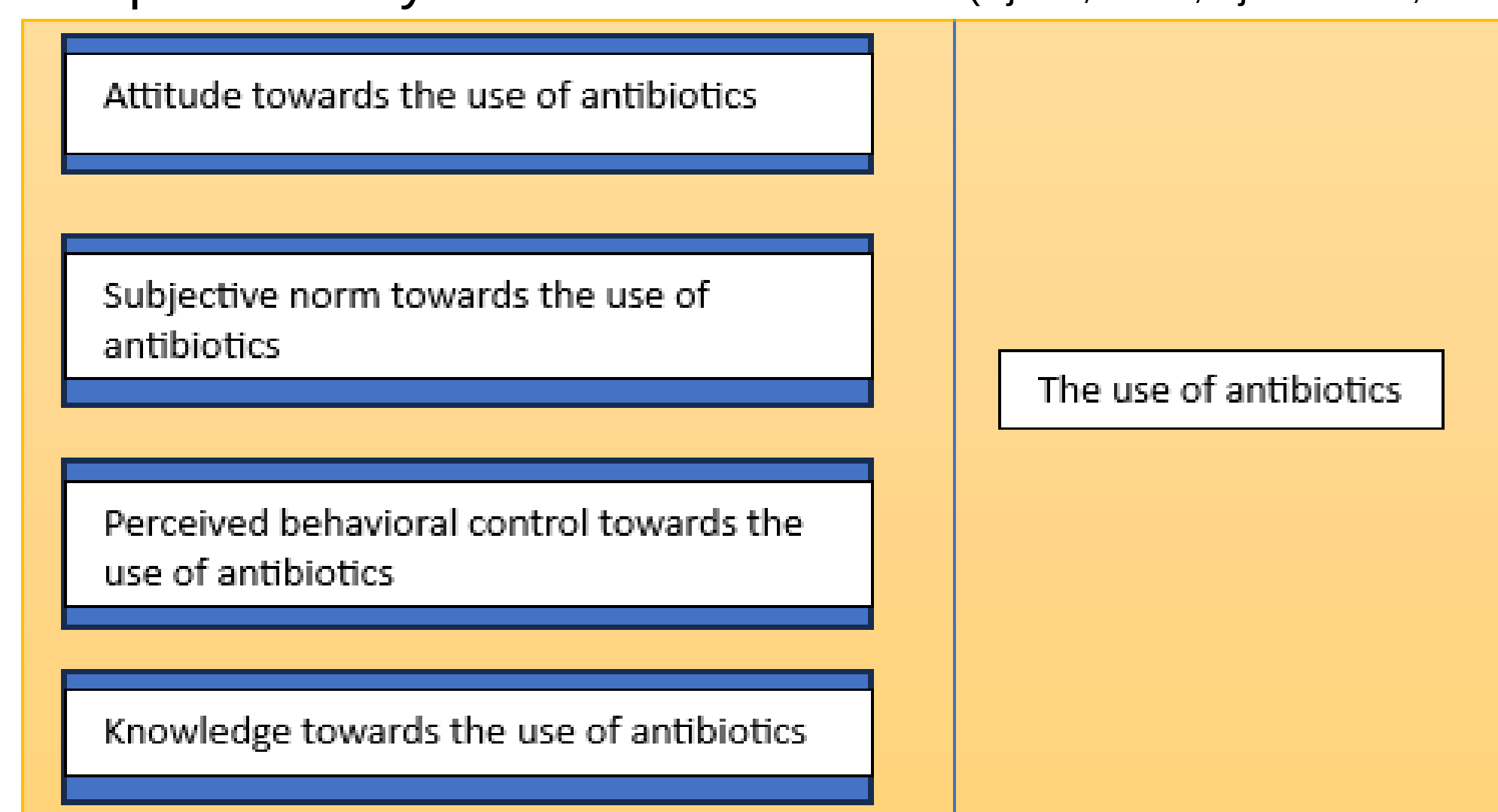
Nastaran Nazrul Tui

Introduction Antibiotics have revolutionized healthcare, improved global health and saved countless lives. However, due to misuse, antibiotic resistant bacteria have made infectious diseases harder to manage. The misuse of antibiotics is a rapidly escalating global health threat in the twenty-first century. This is a case study of physicians to understand the reasons behind the misuse of antibiotics in Dhaka, Bangladesh.

Aim of research Integrating theory towards optimizing the use of antibiotics

Theoretical framework

Adapted Theory of Planned Behavior (Ajzen, 1991; Ajzen et al., 2011)



Sale of antibiotics without doctor's prescription must be stopped: PM



Global Facts

Annual death due to antibiotic resistance	700,000
Projected death if not corrected	10 million by 2050

Bangladesh

The second lowest patient-physician ratio in South Asia:	5.26 per 10,000 people
Patients visit pharmacies to buy medicine without physician's advice:	68%
Hospitalized patients receive antibiotics:	67%
Daily dosage of antibiotics without prescription:	1.5 million
Increase of antibiotic consumption in the last two years:	30.81%
In the capital city, deaths at ICU caused by antibiotic resistance:	70%
Ceftazidime, a watch group drug has become ineffective in killing different bacteria in:	70% of the cases
Pharmacy retailers have poor knowledge of antibiotics:	67.3%

Research method

- Qualitative in-depth interviews with 20 physician *Ten physicians from each low, and low-to-mid income group hospitals*
- Snowball sampling method, Thematic content analysis (TCA)

Attitude: Physicians' positive or negative evaluation towards the use of antibiotics

Positive viewpoints on the use of antibiotics:

- Avoids life threatening damage to patients' health,
- Leads to shorter hospital stays,
- Return to work sooner,
- Fights bacterial infection,

Negative viewpoints on the use of antibiotics:

- Adverse medical effects on patients' health from incomplete dose,
- Widespread availability without prescription,
- Pharmacies do not follow proper protocols,
- Paramedics lack proper knowledge of antibiotics handling

Belief from clinical experience:

- Supports long distance patients,
- Helps to retain patients,
- Meets patient's expectations,

Patients believe antibiotics promote faster recovery and ignore associated risk:

- Patients shop for antibiotics from multiple sources,
- There is a lack of health insurance support from government or employer,

Belief that patients will swap physicians if not prescribed antibiotics:

- Frustration if not prescribed antibiotics,
- Patients think good physicians prescribe antibiotics.

Social influences: Physicians' perception of the social influence on the use of antibiotics

Influence from Patients:

- Decrease frequency of visit to doctors to save money,
- Financial situation,
- High price of medicine, preserve, reuse,
- May not complete the full course of antibiotics,
- Exaggerate the severity of their illness to access antibiotics for a faster recovery,
- Aggressive behaviour or threatening of political and higher power

Influence from Peers:

- Junior doctors follow instruction from senior doctors even though it goes against guidelines,
- Peer pressure to give antibiotics from specific pharmaceutical companies,
- Restricted number of hospital beds and so doctors feel pressure to prescribe antibiotics,

Influence from Pharmaceutical Companies:

- Prescribe high priced antibiotics to meet sales targets,
- Sales representatives feel pressure to keep their jobs,
- Offer gifts or other incentives to doctors for prescribing antibiotics,



Findings

Perceived behavioural control: Physicians' self-efficacy over prescribing antibiotics

Maintain control while prescribing:

- Senior doctors have full control over prescribing decision,
- Junior doctors must wait for instruction from seniors,

Following clinical guidelines:

- Sometimes contradicts with senior doctors' instruction,
- Some doctors do not know where the guidelines are available,
- Helps to increase confidence,

Constraints while prescribing:

- High patients-physicians ratio demand quick recovery,
- Patients' immediate recovery to continue work for survival,
- Patients' financial constraints prohibit pre-diagnosis,
- Physicians' access to updated guideline,
- Change of brand name of antibiotics leads to difficulty to assess the proficiency and authenticity of that class of antibiotic.

Knowledge: Physicians' understanding and awareness regarding the use of antibiotics

Knowledge gap:

- Knowledge gap about when to prescribe (viral/fungal/bacterial),
- Limited training on antibiotics,
- Poor knowledge of unlicensed individuals who prescribe,
- Learnt during study and internship, not any more

Educating patients about antibiotics usage:

- Finish full course, do not use left overs
- Lack of interesting materials in learning,
- Low educational qualification,
- Lack of interest in learning.

Educating patients about infection prevention:

- Avoid infected places,
- Maintain safe distance,
- Avoid street and unhygienic food,
- Personal hygiene and regular cleanliness.



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Developing an Intelligent Supply Chain Risk Management Framework for Australian Maritime Ports

AUTHORS

Amir Hossein Ordibazar,^a Omar K. Hussain,^a Ripon K. Chakraborty,^a Elnaz Irannezhad,^a and Morteza Saberi^b

AFFILIATIONS

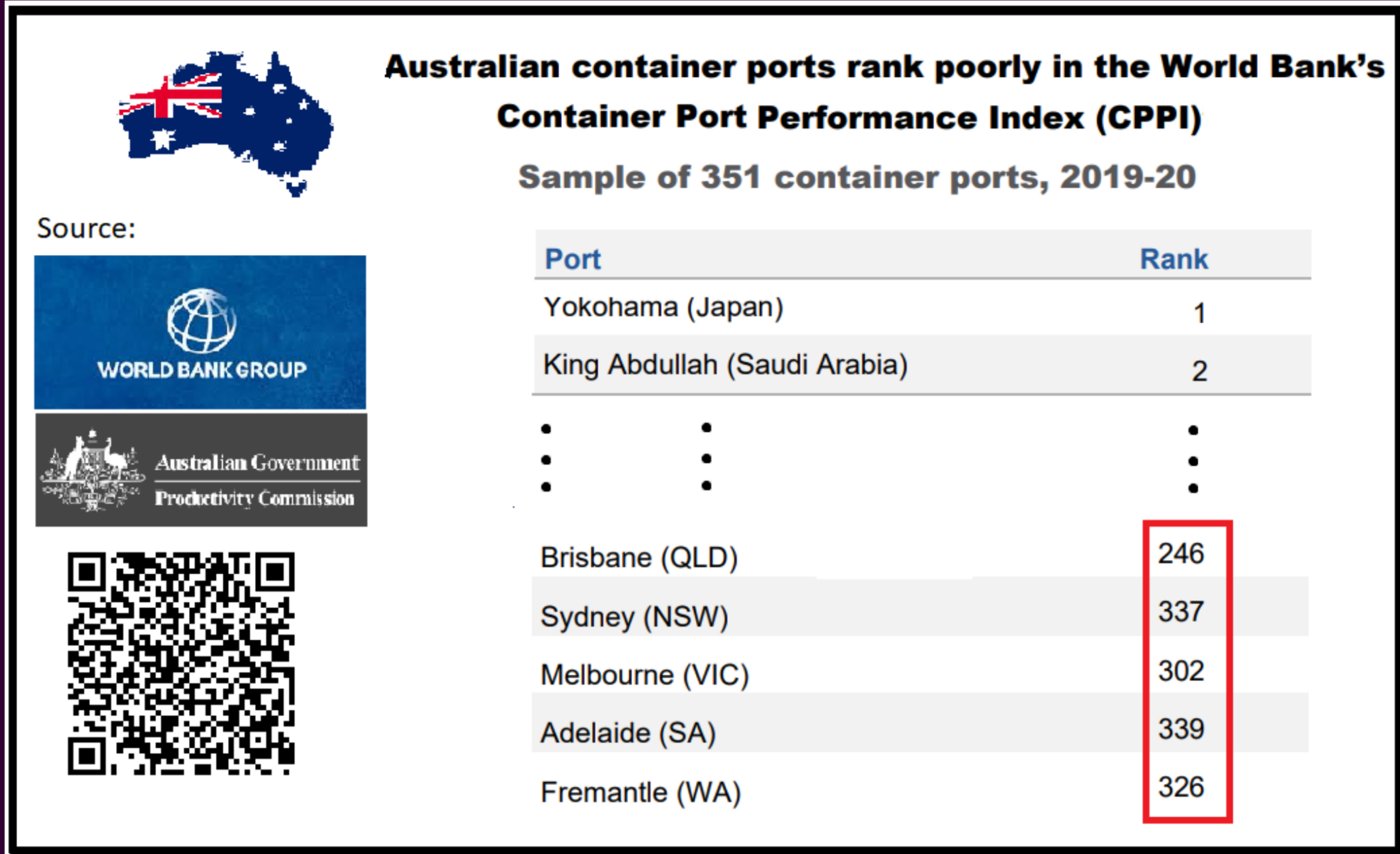
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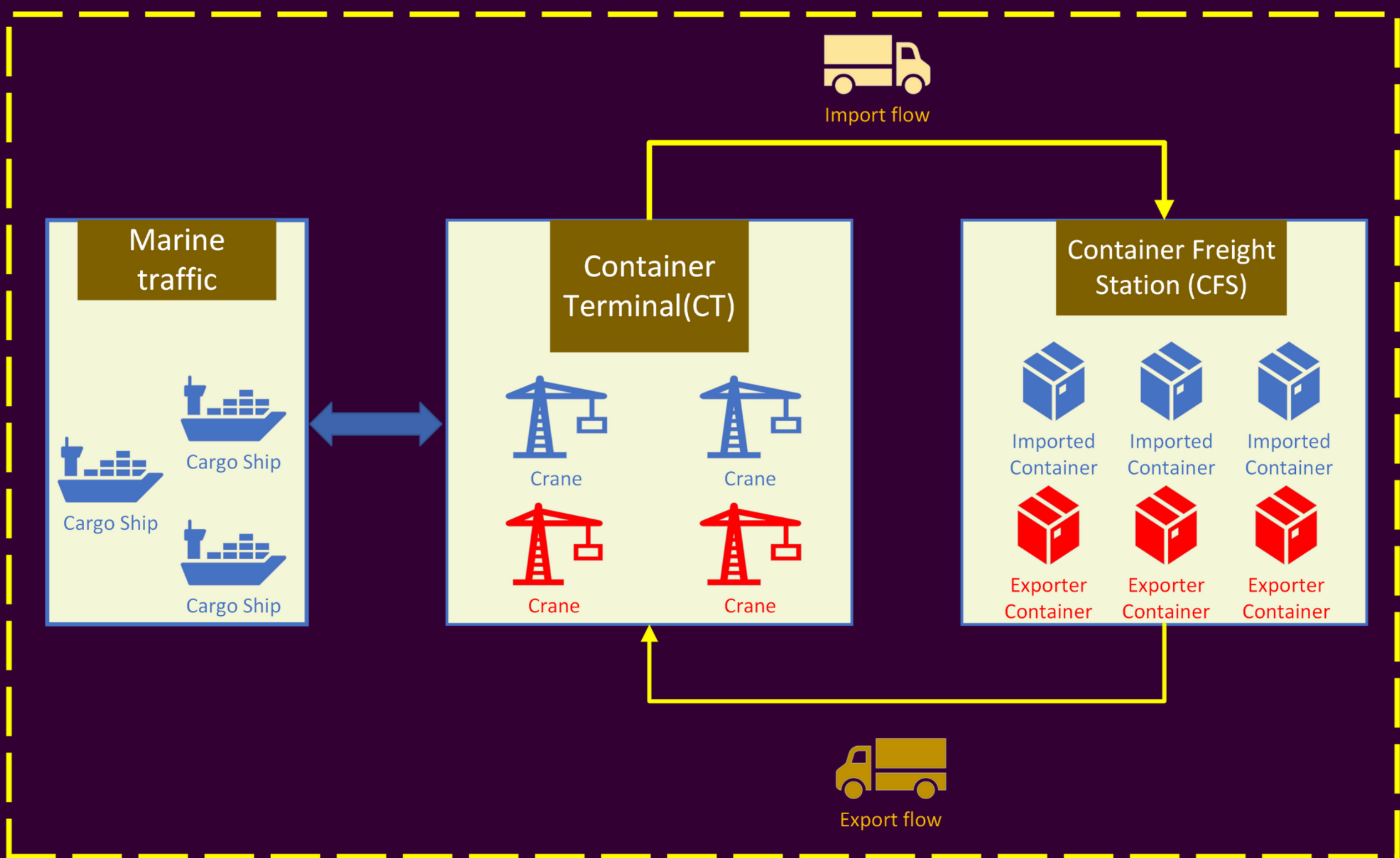
1. ABSTRACT

This research proposes an intelligent framework for planning and risk management of maritime ports based on an Australian maritime port case study. First, a simulation-optimisation model is developed to consider the actual behaviour of the port and plan the activities using queue theory. Then, in case of risks, a counterfactual explanation (CE) model is developed to recommend mitigation strategies. Finally, the research aims to improve maritime supply chain performance by effectively managing maritime ports.



2. PROBLEM DESCRIPTION

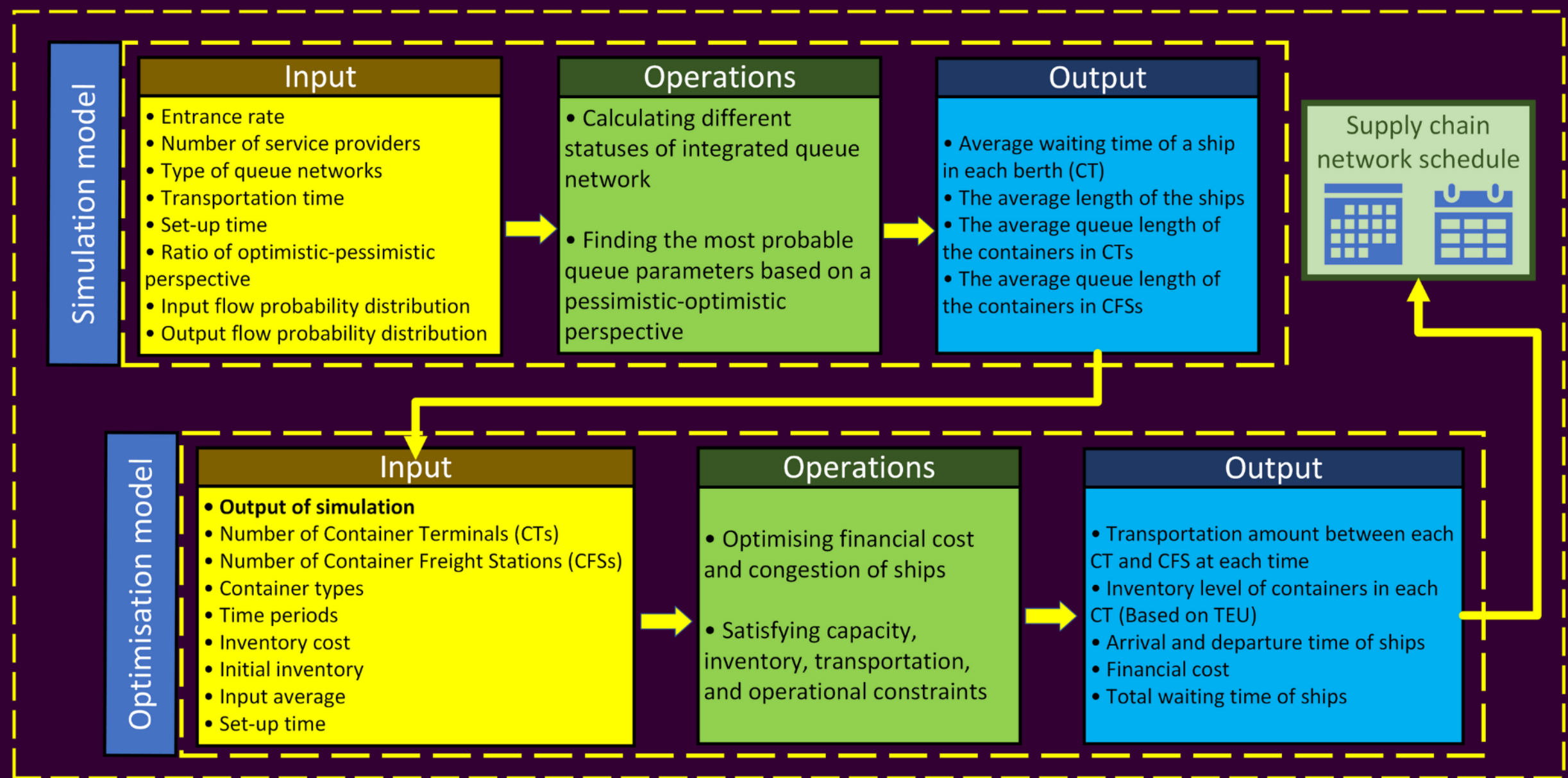
The problem considered in this research is a multi-echelon marine supply chain network (SCN), including import and export processes. We focus on ships' waiting time in container terminals (CTs). The waiting time of ships on the CTs depends on the service time of loading, unloading, transportation, and storage capacity, which is relevant to scheduling. Therefore, efficient planning of the CTs activities helps to reduce the waiting time of ships and, consequently, congestion of the port. On the other hand, unpredictable events may cause delays and extra workloads in the CTs, so predicting and mitigating risks proactively is crucial to improve the performance of the ships.



3. SIMULATION-OPTIMISATION MODEL

The simulation-optimisation model consists of two parts:

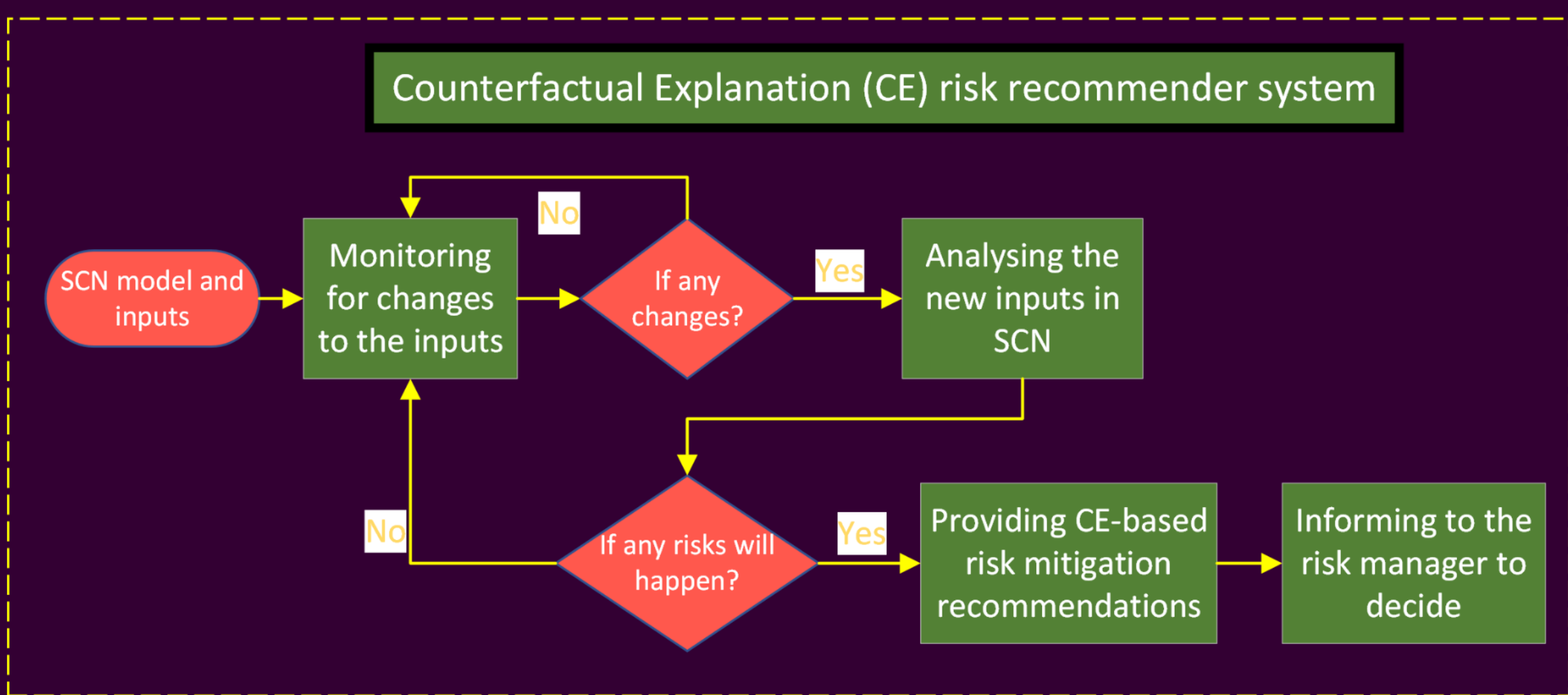
1. A queueing model to simulate ships' waiting time in each berth of the CTs by considering the historical data as input.
2. The optimisation model for planning a feasible and optimal schedule for the marine SCN in CTs by considering the simulation model's output and port information.



4. THE COUNTERFACTUAL EXPLANATION (CE) MODEL

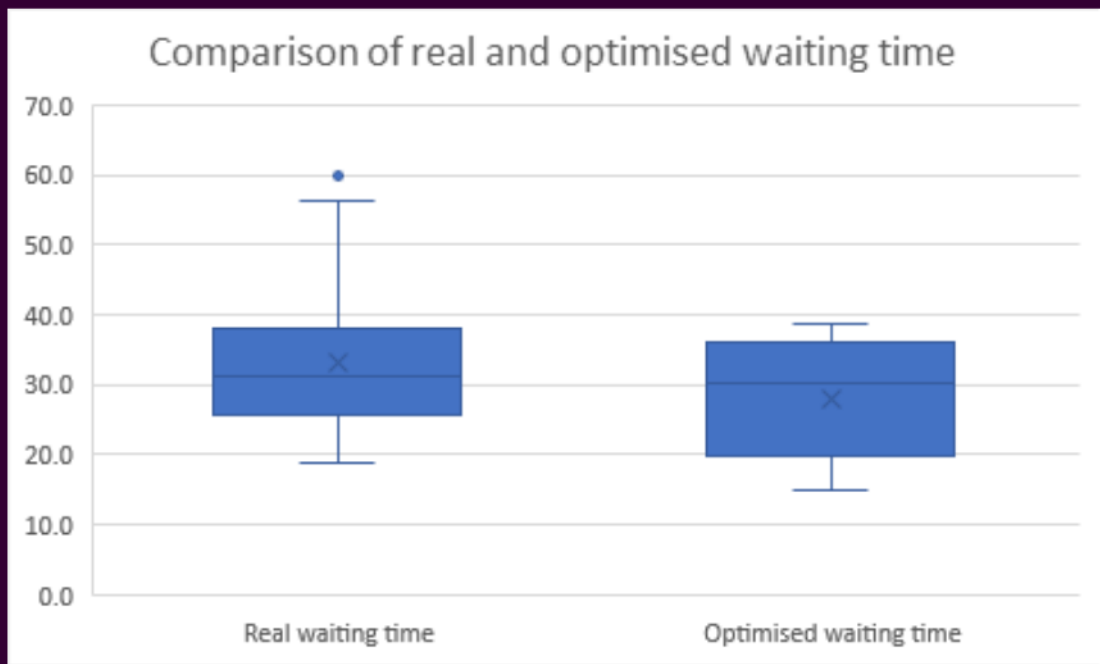
If any unexpected risk happens, the CE optimisation model will recommend mitigation strategies to avoid the risk or mitigate its impact as follows:

1. Find the most optimal and feasible mitigation strategy
2. Minimise the effort needed to change the SCN plan to mitigate the risk



5. RESULTS

The waiting time of ships is improved by implementing the framework compared to the actual waiting time, which reduces congestion.



6. RESEARCH CONTRIBUTIONS

- Improving the performance of the container terminals for import/export activities
- Minimising the impact of long waiting times on the operations of the container terminals
- Assisting the port manager with more intelligent decision-making tools regularly and in case of risks

Contributing Event-based Risk Identification and Assessment (CoERIA) in Supply Chains

AUTHORS

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SUMMARY

Risk identification and risk assessment are important aspects of Supply chain risk management which help supply chain risk managers to be proactive while managing the risks. We emphasize that to better identify the chances of a risk happening, supply chain managers first need to identify the chances of contributing events which then lead to the risk event happening. In this research, we will propose an approach called CoERIA. The proposed approach addresses the need to identify the contributing events before a risk event happens. It also quantifies the risk event in terms of its probability of occurrence.

01

Preparing the base knowledge

Applying an AI approach to analyse the past two years news to find the dependency between contributing events and the risk event of interest, and also the related keywords to each event



02

Preprocessing

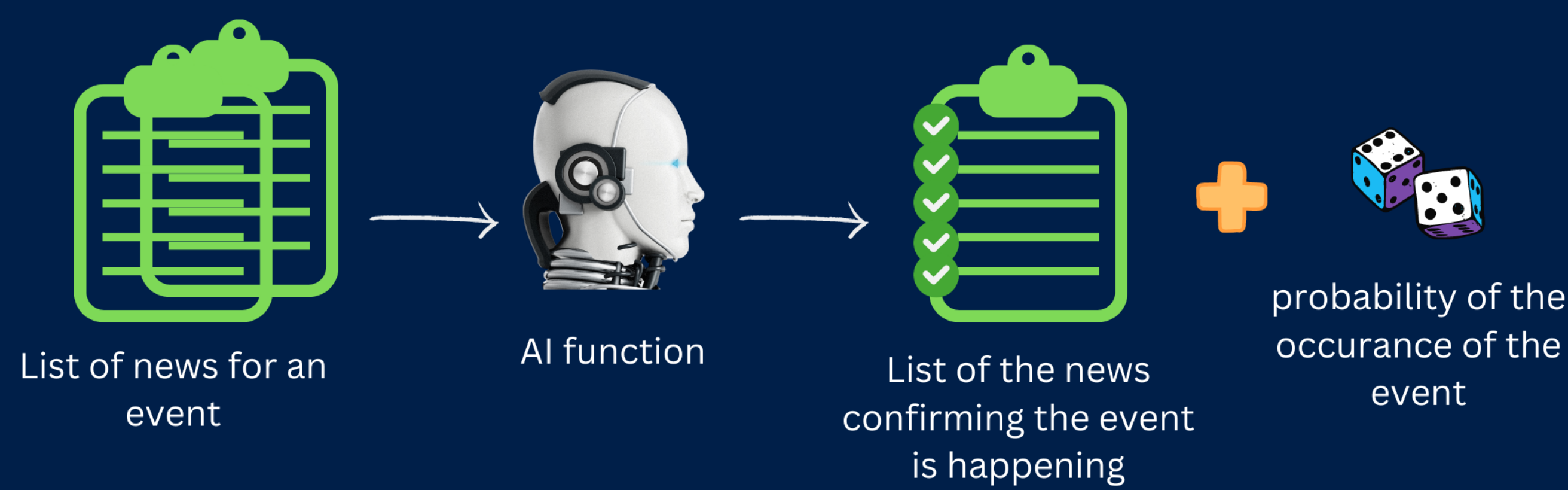
Based on the keywords extracted in step 1, we search for daily news on Google News search engine.



03

Deep Analysis

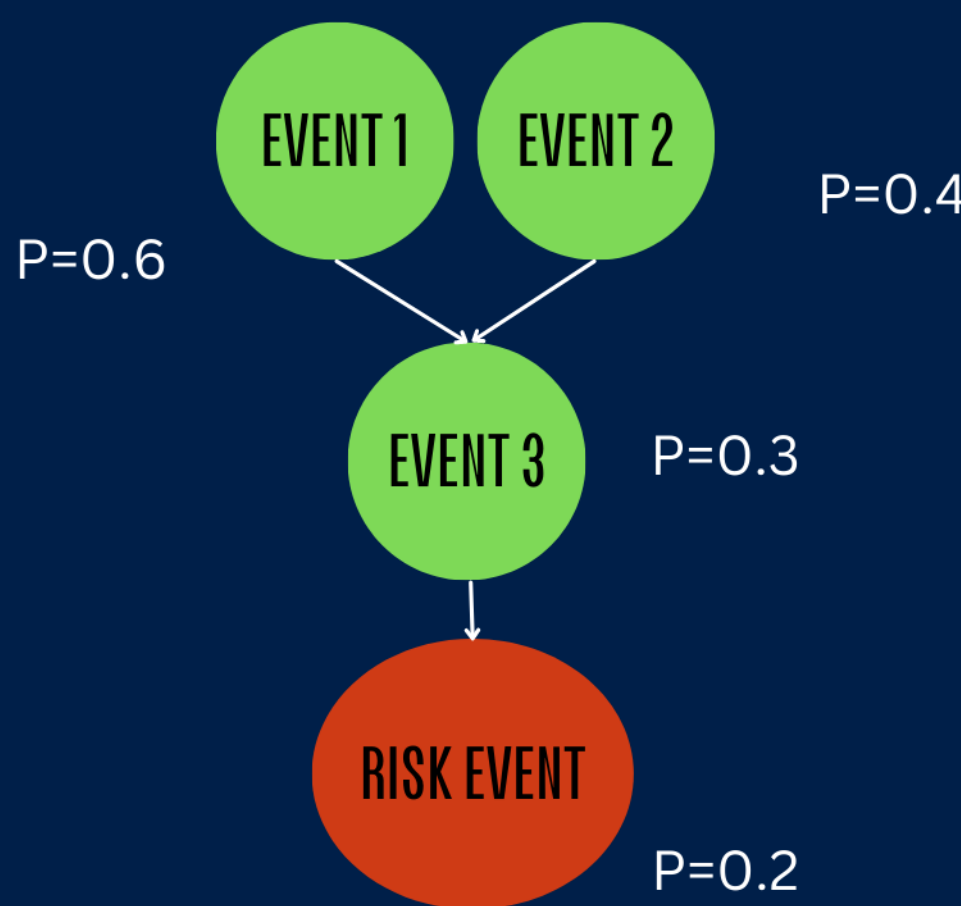
Applying an AI approach for analysing the news based on their semantic similarity to the event.



04

Output generation

By having the probability of the occurrence of each event, we can quantify the occurrence of the main risk. We will use Bayesian network for this aim.



PERFORMANCE ANALYSIS

We evaluated the COERIA's event identification module by using expert knowledge. The experiments show the effectiveness of this module against manual approach.

ACCURACY : 98%

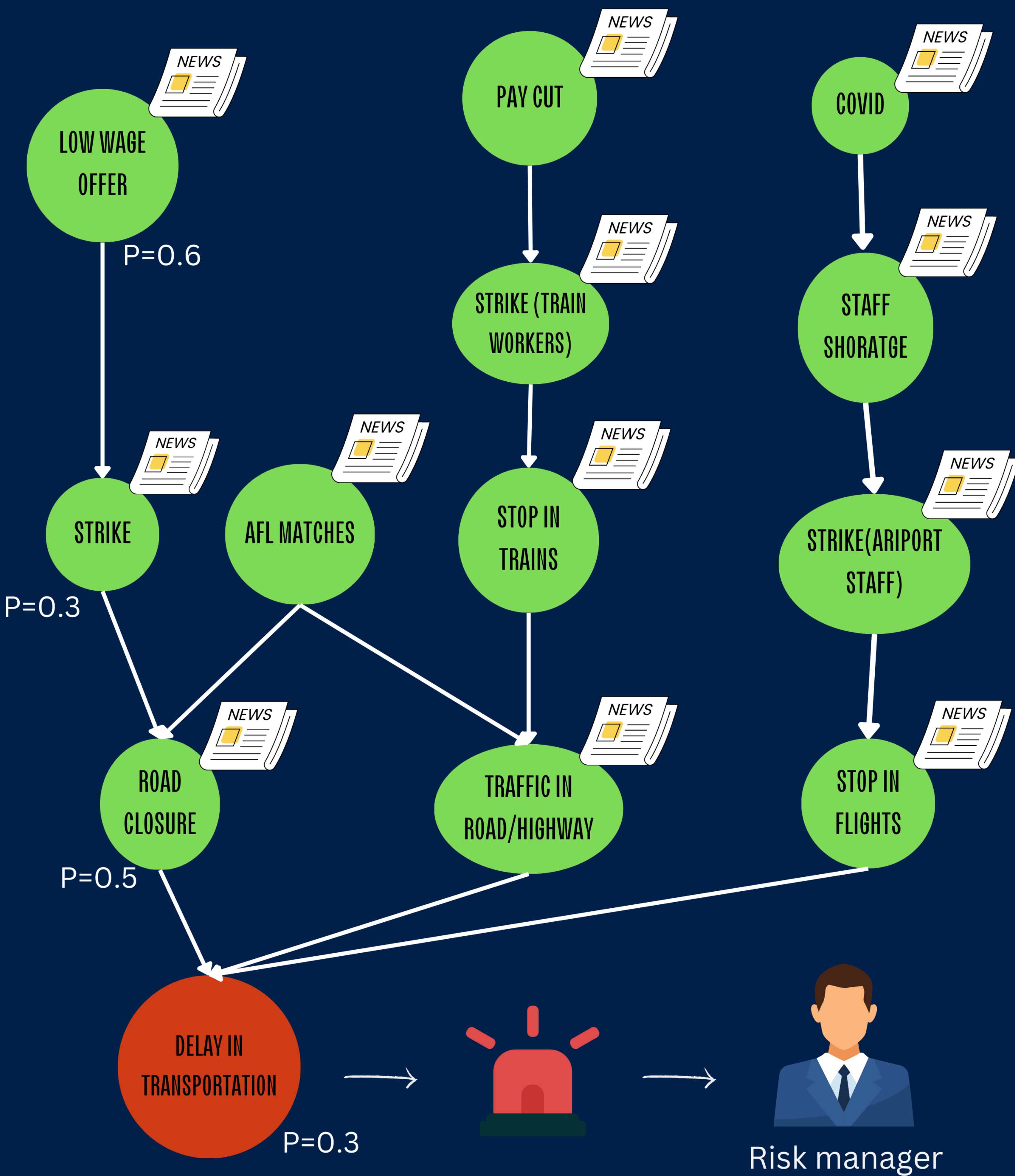
RECALL: 95%

PRECISION: 95%

F1: 95%

USE CASE

We implemented the first three parts of the project by analysing the chances of occurrence of risks in an Australian context. This is the Bayesian network for the case study:



A rapid review of sexual harassment in the world of work in Australia

Dr. Catherine M. Deen (UNSW) & Prof. Sara Charlesworth (RMIT University)

Background

This rapid review was part of a large-scale project aimed at synthesizing knowledge on family violence and violence against women.

Commissioned by **Respect Victoria** and managed by the **Australian Institute of Family Studies (AIFS)**, this **review** focused on **sexual harassment (SH) in the world of work in Australia**.

The review covered the following: (1) nature and prevalence, (2) drivers and reinforcing factors, and (3) prevention recommendations. The researchers also completed a **critical analysis** of the depth and limitations of the current scholarship and offered **evidence-based recommendations** for future research and practice.

Method

The rapid review covered database search (i.e., Scopus, ProQuest Social Science Premium) using relevant keywords (e.g., “sexual harassment” AND “work”) and appropriate delimiters (e.g., studies from past 10 years).

An inclusion criteria (i.e., topic relevance, Australian context, empirical) was applied to identify studies to review. Grey literature (e.g., inquiries, reports) search was also conducted to ensure maximum coverage of related studies. The final number of included articles was 88.

Funding

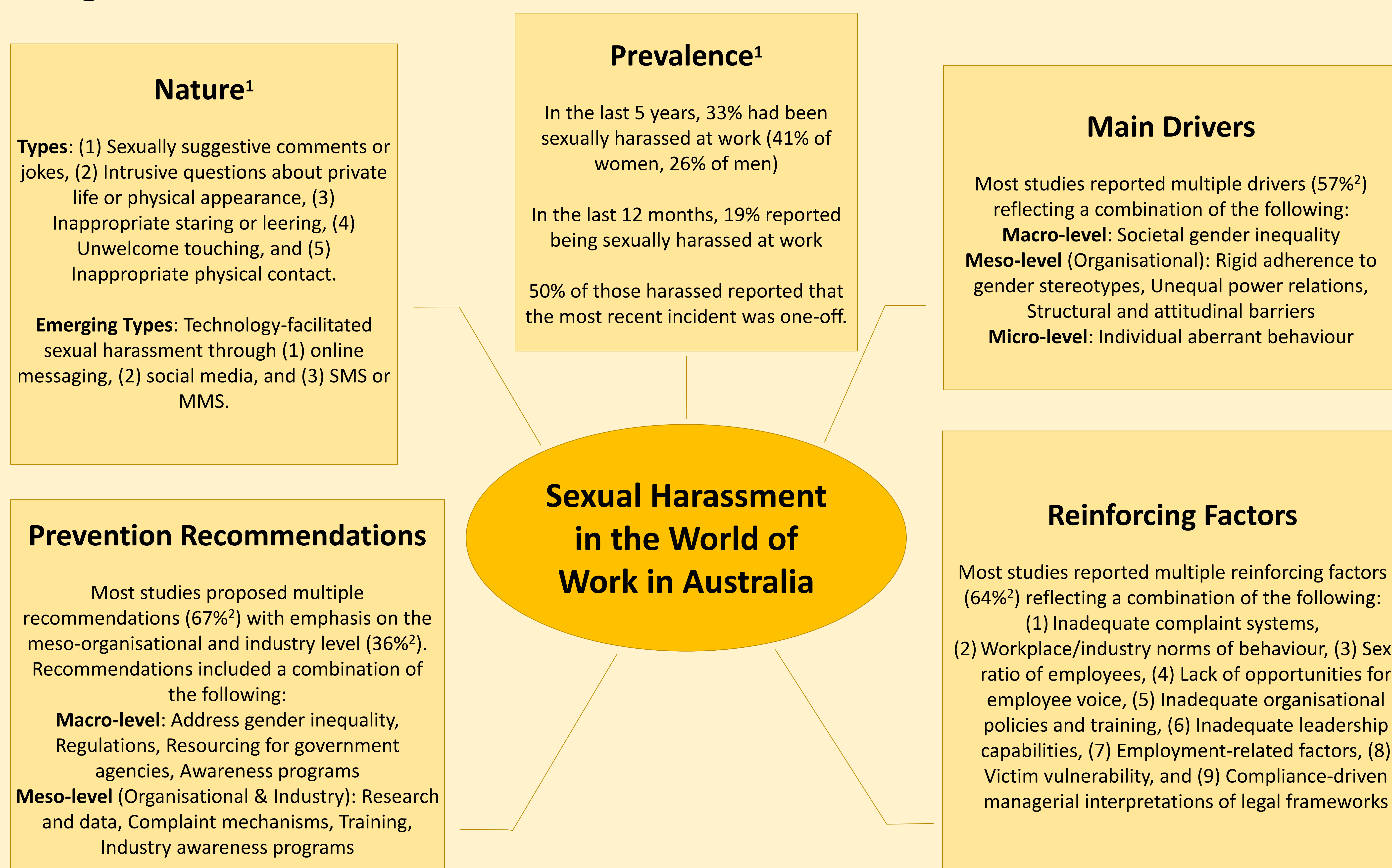
This project was funded by Respect Victoria and managed by the Australian Institute of Family Studies (AIFS).



Key Takeaways

- Sexual harassment is a type of gender-based violence (GBV) that predominantly occurs in the world of work. While SH is largely driven by gender inequality, there are unique work-related drivers (e.g., gender power imbalances, role segregation) that makes SH distinct from other GBV (e.g., intimate partner violence). It is necessary to examine SH with keen attention to the context where it occurs.
- Further research is needed in these focus areas: (1) SH in specific industries, (2) SH and vulnerable worker groups (e.g., migrants, refugees, persons with disabilities, indigenous peoples, others), (3) SH and theoretical perspectives, and (4) emerging forms of SH (e.g., technology-driven)

Findings



¹Updated data from Australian Human Rights Commission (2022) *Time for respect: Fifth national survey on sexual harassment in Australian workplaces*, November 2022.

²Percentage of reviewed studies. Total reviewed studies: 88



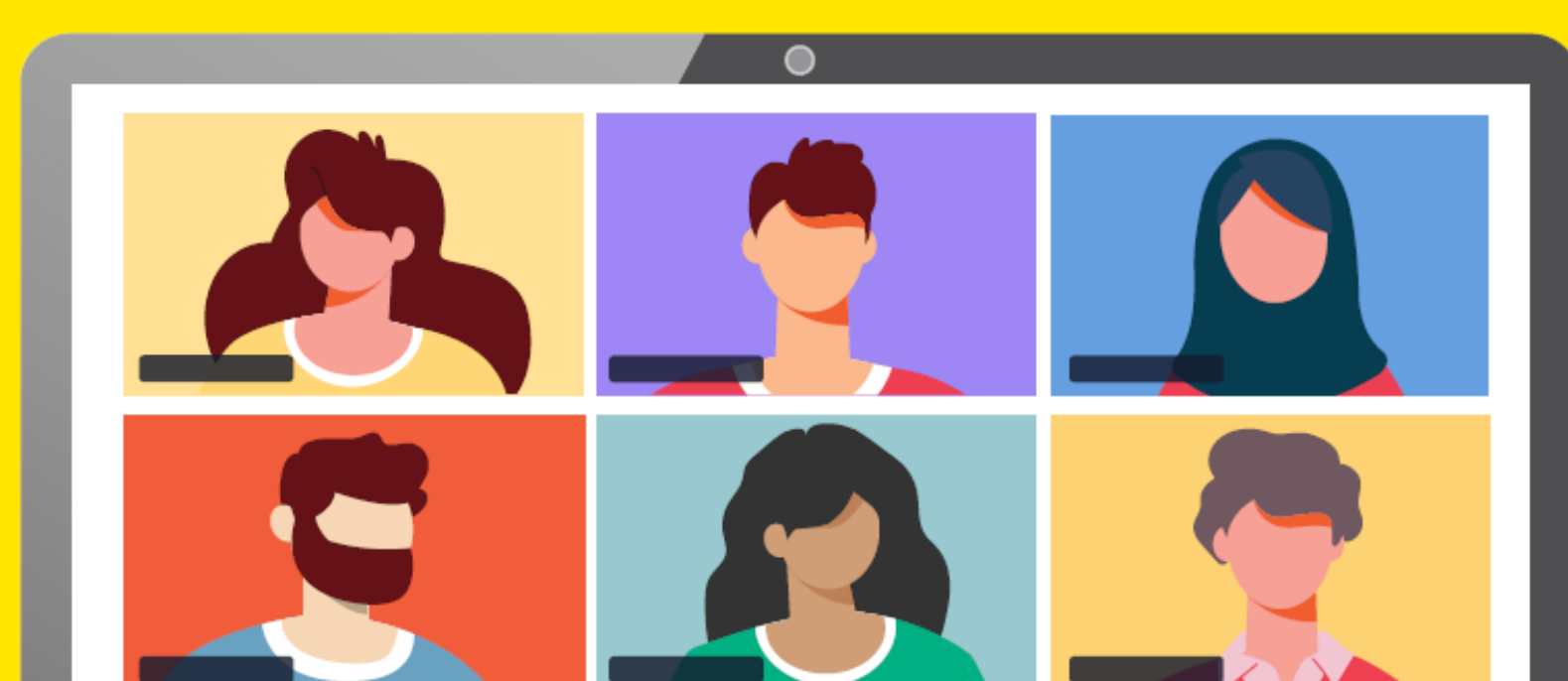
Scan this QR Code to learn more about Dr. Catherine Deen
Research Interests: Dark Side of Human Behaviour in Organisations, Work-Related Intimate Partner Aggression, Micromanagement, Leadership, Inclusion and Vulnerable Workers



Scan this QR Code to learn more about Professor Sara Charlesworth
Research Interests: Gender (in)equality in Employment, Gender-based Violence, Gender Pay Equity, Working Time Conditions, Employment Regulation, Low-paid Feminised Work, Paid Care Work

Summary

Employees experienced both advantages (gains) and disadvantages (losses) while working from home during the COVID-19 pandemic. Researchers have examined the impacts of working from home on women, and those with caring responsibilities, however little research has examined the impacts on other groups of employees, such as those with a disability, or employed on a casual basis. In this paper we examine who gained and who lost while working from home, based on a survey of over 5,000 Australian public servants.



Method

- To identify who gained and lost during the pandemic, we developed an index.
- Our index is akin to a decision tree, with trunks (elements) and branches (factors).
- Results can be read at various levels: branch, element, and tree.

Findings

- We assessed who gained and who lost in the areas of operational aspects (how work is undertaken), performance management, and beliefs & values (such as resistance to working from home).
- We found:
 - Overall, participants gained while working from home. More than half the gains were attributable to performance management (increased productivity).
 - Women gained less than men due to operational and performance management (being visible, and productive) reasons.
 - Families gained in the categories of operational and performance management.
 - Women and disabled employees gained the most in the beliefs & values category, due to increased support for working from home.

Conclusions

- Hybrid working is here to stay. Therefore, we need to know the impacts on different groups of employees.
- Evaluation is key, and our index uses all available information to show who benefits, and who is disadvantaged while working from home.

Table 3 Model estimation results – net gains

	Operational		Performance Management		Beliefs & Values		Overall	
Female	-0.030	***	-0.073	***	0.030	*	0.073	***
Other	-0.089	*	-0.158	**	0.036		0.211	
Age group	-0.006	**	-0.007	**	0.007	**	0.006	
Indigenous	0.031		0.045		-0.007		0.068	
Health condition	0.009	***	0.012	*	0.013	***	0.023	***
Couple	0.040	***	0.044	**	0.007		0.091	***
Carer	0.038		0.052		-0.067	*	0.023	
With children	0.043	***	0.059	***	0.002		0.103	***
Other	0.056	**	0.050	*	0.017		0.123	**

*** p-value < 0.001, ** p-value < 0.01, * p-value < 0.05.



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WHAT IS “GNH”?

Gross National Happiness (GNH), a concept introduced by Bhutan, has gained immense traction as an alternate development paradigm to GDP towards achieving wholesome global progress.

The concept of GNH was first conceptualised in the 1970s by the Fourth King of Bhutan when he stressed the need to consider “happiness” in addition to the pursuit of Gross National Product.

In the last 50 years in Bhutan, achieving GNH has served as its main developmental philosophy and the policy of happiness has been integrated into national plans and programs through the GNH policy screening tool.



RESEARCH OBJECTIVES & METHODS OF THE STUDY

This research aims to analyse the effectiveness of the GNH policy screening tool in Bhutan to frame, formulate and implement policies by using the Economic Development Policy of Bhutan (2016) as a case study.

Fieldwork was conducted in Bhutan in Dec – Jan 2023. Approx. 25 interviews conducted and survey (ongoing).

GNH POLICY SCREENING TOOL & POLICY PROCESS

Table 1 Bhutan's indicators for measuring gross national happiness using domains, indicators and determinants. Reproduced with permission from [13]

Domains of GNH (9)	GNH indicators in GNH Index (33)	GNH determinants in GNH policy-screening tool (22) ^a
1. Living standard	1. Per capita income 2. Assets 3. Housing	1. Equity 2. Economic security 3. Material well-being 4. Engagement in productive activities
2. Good governance	1. Political participation 2. Services 3. Governance performance 4. Fundamental rights	1. Decision-making opportunity 2. Anticorruption 3. Legal recourse 4. Rights 5. Gender 6. Transparency
3. Education	1. Literacy 2. Schooling 3. Knowledge 4. Value	1. Skills and learning
4. Health	1. SRH 2. Healthy days 3. Disability 4. Mental health	1. Public health
5. Ecology diversity and resilience	1. Wildlife damage 2. Urban issues 3. Responsibility toward environment 4. Ecological issues	1. Water and air pollution 2. Land degradation 3. Biodiversity health
6. Community vitality	1. Donations 2. Safety 3. Community relationship 4. Family	1. Social support 2. Family
7. Time use and balance	1. Work 2. Sleep	1. Leisure
8. Cultural diversity and resilience	1. Zorig Chusum (artistic skills) 2. Cultural participation 3. Speak native language 4. Driglam Namzha	1. Culture 2. Values
9. Psychological well-being	1. Spirituality 2. Life satisfaction 3. + emotions 4. – emotions	1. Spiritual pursuits 2. Stress

Bhutan's Gross National Happiness Commission: the mechanism and scorecard

Bhutan's Gross National Happiness Commission (GNH Commission), known as the Planning Commission until 2008, is the highest government body mandated to formulate and monitor policies [19]. To carry out assessment of anticipated impacts of any new policy on GNH determinants (Box 2), the GNH Commission forms a 15-member GNH multisectoral committee representing agencies relevant to the policy. Each of the committee members scores the 22 GNH determinants (using the GNH policy-screening tool) as follows: 1 for negative impact, 2 for uncertain, 3 for neutral, and 4 for positive impact. The minimum score for policy approval is 66 points (3 points × 22 determinants). Policies scoring fewer than 66 points require changes if they are to be considered further; otherwise, they are rejected [13]. Final approval of any policy depends on acceptance by the Council of Cabinet Ministers. Figure 1 shows the implementation process of GNH policy-screening tool. Since 2010, Bhutan uses the GNH policy-screening tool for all policies except for 'national exigencies' (urgent needs as in case of national emergency or natural calamities) [20].

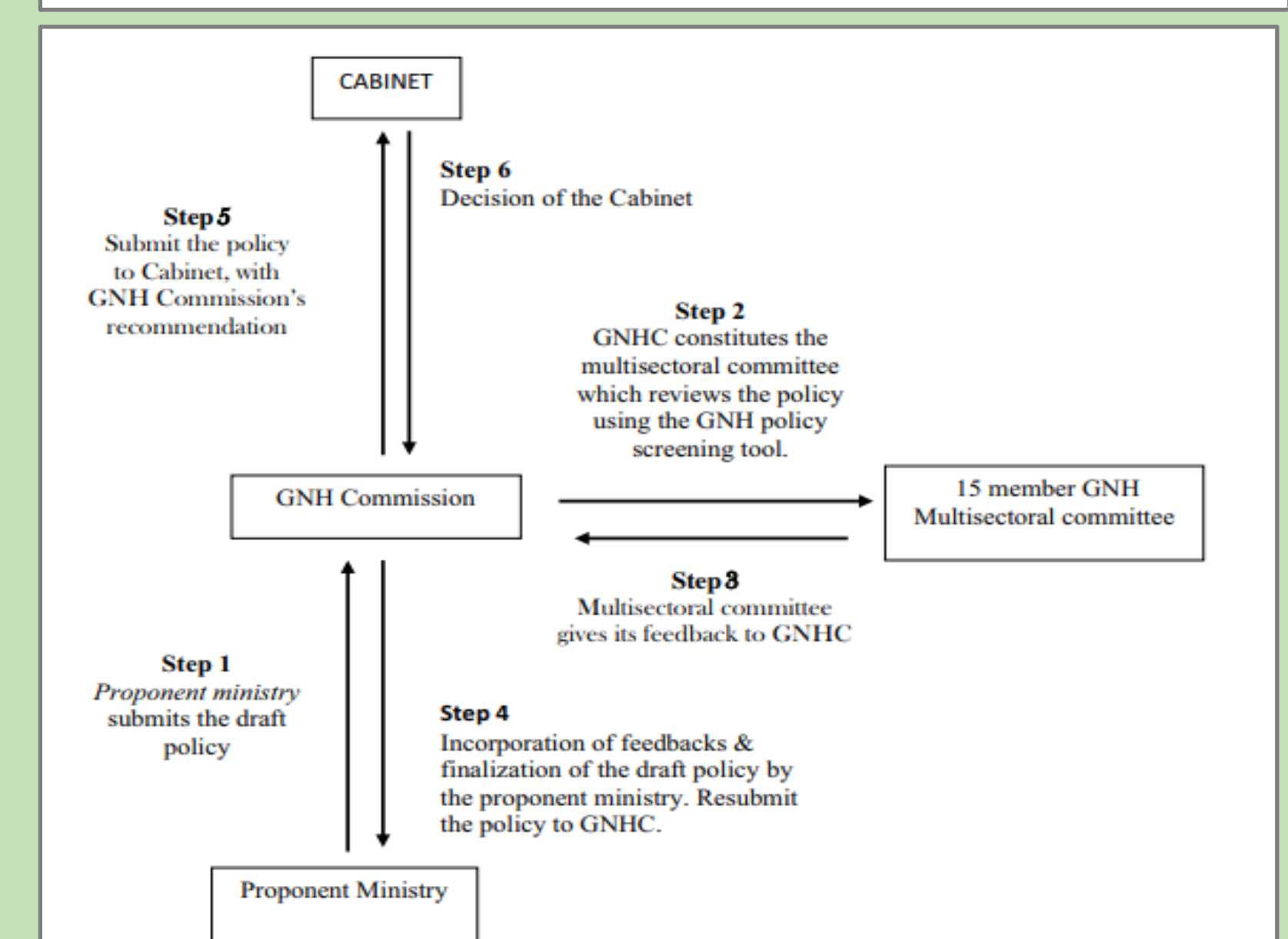


Fig. 1 Protocol for GNH policy formulation and implementation of GNH policy-screening tool (Adapted from protocol for policy formulation, dated March 15, 2015 [20])

Source: Sithey, G., Li, M. & Thow, A.M. Strengthening non-communicable disease policy with lessons from Bhutan: linking gross national happiness and health policy action. *J Public Health Pol* 39, 327–342 (2018). <https://doi.org/10.1057/s41271-018-0135-y>

PRELIMINARY ANALYSIS & RESEARCH IMPLICATIONS

For Bhutan:

- Policy → Programs/Activities → Budget
- Identifying issues and challenges in the policy making and implementation

For ACT/Australia/Others:

- Integrating the well-being policy making process into well-being budgeting systems.

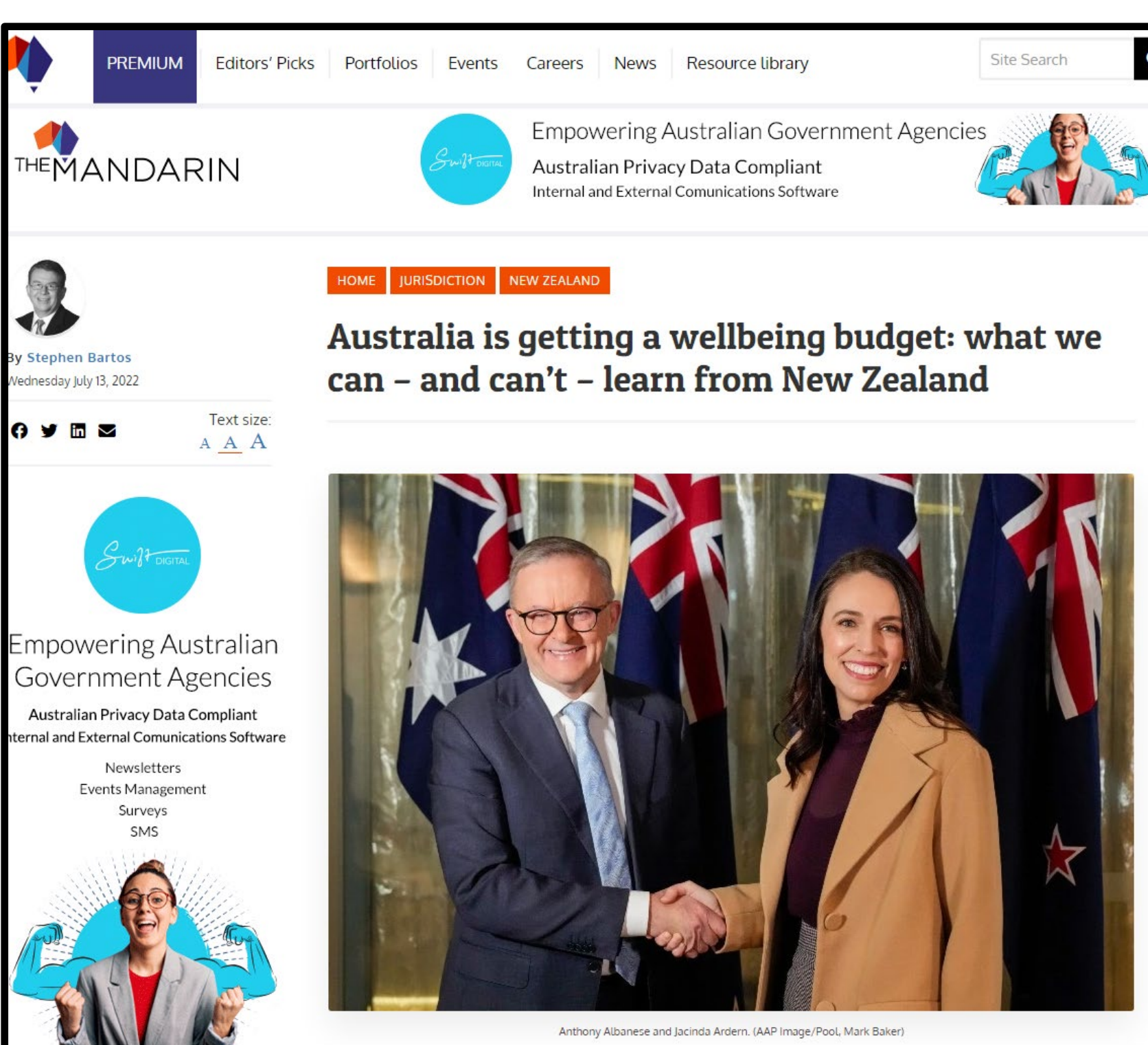
A focus on Canberra's wellbeing

We are the first jurisdiction in Australia to embed a Wellbeing Framework in our Budget process - and one of the first in the world, in the ACT, our focus on wellbeing as a way of thinking about how we are doing, and as a way of informing our decision-making and investments, strengthens our city and our community.

Our Wellbeing Framework recognises that:

- > a strong economy is important to providing jobs that support our standards of living and provide daily fulfilment
- > opportunities in life will be diminished without the benefits of good health, suitable housing, and a good educational foundation
- > social connection, being included, having a sense of belonging and being safe, are fundamental to being able to lead our best lives
- > our environment sustains all life and supports our wellbeing
- > the broader health of our society relies on strong and trusted institutions, and our ability to participate and have our voices heard

The Wellbeing Framework is helping us to measure our progress and assisting the government to make better decisions on which investments and programs are going to best contribute to our quality of life, make Canberra a more inclusive city and ensure we are prepared for new challenges and can grasp the opportunities that come our way.



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Who we are

- Adaptive leadership takes leadership to the next level to confront the challenges and opportunities in our more volatile, uncertain, complex and ambiguous world
- AAL@UNSW is an exciting venture between AGSM and UNSW Canberra that builds off our proven experience to curate adaptive leadership to suit your demands
- AAL@UNSW is THE one-stop shop for adaptive leadership to meet the needs of private, public and civil society in the Indo-Pacific

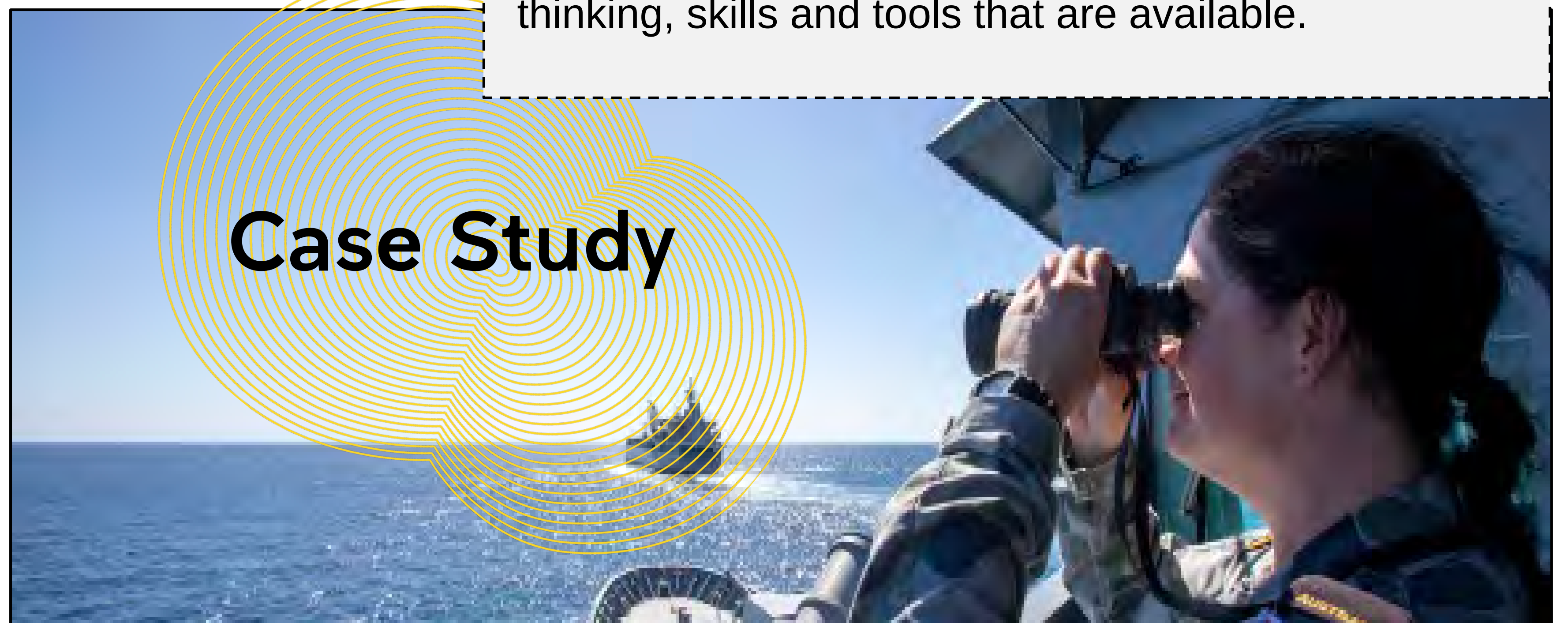
ADAPTIVE LEADERSHIP FOR DEFENCE

The Australian Defence Department as part of their strategic update identified, as a matter of necessity, a need to build adaptive leadership capability and capacity to learn and excel in making risk-based decisions in ambiguous environments. A five level Adaptive Leadership Program has been designed and developed by UNSW to engage with the practices of adaptive leadership across the various leadership levels of military and non-military settings to understand and embed adaptive leadership thinking, skills and tools that are available.

"Adaptive Leadership is the practice of mobilizing people to tackle tough challenges and thrive"

Ron Heifetz et al, 2009

Case Study

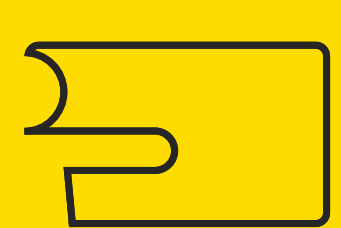


Our commitment to you

- We will work with you to tailor our knowledges, skills and services. We build off the wisdom of long-standing adaptive leadership practitioners alongside newly emerging adaptive leadership innovators. Our faculty, staff and coaches bring deep expertise and experience in adaptive leadership and scholarship

What makes us unique in the world

- We provide comprehensive wraparound services. Our competitive advantage is our research underpinnings and our focus on assessing impact. The regional focus of AAL@UNSW allows us to evidence and live the strengths of diversity and inclusion
- We bring the best of local and international collaboration. AAL@UNSW proudly partners with the founders and members of the Australian Adaptive Leadership Institute (AALI), Adaptive Leadership Australia (ALA), the Kansas Leadership Center (KLC) and with the Harvard founders and facilitators of adaptive leadership



Some of our faculty (L to R):

Farayi Chipungu, Shibaab Rahman, Maxime Fern, Catherine Althaus, Max Rixe, Saul Brown, Rosamund Christie, Michael Johnstone

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The Australian Policy Handbook:

A Practical Guide to the Policymaking Process (7th edition)

Catherine Althaus, Sarah Ball, Peter Bridgman, Glyn Davis,
David Threlfall

Summary

This longstanding textbook is a recognised part of the Australian policymaking landscape. Having sold over 30,000 copies it has become a mainstay for professionals seeking to understand and navigate policy processes. Endorsements from the Honourable Quentin Bryce, AD CVO, Dr Martin Parkinson AC PSM, Helen Williams, AC, and Professor Emeritus Richard Mulgan frame the text as a perfect ‘blending [of] academic literature and practitioner experience’...

“The Australian Policy Handbook remains the essential guide for students and practitioners of policymaking in Australia”

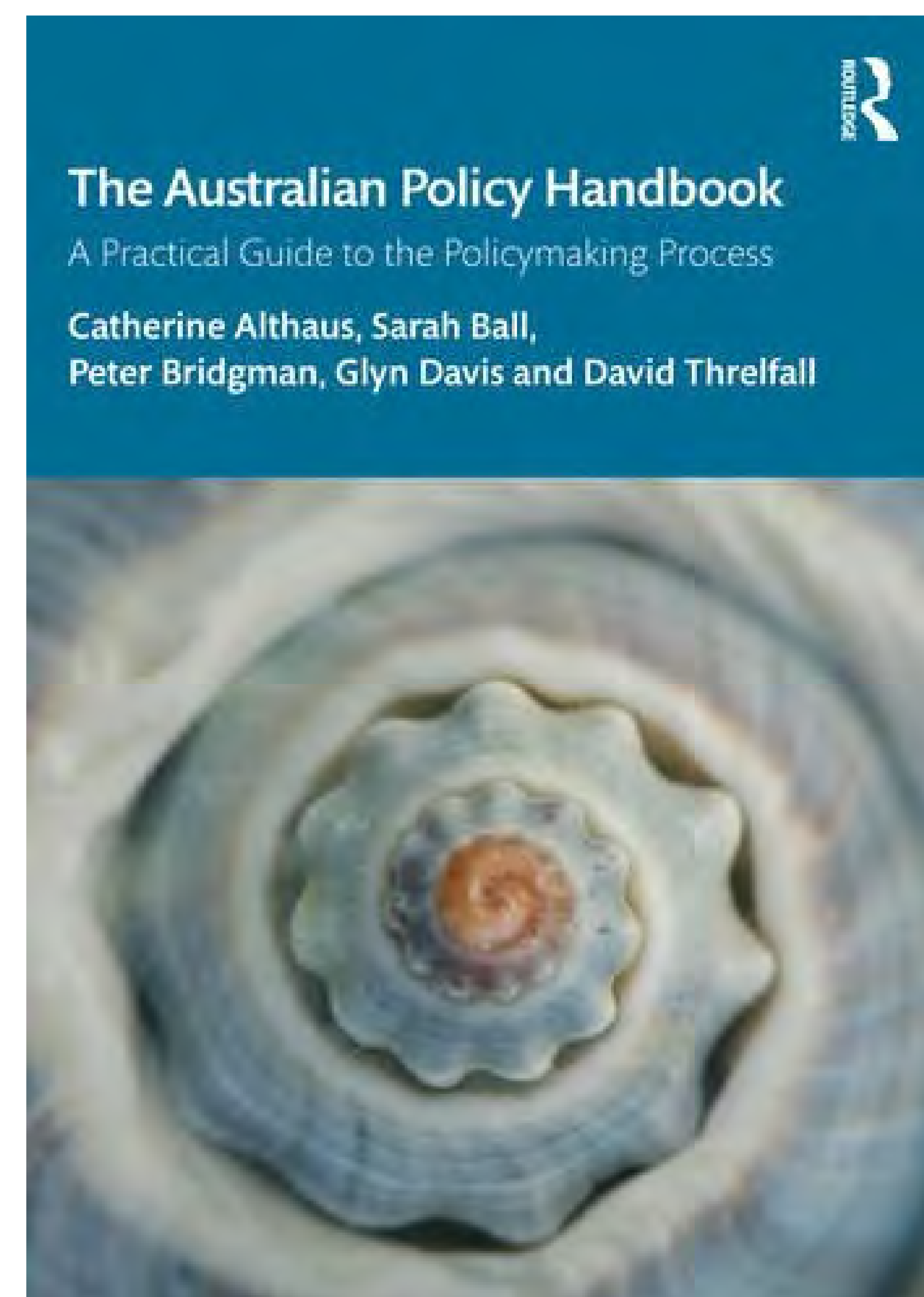
The seventh edition of this classic handbook on the policy process is fully updated, featuring new material on policy making amid local and global disruption, the contestable nature of modern policy advice, commissioning and contracting, public engagement and policy success and failure.



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The Australian Policy Handbook: A Practical Guide to the Policymaking



The Australian Policy Handbook shows how public policy permeates every aspect of our lives. It is the stuff of government, justifying taxes, driving legislation and shaping our social services. Public policy gives us roads, railways and airports, emergency services, justice, education and health services, defence, industry development and natural resource management. While politicians make the decisions, public servants provide analysis and support for those choices.

This updated edition includes new visuals and introduces a series of case studies for the first time. These cases—covering family violence, behavioural economics, justice reinvestment, child protection and more—illustrate the personal and professional challenges of policymaking practice.

Drawing on their extensive practical and academic experience, the authors outline the processes used in making public policy. They systematically explain the relationships between political decision makers, public service advisers, community participants and those charged with implementation.