



Australian Telecommunications Sector Resilience Profile

Keeping Australia connected in an uncertain world

This landmark initiative unveils Australia's first telecommunications sector resilience profile. It sets a benchmark by measuring current sector maturity, provides an evidence base for future policies and decisions, and articulates a collective vision for a fully optimised resilient telecommunications sector.

This Profile is pioneering because it:

- recognises risk as a component of resilience
- takes a holistic all-hazards approach
- adopts a sector-wide perspective; and
- introduces the **Sector Resilience Maturity Model**, a new analytical framework for assessing sector resilience at the national level.

Telecommunications connectivity underpins nearly every aspect of our lives, from personal communications to global commerce, healthcare, and national security. It connects communities, empowers businesses, and drives innovation.

Despite its national importance, until now, the resilience of the Australian telecommunications sector has not been profiled at the sector-level. Assessing resilience has been hampered by different approaches by individual enterprises and levels of government, as well as a lack of a shared understanding of resilience.

To fill this gap, ANU Tech Policy Design Centre (TPDC) was commissioned by the Department of Infrastructure, Transport, Regional Development, Communication and the Arts (DITRDCA) to build this profile.

Over the course of this project, TPDC developed a number of new tools, while fostering and modelling collaboration among diverse stakeholders. The outcomes of this project demonstrate that coordinated action is both feasible and beneficial when building sector resilience.

The insights, actions, and principles in this profile are not the final word, but rather lay the foundation for an ongoing, vital dialogue between government, industry, and communities in a critical sector.

26
experts

Risk and Resilience Expert Panel members - practitioners in engineering, network architecture, climate change research, government, enterprise, and strategic policy.

204
stakeholders

From across the telecommunications sector representing all states, territories, the Australian Government and representatives from other dependent and interdependent sectors.

Key Findings

This Profile and the tools TPDC developed to build it, offer a common language and a shared vision. It serves as an invitation and roadmap to improve the resilience of the telecommunications sector - on which all Australians rely every day.

1

Resilience is an emergent concept. No pre-existing fit-for-purpose methodologies existed to profile resilience at the sector-level.

2

To build this Profile, TPDC developed a conceptual framework for defining and assessing sector resilience: **the Sector Resilience Maturity Model.**

3

The Sector Resilience Maturity Model outlines the **principles, capabilities and resources** needed to mature sector resilience.

It articulates a **shared vision** of sector resilience and it provides a **method to assess** sector resilience maturity.

5

Assessed against the Sector Resilience Maturity Model, **the Australian telecommunications sector is at the 'Developing (2)' level of resilience maturity.**

This level indicates that basic resilience measures are in place, including initial efforts to coordinate sector-wide.

4

While the Sector Resilience Maturity Model was developed to profile the telecommunications sector, it **could be used to assess resilience maturity of any critical sector.**

The Sector Resilience Maturity Model and the resulting assessment were developed by TPDC and **endorsed by the project's 26-member Expert panel.**

The model and assessment were informed by evidence gathered from **February 2023 to May 2024**, with the participation of **204 stakeholders.**

6

Contributing to the overall telecommunications sector resilience maturity score are assessments of the sector's maturity against resilience principles, capabilities and resourcing.

Principles: the sector is at the developing (2) level. Individual organisations may be guided by social, economic, and environmental resilience principles, but these efforts are fragmented and not cohesively aligned across the sector.

Capabilities: the sector is at the developing (2) level. The sector is more mature when it comes to asset maintenance and infrastructure hardening, and significantly less mature in relation to other resilience capabilities, such as those relating to data, standardisation, cross-sector engagement, and consequence management.

Resourcing: the sector is at the developing (2) level. Some resources, such as physical assets and technological solutions, are dedicated to resilience, but significant gaps remain.

8

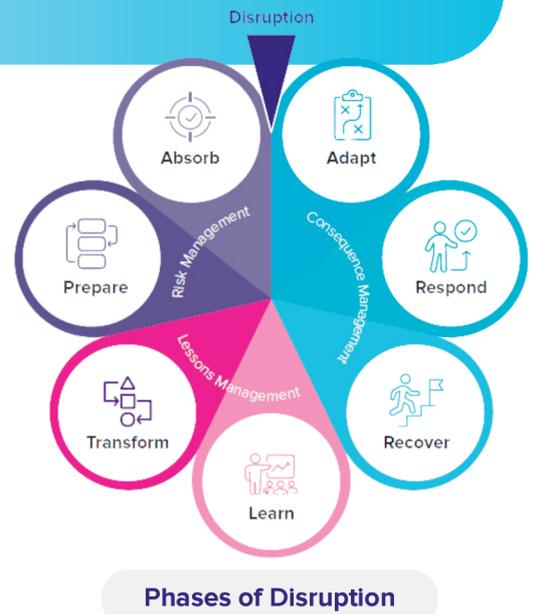
This Profile captures a **point in time assessment** and a benchmark of the current maturity of sector resilience. It should be **revisited regularly** to measure progress.

9

Resilience in the Australian telecommunications sector will be significantly enhanced by the **operationalisation of the shared vision** articulated in this Profile. This document should not be treated as a static artefact, but rather as a **roadmap for future cooperation.**

Profile Overview

To build this Profile, TPDC developed a conceptual framework for defining and assessing sector resilience, culminating in the Sector Resilience Maturity Model.



Steps	Conclusion
<p>Defining Resilience</p> <p>Clarifying sector-wide resilience and its relationship to risk</p>	<p>Building resilience in the Australian telecommunications sector requires maturing capacities across all phases of disruption management: prepare, absorb, adapt, respond, recover, learn and transform.</p>
<p>Defining the sector</p> <p>Who are the stakeholders involved?</p>	<p>The Australian telecommunications sector is a complex socio-technical system of entities, stakeholders, and assets.</p>
<p>Understanding the Risk Horizon</p> <p>Risk management: Developing situational awareness of the risk horizon and preparing for unexpected disruptions</p>	<p>A diverse array of threats, threat sources and vulnerabilities contribute to the risk horizon for the telecommunications sector.</p> <p>Resilience requires sector-wide monitoring and preparation for inevitable disruptions (situational awareness), ideally in near real-time.</p>
<p>Understanding how the sector adapts, responds & recovers</p> <p>Consequence management: Building capabilities to ensure services continue when disruptions occur</p>	<p>There is an immediate need for greater information-sharing and coordination between public and private sector stakeholders.</p> <p>A greater focus by government on resilience policy & regulatory settings would enhance sector consequence management.</p>
<p>Assessing the sector's resilience and mechanisms for maturing it</p> <p>Lessons management: Assessing and maturing sector resilience by learning and transforming</p>	<p>Assessed against the Sector Resilience Maturity Model, the Australian telecommunications sector is currently at a 'developing' level of resilience maturity (level 2 of 5).</p> <p>Maturing sector resilience will require implementing a shared vision through cooperation and clearly defined shared responsibility.</p>

New Tools

- Threat Taxonomy
- Threat Source Categories
- Vulnerability Categories

New Tool

Consequence Management Analysis Tool

New Tool

Sector Resilience Maturity Model

Sector Resilience Maturity Assessment

Resilience is a hot topic, but as a methodology it's comparatively new. Our research shows that Australia is starting from a good foundation and, importantly, there is a strong appetite from all stakeholders - including from government and industry - to do better.

Maturity is assessed on a scale of 1 to 5



2. Developing: Basic resilience measures are established, including initial sectoral coordination efforts.



4. Managed: Resilience practices are systematically integrated and applied consistently across the sector.



1. Initial: Resilience practices are unstructured and reactive across the sector.



3. Defined: Resilience processes are well-defined and documented across the sector.



5. Optimised: Resilience is continuously improved through proactive learning, innovation, and transformation.

Summary of 2024 Telecommunications Sector Resilience Maturity Assessment

Principles	Capabilities	Score
1. Adaptive transforming	1.1 1.2 1.3 1.4	3
2. Environmental responsibility	2.1 2.2 2.3	3
3. Resilient by design	3.1 3.2 3.3 3.4 3.5	2
4. Social responsibility	4.1 4.2 4.3 4.4 4.5	2
5. Shared responsibility	5.1 5.2 5.3 5.4 5.5 5.6	2
6. Continuously learning & embedding lessons	6.1 6.2 6.3 6.4 6.5 6.6	2
7. Economic responsibility	7.1 7.2 7.3 7.4 7.5 7.6 7.7	2

Overall Developing

2



Australian National University



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