



The Foundation for Resilient Asset Management

Transforming brittle systems into antifragile infrastructure

The \$114 Billion Problem

Traditional asset management has failed Australian councils, creating brittle systems that break under pressure:

\$1.3 billion in "found assets"

Queensland councils discovered assets they didn't know they owned

Source: Queensland Audit Office, 2023

60-80% CMMS implementation failure rate

Most systems fail to deliver promised efficiency

Source: Leckington, 2011; Shankar et al., 2023

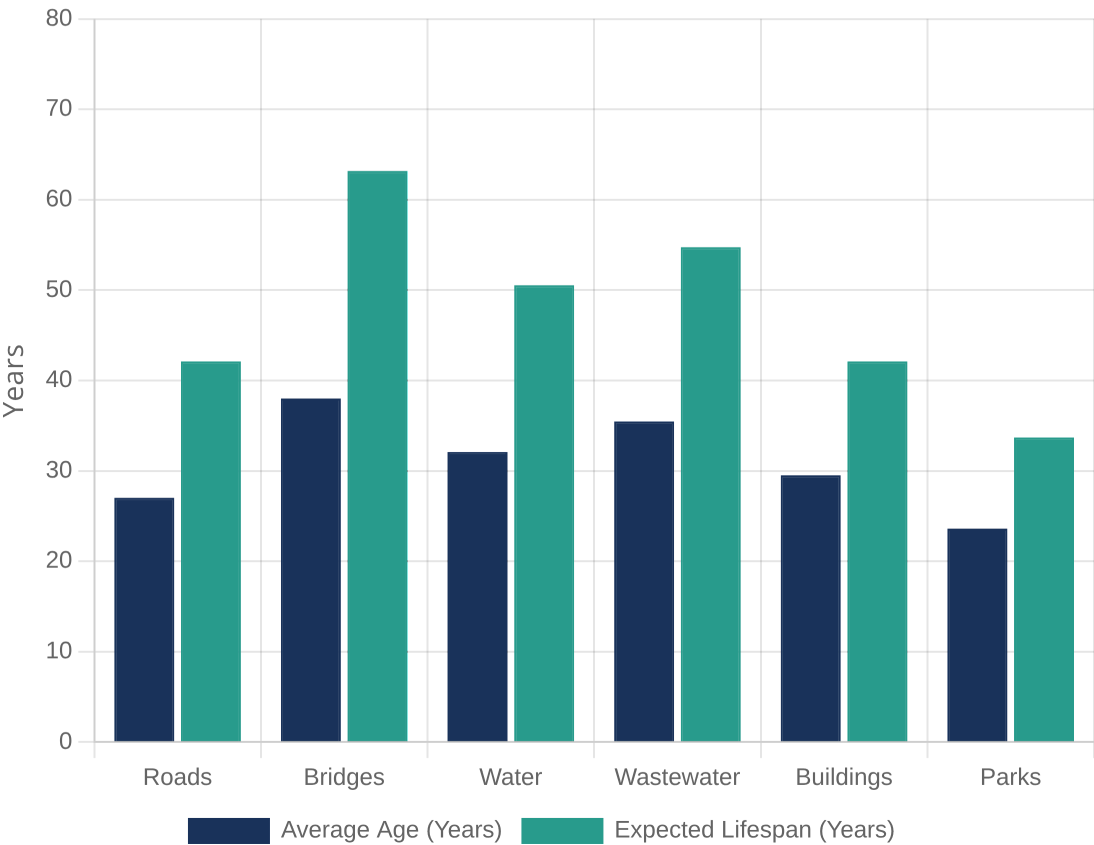
Only 9.6% of councils meet standards

Most fall short of international asset management standards

Source: Queensland Audit Office, 2023

Infrastructure Age vs. Expected Lifespan

Australian Local Government Infrastructure



Creating a New Category: Resilient Asset Management

Moving beyond traditional asset management to create systems that **get stronger under stress**



Traditional Asset Management

- ✗ Efficiency-focused
- ✗ Location-based hierarchies
- ✗ Time-based maintenance
- ✗ Rigid schedules
- ✗ Optimized for normal conditions

Result: Brittle systems that break under pressure



Resilient Asset Management

- ✓ Resilience-focused
- ✓ Function-based hierarchies
- ✓ Risk-based maintenance
- ✓ Adaptive planning
- ✓ Built-in operational margin

Result: Antifragile systems that **get stronger under stress**

Academic foundation: Resilience theory (Carlson et al., 2012), Antifragility (Taleb, 2012), Dynamic capabilities (Teece, 2007)



The Aegrid Rules: Academic Foundation

Four principles that transform asset management from reactive maintenance to proactive resilience

1 Every Asset Has a Purpose

Structure assets around what they do (their service purpose), not just where they sit.

📖 *Kaplan & Norton (2004) Strategy Maps: Converting intangible assets into tangible outcomes*

📖 *Gay & Sinha (2013) Resilience of civil infrastructure systems*

2 Risk Sets the Rhythm

Let consequence × likelihood determine cadence, scope, and budget allocation.

📖 *Khan & Haddara (2003) Risk-based maintenance: a quantitative approach*

📖 *Leoni et al. (2021) Risk-based maintenance: impact of consequence modeling*

3 Respond to the Real World

Plans are guides, not gospel. When conditions, signals, or context change — adapt resources and priorities quickly.

📖 *Teece (2007) Dynamic capabilities: enterprise performance*

📖 *Roux et al. (2010) Framework for participative reflection*

4 Operate with Margin

Build practical slack so today's actions create tomorrow's resilience.

📖 *Taleb (2012) Antifragile: Things That Gain from Disorder*

📖 *Jones (2014) Engineering antifragile systems*

These rules are validated by **36 academic sources** across resilience theory, systems engineering, and risk management.



From Theory to Practice: Implementation

Phase 1: Critical Control Mapping

Identify and map critical service controls to assets

Phase 2: Risk-Based Prioritization

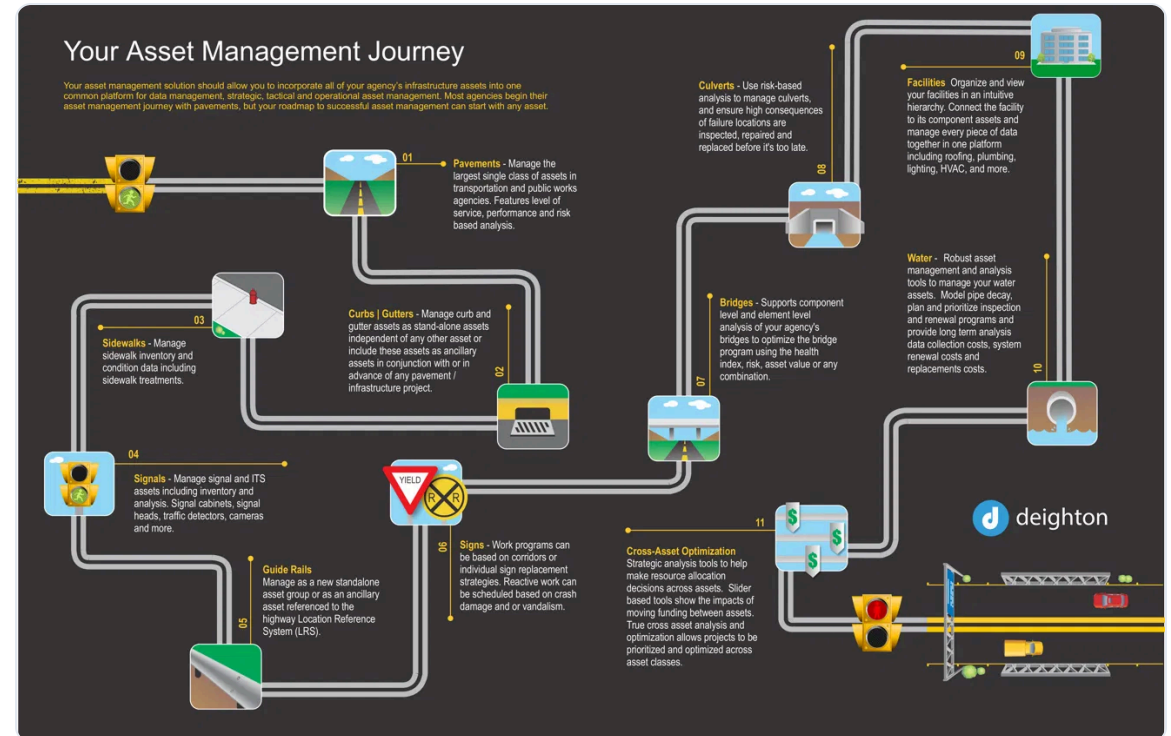
Establish maintenance rhythms based on risk calculations

Phase 3: Signal Integration

Connect real-world signals to enable adaptive planning

Phase 4: Resilience Margin Building

Implement operational buffers across resources



Aegrid transforms traditional asset management into resilient systems

The Founder's Journey



"I built Aegrid because I was frustrated with traditional CMMS systems that promised efficiency but delivered brittleness."

Unique perspective combining:

- ✓ Service design expertise
- ✓ Reliability Centered Maintenance background
- ✓ Systems thinking approach

- **Early Career: Electrician in RCM**
Hands-on experience with maintenance operations in mining (1993-2003)
- **Mid-Career: Project Management**
Royal Australian Mint (2005-2009), Defence Estate (2009-2012)
- **Education: Law Degree**
Developed analytical thinking and regulatory understanding (2008-2012)
- **Expertise: Service Design**
15 years specializing in service design for complex systems
- **Today: Aegrid Founder**
Combining technical expertise with human-centered design to transform asset management

Proven Results Framework

Performance Improvements with Aegrid

Based on case study results (indexed to 100)



30% Reduction in Reactive Maintenance

Function-based organization and risk-driven maintenance scheduling reduces emergency repairs

50% Improvement in Regulatory Compliance

Critical control visibility ensures regulatory requirements are never buried in the backlog

20% Increase in Service Reliability

Built-in operational margin creates resilience against disruptions and seasonal spikes



Pilot Partnership Opportunity

Your Pilot Journey

- 1 Discovery Workshop**
Identify critical control assets and resilience gaps
- 2 Pilot Implementation**
Deploy Aegrid for a specific asset class
- 3 Measure Results**
Document improvements in resilience metrics
- 4 Scale Partnership**
Expand to additional asset classes with proven ROI

Partnership Benefits

-  **Innovation Leadership**
Position your council as a pioneer in resilient infrastructure
-  **Risk Reduction**
Protect critical assets and improve compliance
-  **Operational Efficiency**
30% reduction in reactive maintenance
-  **Co-Development**
Shape the future of Aegrid with direct input

Limited opportunity: Seeking 3 visionary council partners for 2025 pilot program



Build the Future of Asset Management

Partner with Aegrid to transform brittle infrastructure into resilient systems

Join the 3 visionary councils pioneering Resilient Asset Management

Be part of the solution to Australia's \$114 billion infrastructure challenge

Schedule Your Discovery Workshop

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