Infrastructure for Resilience

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Content

• Taking stock of the last two years and looking ahead

• From infrastructure resilience to *infrastructure for resilience*

• Focus on Asset Management
Taking stock of the last two years...

2020
Flooding in Greater Sydney and Central/North NSW

2021
Flooding in Greater Sydney and Mid-North Coast

2022
Record flooding across NSW

2019/2020
Black Summer Bushfires

2020
COVID emerges: lockdowns and economic shocks

2021
Delta and Omicron emerge: severe health and social impacts
What does the future have in store?

Increased impacts of more frequent and more severe natural disasters, chronic stresses, and human-induced threats

Unequal distribution of impacts most affecting those with least adaptive capacity
From infrastructure resilience to *infrastructure for resilience*

Taking a **systems-approach** to shift focus from the resilience of the asset, to the contribution of assets to the resilience of the system – or *infrastructure for resilience*. 
Infrastructure for Resilience – an example

- Raising community awareness of flood risk and evacuation protocols
- Removing future populations from risk through land use planning
- Better flood forecasting
- Improved response, evacuation and recovery planning
- Operational improvements to utilities and critical infrastructure services
- Infrastructure upgrades on evacuation roads
- Raising of Warragamba Dam wall

Legend:
- Asset Level
- Network and Place Level
- Community Level
- Governance and Coordination Level
Focus on Asset Management

- NSW’s existing asset stock is large and growing
- Asset maintenance and maintenance can be overlooked when competing for funding
- Understanding interdependencies between different asset classes and operators
- Asset renewal must incorporate adaptation and “building back better”
- Maintenance and planning enhances resilience
- Embedding digitisation and technology
Scale of the portfolio

$410.8b Current value

+$110.4b over the next 4 years

$70.2 billion for public transport and roads

$10.4 billion for hospitals and health facilities

$8.4 billion for schools and skills infrastructure
# The NSW AM Policy – core requirements

## Core Requirement 1
**Asset Management Principles** must be adopted by agencies and used to determine how assets under the agency’s control are managed.

<table>
<thead>
<tr>
<th>Principle 1</th>
<th>Principle 2</th>
<th>Principle 3</th>
<th>Principle 4</th>
<th>Principle 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets exist to provide value by supporting government objectives</td>
<td>Agencies act as stewards of public assets on behalf of the Government</td>
<td>Asset management decisions must have regard to the appropriate balance of cost, risk and performance</td>
<td>Asset management decisions must be integrated with other organisational functions, processes, activities and data</td>
<td>Asset management decisions must be made using a whole-of-lifecycle approach</td>
</tr>
</tbody>
</table>

## Core Requirement 2
**Asset Management Frameworks** must be established and maintained in line with the NSW AM Policy. This includes production of Asset Management Plans, Strategic Asset Management Plans and an Asset Register.

<table>
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<th>Element 3</th>
<th>Element 4</th>
</tr>
</thead>
<tbody>
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<td>Establishing and managing the Asset Management Framework</td>
<td>Lifecycle planning and operation</td>
<td>Integration with other organisational asset policies, functions, processes activities and data</td>
<td>Improving and reporting on performance</td>
</tr>
</tbody>
</table>

## Core Requirement 3
**Policy Compliance and Disclosures** require that Accountable Authorities must annually certify their compliance with core requirements 1 and 2 and periodically assess their asset management maturity.
AM Policy resilience requirements

NSW AM Policy mandates:

“a ‘system-of-systems’ approach across interconnected infrastructure networks to drive an integrated vision of infrastructure provision and management, and create value, reduce costs, manage risks and improve the resilience of assets”

asset management plans must include “an assessment of the resilience and vulnerability of the agency’s assets to the impacts of climate change, natural disasters, and human-related threats and proposed mitigations/ interventions”
Outcomes being sought

Growth in new infrastructure

Outcome 1
Increase NSW public sector asset management capability

Asset use and resilience

Outcome 2
Increase economic and social value of assets to meet future needs of communities

Financial sustainability

Outcome 3
Decrease lifecycle costs and increase return from assets

Investment in existing assets

Outcome 4
Improve data and evidence supporting maintenance requirements
Thank you for listening