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# Building and sustaining a Resilient Transport system

Helping Create Resilient Communities



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# Defining Resilience

Resilience impacts us all

Individuals

Interest Groups

Communities

Organisations

Local government

Central government

# NZTA's Resilience World

## Pressures and Challenges

**More  
events**

**Aging  
assets**

**More,  
exposed  
assets**

**Higher  
needs**



# NZTA Resilience Position statement

## Initial three-year position

### Our challenge

Increasingly  
frequent and  
severe  
unplanned  
disruptions

### Our focus

Collaborative  
approach with  
an increasing  
understanding  
and responding  
to hazard risk

### Our drive

Proven  
capability &  
capacity to  
manage and  
respond to  
small-major  
events

# NZTA Resilience Framework

## Purpose and Outcomes

- Setting the Transport Agency's strategic approach to resilience
- Prioritising and guiding the Transport Agency's resilience work programme



# NZTA Resilience Framework

## Why it matters



## NZ TRANSPORT AGENCY 2018 RESILIENCE FRAMEWORK

### Transport Resilience for our Communities

Resilience is the transport system's ability to enable communities to withstand and absorb impacts of unplanned disruptive events, perform effectively during disruptions, and respond and recover functionality quickly. It requires minimising and managing the likelihood and consequences of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disruptive events, caused by natural or manmade hazards.<sup>1</sup>

Resilience is about being prepared, and preserving and quickly restoring access to the transport network for our customers, including Lifelines Utilities, in the face of unplanned events.<sup>2</sup>

#### PURPOSE OF THE FRAMEWORK:

The purpose of the framework is:

- › to provide a clear expression of the Transport Agency's strategic approach to resilience, and
- › to prioritise, guide and coordinate the Transport Agency's ongoing activity and strategic work programme to improve resilience

#### WHY IT MATTERS

A resilient transport system (which proactively addresses current and emergent risks) that is available for customers to use is fundamental to economic and social resilience of communities. Disruptions undermine economic growth and social well-being of communities and businesses. Resilience is critical for the availability of the national and regional transport system that carries freight and supports tourism, and that links regions to the wider transport system and markets. Poor resilience can impede critical and emergency services providing response and recovery support after significant events.

<sup>1</sup> Derived from and aligned with resilience definitions from the Sendai Framework for Disaster Risk Reduction, draft National Disaster Resilience Strategy (CDEM, Nov 2017) and NZTA's Four Year Excellence Horizon

<sup>2</sup> Simplified definition from NZTA's Resilience Business Improvement Project 2016.

### EMERGING DRIVERS

#### Policy drivers

- › Increased recognition of the need for an integrated all-of-government approach to address emerging climate change issues
- › Enhancing the government's responsiveness to emergencies (the CDEM TAG review)
- › Increased investment in regional economic development - \$1B annual investment likely to include transport resilience projects
- › Developing focus on modal-neutral transport system strategy - widening policy and investment to cover rail and ports/shipping

#### Operational drivers

- › More frequent significant and recurring natural hazard events is increasing risk of disruptions
- › A larger and more complex network exposes more assets to hazards, with more in increasingly difficult terrain
- › Increasing dependence on electronic systems
- › Ageing, degrading assets become less robust with time and have been built to older design requirements
- › Public expectations of levels of service provided are rising, as is the risk exposure they will tolerate

### KEY CHALLENGES

The following challenges impact on the Transport Agency's and sector's efforts to improve system resilience:

- › Limited understanding, evidence and metrics of how disruption in different locations impacts on customers and communities well-beings and their tolerance and acceptance of risk
- › Poor understanding of interdependencies within and between systems, networks and sectors.
- › Poor understanding of the (changing) risk, interdependencies and efficacy of interventions to medium and low frequency large sized events on the transport system
- › Assessment frameworks and discount rates serve to undermine investment in low frequency events and effective trade-offs across programme outcomes (e.g. safety vs resilience vs reliability)
- › Inconsistent and non-comprehensive approaches used across the sector to assessing and responding to risk.
- › Poorly co-ordinated approach across government for adapting to emergent issues, especially climate change (e.g. sea level rise).

### STRATEGIC CONTEXT

**Changing environment** – natural hazard events and manmade disruptions are increasing in frequency and intensity reflecting climate change impacts and low frequency events patterns

**Policy environment** – resilience profile and importance is growing in many strategic policy documents e.g. GPS, Agency Sol, and LTV, including expanding recognition of social and economic impact focus

**Partner activity** – Other Government agencies, Lifelines and local authorities are increasingly addressing resilience issues and have initiatives underway, e.g. MoT "Transport Sector Resilience Strategy" and Lifelines "National Vulnerability Assessment"

**Agency role** – Recognised as well-resourced leader with many levers for proactively enhancing system and community resilience, e.g. NLPF investment, GPS implementation, advocacy/ advice, engagement in RMA processes. Other activities include asset management and improvements, organisational and emergency response planning, business case tools, and engagement with partner initiatives.

### NZTA ACCOUNTABILITIES

- › Civil Defence and Emergency Management Act 2002 - as a Lifelines Utility, NZTA is obliged to ensure that we are able to operate to the fullest possible extent in an emergency, provide technical advice and participate in emergency planning
- › Land Transport Management Act 2003 - NZTA is responsible for implementing the GPS, managing the state highway network and investment of the National Land Transport Fund - this includes priority for resilience
- › Crown Entities Act 2004 - NZTA is required to respond to shareholder Ministers via letters of expectation and Statements of Intent; to act in a manner consistent with the spirit of public service, and to collaborate across the public sector.



New Zealand Government

# Framework approaches

## Principles of delivery

**Community  
focused**

**Collaborative**

**Comprehensive**

**Proactive**

Considering  
social and  
community  
impacts

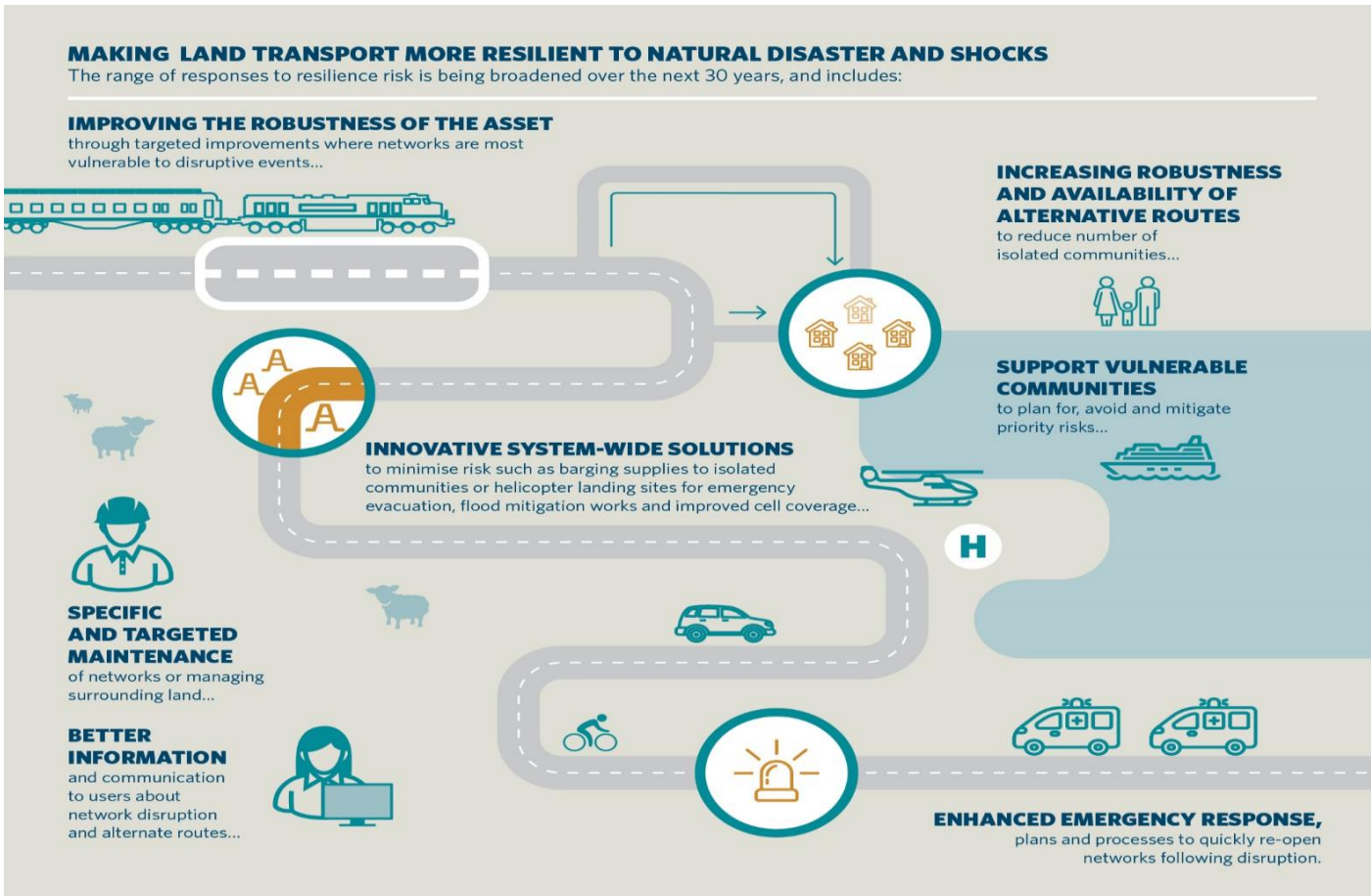
Building  
bridges, not  
barriers... so  
to speak...

Knowing the  
hazards, risks  
and  
opportunities

Active and  
pre-emptive  
across all 4  
'R's'

# Strategic Responses

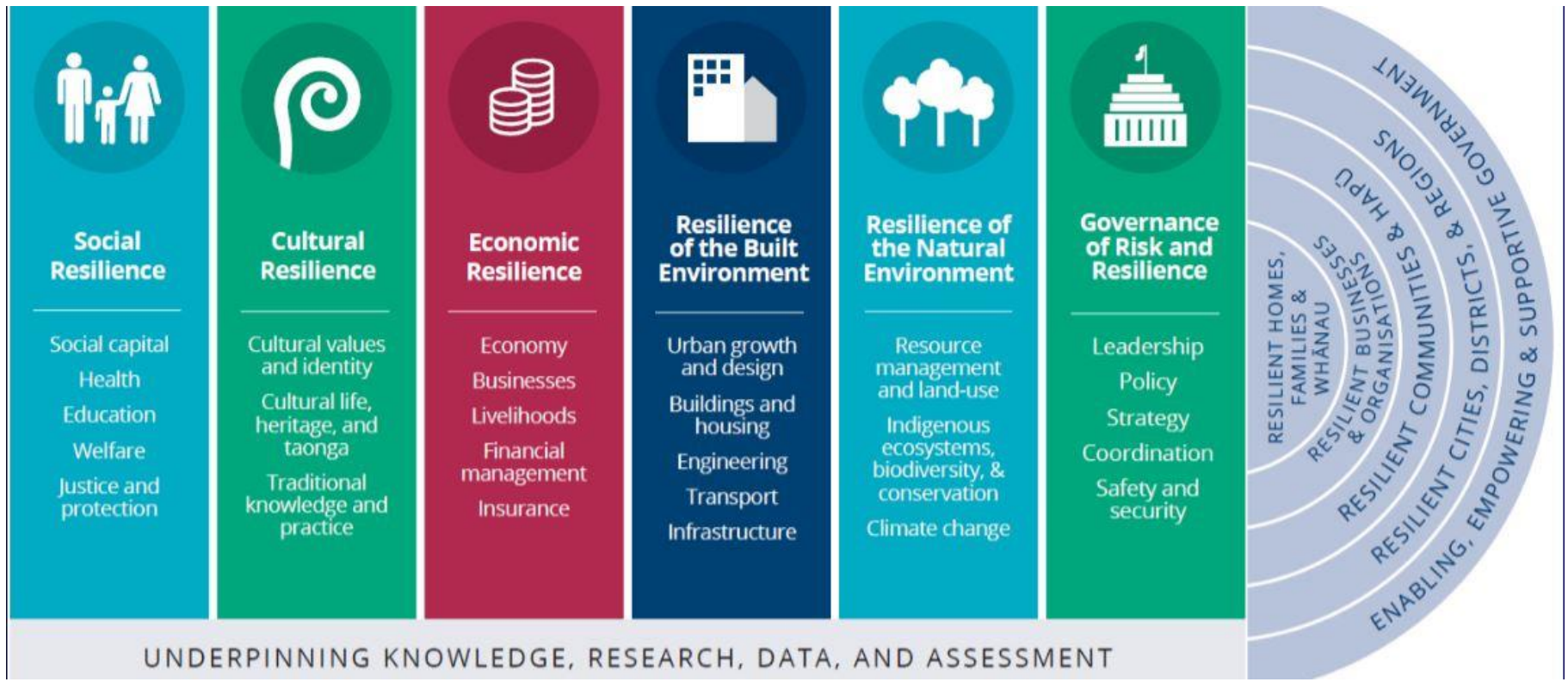
## Broadening the range





# NZTA has a role to support the National Disaster Resilience Strategy

## Model of a Resilient Nation



Department of the Prime Minister and Cabinet - 2018

# Final thought

Martin Ras – UNDP Disaster and Climate Risk Governance

“Natural disasters don’t exist but natural hazards do.”

