

# NZTA Resilience Project

*Keeping our roads open*

# The Resilience Project at a glance

## RESILIENCE KEEPING OUR ROADS OPEN

Resilience is about preserving and quickly restoring access to the network in the face of natural hazards.



Increasing robustness and improving alternate routes

### KEY ASPECTS

Decreasing the recovery time

### WHAT THE TRANSPORT AGENCY ALREADY HAS UNDERWAY?

- » Resilience management and emergency response plans
- » Greater resilience and better alternate routes being built
- » Improved scour protection and erosion control
- » Well advanced seismic strengthening
- » Ongoing maintenance activities, reducing blackspots
- » Avalanche control and rock fall management

### WHAT IS THE RESILIENCE PROJECT DOING?

The Resilience Project has been set up with four core work streams:

- » **Infrastructure Planning work stream**
- » **Emergency Response Plans work stream**
- » **Business Continuity Plans work stream**
- » **External connections**

All of these activities are due for completion this calendar year.

BIGGER RESILIENCE PROGRAMME AND REGULAR BCP AND ERP TESTING

# RESILIENCE

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# What We're Preparing to Deliver

## Tools and Resources

- 1. National Risk Evaluation Assessment**  
*(Outage Assessment Tool)*
- 2. MERIT Tool and SH 4 Pilot**  
*(Economic Impact Assessment Tool)*
- 3. Resilience of Transport Infrastructure Tool**
- 4. Social Impact Assessment Tool**
- 5. Alternate Routes (Interactive Detour Maps)**

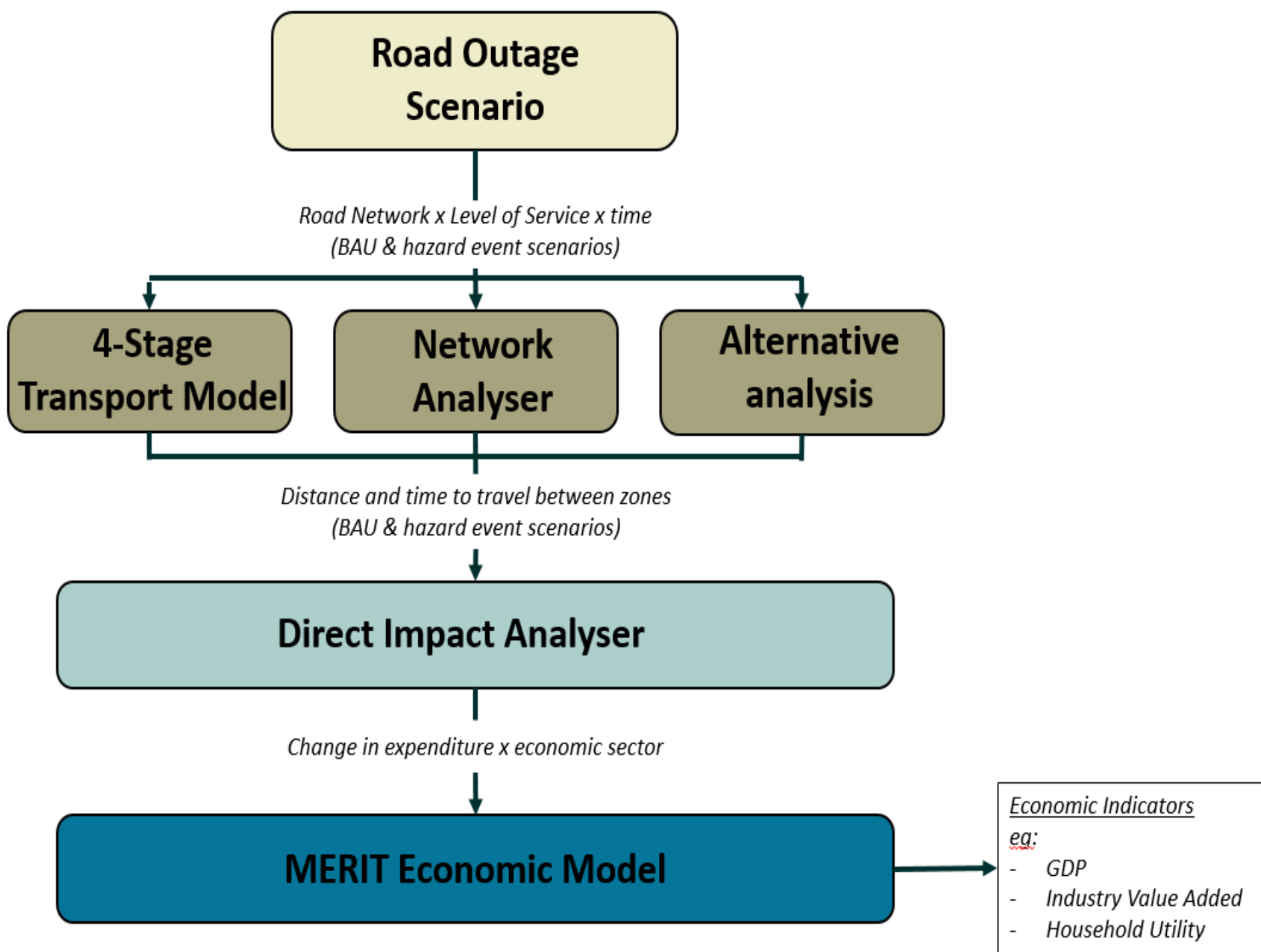


# National Risk Assessment Tool

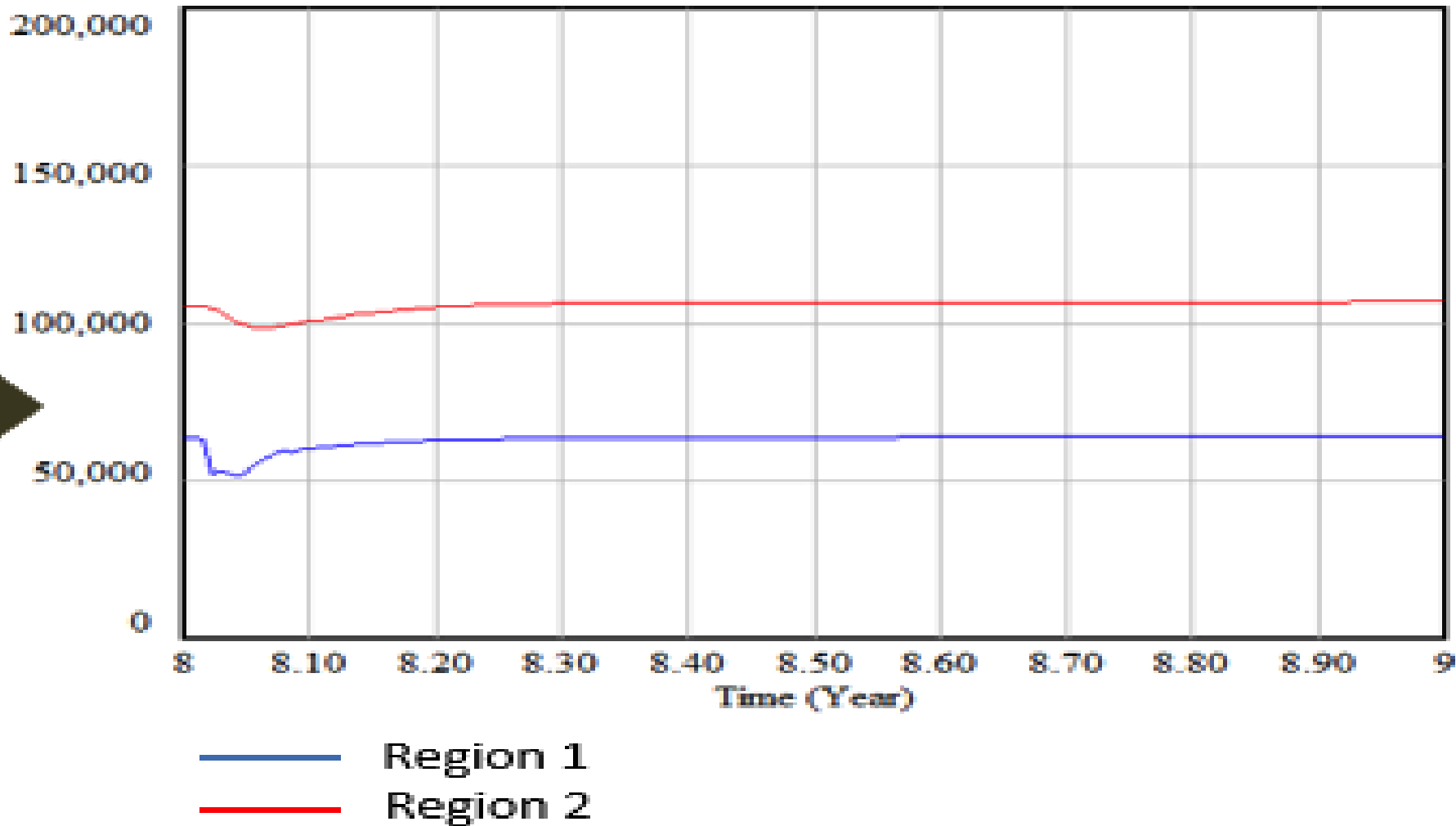
- A high-level national framework for assessing resilience risks from natural events.
- Provides a consistent and accessible approach to assessing resilience across the country
- Supplements the National Resilience Programme Business Case.
- Regional methodology also being developed for more detailed assessment of resilience.

# MERIT Tool and SH4 Pilot

- Economic assessment model computable general equilibrium - regional and national outputs
- Dynamic, multi-regional and multi-sectoral
- Infrastructure outages – used already on water network and port assessments
- Developing for use on transport network
- MoT SH4 Pilot test just completed



## Total value added (\$<sub>2007</sub>m)



- Single year effect for single scenario
- Total GDP loss estimate: \$10.7M

# Resilience of Transport Infrastructure Tool

- **Aim:** *to develop a framework to measure the resilience of the New Zealand transport system.*
- Following initial scoping research an initial framework and practical assessment tool was developed in 2013.
- Next step was to undertake real-scenario testing of the framework with key operational staff.
- This process began in 2015 and has just been completed. We are currently reviewing the results as we consider the wider application of the tool.

# Social Impact Assessment Framework

- Assessing social impact from network disruption
- Requires a different approach than economic assessment
- Identified key social hubs and worked backwards
- **Next:**
  - *Definitions of social resilience;*
  - *Public tolerance of disruption.*
  - *Testing the tool with pilot 'hubs' and our regional offices.*
- **Up and running before end of 2016.**

# Alternate Routes

## Interactive Detour Maps

- Online, interactive detour maps that compare travel times, distance, and other key information live for the user
- This information already exists but only in hardcopy form.



# Engagement with Local Government

## Local Government Authorities, Lifelines etc

- **Local Government:** The Resilience Project supports NZTA's Planning Managers with regular updates and information they can relay to RTCs and others via the various RAGs/TOGs they work with.

In addition to these ongoing engagements we're also keen to stay in dialogue with the RCA Forum as relevant.

- **Lifelines:** liaising directly with national committee members and representatives, sharing information and updates