



NZ TRANSPORT AGENCY
WAKA KOTAHI




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INTERACTIVE SAFETY ASSESSMENT TOOL

Using GIS to target road safety investment

3M Traffic Safety Award Applicants
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Project Overview

- To develop standardised methods for the NZTA Wellington Regional Office to:
 - Identify parts of the State Highway network where road safety improvements are required most; and
 - Prioritise projects put forward to address safety deficiencies.

Identifying the Need



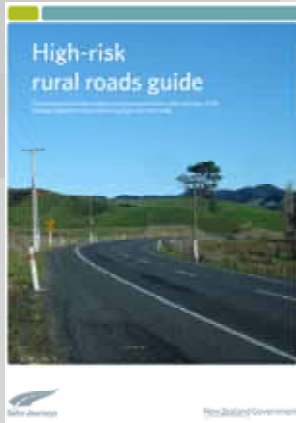
- Inconsistent evaluation of safety projects
- Desire to avoid low benefit safety projects
- Safer Journeys requires the industry to perform better
- 'Connecting New Zealand' requires the industry to demonstrate 'Value for Money'
- Diminishing return on road safety investment

Our Approach



- To explore the potential of existing , studies and guidance as a way of creating value.
 - Crash data;
 - Safety works programmes;
 - Project feasibility reports;
 - Crash reduction studies;
 - KiwiRAP risk mapping and star rating protocols, including:
 - KiwiRAP Analysis Tool

High-risk rural roads guide



- A road is defined as 'high risk' if one or more of the following criteria is met:
 - Current Collective or Personal Risk Rating is High or Medium-High; or
 - Published Collective or Personal Risk Rating is High or Medium-High; or
 - KiwiRAP Star Rating is 1-Star or 2-Stars; or
 - Road Infrastructure Safety Assessment (RISA) is greater than 2.5

Collective Risk



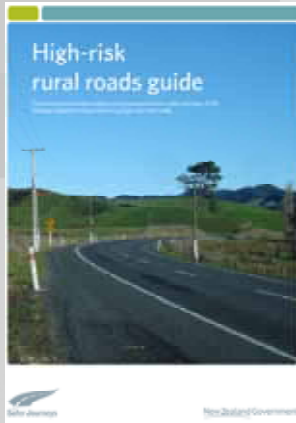
Personal Risk



Star Ratings



High-risk rural roads guide



- Good 'first cut' analysis
- Not sufficient to allow for targeted road safety efforts and investment in busy network areas

Investigation Priority Rating



- Performance Factors (Link Based)
 - Current Collective Risk is High or Medium-High.
 - Current Personal Risk is High or Medium-High.
 - Number of reported injury crashes is greater than the predicted number of injury crashes based on the KiwiRAP Star Rating.
 - Number of reported fatal and serious crashes is greater than the predicted number of fatal and serious crashes based on the KiwiRAP Star Rating.

Investigation Priority Rating



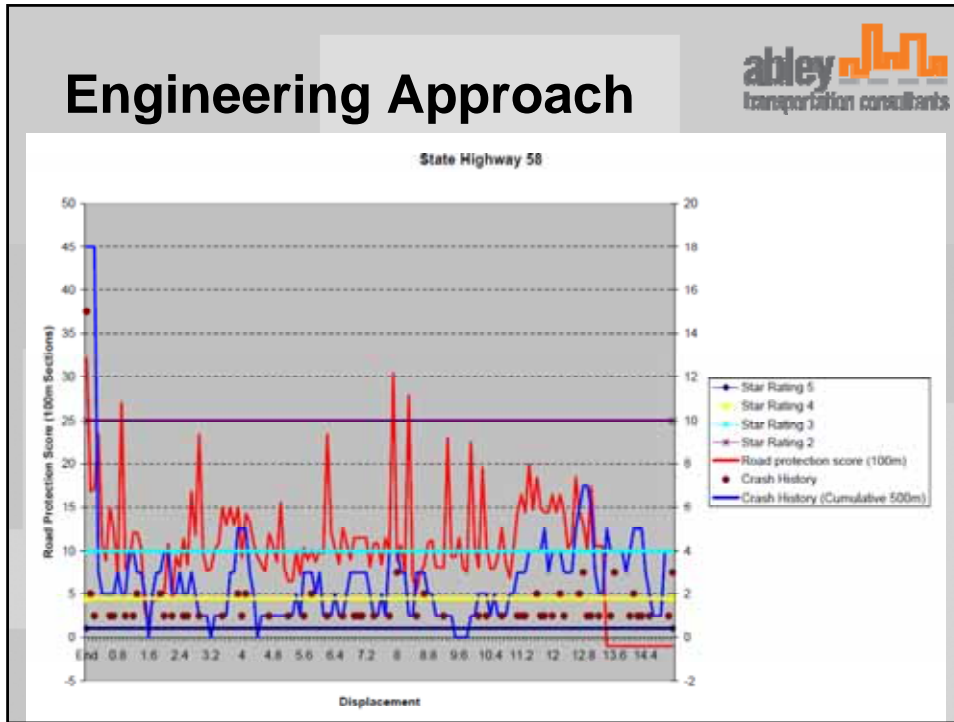
- Performance Factors (100m Section)
 - Road Protection Score (RPS)
 - Number of reported injury crashes 200m either side (500m in total) is greater than the predicted number of injury crashes based on the KiwiRAP Star Rating.

Investigation Priority Rating



The 5-tier IPR system is:

- **Low** = 0 or 1 criteria met
- **Low – Medium** = 2 criteria met
- **Medium** = 3 criteria met
- **Medium – High** = 4 criteria met (one must be for a 100m section)
- **High** = 5 or 6 criteria met



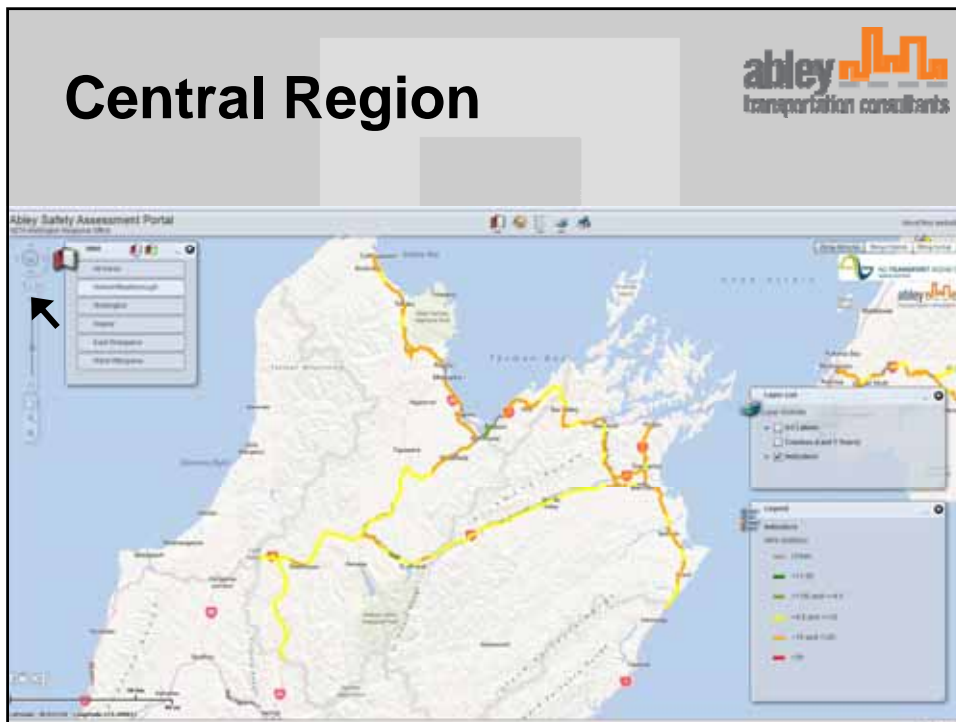


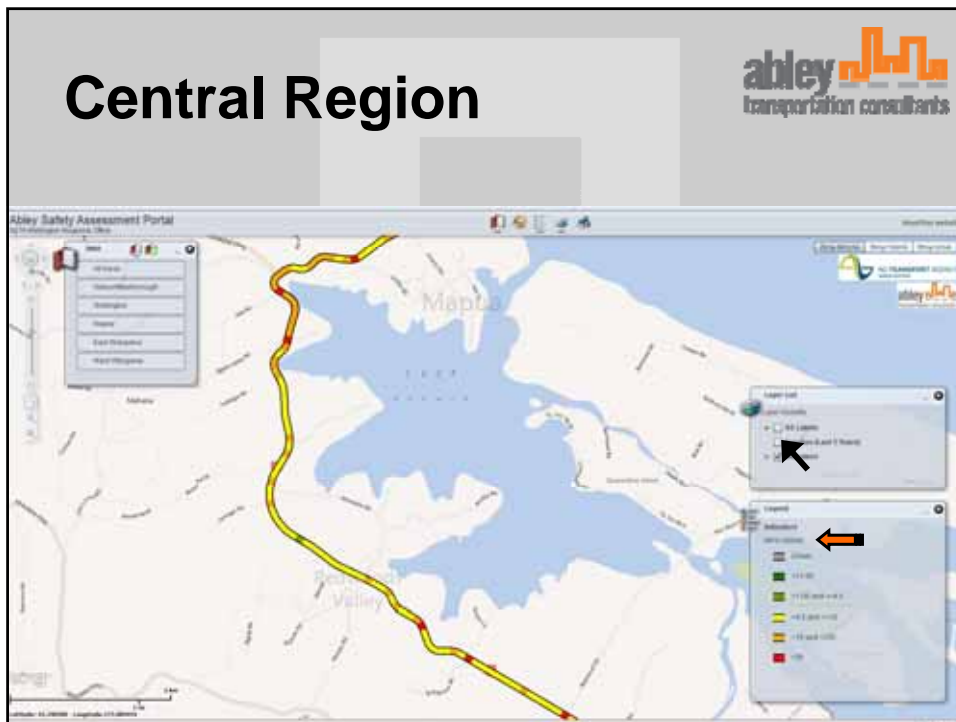
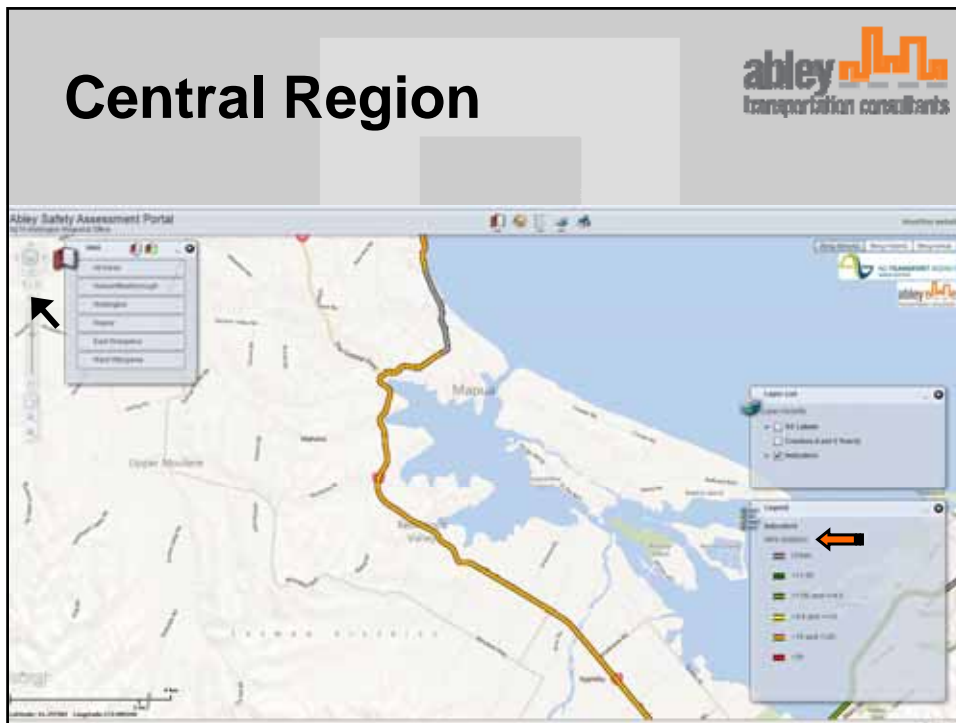


Effectiveness

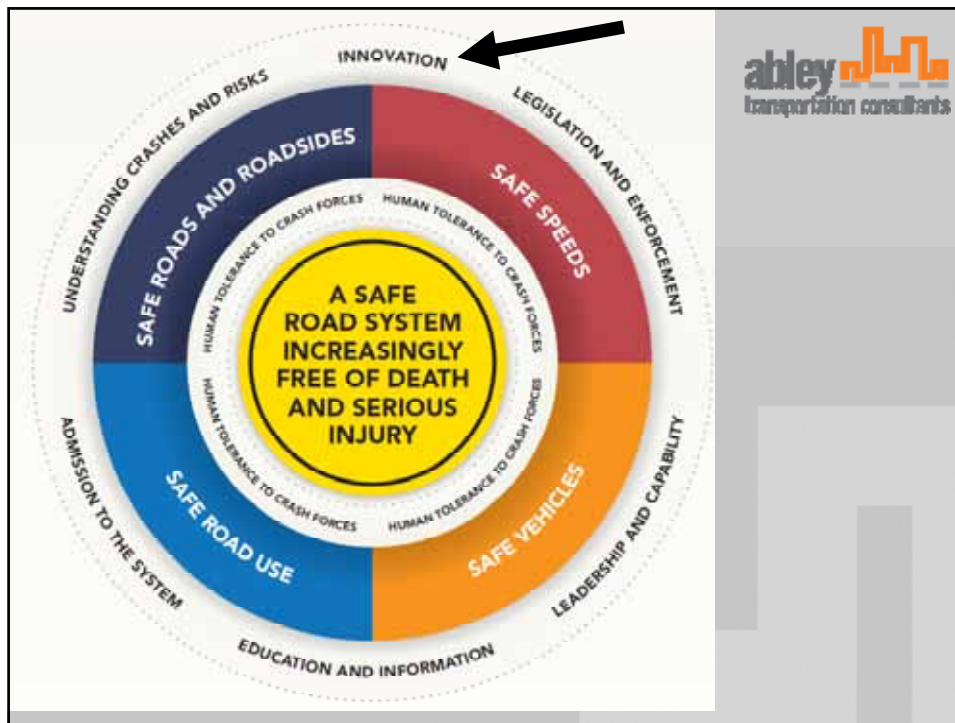
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- Highly efficient
- Improved decision-making
- Improved communication
- Better management









Importance of Innovation



“If we try to solve today’s problems with yesterday’s solutions we will seek the future by looking through yesterday’s eyes”

(Jack Collis, 2007)



To Find Out More



- Contact me:
 - paul@abley.com
- Read about the project in our newsletter
 - <http://www.abley.com/newsletters>

