The Safety Effectiveness of the Audio Tactile Profiled Markings Programme
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INTRODUCTION

Audio Tactile Profiled Markings (ATP)

- Successful trials in 2007 (Waikato/BoP)
- Intensive installation 2008/09 with economic stimulus funding
- approx. 3,000 kilometres installed as at end of 2010
Crash reductions claimed from ATP research

- Shoulder rumble strips reduce:
  - "run off road" injury crashes by 32%
  - "run off road" fatal crashes by 42%
- Centreline rumble strips reduce:
  - "head-on" and "sideswipe" crashes by 21% - 37%
- ARRB studies – 23% crash reduction
BACKGROUND

NZTA Business Case

- 15% crash reduction rate
- BCR of 7.2
- ATP replacement every 4 years (10 years on lower volume highways)
- High risk corridors targeted (e.g. SH1 Auckland to Hamilton)
- 2,000 km (18% of rural SH network)
CRASH ANALYSIS

Assumptions

- At least 50% of route station has ATP
- Minimum 1 year post-installation data
- Injury crashes from 2003 onwards
- Minimum of 3 years “Before installation”
CRASH ANALYSIS

% Reduction in Crashes

BoP | Waikato | Otago | Canterbury | Manawatu | Hawkes Bay | Auckland | TOTAL NZ

% Reduction
-20.0% | 0.0% | 20.0% | 40.0% | 60.0% | 80.0% | 100.0% | 120.0%

Fatal | Serious | Minor

Region

NZ TRANSPORT AGENCY
WAKA KOTahi

Safer Journeys

New Zealand Government
UNDERLYING CRASH TRENDS

State Highway Crashes

- Black line: Injury on ATP lengths
- Red line: Injury (exc. ATP lengths)

Year

2008 2009 2010

Number of Crashes

0 500 1000 1500 2000 2500

7.5% ↓

18.1% ↓
UNDERLYING CRASH TRENDS

State Highway Crashes

- High Severity (on ATP lengths)
- High Severity (exc. ATP lengths)

Year: 2008, 2009, 2010
Number of Crashes:
- High Severity (on ATP lengths): 600
- High Severity (exc. ATP lengths): 500

% Change:
- 8.4% decrease
- 27.2% decrease
SUMMARY

- Injury crash rate reduction 18% (7.5% without ATP)
- High Severity crash reduction 27% (8% without ATP)
- Reduced fatal/serious casualties – Safer Journeys focus
- Recommend results shared with NZTA operational managers