Central Motorway Junction

"fiendishly complicated, multi-layered puzzle of concrete, steel and asphalt"

"unbuildable"

Presentation Overview

- **Central Motorway Junction**
- Victoria Park Tunnel
- Newmarket Viaduct

CMJ Overview

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Background

- Where did the idea for CMJ come from?
- What does CMJ achieve?
- When were the sections delivered?

CMJ Overview

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Half-built...

- From conception in the 1960's, it took 40 years to complete 'half' of CMJ
- The second half took 10 years – what was the hurry?

Presentation Overview

- Central Motorway Junction
- **Victoria Park Tunnel**
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The Hurry...

- General election 2008 sees a National government take office.
- GPS2, following the Labour GPS – roadmap for guiding NZ through the Global Financial Crisis.
- The new National government adopted a policy of 'capital investment in Roads of National Significance (RONS) to stimulate the economy'.
- The new National government challenge NZTA to deliver the VPT, with a twist...

The Twist...

Alliance vision to meet NZTA objectives:

- Early start / early delivery – to stimulate the economy;
- All functional requirements met;

- Unparalleled social and environmental outcomes;
- Outstanding quality;

- Maximum use of the local supply chain to stimulate and enhance growth;
- Excellent value for money through superior delivery; and
- The alliance model enhanced.

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Victoria Park Tunnel Scope

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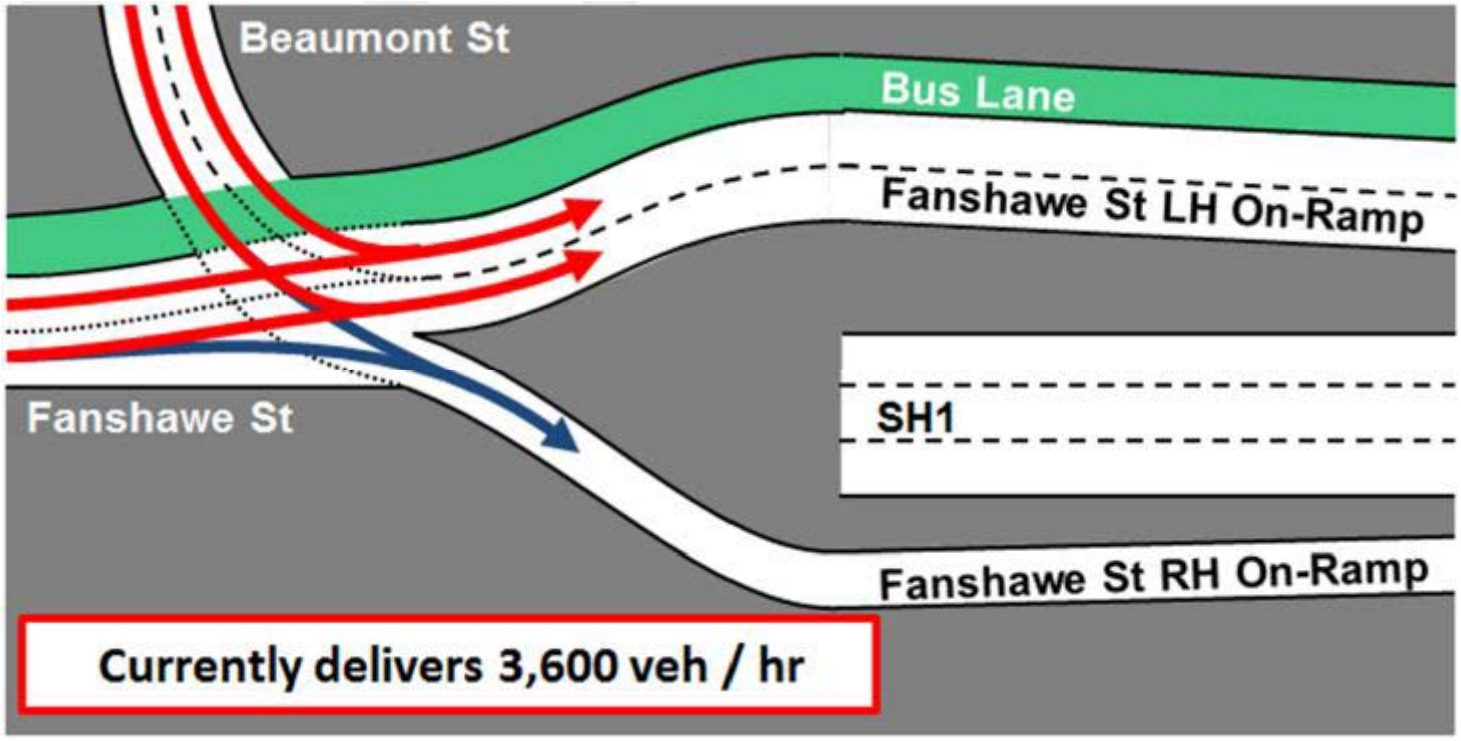
VPT overview

VPT drive-through

VPT drive-through

Tidal Flow and Fanshawe Street



VPT Moveable Lane Barrier Operations

Victoria Park Alliance

MOVEABLE LANE BARRIER OPERATIONS

Victoria Park Alliance

NZTA + BECA + PB + FLETCHER + HIGGINS

EARLY MORNING RUN (4am)
From Fanshawe Street to Auckland Harbour Bridge

Fanshawe Street Operation

Refer PeakLane video

Presentation Overview

- Central Motorway Junction
- Victoria Park Tunnel
- **Newmarket Viaduct**

Newmarket Viaduct Replacement

- $215m
- 4 years
- 160,000 veh/day

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Slow Down Over Newmarket

The challenge: Reduce speeds to minimise accident severity and frequency

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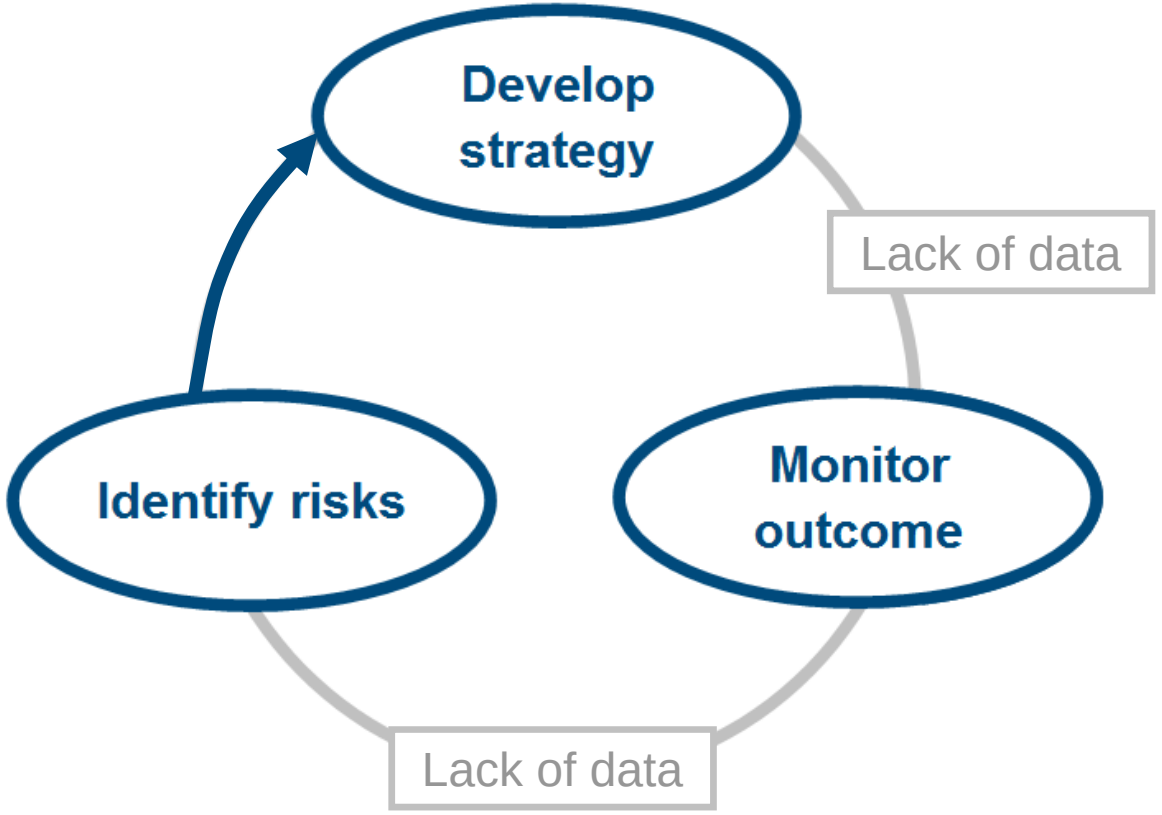
The Challenge

Specially designed TL-4 barriers
High specification and high design standard line marking
70 km/hr speed limit
Installation of project variable message sign
Tailored region-wide driver education campaign
Comprehensive communications
Best-practice COPTTM signage
Speed enforcement strategy

Challenge: Find a way to improve continuously

Continuous Improvement



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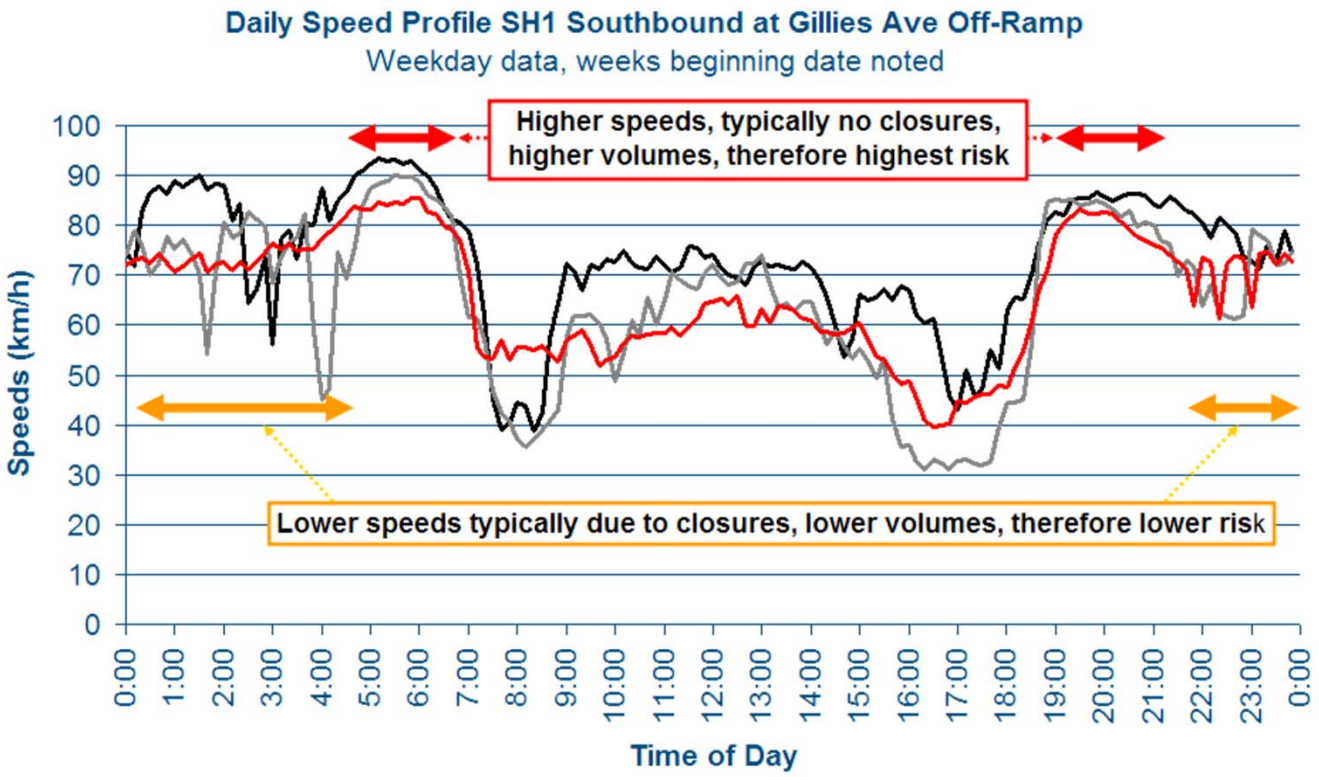
Understanding the Risk



Refining the Strategy

SPEED CAMERA OPERATES

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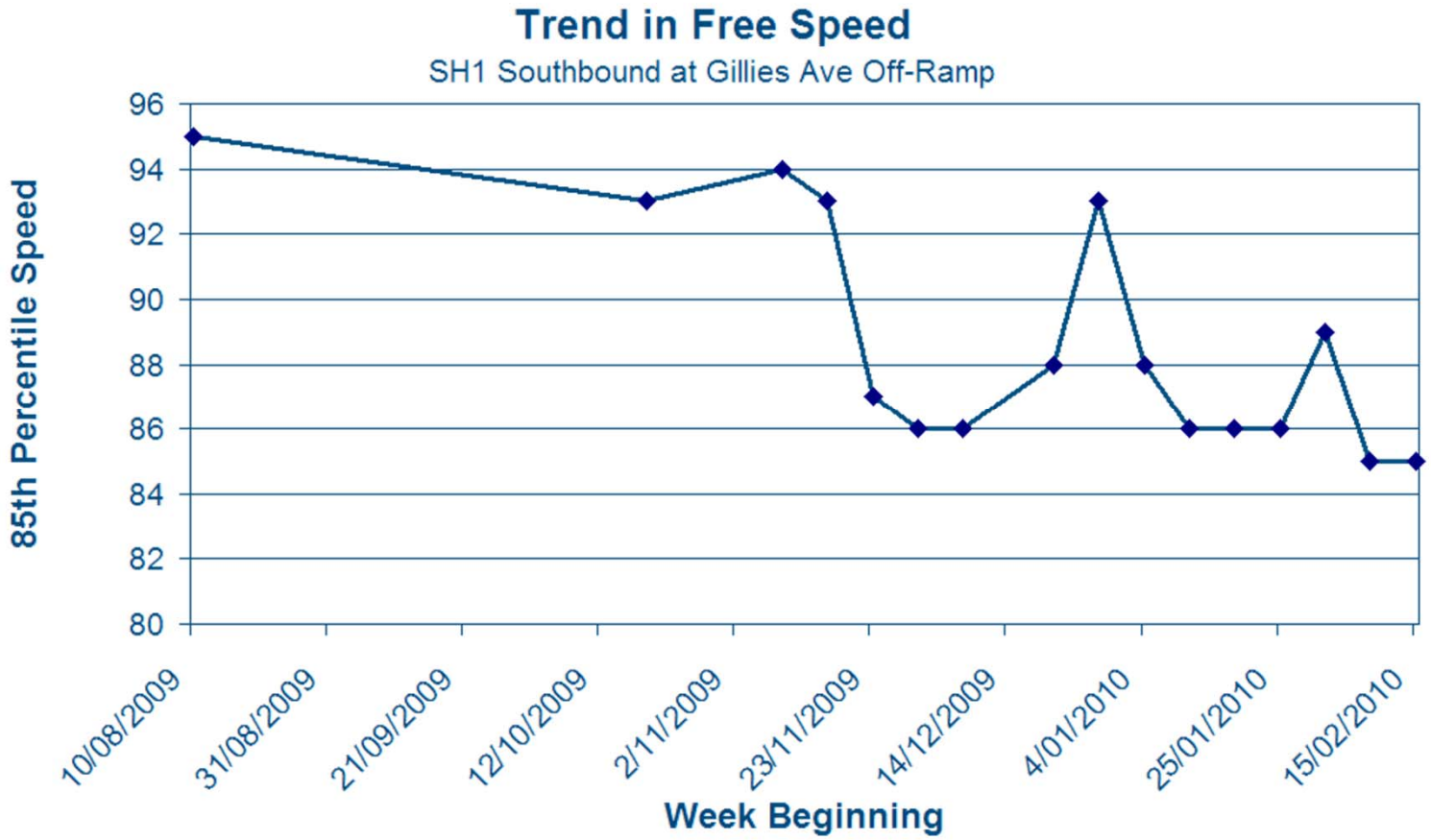
The Outcome



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Southbound Switch

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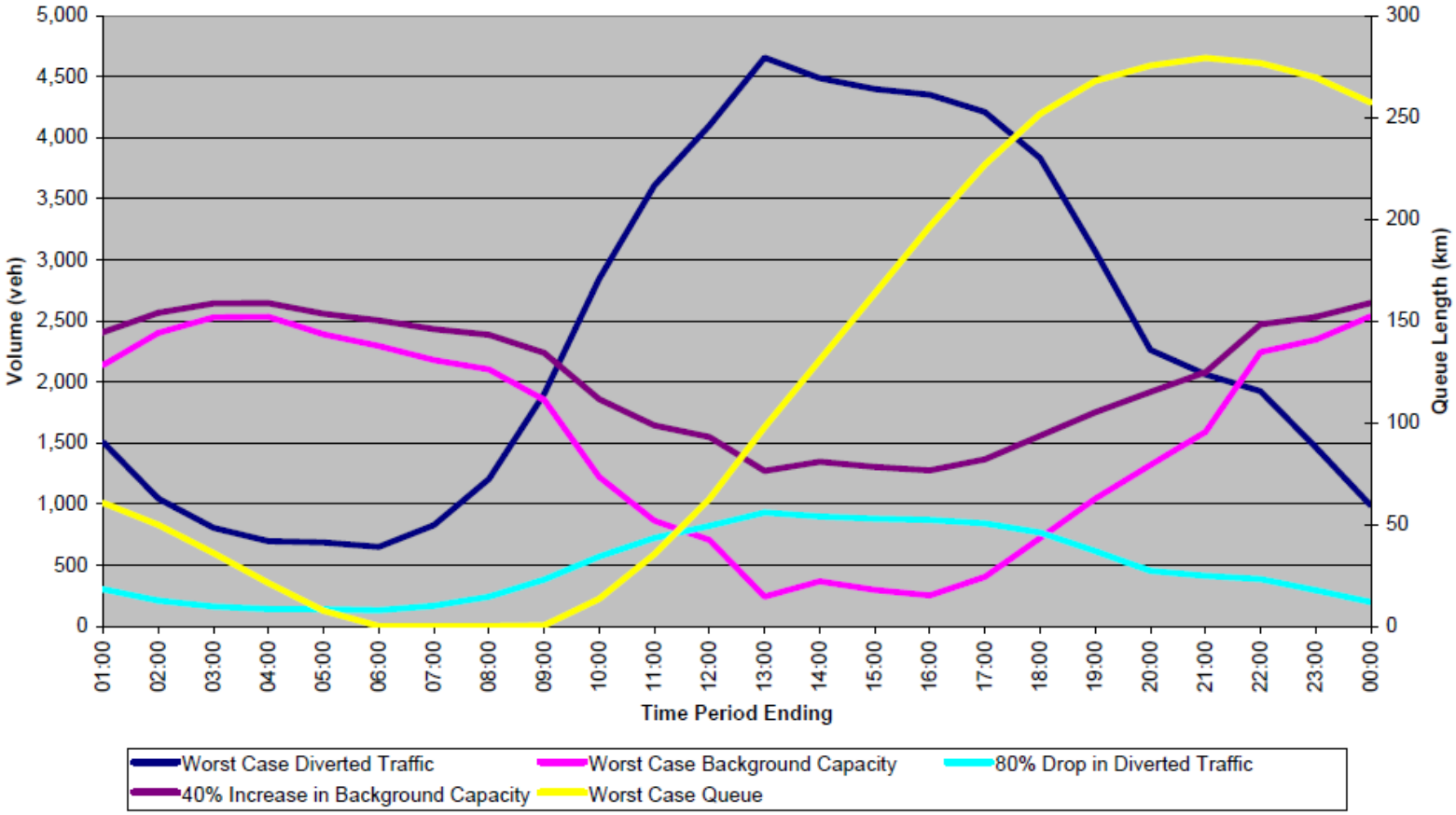
Worst Case Scenario



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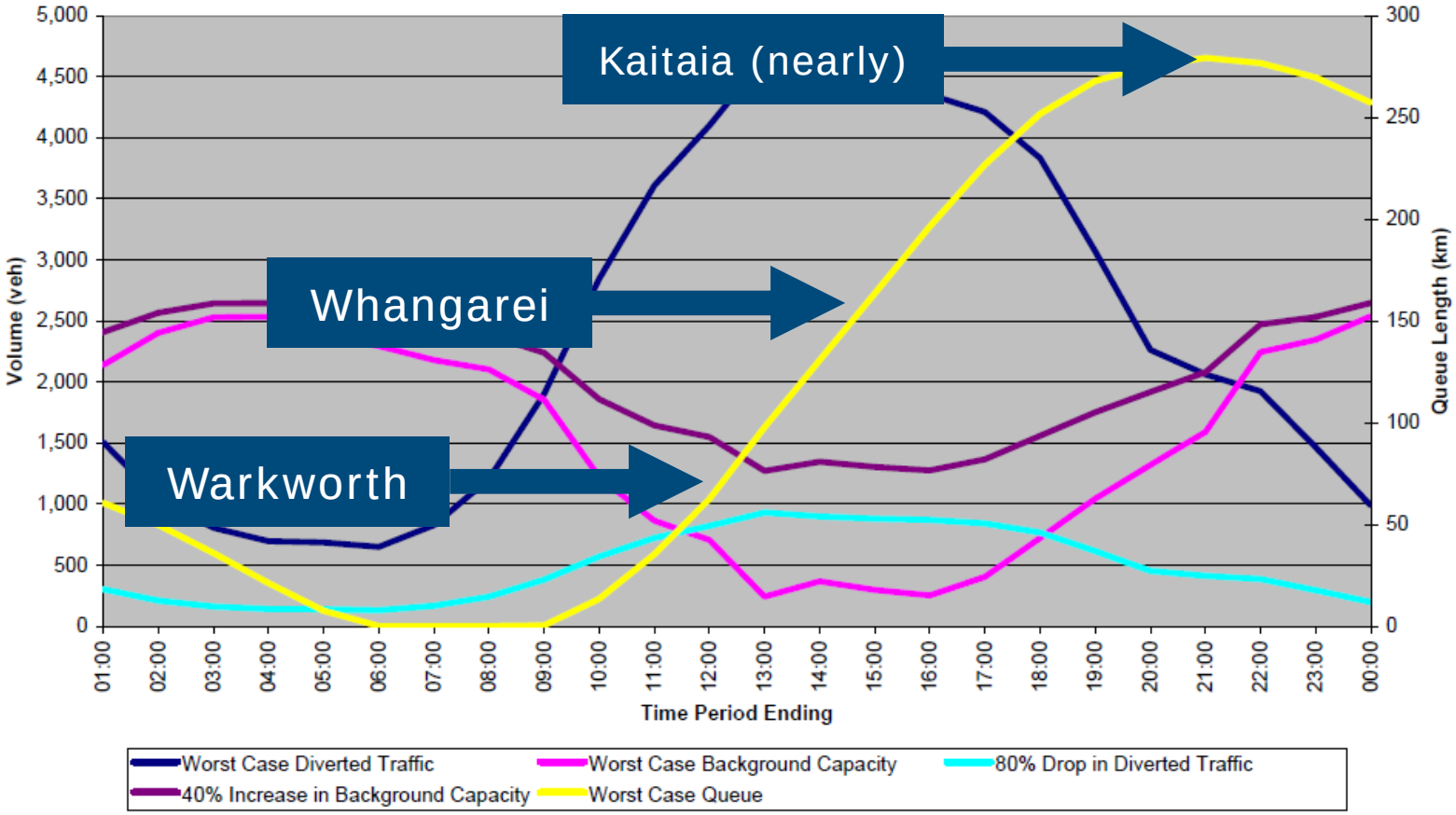
Worst Case Scenario



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Worst Case Scenario

- No diversion away from SH1
- No trip suppression on wider network

Which could mean:

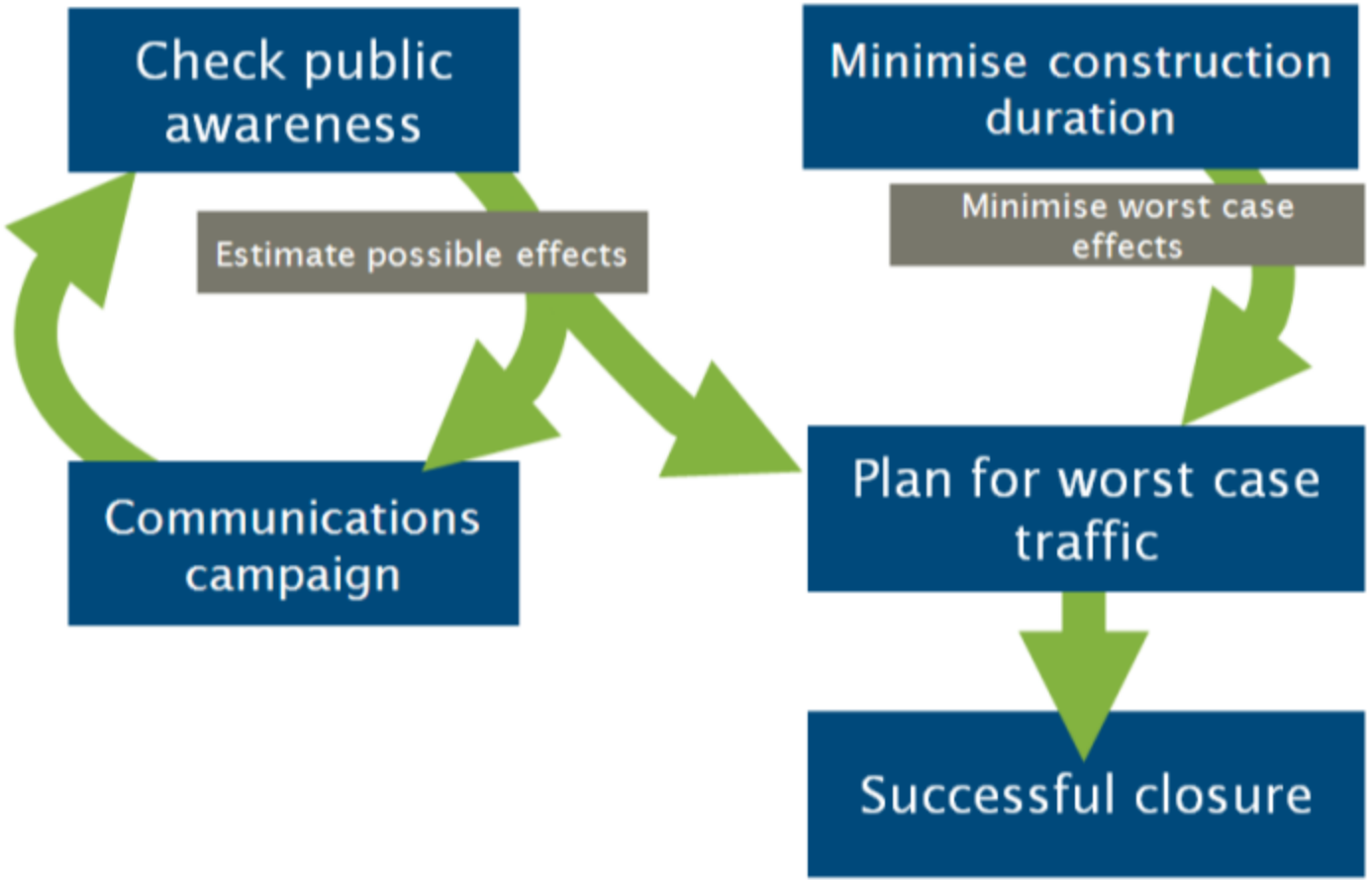
- Lifelines broken
- Emergency services affected
- Front page news
- Very unhappy Aucklanders

Traffic Suppression

At least 80%
of usual SH1 Southbound traffic to stay away

About 40%
of usual traffic on the detour routes to stay away

Our Process



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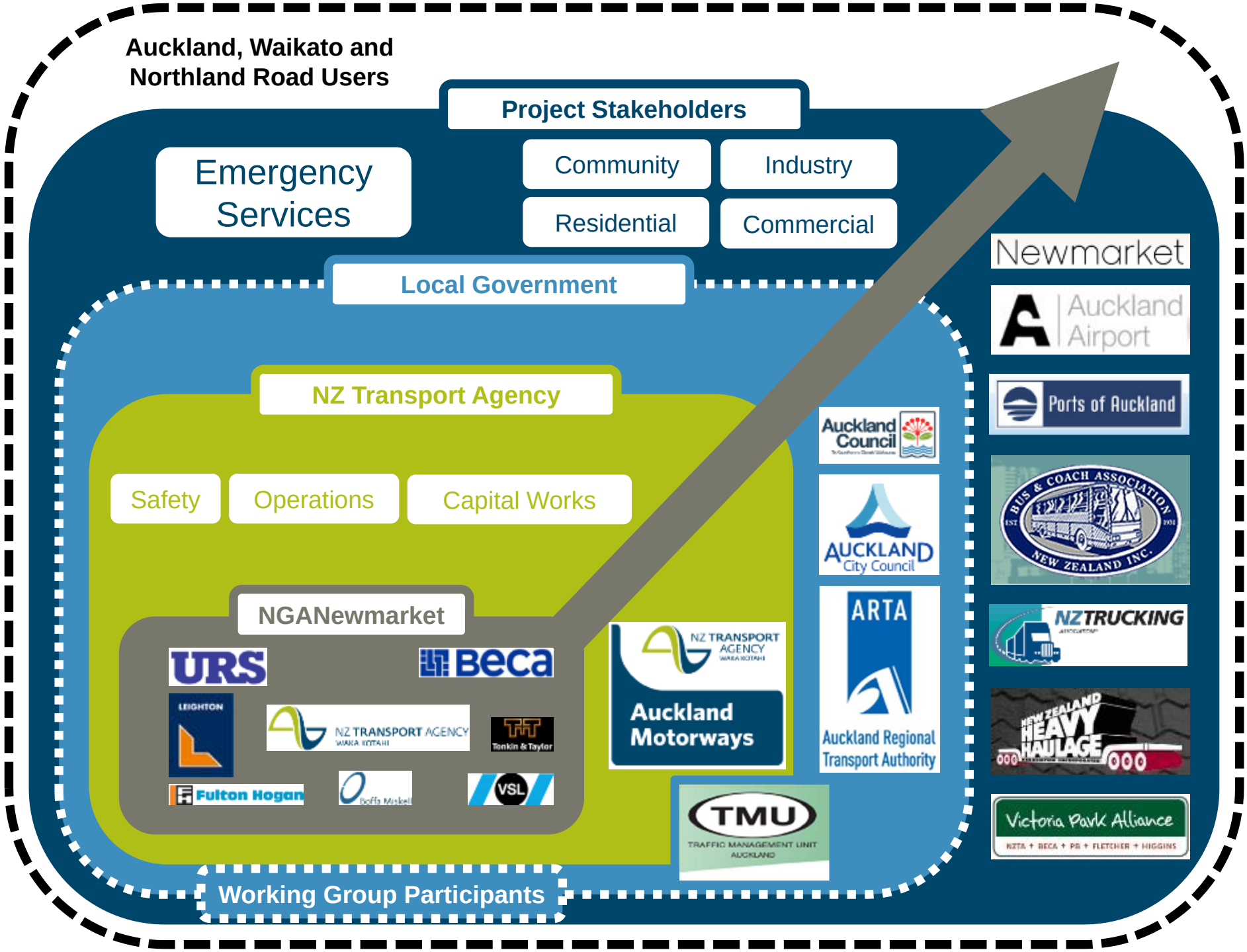

Auckland, Waikato and Northland Road Users
Project Stakeholders
Emergency Services
Community
Industry
Residential
Commercial
Local Government
NZ Transport Agency
Safety
Operations
Capital Works
NGANewmarket
URS
Beca
LEIGHTON
NZ TRANSPORT AGENCY
Tonkin & Taylor
Fulton Hogan
Boffa Miskell
VSL
NZ TRANSPORT AGENCY
Auckland Motorways
TMU
TRAFFIC MANAGEMENT UNIT AUCKLAND
Auckland Council
AUCKLAND City Council
ARTA
Auckland Regional Transport Authority
Working Group Participants
Newmarket
Auckland Airport
Ports of Auckland
BUS & COACH ASSOCIATION NEW ZEALAND INC.
NZTRUCKING
NEW ZEALAND HEAVY HAULAGE
Victoria Park Alliance
NZTA + BECA + PB + FLETCHER + HIGGINS

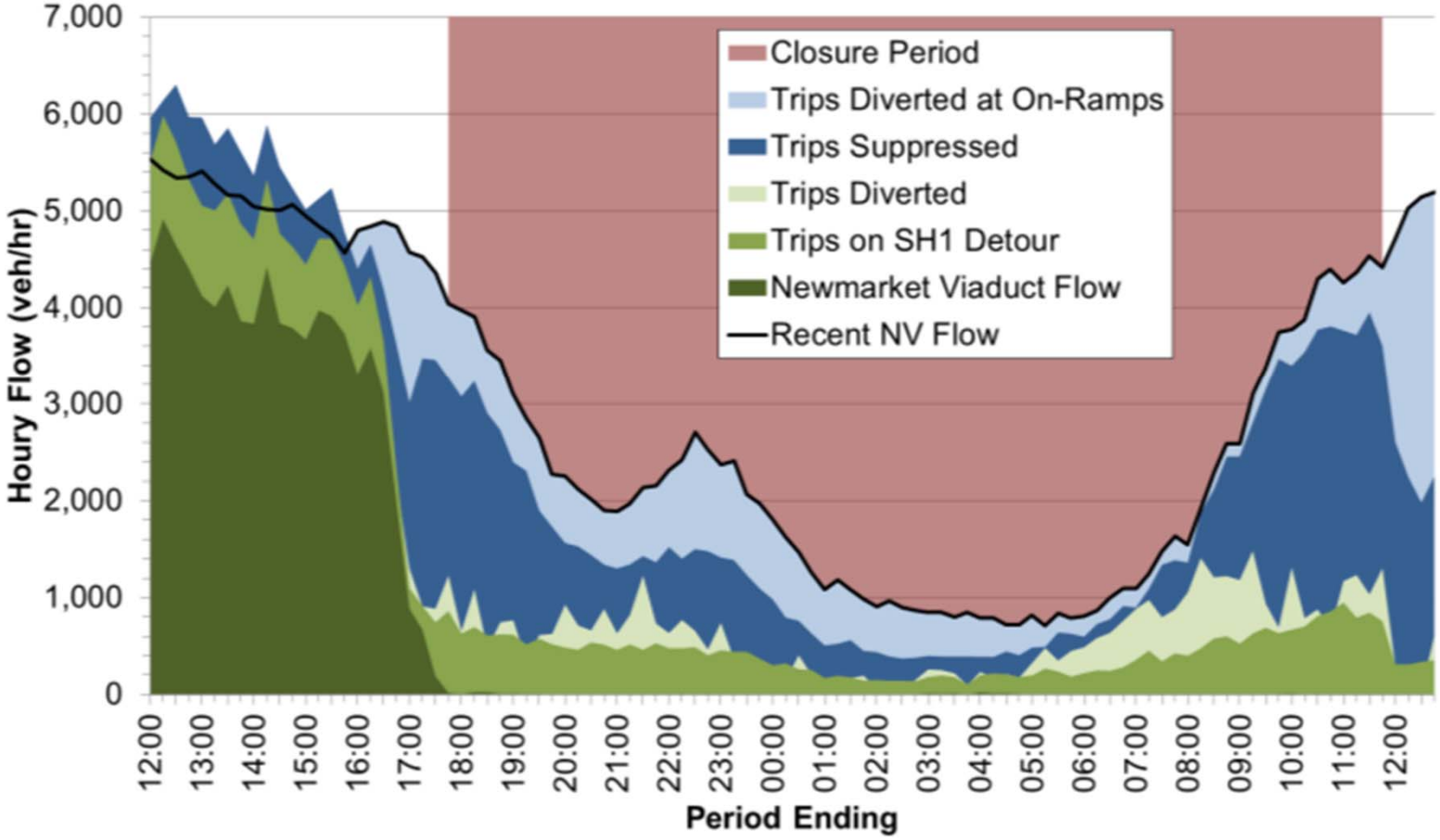
Traffic Management Strategy

- Divert people before they get trapped in the closure
- Close on-ramps to force traffic onto a range of detours
- Optimise the detour routes for remaining traffic

Channels

- **Traditional media**
  - TV (live crosses, editorial)
  - Radio, newspaper, billboards
- **Web**
  - Website, HTML email
- **Social Media**
  - Facebook, Twitter

Newmarket Viaduct Switch Weekend Trip Reallocation



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Outcome

- Suppression of normal trips was around 70%
- Diversions and detours catered for between 10% and 40% of usual flow

Central Motorway Junction

"unbuildable"

Yeah, right.