

Shared Space Performance Evaluation: Quantitative Analysis of Pre-Implementation Data

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Aut Karndacharuk ME(Hons) MIPENZ CPEng

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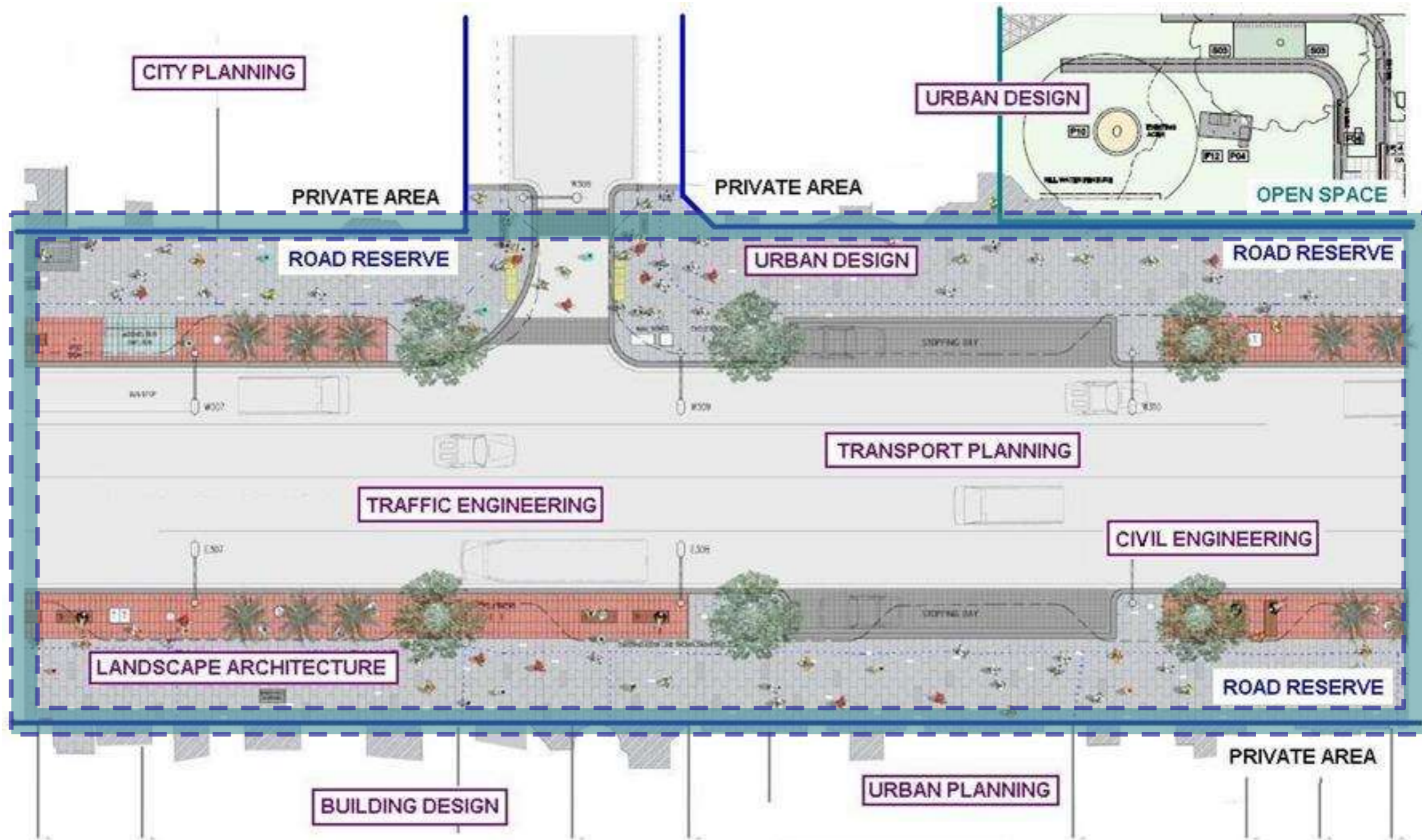


THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

**Auckland
Transport**
An Auckland Council Organisation

Presentation Outline

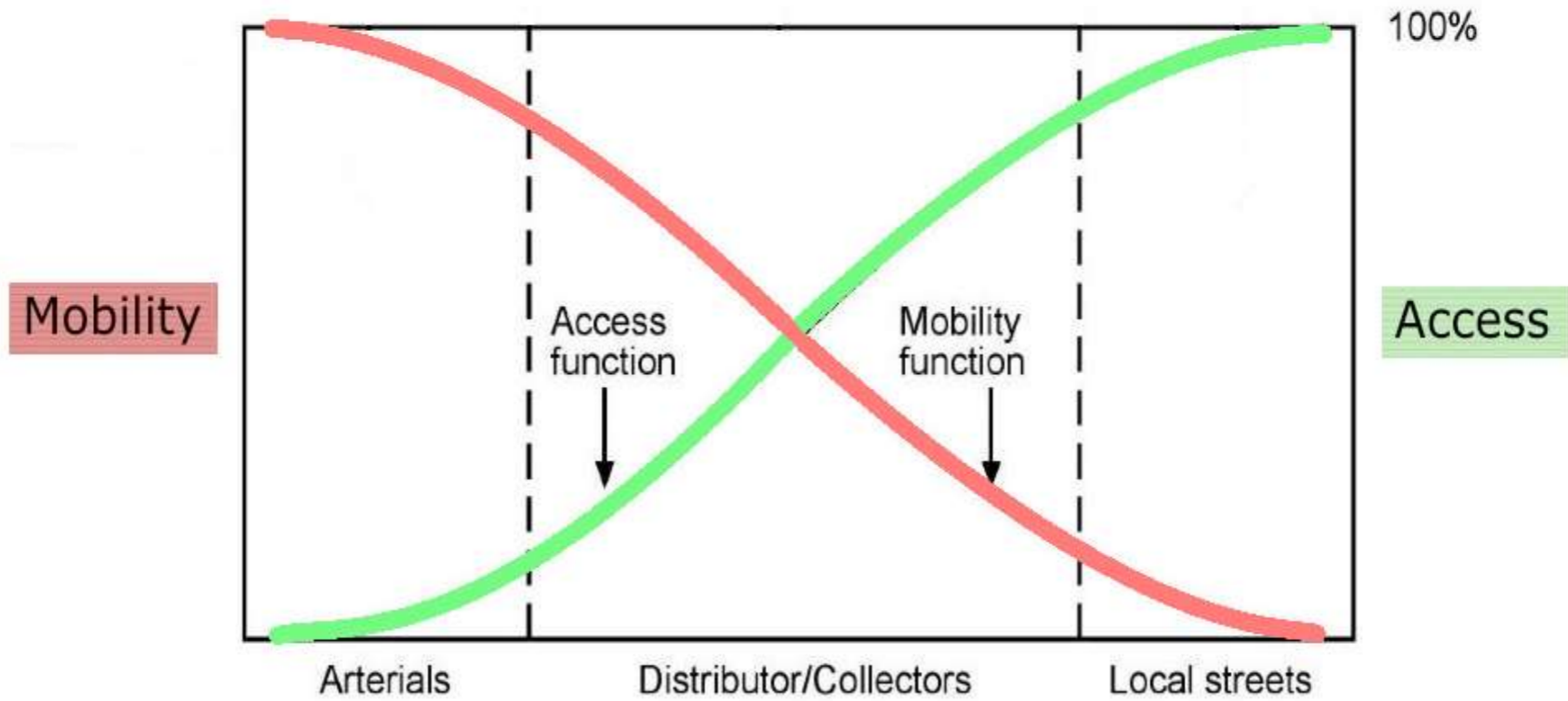
- Introduction
- Shared Space in Transport Context
- Research on Performance Evaluation
 - Shared Space Objective & KPI
 - 'Before' Data Collection
 - Prelim Quantitative Analysis
- Conclusions



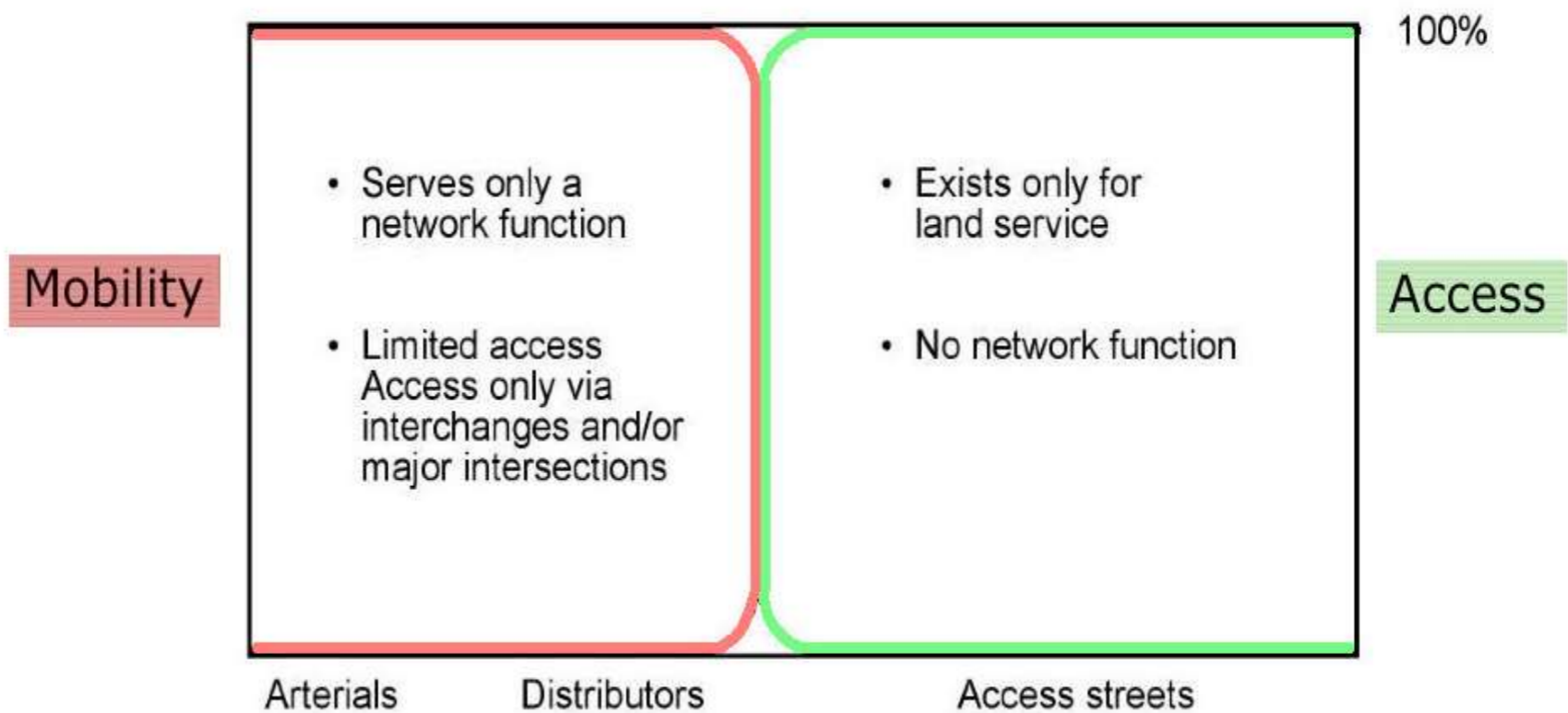
Multidisciplinary Knowledge within & outside
the Road Reserve in Urban Area

Road Functional Classification

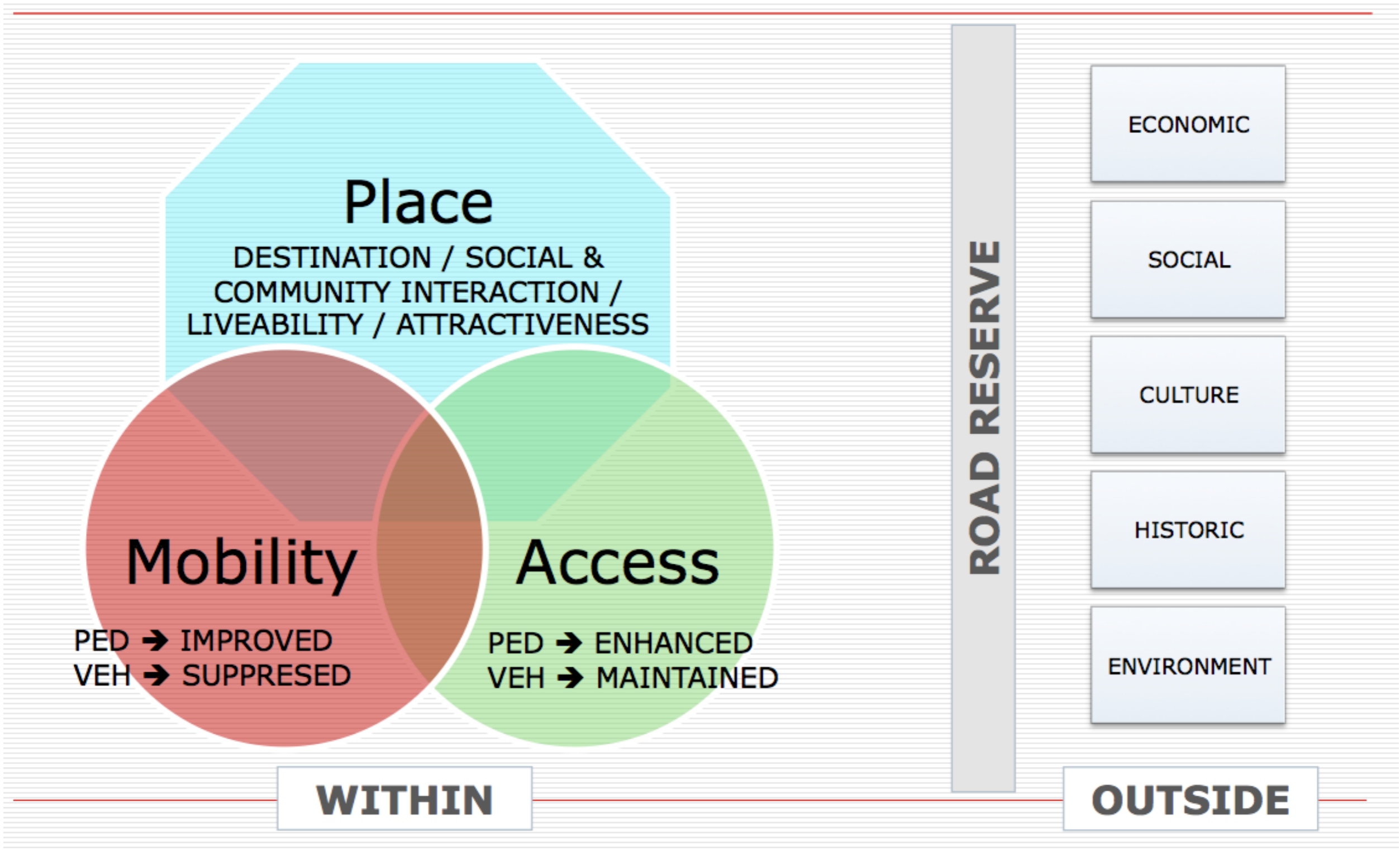
CONVENTIONAL MODEL



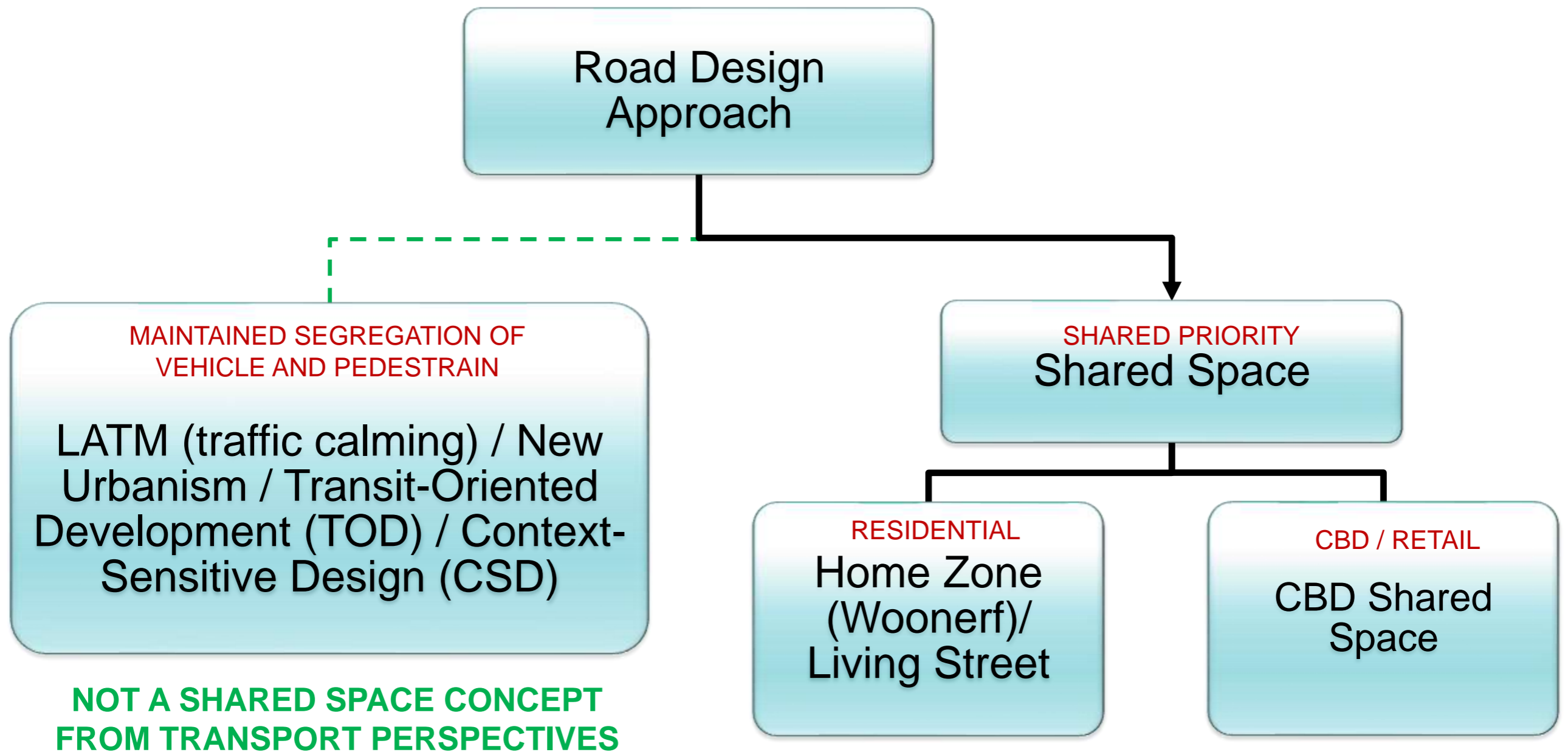
TWO CLASS MODEL



Place Function for Urban Road



Shared Space in Urban Road Design





LATM

- Reduce vehicle speed and volume
- Maintain segregation of vehicles and pedestrians
- Vehicles still dominate the road corridor space

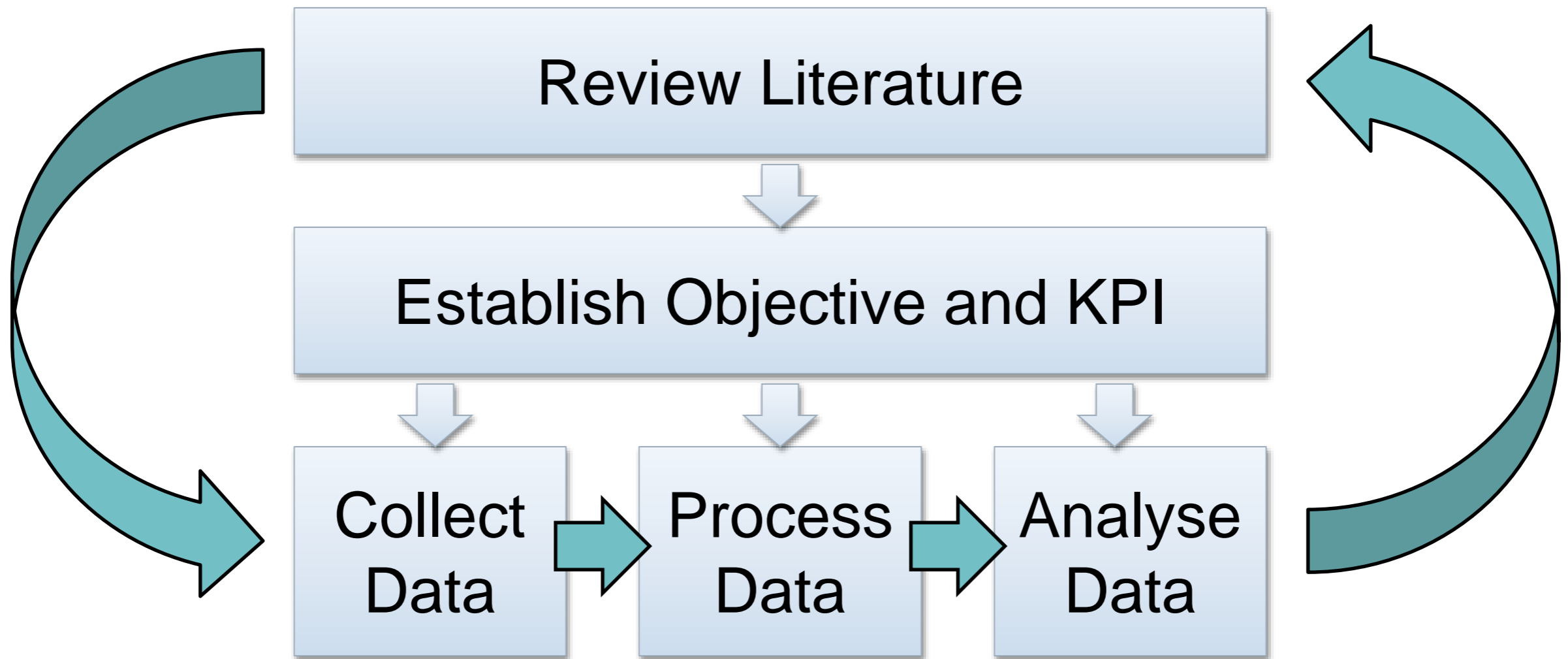
Shared Space

- Reduce vehicle dominance by creating a shared environment
- Level surface with minimum signage & marking
- Motorist to be a guest



COPENHAGEN RETAIL SHARED SPACE

Research Strategy on Performance Evaluation



BEST PRACTICE & TECHNIQUE

Shared Space Objectives

KPIs

- Placemaking →
- Pedestrian Focus →
- Economic Impetus →
- Vehicle Behaviour Change →
- Safety for All Users →

USER PERCEPTION

CRASH HISTORY

CRASH SEVERITY

USER DEMOGRAPHY

SAFETY INCIDENT
RECORD

'Before' Data Collection- Elliott St



Video survey using network cameras



Traffic tube counter

'Before' Data Collection - Elliott St



Cameras installed at Smith & Caughey's building

'Before' Data Collection - Lorne St



Network cameras installed
inside the central library



'Before' Data Collection - Lorne St



Views from cameras

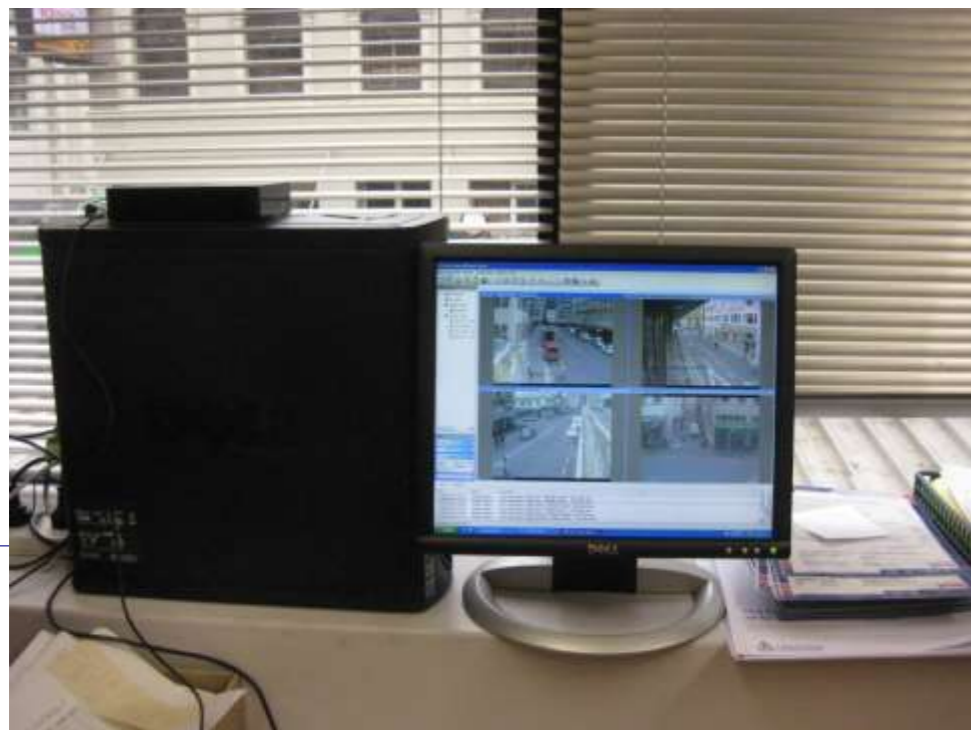
'Before' Data Collection – Fort St



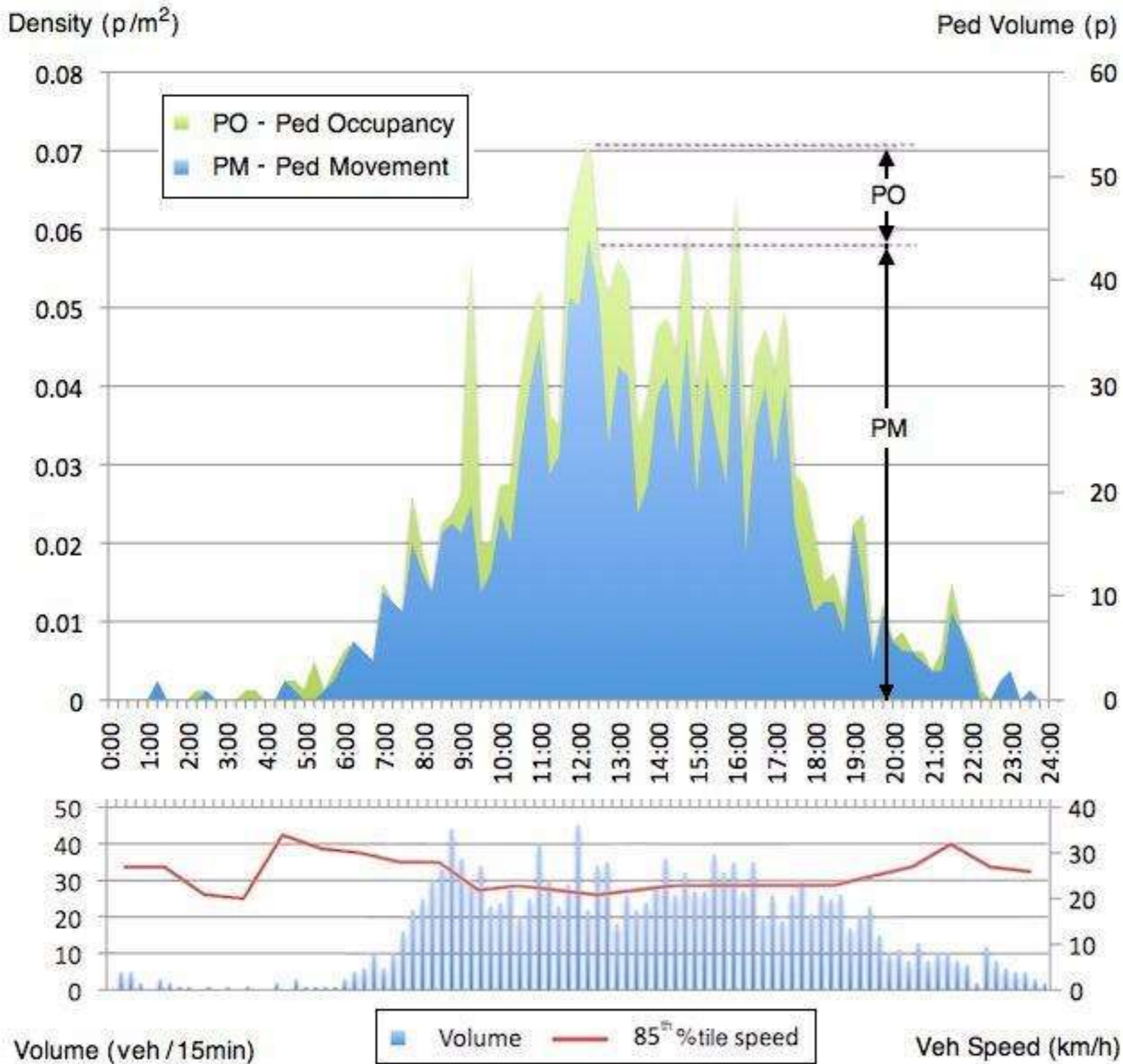
Network cameras installed at police building



'Before' Data Collection – Fort St

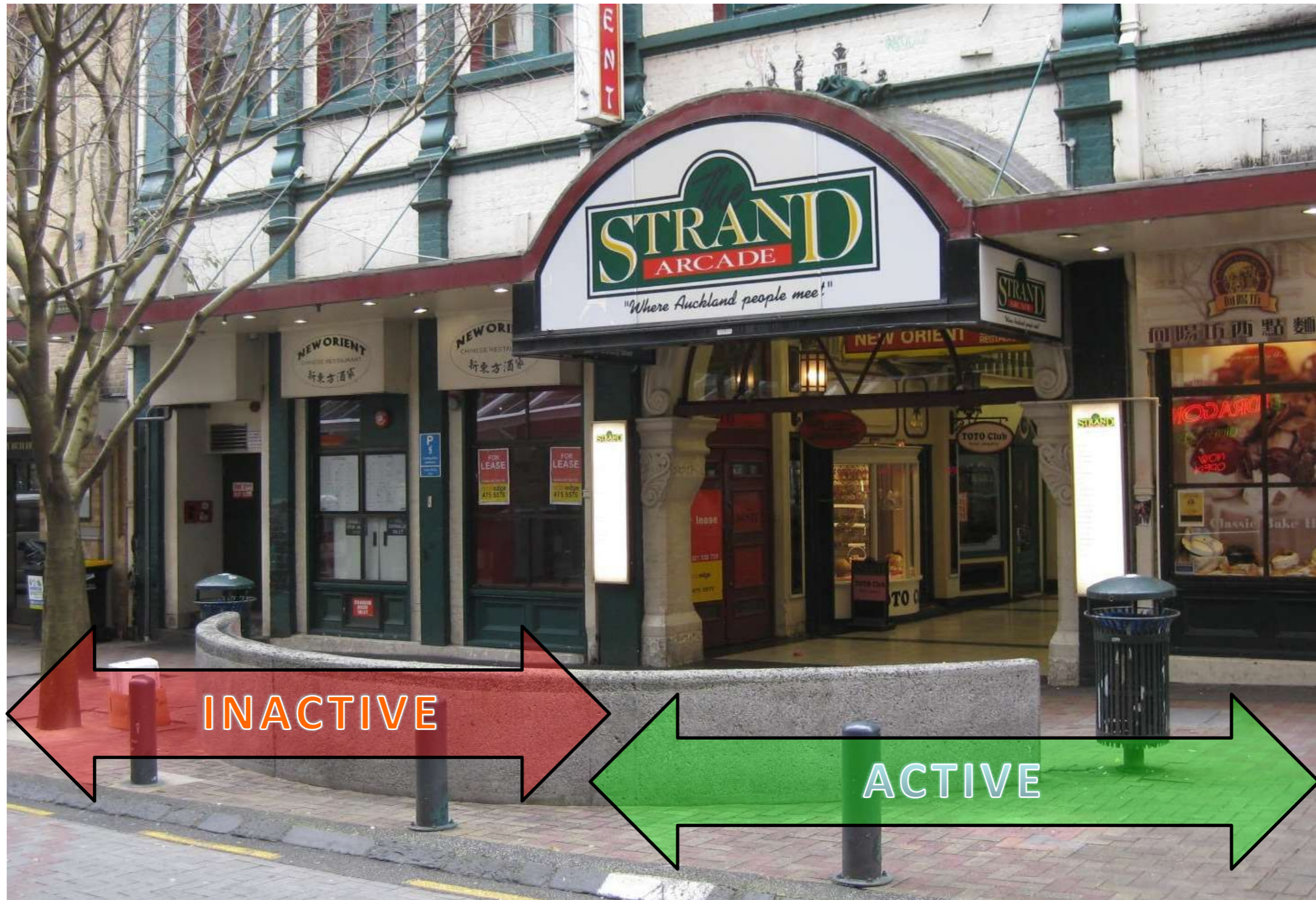


Camera recording + traffic tube count

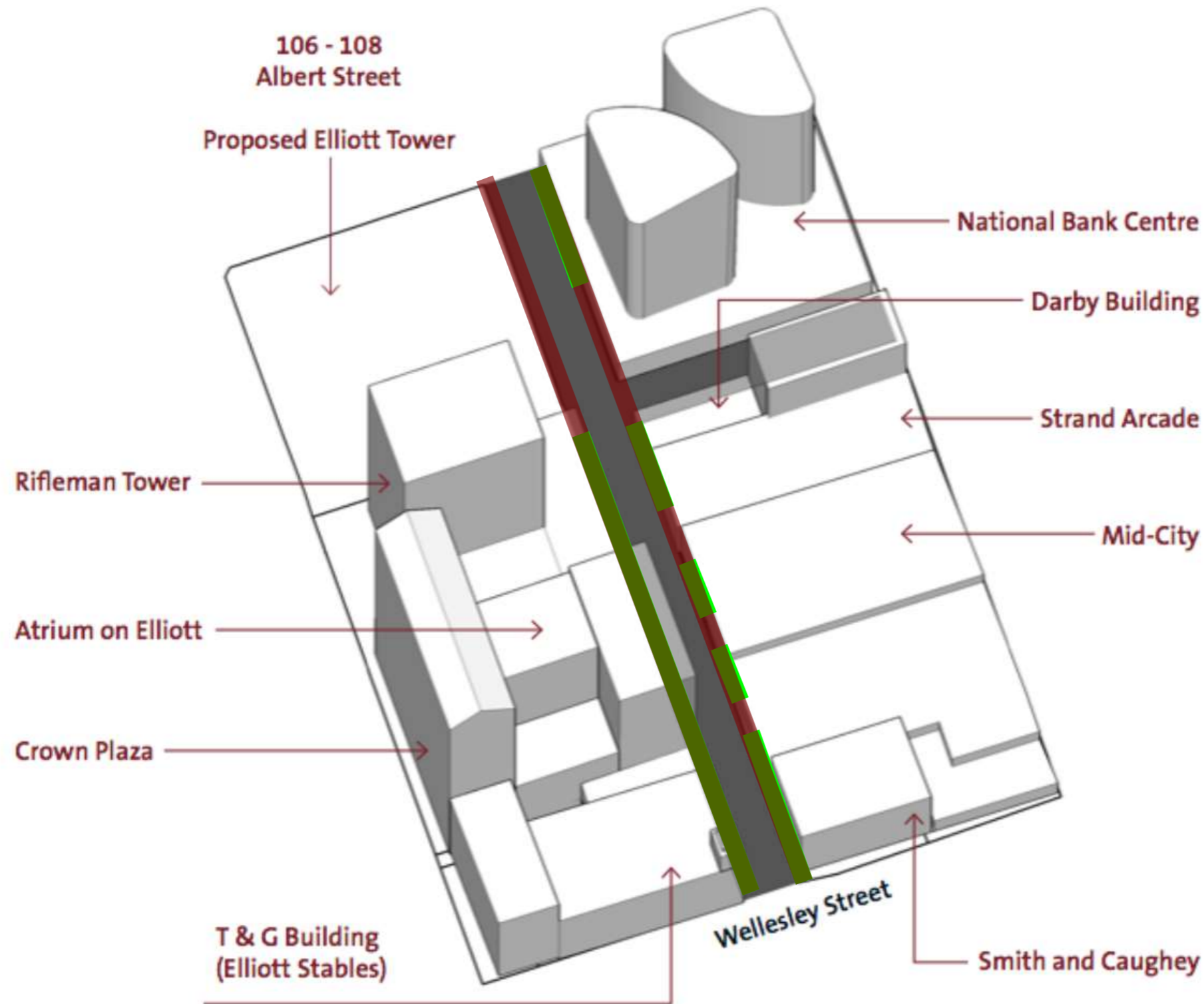


'Before' Data Analysis – Elliott St

'Before' Data Analysis – Active Edges

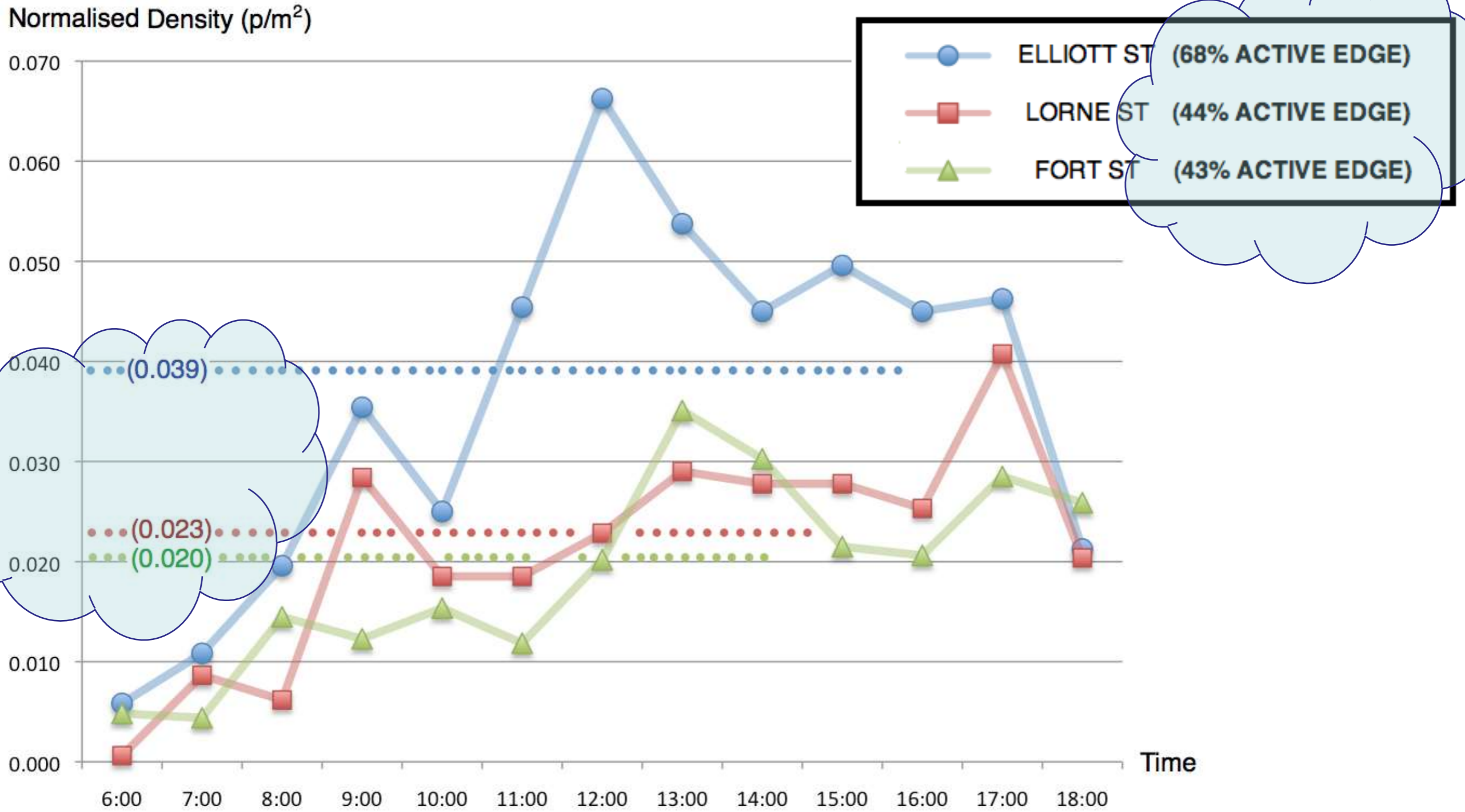


'Before' Data Analysis – Active Edges (Elliott St)

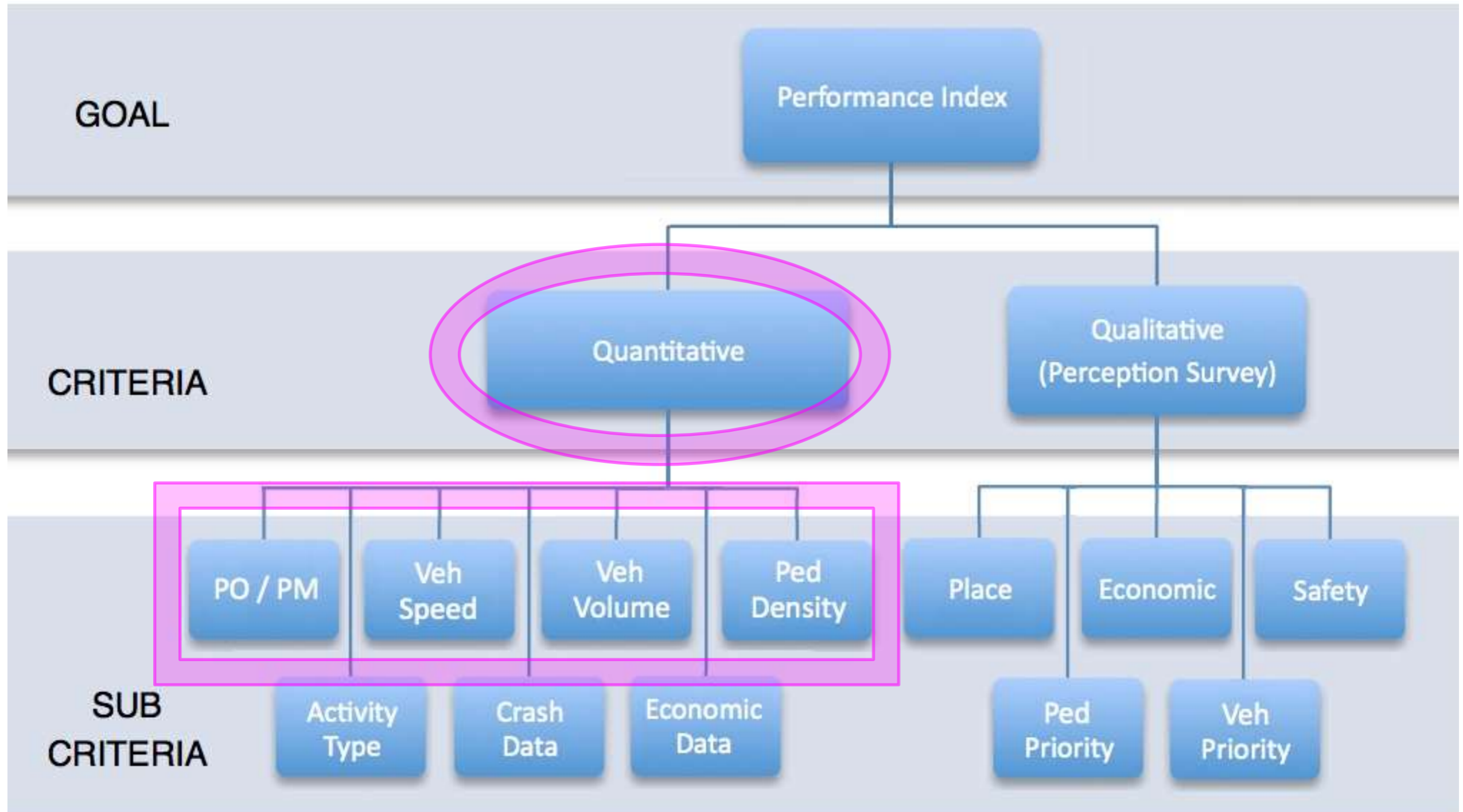


$$\text{ACTIVE EDGE}_{\text{ELLIOTT}} = \frac{250}{370} = 68\%$$

'Before' Data Analysis – Comparison



Conclusion on Performance Evaluation Research



Acknowledgement

- NZ Police and Smith & Caugheys' for camera installation
- Auckland Council's City Transformation for CBD shared space information

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Q + A

