good public transport system

overall sustainable transport system

Introduction

1. Engineers
2. Outcomes
3. Problem ID
4. Solutions
5. Benefits
6. Future

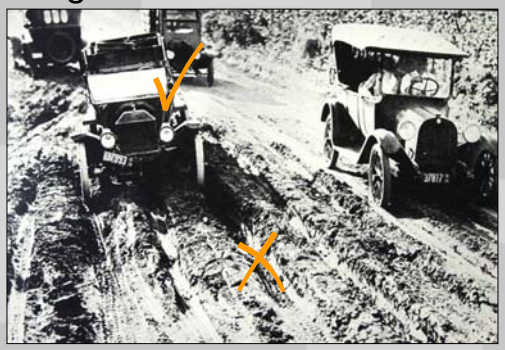
1. Engineers

Sewer pipes in Kearney, Nebraska. 1889. Photo: Solomon D. Butcher, 1856-1927

1. Engineers

United States of America, SP Depot, Santa Margarita, California c.1890

1. Engineers

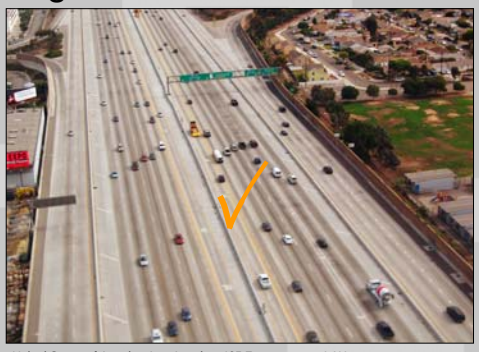


United States of America, Valley Mall, c.1900, poor road construction, Source: Dan Burden, Walkable Communities, Inc.

1. Engineers

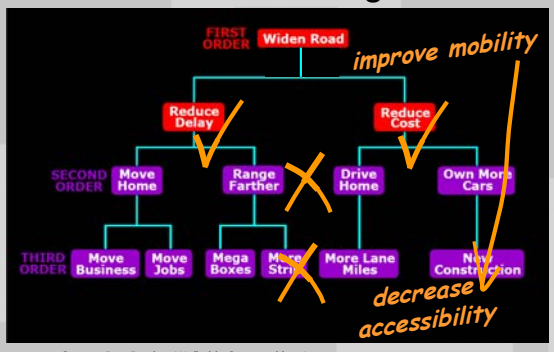
Mexico, Near Colonia Juarez c.1900, new road construction

1. Engineers



United States of America, Los Angeles, 405 Freeway, near LAX

2. Outcomes - Existing



Source: Dan Burden, Walkable Communities, Inc.

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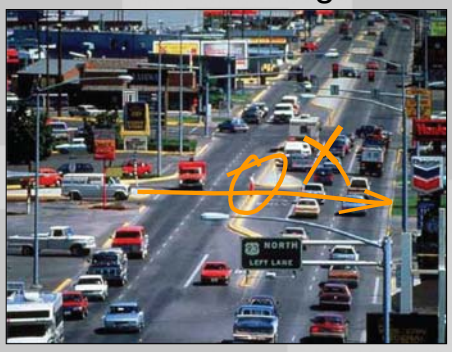
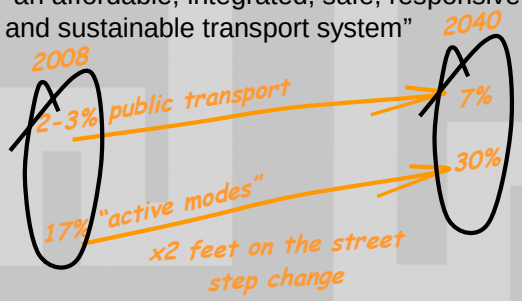


United States of America, Source: Dan Burden, Walkable Communities, Inc.

2. Outcomes - Future

"an affordable, integrated, safe, responsive and sustainable transport system"



2. Outcomes

Only two questions…

- 1. What influences outcome?
- 2. How do we measure?

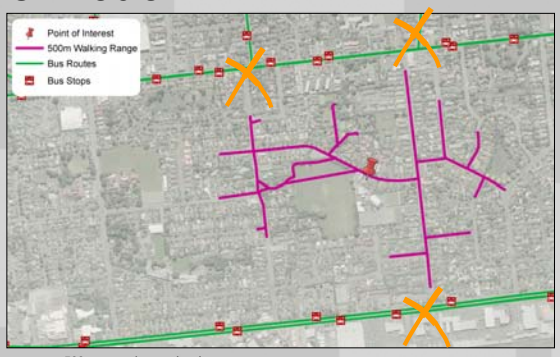
3. Problem ID

Christchurch, ECan RLTS measure of PT access, 400m to bus stop for subdivisions

3. Problem ID

Christchurch, ECan PT Plan measure of PT access, >90% 500m to bus route

3. Problem ID



500m on road network to bus stop

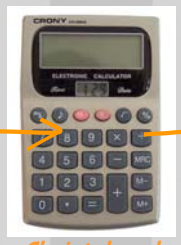
3. Problem ID

4. Solutions

- Measure better!
- Public Transport Accessibility Levels
  - Developed by London Borough of Hammersmith and Fulham (1992)
  - Adopted by Transport for London (T*f*L)
    - Used for transportation assessments
    - Used to vary rate of parking supply
  - Used outside London too
    - Used to determine housing density

4. Solutions

access points
services
frequency
reliability
ease of walking



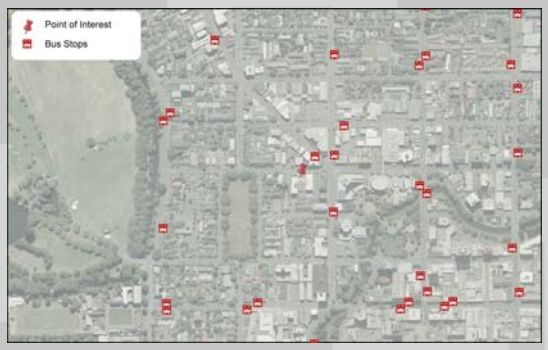
accessibility index

Christchurch mid weekday shopping period

4. Solutions

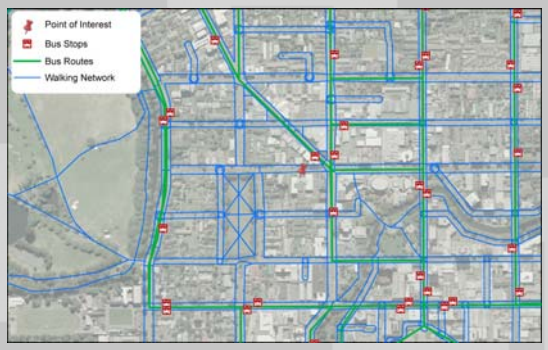
Christchurch City Council, Aerial Photo, Christchurch, Point of Interest is ECan

4. Solutions



4. Solutions

4. Solutions



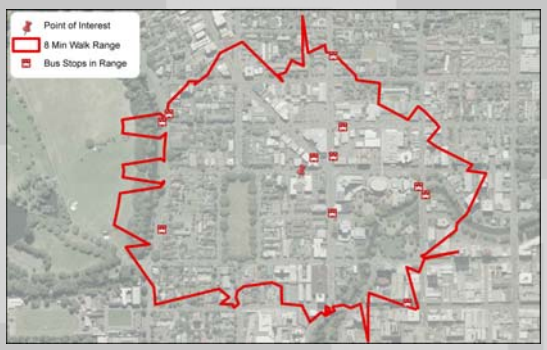
4. Solutions

Walk at 1.3m/s, delays when crossing the road, different delays for different crossing types

4. Solutions

Walk time service area analysis

4. Solutions



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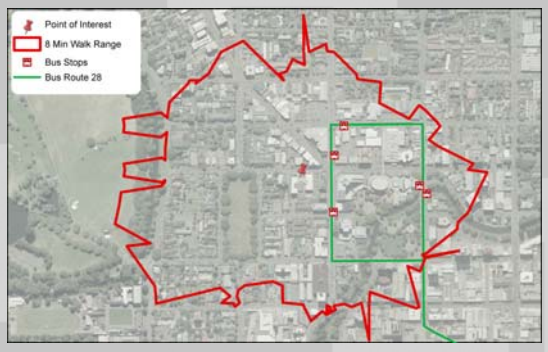

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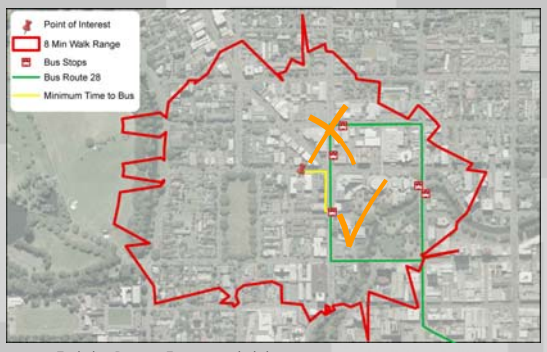
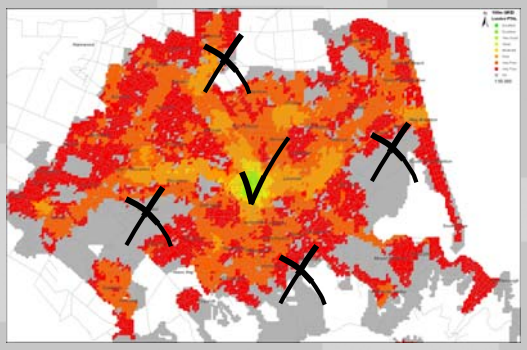


Equivalent Doorstep Frequency calculations

4. Solutions



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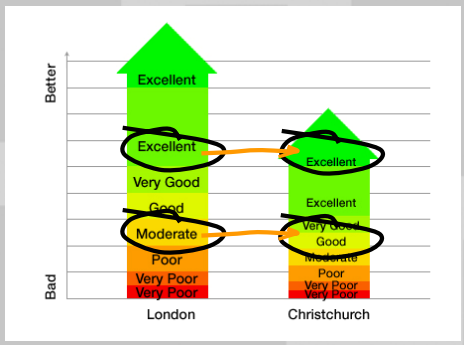
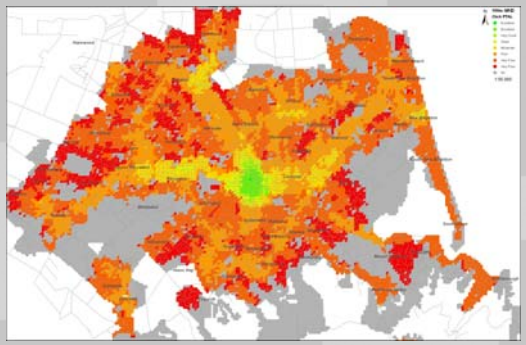
4. Solutions



4. Solutions



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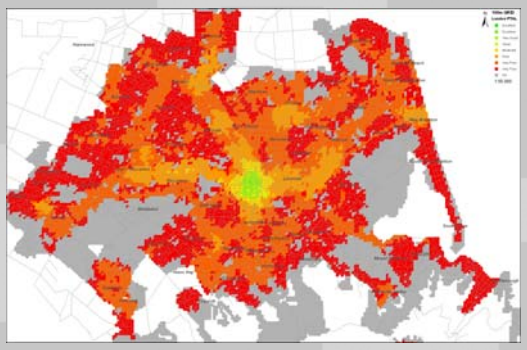

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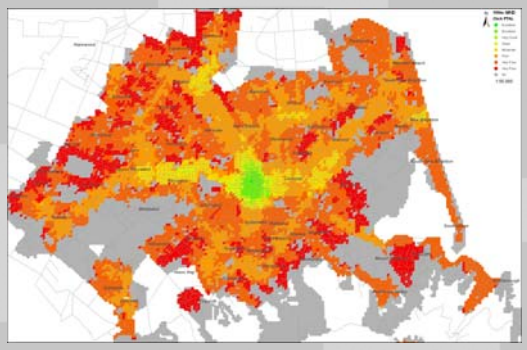

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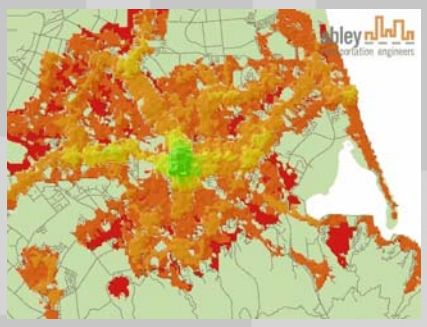

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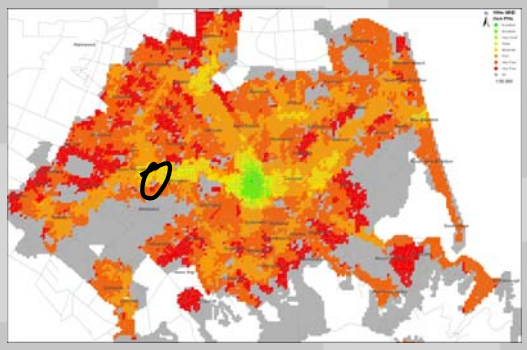


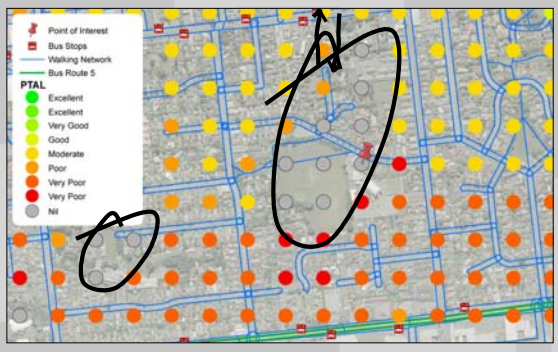
4. Solutions

Christchurch, ECan RLTS measure of PT access, 400m to bus stop for subdivisions

4. Solutions

4. Solutions

4. Solutions



4. Solutions

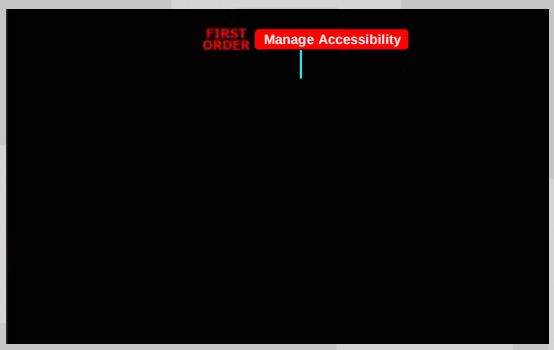
Increase in public transport accessibility = 4 x Poor

4. Solutions

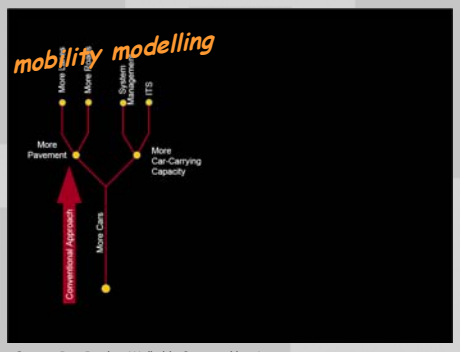
4. Solutions

Increase in public transport accessibility = 3 x Poor, 3 x Very Poor

5. Benefits



6. Future



Source: Dan Burden, Walkable Communities, Inc.

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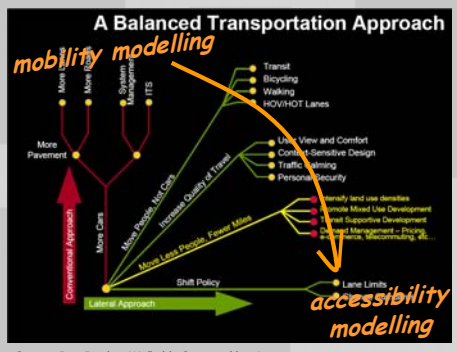

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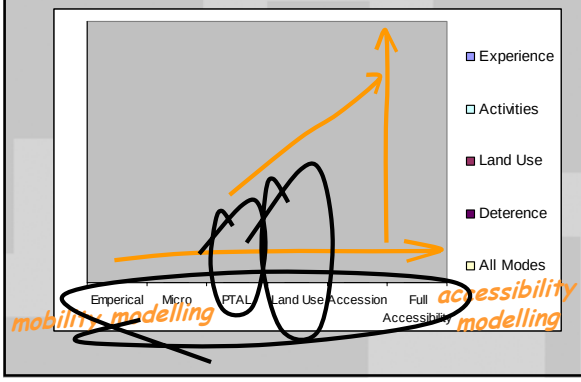

6. Future

- Other periods e.g. commuter
- Different walking speeds e.g. young, old
- Link with demographics – low income and low PT accessibility?
- Benchmark other NZ cities
- Create levels customised to NZ
- Link with policy – e.g. RLTS, LTCCP
- Use as part of other assessments e.g. ITA

Summary

- Engineers are problem solvers
- If you measure you manage

public transport supply

Q. *"Can a transport system be measured?"*
A. *"Public Transport Accessibility Levels"*

- Full Accessibility modelling is coming soon

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