



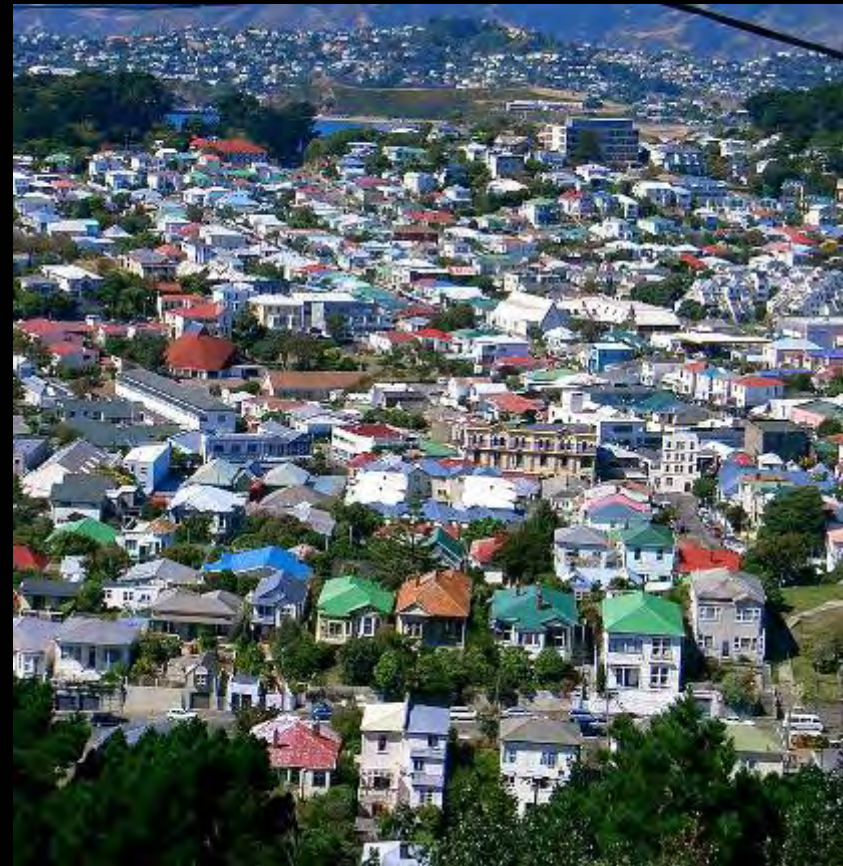
Neighbourhood walkability tools: the URBAN study

Suzanne Mavoia and Karen Witten

SHORE, Massey University

The Built Environment
Is Important

At the city and neighbourhood level



At the street level



At the perceptual level





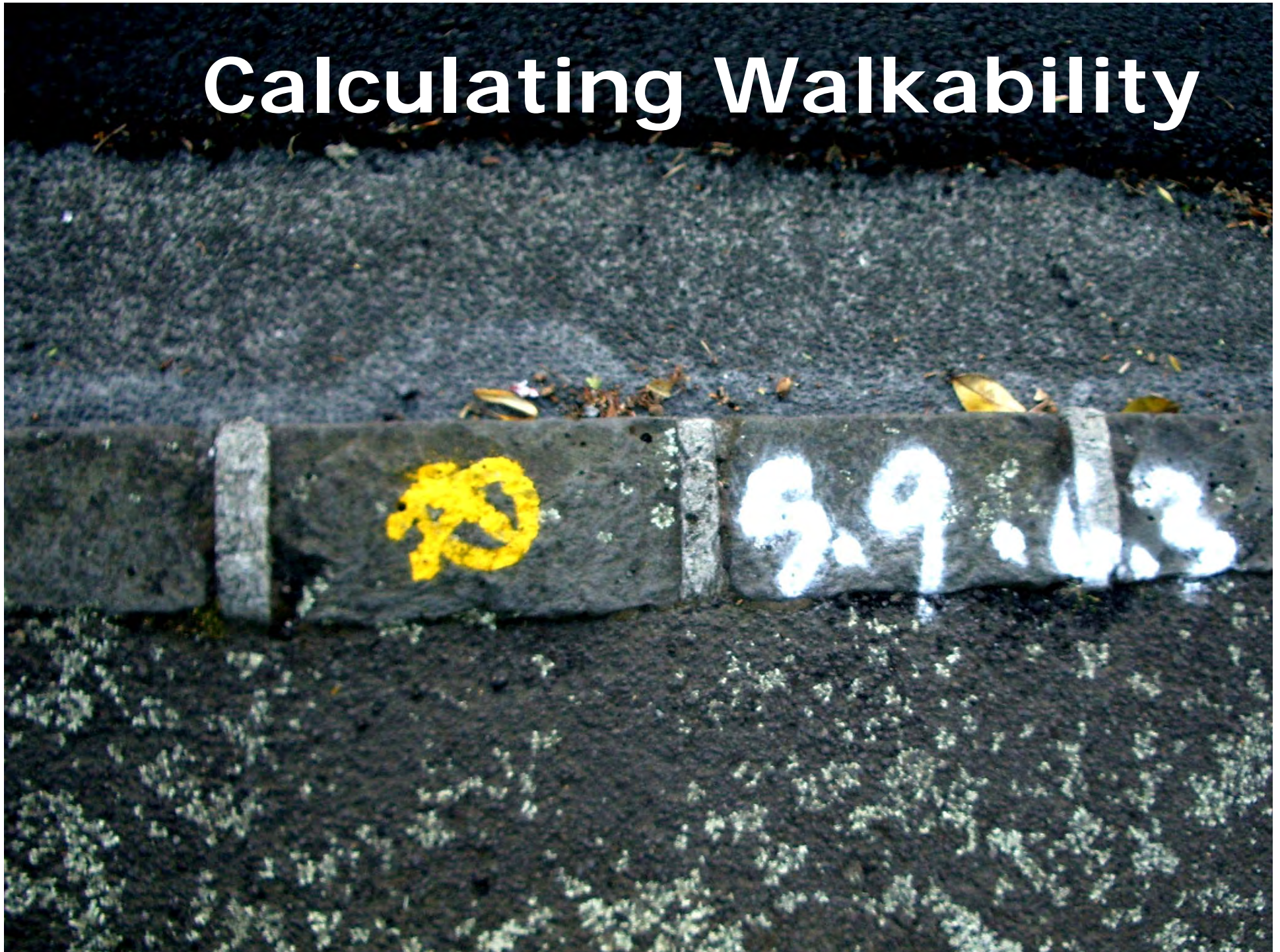
URBAN Study

- 4 Cities
- 48 Neighbourhoods
- 2000 Participants

Research Tools

- Walkability index
- Streetscape audit
- Photovoice

Calculating Walkability



Walkability Index



GIS based calculation

4 components

Walkability Index Component

Street Connectivity



Number of Intersections
Area

Walkability Index Component

Residential Density



Number of Dwellings
Area



Walkability Index Component

Land Use Mix

Not Mixed = One Land Use in Area



Mixed = All Land Uses Equally in Area



Walkability Index Component

Commercial building to land area ratio

Less Walkable = more carparks



More Walkable = less carparks



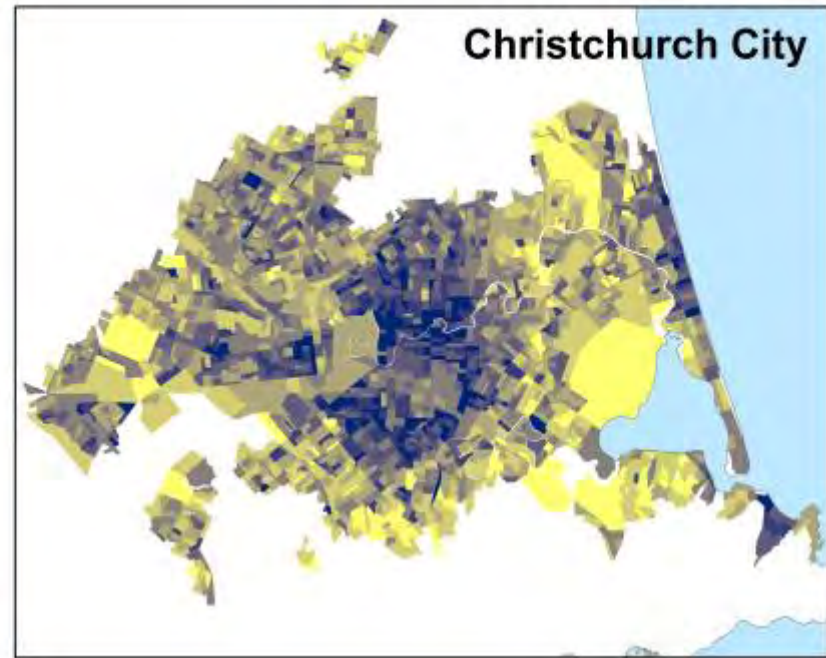
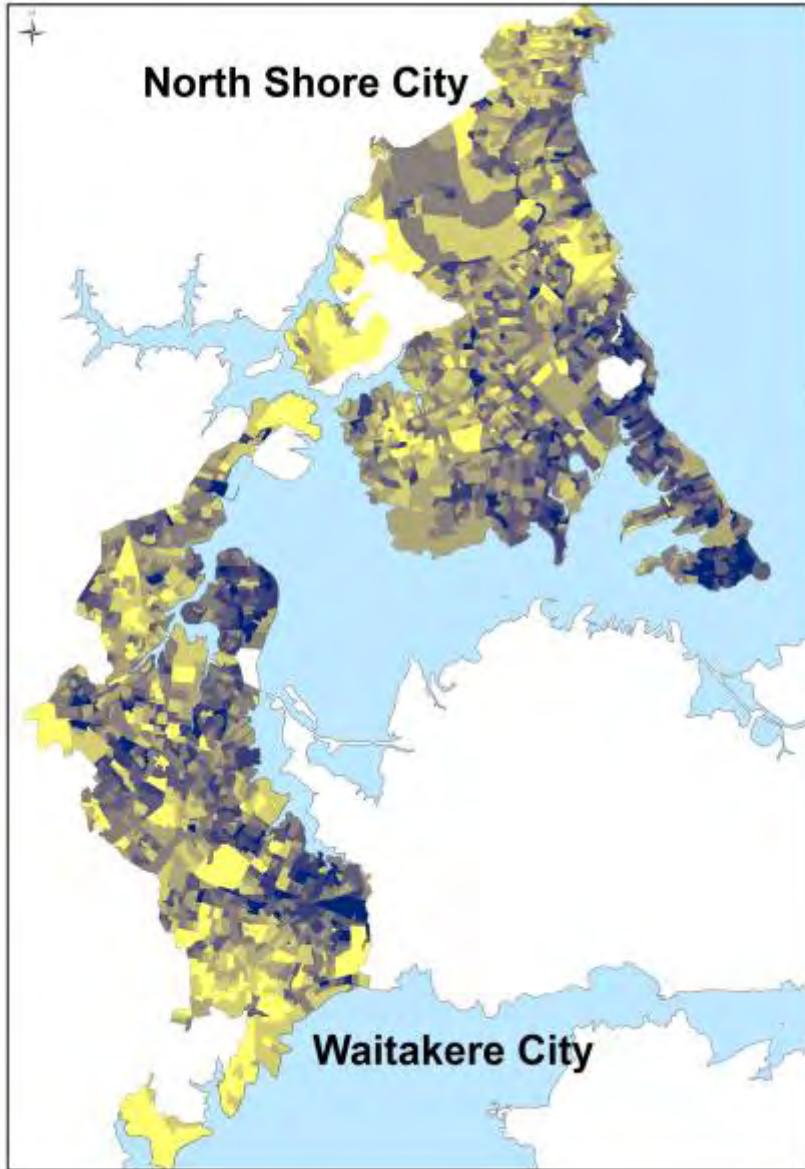
URBAN Study Walkability Index Data Sources

<i>Component</i>	<i>Data source</i>
Street connectivity	Intersections density- road centreline database
Dwelling density	Census
Land use mix	TAs zoning data
Commercial building area to land area ratio	TAs building outlines and zoning data

Walkability Index Issues



Data was the main problem

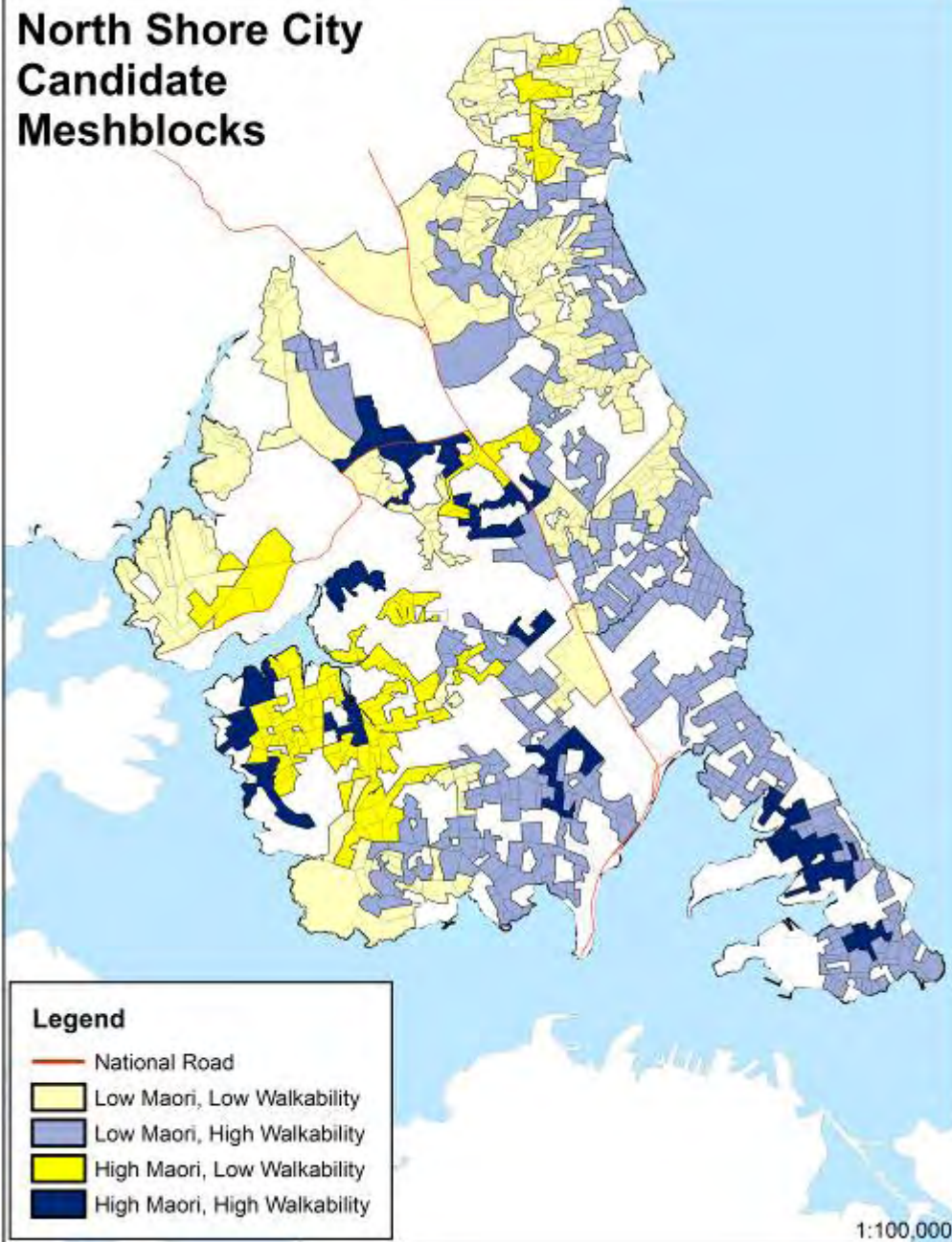


**Walkability Index =
Residential Density +
Street Connectivity +
Land Use Mix +
Retail Area**



Scale: 1:160,000

North Shore City Candidate Meshblocks



Neighbourhood Selection

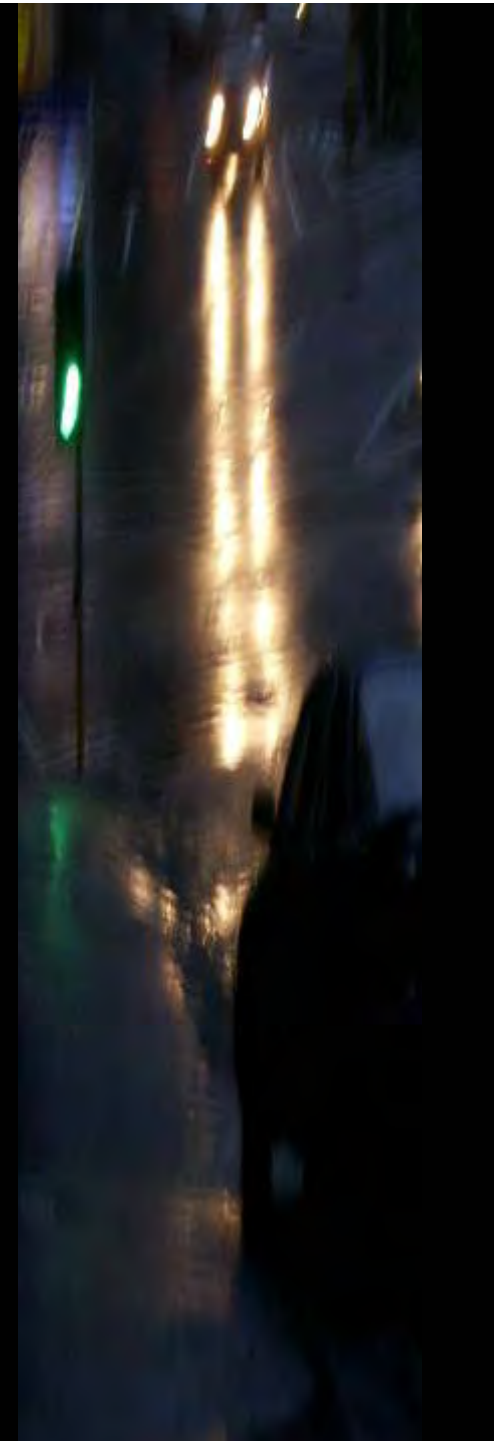
- Select 12 Neighbourhoods in each city:
- 3 Low Maori, Low Walkability
 - 3 Low Maori, High Walkability
 - 3 High Maori, Low Walkability
 - 3 High Maori, High Walkability

streetscape

Environmental audit

SPACES – University of Western Australia

12 street segments per neighbourhood



Kerbs

Poor transition



Smooth transition



Footpaths



Verges



Cyclelanes



Alternative Routes



Traffic Control Devices



Crossing Aids



Graffiti and Vandalism



Eyes on the Street



Views

Nature (wild)



Nature (tended)



Residential



Commercial

What's missing?

Urban design qualities:

Imageability – quality of place that makes it distinct, recognisable and memorable

Enclosure – streets and public places with room-like qualities

Human scale – size, textures etc match proportions of humans (scaled for walking speed not car)

Transparency – seeing human activity beyond the edges of streets

Complexity – the visual richness of place

Clemente and Ewing et al, National Centre for Smart Growth, University of Maryland



