

Measuring Walkability

- Consumer Satisfaction Surveys -



Living Streets Ambassador
New Zealand Walking Conference 2006



What is Walkability?

- It is not the “performance of walking” i.e. John Cleese
- It is the “performance of the environment when walking”
- Performance:
inviting, functional, safe, aesthetic, secure, comfort, convenience, continuity, system coherence, compliance, accessible, pleasant, legible, people populated, legal, seductive, social interaction, convivial, connected...
- Walkability: the extent to which the built environment is walking friendly

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How is walking improved at the moment?

Practitioners consider important:	Local Authority prioritisation:
73% engineering compliance	25% use judgement
71% community perception	23% significant public influence
68% accessibility	17% politically determined
65% safety from traffic	15% benefit/cost
56% personal security	14% other
49% urban design	6% don't prioritise
45% cleanliness	100%

These lists are not complementary

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Provision vs. quality



What is this?



Is it basically this?
Photo Source: Living Streets (UK)

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Do we always get quality right?




add 117 years of (so called) 'improvements' to Reading UK

Photo Source: Intelligent Space Partnership

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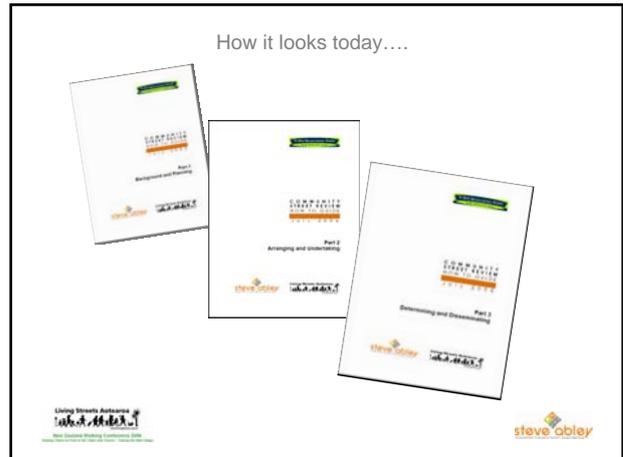


How do you measure walkability?

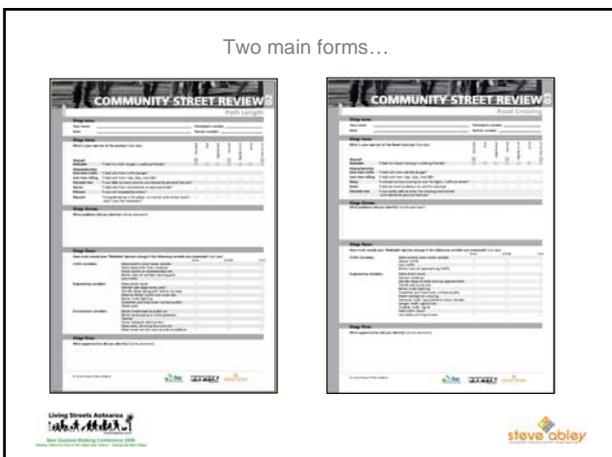
- Walkability is very difficult to measure because it is based on consumer satisfaction i.e. people
- “Count what is countable...measure what is measurable...
What is not measurable, make measurable”
Galileo - (February 15, 1564 – January 8, 1642)
 - “I’m ¾ happy today”
 - ...but what questions do I ask myself to determine happiness?
 - ...do I want to be more ‘happy’ than ‘content’?
 - ...if I’m ¾ happy, are you?
 - ...what would make me more happy?

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- ### How it works...
- Minimum group of 5 participants, minimum age 15 years, no max age
 - "Path lengths" and "Road Crossings"
 - 4 types of user groups
 - Not impaired – can see, are mobile
 - Mobility impaired – can see are not mobile
 - Sight impaired – can not see are mobile
 - Sight and mobility impaired – can not see, are not mobile
 - There are groups within groups
 - Have to do a lot more collecting of data (Land Transport NZ)
 - Have to make level of service calculations easy
-



Road Crossing example

Step one:

Your name: Steve Abley Participant number: 12
 Date: Saturday 4 Nov 2006 Section number: B

Step two:

What is your opinion of the Section? (tick box)

	Very Bad	Bad	Slightly Bad	Neutral	Slightly Good	Good	Very Good
Overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walkable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Characteristics							
Safe from traffic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safe from falling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obstacle free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Efficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pleasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Road Crossing example (cont)

Step three:
What problems did you identify? (write comment)
Hurt when I fell into big pothole

Step four:
How much would your 'Walkable' opinion change if the following variable was improved? (tick box)

	None	A little	A lot
Traffic Variables:			
More priority over motor vehicles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More separation from roadway	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fewer cyclists or skateboarders etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better view of vehicles crossing path	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Less traffic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engineering Variables:			
More direct route	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gentler side slope across path	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gentler slope along path and/or no steps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More or better tactile and visual aids	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better street lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoother and more even surface quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

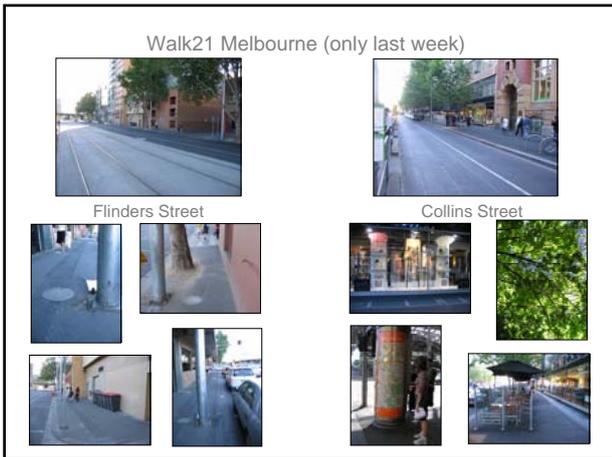
Step five:
What opportunities did you identify? (write comment)
Thought planters were nice but tulips would be better



Walkability descriptors

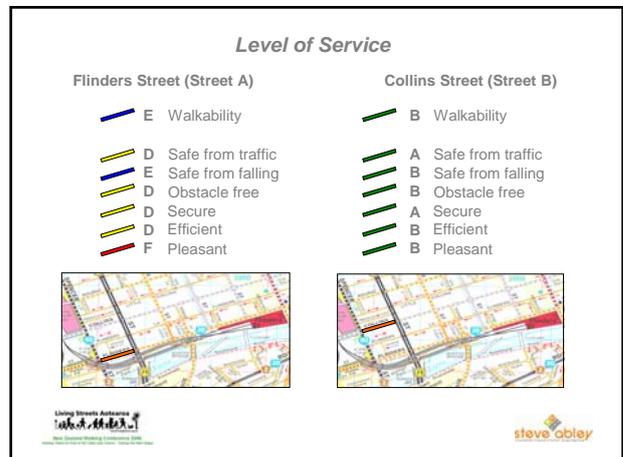
Level of Service Comparisons

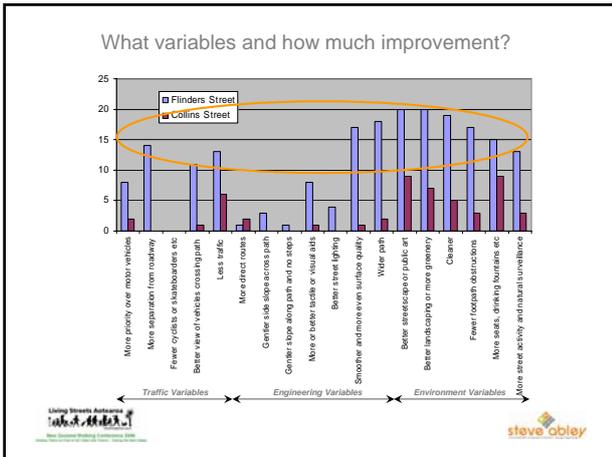
Opinion
Very Good
Good
Slightly Good
Neutral
Slightly Bad
Bad
Very Bad

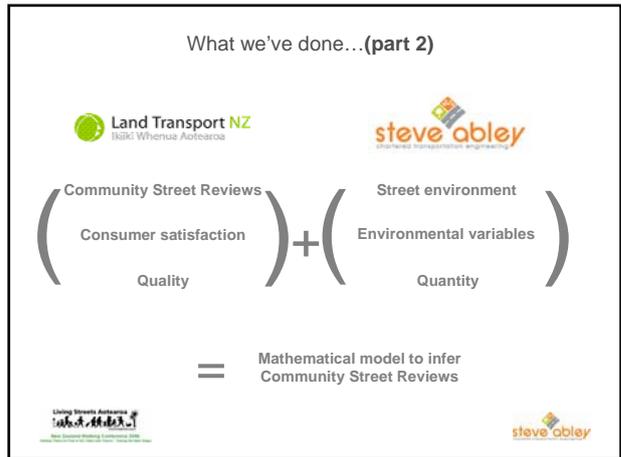
- ### Problems
- | Street A | Street B |
|--|---|
| <ul style="list-style-type: none"> Noisy Rubbish Narrow footpath Uneven footpath Driveways Not sufficient street life Obstacles Holes in footpath Closed up buildings Road works Polluted (suspect emissions) Broken glass Too many levels Overhead safety | <ul style="list-style-type: none"> Noisy Litter Footway width varies Surface variations Lots of vehicles No one stopping to enjoy Lots of people |
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- ### Opportunities
- | Street A | Street B |
|---|--|
| <ul style="list-style-type: none"> Public art on walls Open up buildings Lanes could be more interesting Better view of driveway vehicles Wider footpath Resurface area Shade More control of construction site | <ul style="list-style-type: none"> Public art Volume on the iHub More public seating More greenery Tourist signage Better control of café dining areas Drinking fountains |
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- ### Community Street Reviews
- Are strongly supported by Land Transport New Zealand
 - Need promotion – practitioners need to understand usefulness
 - Are labour intensive – but not necessarily expensive
 - Need experienced operators (especially when so new)
 - Used as transportation planning tool – doesn't replace thinking



- ### Variables in the environment
- Effective width
 - Footpath cross fall
 - Footpath longitudinal fall
 - Area adjacent footpath walkable
 - Adjacent land use
 - Footpath materials
 - Deviation around obstacles
 - Source of smells
 - Quantity of litter
 - Stumbling hazards
 - Height of buildings
 - Distance from moving vehicles
 - Quantity of greenery
 - Shared path
 - Directional information
 - Posted speed limit
 - Street activity
 - Road width
 - Vandalism
 - Detritus
 - Temporary hazards
 - Weather
 - Vehicle speed
 - Density of people
 - Comfort features
 - Utility features
 - Trip hazards
 - Tactile aids
 - On street parking
 - Use of vehicle access ways
 - Visibility to driveways
 - Designed steps
 - Protection from hazards



