Inclusive access matters – measure it

What is accessibility?

Why does it matter?

How do we measure it?

How would measuring it change our decisions?

Tim Hughes

Inclusive access - the top priority

What is it?

Click to edit subtitle

- The purpose of transport is to provide access – movement is for a reason.
- Access is defined as Ease of access to social and economic opportunities for people
- Could also include:
  - access to resource and markets for business.
  - Catchments for location of services
- Top government transport priority

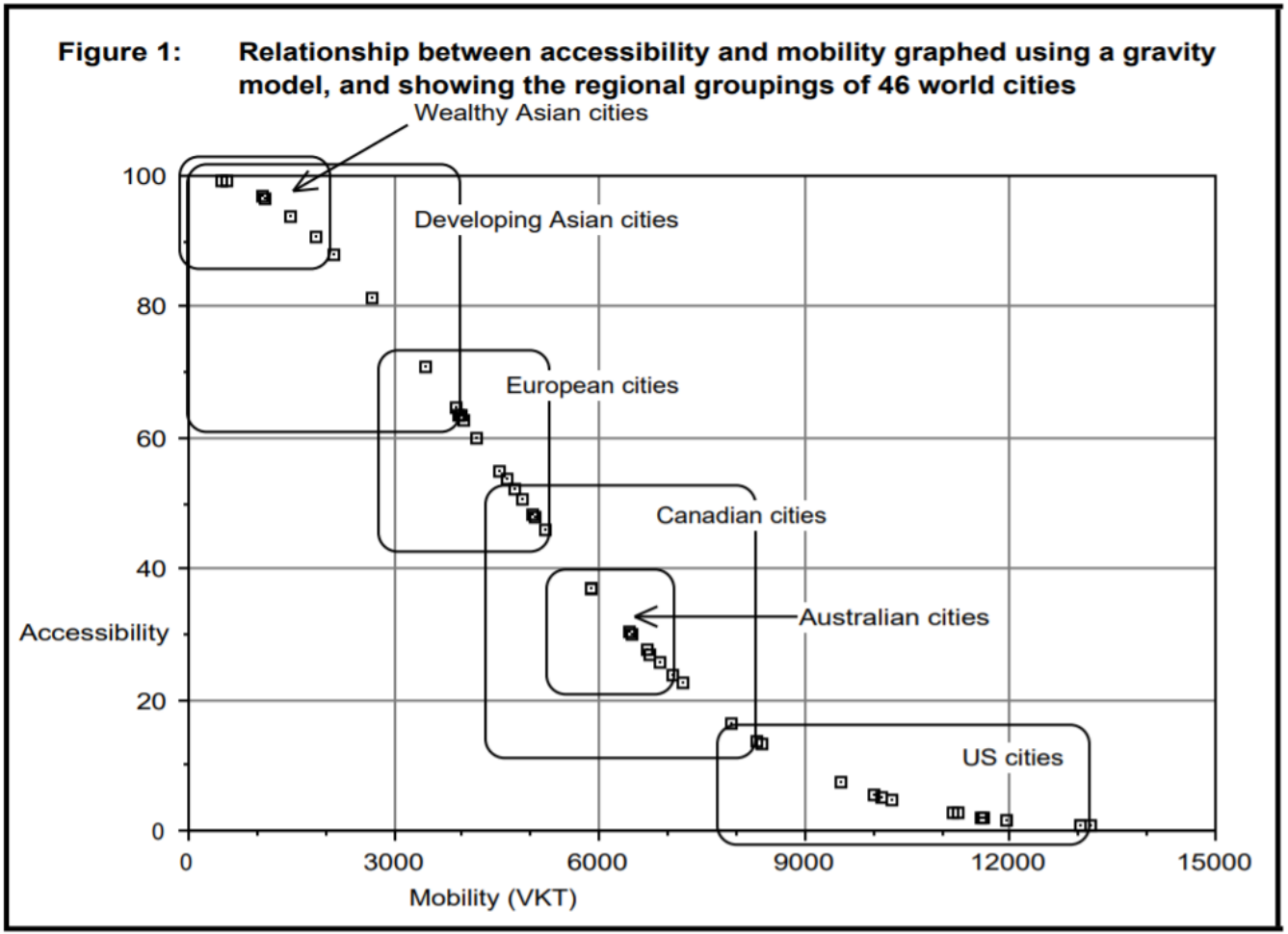
- GPS requires us to improve accessibility and to measure accessibility outcomes.
- I will share some early easy steps so far
- Opportunities to do much more.

Inclusive access - the top priority

What is it?

Click to edit subtitle

- The purpose of transport is to provide access – movement is for a reason.
- We are very good at measuring and modelling traffic movement but very poor at measuring movement by active modes.
- Our process are very poor at measuring transport equity.
- We don’t measure the opportunities missed due to transport difficulties.
- Or the trip you hope you will never have to make.
- Land use change feedback



Source: William Ross; Accessibility and Mobility: the Yin and Yan of planning

We need something better than opposite of VKT

Need for a better indicator for accessibility outcomes from transport and land use changes.

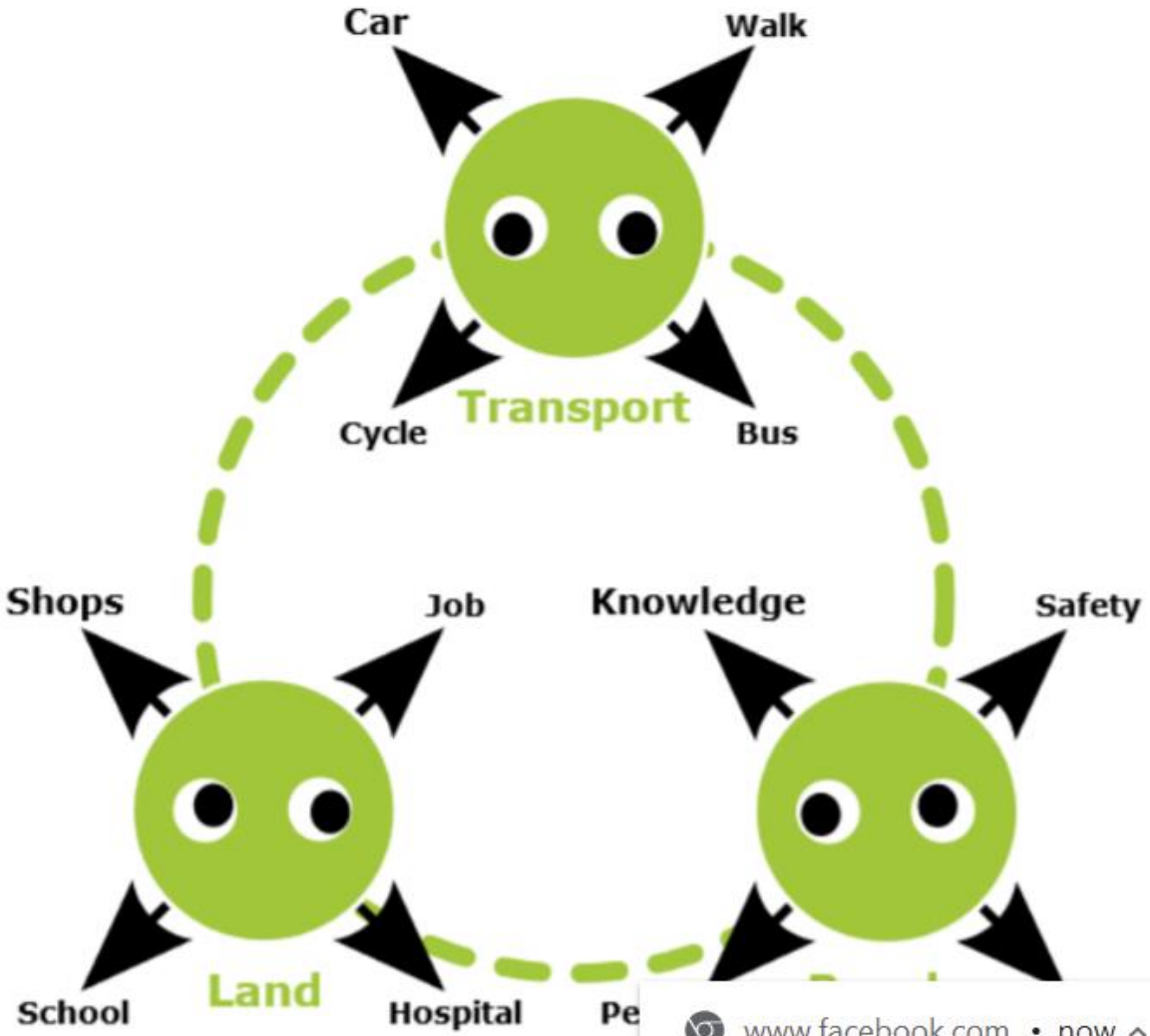
- Existing methods used in economic analysis are based on changes in movement and assume that time savings improve access especially by increasing the number of opportunities.
- But motor vehicle time savings result in destinations shifting.
- Which reduces accessibility for every other mode
- Car accessibility may already be more than optimal.
- Care based measures do not consider equity

Measuring transport outcomes

What is it?

Click to edit subtitle

- Measure what you value and value what you measure
- You manage what you measure.
- “Corporate managers start off trying to manage what they want, and finish up wanting what they can measure.’
- the easy-to-measure drives out the hard, even when the latter is more important
- What gets measured gets managed - so be sure you have the right measures, because the wrong ones kill.
- “Measure what you value and others will value what you measure.”
- So: measure what you value then value what you measure.

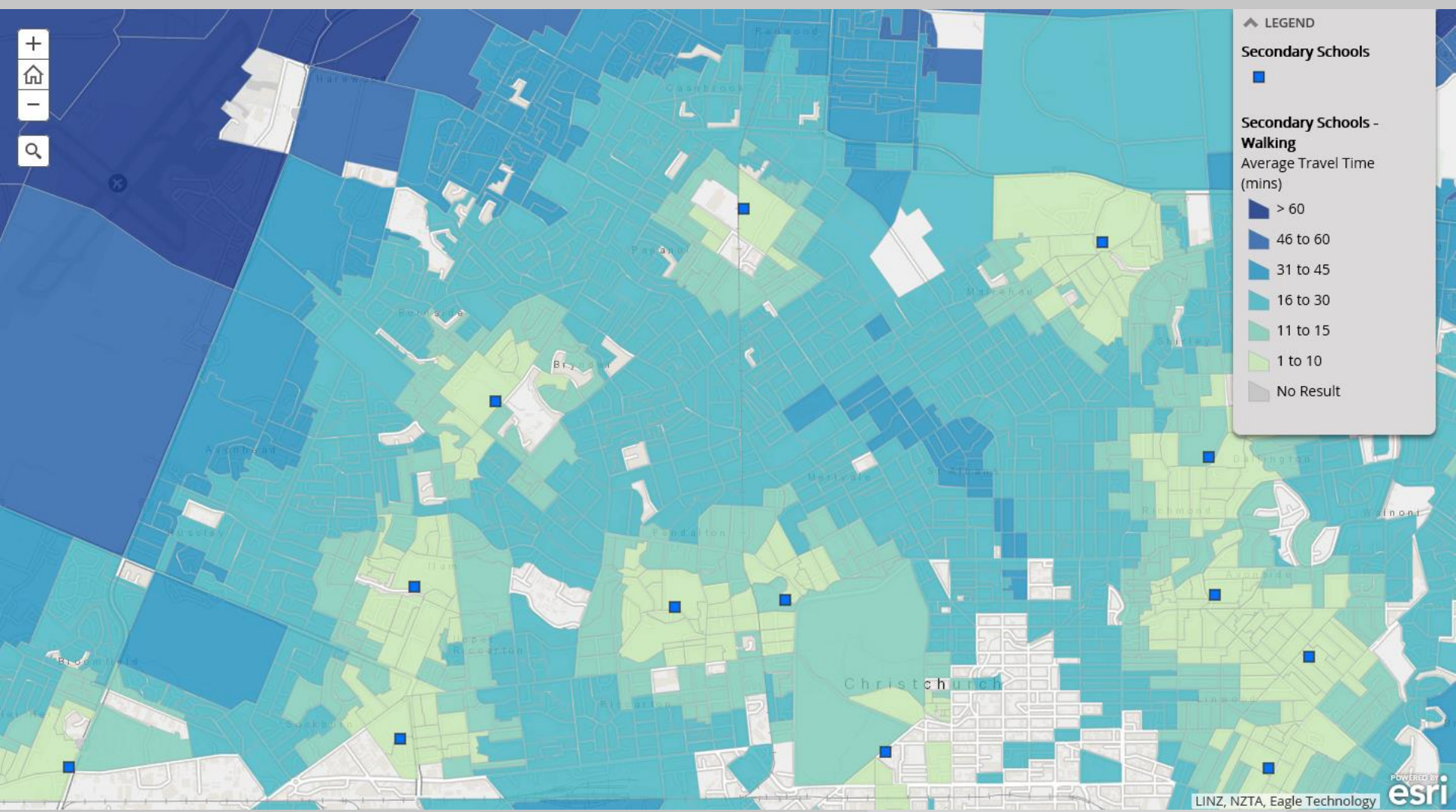


Measuring transport outcomes - so far

What is it?

Click to edit subtitle

- What indicators: depends on what you are using it for:
- Easy to understand,
- Thresholds: can you reach nearest destination within 20 minutes
- How many opportunities can you reach within 20 minutes
-
- Where are the problems - where for whom?
- These measures are not linear - not good for assessing value of change .


LEGEND
Secondary Schools
Secondary Schools - Walking
Average Travel Time (mins)
> 60
46 to 60
31 to 45
16 to 30
11 to 15
1 to 10
No Result
Christchurch
LINZ, NZTA, Eagle Technology
POWERED BY esri

Christchurch

Population: 331,767

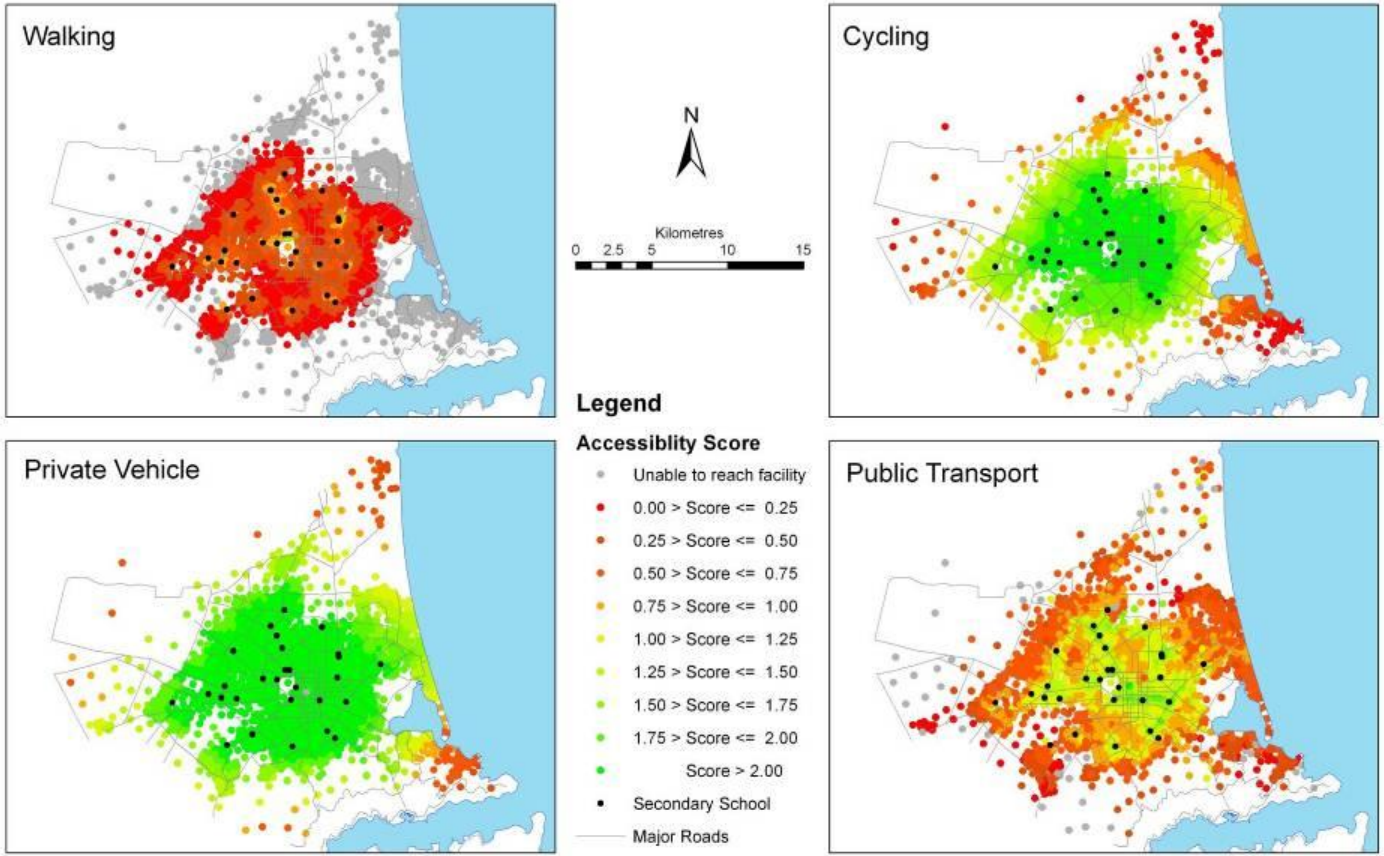
	Within 15 Minutes (%)	Within 30 Minutes (%)	Within 45 Minutes (%)	Within 60 Minutes (%)
Secondary Schools				
Bicycling	83	95	97	98
Driving	97	99	100	100
Transit	44	89	96	97
Walking	24	65	80	87
Intermediate Schools				
Bicycling	97	99	100	100
Driving	100	100	100	100
Transit	73	97	98	99
Walking	48	87	96	99
Primary Schools				
Bicycling	98	99	100	100
Driving	100	100	100	100
Transit	85	97	98	99
Walking	70	95	98	99

Measuring transport outcomes

What is it?

Click to edit subtitle

- In project and programme assessment
- What is the value of accessibility changes to people.
- Utility measure.



abley transportation consultants

Access to Secondary Schools
Christchurch City

Project Number: 3588
Date: 21 May 2009

File Name: MB_SecondaryEd.mxd

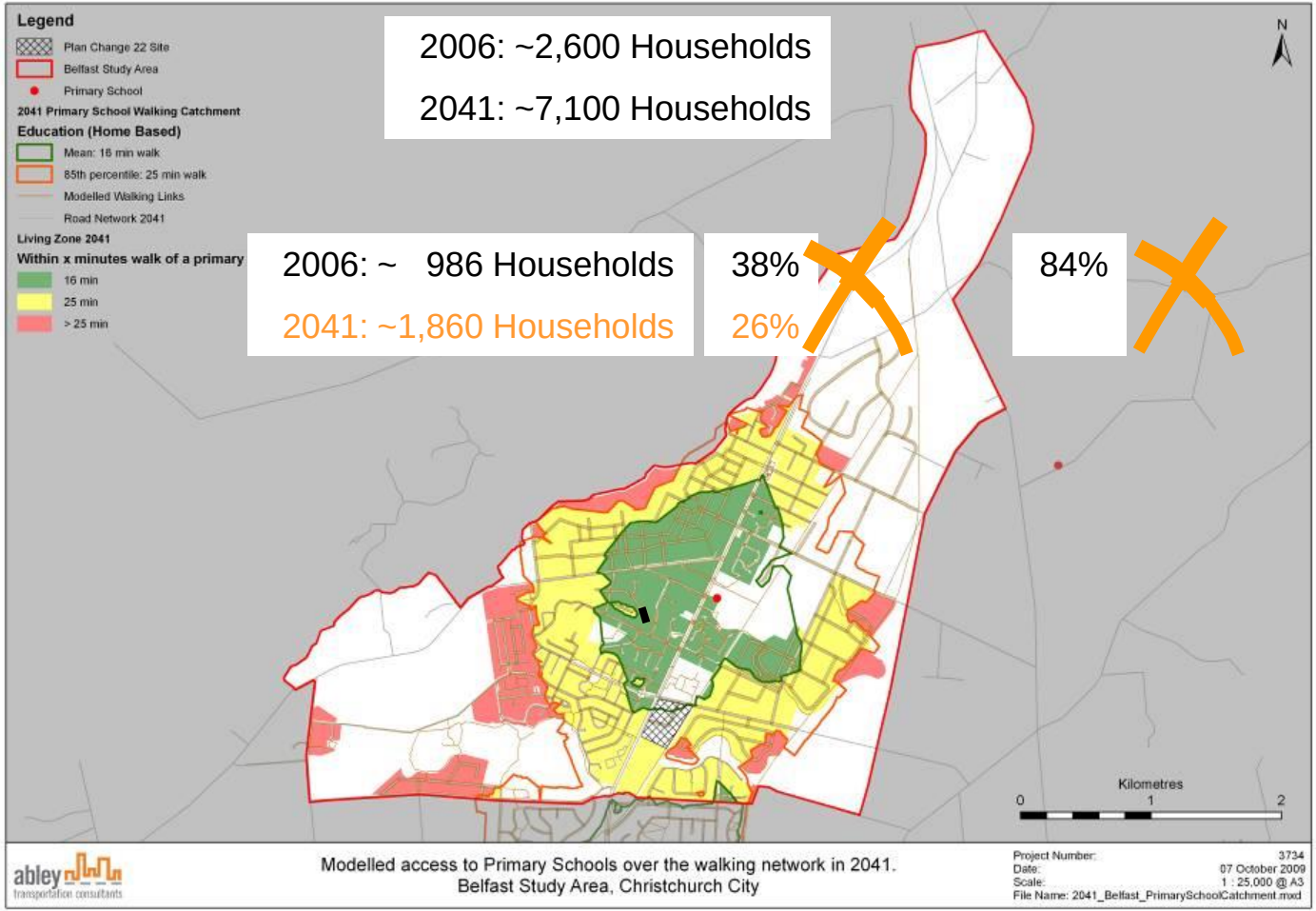
A utility base indicator proxy for economic evaluation

A mode comparison score

- Comparing non-car to car modes.

A potential composite score ?

- The value of each destination
- The generalised cost of getting to the nearest destination.
- The value of a choice of destination
- The value of mode choice


Legend
Plan Change 22 Site
Belfast Study Area
Primary School
2041 Primary School Walking Catchment
Education (Home Based)
Mean: 16 min walk
85th percentile: 25 min walk
Modelled Walking Links
Road Network 2041
Living Zone 2041
Within x minutes walk of a primary
16 min
25 min
> 25 min
2006: ~2,600 Households
2041: ~7,100 Households
2006: ~ 986 Households
2041: ~1,860 Households
38%
26%
84%
N
Kilometres
0
1
2
Modelled access to Primary Schools over the walking network in 2041.
Belfast Study Area, Christchurch City
Project Number: 3734
Date: 07 October 2009
Scale: 1 : 25,000 @ A3
File Name: 2041_Belfast_PrimarySchoolCatchment.mxd