Benefits and Costs of Inclusion in Transport

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AGENDA

• Our context
• Policy objectives in transport
• Economics of inclusive transport
• Asking different questions
• Using different data
• Implications for transport in New Zealand
Our context

- A new approach
- Asking different questions
- Practical changes that professionals can readily adopt
Policy objectives in transport

- Some well-defined, some not
  - Example of road safety
  - Visions, measurement, data
What is accessibility?

- The ability to participate
- Vague and undefined in transport
- No visions, no targets, no data
- We have a problem
Our research question

- Can we measure and value participation in a way that demonstrates inclusiveness?
- What is not measured is not valued
Why research accessibility?

- To be more inclusive
- Currently vague and undefined in transport
- No visions, no targets, no data
- It’s going to get worse
Walking is...

- A part of most journeys
- An urban and rural challenge
- Difficult to plan for
Pedestrian networks are not inclusive yet
- Design and operation should work for all humans in all states
  - We actively discourage participation if it compromises other objectives: we do not make a transparent trade-off
There is no economics of inclusion in transport

- We rely on design standards and guidelines
- We do not value participation in dollars like we value human life
Counting cars
Vs
Providing for people
- Tradition: roads, vehicles, speeds
- Participation: communities, activities, mobility
We need to count something

- Start by acknowledging failure
- Look to the weakest part of the system: indicator population
Kiwi Transport Survey 2015

- 2954 responses
- 1539 (52%) aged over 65 years
- 2032 (69%) use a mobility aid
- 2383 (81%) identify with disability
Proportion who report participating in the activity at least once per week:

- Visit a family member in their home: 50%
- Meet someone at a cafe or restaurant: 30%
- Go to a local park, garden or swimming pool: 20%
- Go to a gym: 10%
- Attend a church service: 20%
- Go to the library: 10%

Use a mobility aid
Do not use a mobility aid
Case Study: Five Cross Roads, Hamilton

- Suburban intersection
- Tradition: what can we justify?
- Alternative: who is participating here?
Case Study: Five Cross Roads, Hamilton

- Improvement to some crossings
- Increase in participation
- Increase in numbers of people using mobility aids
Economic benefit

- More people: increased opportunity
- Reduced trip cost: walking vs taxi
Community benefits

- Individuals: health, social interaction, employment, shopping, carers
- More inclusive community
Industry benefits

- Return on investment
- Redirects transport as enabler
- Link to genuine cross-sector conversations
- Invites more participatory process
Estimating costs of trips not made

- Mobility aid user proportion can be estimated
- Areas of greatest need can be prioritised
- Invites more transparency in decision-making
We can predict future community structures

- Road networks are planned with traffic forecasts
- Transport planning does not usually consider demographic change
“the work will make it easier for everyone, including those with mobility aids…”

Improvements made to central city roundabout

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Implications

- Local and regional planning improvements
- Creating a sub-industry for improvement
- Insights into complex, cross-sector problems
RECOMMENDATIONS

• Measure the contribution of transport to enabling participation

• Transport is based on engineering which relies on data and process:
  Count visibly identifiable beneficiaries of accessible environments

• Improve our understanding of the benefits of inclusive participation to
  individuals, communities, economies and broader society:
  stated/revealed preference research
Discussion

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