In the town & in the country, can we make a real difference for the mobility impaired

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In the town & in the country…

...can we make a real difference for the mobility impaired

This paper presents primary research into the benefits of an urban tram scheme for mobility impaired users and contrasts this with a rural bus scheme... but first asking whether current appraisal approaches adequately take into account the potential benefits for such users at the planning stage.
Agenda

- Why this subject area?
- Appraising transport schemes in both rural and urban area
- Evaluation of scheme impacts...
  - Urban: Nottingham Express Transit
  - Rural: InterConnect bus service in rural Lincolnshire
Why this subject area?
Appraising transport schemes
Evaluation of scheme impacts
In the town & in the country…

Why this subject area?
- Moderate proportion of travellers are likely to have some mobility impairment
- Limited understanding in transport planning & operating community?
  - extent of travel, motivation and benefits of major investment
- Possible contrasts between urban and rural areas

Evolution of facilities
- Access used to be engineering-led
- New technologies have and continue to improve access... but this is not everything
- UK Disability Discrimination Act requirements are unfunded and not substantiated in CBA terms... impacts on scheme development
In the town & in the country…

Key Definitions
- Mobility impaired
  - for the survey elements - clear form of impairment
  - part-proxy for some social inclusion issues
- Appraisal
  - ex-ante assessment of potential impacts
  - covered well by guidance, even if the guidance does not cover the issue well
- Delivery... measured through Evaluation
  - ex-post reviews of actual outcomes
  - new guidance prepared, but not yet released
Why this subject area?
Appraising transport schemes
Evaluation of scheme impacts
Appraising transport schemes

Major Scheme Appraisal
- Potential impacts
- Measuring against a wide range of objectives
  - Government Objectives
  - NATA/Shared Priorities
  - Regional/Local Objectives
- Standard procedures across major schemes in England and Wales (WebTAG)
  - Equity arguments
  - Comparability

NATA issues
- Where and how to include social inclusion and mobility impacts
- Argument that CBA includes benefits as user time savings
- Coverage under several NATA objectives
- Over-arching issue, but is it neglected?
Appraising transport schemes

Other (Smaller Scale?) Appraisal
- Need to fit within the NATA framework
- Local focus.. meeting local & funding agency objectives
- For Lincolnshire Interconnect
  - improve access to essential services
  - increase travel opportunities
  - achieve cross-sector benefits
  - target subsidies more effectively
  - improve rural quality of life
Appraisal processes and issues

Appraisal Processes
- Pre-NATA
  - Emphasis on Restricted Cost Benefit Analysis
    - proxy approaches
    - avoided costs
  - Qualitatively
- NATA
  - Quantatively
  - Qualitatively

Maynard Research
- Incorporation of disabled access to three tram projects
  - disabled access not really accounted for
  - emphasis on costs rather than benefits
  - greater emphasis during construction
  - experience gained is transferred in design, but not in appraisal

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Appraisal processes and issues

Quantification of Benefits: User Benefits

- Little, often.........................
  - Regular travellers
  - Marginal changes
  - Vast majority

- Large, infrequent.............
  - Infrequent travellers (for now)
  - Potentially significant changes
  - Small minority (or are they?)

- Key issues........
  - extent of current travel by travellers groups
  - barriers to travel, physical and psychological
  - understanding potential demand and benefits
Appraisal processes and issues

Appraisal Processes
- Continuing evolution
  - improvements to treatment in modelling and appraisal?
- DfT: UG320 Research
  - considered how social inclusion could be included in modelling
- Further movement likely

UG320 Research
- Notes deficiencies in current modelling and appraisal processes
- Issues considered...
  - area/population-based segmentation, accessibility concepts
  - extended appraisal
  - identified need for long-term research, including ‘measurable indicators’
Quantifying mobility benefits in appraisal

Emphasis on Measuring Accessibility
- Accessibility is narrowly drawn in NATA
- Development of accessibility strategies, with supporting tools – such as accession
  - measures provision of transport services...
  - but does this miss out on the whether services are actually available or useful...
    - linkages, timing, fare levels
    - importance of these issues maybe critical in rural areas where mode/facility alternatives don’t exist
  - tailoring for specific impacts is possible, but this may increase data collection/assimilation burden
Quantifying mobility benefits in appraisal

Emphasis on Further Quantification
- Increasing requirement for benefit monetisation
  - Offers increased clarity?
  - Rebalancing dominance of ‘economics’ (TEE), but also makes it more important and develops implicit weightings between objectives
- Key question... what benefits to include and how?
  - Well understood?
  - Suitable proxies?
- Needs strong evidence base
  - But is this available?
Appraising transport schemes

Appraisal Conclusions

- Past appraisals have not been fully inclusive and current appraisals are still deficient
- Evolution of appraisals may assist identifying impacts, but only against a moving background
- Accessibility or other proxies may be suitable for developing quantified approach, but there are potential issues to deal with in both modelling and appraisal... key impacts may not just be about links to facilities
- Understanding of specific mobility impacts may be limited and synergy between impacts important - needs further research before linking to appraisal?
Why this subject area?
Appraising transport schemes
**Evaluation of scheme impacts**
Scheme evaluation: one component

Mobility Impaired Surveys:

**NET Survey** - Quantitative & Qualitative assessment of the impact of NET Line One for the mobility impaired

**IC Survey** - Quantitative assessment of the impact of IC for rural residents (inc mobility impaired)

**Issues**

- Have the new services led to increased mobility?
- extent of travel compared to before the system opened and why behavioural change
- impact of getting out and about more (Quality of Life improved?)
Town: Nottingham Express Transit
Country: Lincolnshire InterConnect

Connecting our county

[Map showing various locations in Lincolnshire, including Scunthorpe, Grimsby, Gainsborough, Lincoln, Sleaford, Boston, Grantham, Bourne, Stamford, Peterborough, and King's Lynn.]
Evaluating NET and IC

Demand/Potential Demand:

**NET Demand**  (5-6% mobility impaired)
- 400,000 journeys p.a. by people with an obvious mobility impairment (*50% higher if self-categorised*)
- On a typical Saturday, 1000 buggies; 500 difficult walking/bags; and ~40 wheelchairs

**IC Catchment**  (26% mobility impaired)
- 14,000 population served by IC
- ~3,500 mobility impaired people
Evaluating NET and IC

Sample Sizes:

**NET Survey** (N=167 mobility impaired)
- 26 wheelchair users
- 44 difficulties walking
- 97 with buggies and heavy bags

**IC Survey** (N=107 mobility impaired)
- 410 residents in total
- 89 disabled or long-term illness
- 18 regularly travelling with buggies and heavy bags
Impacts of NET

Impact of NET on Wheelchair Users (1):

- Change in travel behaviour:
  - 83% get ‘out and about’ more often than before

- Types of ‘new’ journey:
  - 80% more shopping trips; 45% more visits to friends/relatives; 45% more leisure activities

- Impact on Quality of Life
  - 75% have considerably increased social interaction
  - 96% have improved Quality of Life (QoL)
Impacts of NET

Impact of NET on Wheelchair Users (2):

- What has made all the difference?
  - 95% because of ease of boarding and alighting
  - 65% NET enables them to travel independently

- What do wheelchair users really think of NET?

  “More freedom to get out and about on my own”
  “It’s been a God-send to me, this Tram has!”
  “It’s a boon for anyone in a wheelchair”
  “Easier mobility – I cannot use buses”
  “Able to get about and visit friends”
Impacts of NET

Impact of NET on Those with Difficulty Walking(1):

- Change in travel behaviour:
  - 60% get ‘out and about’ more often than before

- Types of ‘new’ journey:
  - 90% more shopping trips; 38% more visits to friends/relatives; 33% more leisure activities

- Impact on Quality of Life
  - 52% have considerably increased social interaction
  - 91% have improved QoL
Impacts of NET

Impact of NET on Those with Difficulty Walking(2):

- What has made all the difference?
  - 90% because of ease of boarding and alighting
  - 52% NET enables them to travel independently

- What do those with difficulty walking think of NET?

  “With my difficulty walking, it’s easy to hop on and off tram”
  “You meet a lot of people and go to lots of places”
  “The Tram has been a great boost to my life”

  “I live on my own so I travel into town on Tram everyday to get out of the house and meet people”
Impacts of NET

Impact of NET on Those with Buggies/Bags (1):

- Change in travel behaviour:
  - 42% get ‘out and about’ more often than before

- Types of ‘new’ journey:
  - 75% more shopping trips; 61% more visits to friends/relatives

- Impact on Quality of Life
  - 62% have considerably increased social interaction
  - 78% have improved QoL
Impacts of NET

Impact of NET on Those with Buggies/Bags (2):

- What has made the difference?
  - 89% because of ease of boarding and alighting
  - 59% because it is so much quicker
  - 46% because it is cheaper

- What do those with buggies/heavy bags think of NET?

  - "Tram is much better so come into town shopping much more"
  - "takes you to lots of places. And lots of space for buggies"
  - "children enjoy the journey – it’s exciting [for them]"
  - "more user-friendly for Mums with pushchairs"
  - "use Tram [as] bus does not have low floors"
Making a difference .......... in the Town

Overwhelming evidence suggesting huge impact:
- NET has increased community participation leading to significant improvements in Quality of Life......

... much more so the more impaired travellers are

<table>
<thead>
<tr>
<th>NET Line One: Mobility Impaired Survey</th>
<th>Quality of Life Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get out &amp; about more</td>
<td>wheelchair users</td>
</tr>
<tr>
<td></td>
<td>83%</td>
</tr>
<tr>
<td>Get out &amp; about monthly or more:</td>
<td></td>
</tr>
<tr>
<td>- before NET</td>
<td>79%</td>
</tr>
<tr>
<td>- with NET</td>
<td>100%</td>
</tr>
<tr>
<td>'Considerably' increased social interaction</td>
<td>75%</td>
</tr>
<tr>
<td>Improved Quality of Life</td>
<td>96%</td>
</tr>
</tbody>
</table>
## Making a difference .......... in the Town

### Wider Impacts of NET Line One:

<table>
<thead>
<tr>
<th><strong>Access:</strong></th>
<th>“Easier mobility – I cannot use buses”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of Life:</strong></td>
<td>“It’s given me back my independence”</td>
</tr>
<tr>
<td><strong>Social Impact:</strong></td>
<td>“I spend 2-3 hours every day on the Tram [to get out of the house]”</td>
</tr>
<tr>
<td><strong>Cost:</strong></td>
<td>“Cheaper than having to use a taxi”</td>
</tr>
<tr>
<td><strong>Mode Switch:</strong></td>
<td>“Easier to use the Tram to the City. Before, I used car”</td>
</tr>
<tr>
<td><strong>Community Benefits</strong></td>
<td>“My father had a stroke six months ago and is in a wheelchair. The tram has helped him considerably”</td>
</tr>
</tbody>
</table>
Making a difference .......... in the Country

InterConnect has considerable impact in rural areas but NOT for the Mobility Impaired particularly:

<table>
<thead>
<tr>
<th>Rural Residents</th>
<th>% Improved QoL</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Residents</td>
<td>32%</td>
</tr>
<tr>
<td>Elderly Women</td>
<td>55%</td>
</tr>
<tr>
<td>No Car Available</td>
<td>60%</td>
</tr>
<tr>
<td>Young</td>
<td>58%</td>
</tr>
<tr>
<td>Disabled</td>
<td>35%</td>
</tr>
<tr>
<td>Buggies / Bags</td>
<td>34%</td>
</tr>
</tbody>
</table>
Evaluation of scheme impacts

Summary Conclusions on town & country schemes:

- IC has fundamentally changed lives in rural areas
  - especially the young, elderly women & no car avail.
  - MI have benefited less so. Potential – but vehicles are not reaching those in the most remote regions

- NET has also fundamentally changed people’s lives
  - especially wheelchair users, those with diff. walking – accessible vehicles has been the main difference!
  - vehicle accessibility is a key driver but other system attributes have contributed to increased travel for other MI people
Evaluation of scheme impacts

It makes all the difference!

But are we appraising and then evaluating these benefits properly?
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