Feeder systems

Jose Manuel Vega, University of York

Take up seminar #1 • Krakow, Poland • 21 January 2015
1. Smartmove context

- Public transport in peripheral rural areas
- Demographic dynamics
- Unappealing PT features
- Subjective barriers
- Low PT usage
- Increasing car dependence

Jose Manuel Vega, University of York
Take up seminar #1 • Krakow, Poland • 21 January 2015
2. Relevance of feeder systems

Pillars of AMC campaigns

- Public transportation lines
- Feeder systems

Dialogue marketing and active measures
3. Concept

Feeder system are the different ways of linking a specific region with the back bone PT system, usually a bus or train network or a combination of both.

Usedom region, Germany

Source: www.inmod.de
4. Feeder systems categorization

**Individual/public**

- **Individual**
  - **Motorised**
  - **Non-motorised**
    - Park and ride
    - Bike and ride
    - Walking together
  - Fixed route transport
    - Individual transport system combined with a FRT
- **Public**
  - Demand responsive
    - Dial a bus
  - Flexible/hybrid
    - Route deviation services

**Means of transportation**

- Bike and ride
- Walking together
- Park and ride

Jose Manuel Vega, University of York
Take up seminar #1 • Krakow, Poland • 21 January 2015
5. Examples

5.1 Bike & ride

<table>
<thead>
<tr>
<th>Type of transport system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual non-motorized transport systems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean of transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bikes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users can cycle for the first mile of their trips to the parking lots where they can safely lock their bicycles and continue their trip to the city centre taking the fixed route bus services offered at the bike &amp; ride terminal.</td>
</tr>
</tbody>
</table>

Examples

- Waldviertel region (Austria)
- Almada (Portugal)
- York (UK)
5.2 Walking together ("Pedibus")

<table>
<thead>
<tr>
<th>Type of transport system</th>
<th>Mean of transport</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual non-motorised transport systems</td>
<td>Walking</td>
<td>Students are taken to school on foot by adults (on a voluntary basis). The service is organised like a public bus, including stops, routes and timetables etc.</td>
</tr>
</tbody>
</table>

Examples:

- Cities of Riccione and Loano (Italy)
### 5.3 Intermodal transit scheme (bicycles / pedelecs combined with buses or trains)

<table>
<thead>
<tr>
<th>Type of transport system</th>
<th>Mean of transport</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual transport system (pedelecs) combined with a fixed route transport (FRT)</td>
<td>Environmental Friendly Buses and pedelecs</td>
<td>An Intermodal transit scheme is a feeder system scheme combines environmental friendly bus with rental pedelecs. One single tickets allows to rent a pedelec from the home village to the pedelec station, where the traveller could park it and catch a bus for the reminder part of the trip.</td>
</tr>
</tbody>
</table>

#### Examples

- INMOD (Lübeck, Germany)
- Wachau railway line: bike+ rail (Waldviertel, Austria)
### 5.4 Dial a bus

**Examples:**

- Publicar (Switzerland)
- Multibus and Taxibus (Germany)
- Personal bus (Italy)

<table>
<thead>
<tr>
<th>Type of transport system</th>
<th>Demand responsive transport (DRT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean of transport</td>
<td>Buses and minibuses</td>
</tr>
<tr>
<td>Description</td>
<td>Dial-a-bus services adapt their itinerary and time table to suit a particular transport demand.</td>
</tr>
<tr>
<td></td>
<td>Dial-a-bus services exist in a wide variety of schemes.</td>
</tr>
</tbody>
</table>
5.5 Route deviation services

<table>
<thead>
<tr>
<th>Type of transport system</th>
<th>Flexible transport services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean of transport</td>
<td>Vans and minibuses</td>
</tr>
<tr>
<td>Description</td>
<td>Vehicles under route deviation schemes operate on a regular schedule along a well-defined path, with or without marked bus stops and deviate to serve demand responsive requests within a zone around the path. Deviations are incidental to a primarily fixed-route mode of operation or an essential and prominent feature of the operation.</td>
</tr>
</tbody>
</table>

Examples:

- CATC buses (Wyoming, USA)
6. Final conclusions

1. Integration between PT services and feeder systems is needed in order to provide a comprehensive transport network that could fill the gaps of conventional transport in rural areas.

2. Design and development of FS at a regional or national level is preferred to local.

3. Usage of technologies that allow real time communication to and from users to enhance flexibility is recommended.
4. **Key stakeholders**, including end-users, should be involved from the service design stage.

5. **Partnerships** among transport providers might enhance the integration of different transport services.

6. **Marketing and promotion efforts** are essential for guarantee the success of a scheme; e.g. kick-off events, special tours or marketing at soccer games.

7. Define a clear scheme **branding**.

8. Understand the **key role that FS** have in the design and implementation of active measures.
Thanks for listening!

Jose Manuel Vega Barbero

Stockholm Environment Institute at the University of York
Jose.vegabarbero@york.ac.uk