Mobility groups and their needs

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Background: Changes in mobility needs

- Individualization in people's lifestyles and attitudes
- Consequence: daily activity patterns, time use and travel behaviour more diverse, less predictable
- Transport planning: more emphasis on operating the existing network + demand management
User segmentation

• Method borrowed from marketing
• E.g. road authorities, ministries of transport and municipalities in different countries have segmented people and their mobility needs
• Why? To find out public transport user groups; to gain understanding for transport policy
• How? Often based on combination of qualities: income, lifestyle, residential area, attitudes, mode use...
Demography: age, gender, family size, physical disabilities

Employment, income

Land use, type of residential area

Lifestyle, consuming patterns

Values, attitudes

Car ownership, supply of transport infrastructure and modes

Mobility patterns
How?
For what purpose?
How much?
How often?
Where?
When?

Preferences
Accessibility
Travel time / Speed
Flexibility
Punctuality
Traffic safety
Environment
Low costs
Comfort
Our research project

• "Personal mobility needs" (2006), financed by Finnish Road Administration
• Aim of the study: to identify user segments and describe their travel needs
• The data used: Finnish National Travel Survey (www.hlt.fi/english)
Three anchors of daily life

Two of the anchors bind one's daily time use differently in different stages of life:

- Family/community time
- Work-related time
- Leisure time

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Leisure time

Family/community time

Work-related time

Leisure time
Five mobility groups

1) Children and teenagers  
2) The family-bound  
3) The family- and work-bound  
4) The work-bound  
5) The independent
The independent
The work-bound
The family- and work-bound
The family-bound
Children and teenagers
# Mobility patterns of the groups

<table>
<thead>
<tr>
<th></th>
<th>Work-related trips (km/day)</th>
<th>Family trips (km/day)</th>
<th>Leisure-related trips (km/day)</th>
<th>Total (km/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children and teenagers</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>The family-bound</td>
<td>3</td>
<td>10</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>The family- and work-bound</td>
<td>26</td>
<td>5</td>
<td>13</td>
<td>44</td>
</tr>
<tr>
<td>The work-bound</td>
<td>21</td>
<td>3</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>The independent</td>
<td>2</td>
<td>5</td>
<td>16</td>
<td>23</td>
</tr>
</tbody>
</table>
Weekdays (from Monday to Friday)

- **Hour of the day**: 0 to 24
- **Share of trips**: 0% to 14%

**Graph Key**:
- Orange squares: children and teenagers
- Red circles: the family- and work-bound
- Black squares: the family-bound
- Blue circles: the work-bound
- Green crosses: the independent
Weekends (Saturday and Sunday)

- **Share of trips**
  - **Hour of the day**
  - Share of trips (%)

- **Categories**
  - Children and teenagers
  - The family- and work-bound
  - The family-bound
  - The work-bound
  - The independent

- **Graph description**
  - The graph shows the share of trips for different categories throughout the day.
  - The highest share of trips is observed during the noon hours, with a peak around 12 PM.
  - The share of trips decreases significantly towards the evening and night.
  - Children and teenagers show a higher share of trips during the day compared to other categories.
  - The family- and work-bound category has a consistent share of trips throughout the day.
  - The family-bound category has a peak share of trips in the morning.
  - The work-bound category shows a lower share of trips compared to the other categories.
  - The independent category has a varied share of trips, with a peak in the afternoon.

- **Conclusion**
  - The data indicates a significant variation in trip sharing across different categories throughout the day.
  - The highest activity is observed during the day, with a decline towards the evening and night.
  - Children and teenagers have a higher share of trips, especially during the day.
  - The family- and work-bound category maintains a steady share of trips.
  - The family-bound category peaks in the morning.
  - The work-bound category has a lower share of trips.
  - The independent category has a varied share, with a peak during the afternoon.
Future trends in Finland

• Here only demography taken into account: forecasts based on the size of population groups
• The amount of "the independent" grows fastest
• Less work related trips
• A bit more leisure trips, but even more family related trips
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Population of Finland</td>
<td>5.5 million</td>
<td>3.7 %</td>
<td>2.3 %</td>
</tr>
<tr>
<td>Work-related trips</td>
<td>4.3 million</td>
<td>-7.7 %</td>
<td>-11.0 %</td>
</tr>
<tr>
<td>Family trips</td>
<td>3.4 million</td>
<td>5.7 %</td>
<td>3.3 %</td>
</tr>
<tr>
<td>Leisure-related trips</td>
<td>6.3 million</td>
<td>1.5 %</td>
<td>-1.7 %</td>
</tr>
<tr>
<td>All trips</td>
<td>14.1 million</td>
<td>-0.3 %</td>
<td>-3.4 %</td>
</tr>
</tbody>
</table>
Conclusion

• Comparison to other countries - are these trends similar in whole Europe?

• Consequences for road and transport planning
  - User segmentation is a useful tool in assessing users' varying needs more deeply
  - More research needed on how the "family anchors" affect travel behaviour