The role of accessible transport in fostering tourism for all

Roundtable on
The Economic Benefits of Improved Accessibility to Transport Systems
Paris, OECD La Muette, 3-4 March 2016
Index

• Legal background of accessibility
• Social aspects of accessibility
• Studies analysing the economic benefit of accessibility measures in the transport sector
• The economic impact of accessible tourism in Europe and his reliance to the transport sector
  • Economic impact of accessible tourism in Europe
  • Relevance of passenger transportation for the accessible tourism sector
• Conclusion
Legal background

- Convention on the Rights of Persons with Disabilities (CRPD)
  - Full and effective participation and inclusion in society by all persons with disabilities is a human right!
  - Accessibility is one of the general principles of the CRPD!
Legal background

• Convention on the Rights of Persons with Disabilities (CRPD)
  – “States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.” (CRPD, Article 9 – Accessibility)

• National states usually have a complementary legislation for people with disabilities regulating also the general provisions for accessibility
Legal background

- Pending question is how to design the several transport elements with their locally specific characteristics in detail.

- In this context economic conditions of course play an important role for example in the context of Cost-Benefits-Analyses (CBA) for investment decisions in reliance to time and financial limits.
Nowadays it is well-recognised that an **accessible environment** is **essential** for about **10%** of the population and **necessary** for about **20 to 40%**. And last but not least accessible environments are **comfortable** for all.
Social aspects

The 10%: People with disabilities

- People with locomotion limitations (e.g. limp, stand or grasp limits)
- People with sensory limitations (e.g. blindness, deafness, visual impairment)
- People with speech limitations
- People with cognitive limitations
- People with mental limitations
Social aspects

The 20 up to 40%:

• People with temporary mobility-restrictions
  – Pregnant women
  – People with buggies, dogs, heavy respectively lots of luggage
  – People with accident-related limits
  – Overweight people
  – People unfamiliar with the area

• People with age-related mobility-restrictions
  – Young children
  – Elderly
**Demographic change**

- **World population:**
  - proportion of **people over 60** years will **double** between 2000 and 2050 (11% to 22%) and **absolute number** will increase from 605 million to **2 billion** (Frye, 2015)

- **European Union:**
  - By 2050, about half of the citizens will be older than 50 years
  - Proportion of those **aged 80 and over** increase some **180%** between 2005 and 2050
  - Growth of the **65-79** age group is expected to be **44%** in the same period
Demographic change

Elderly in the EU25 2005 and 2050 in %

Source: Data: Dangschat, J.S. et al. (eds.) (2007), Mobilität und Verkehr im demografischen Wandel, Mobilität mit Zukunft, 1/2007, VCÖ, Wien, p.18
Demographic change

- Successful repression of diseases of civilization will lead to higher incidences of chronically-degenerative illnesses and physical and mental insecurities.

- In principal age-related physical restrictions are comparable with those of people with disabilities.

- “Strong correlation between age and disability, or loss of mobility” (Frye, 2015)
  - European Union: In 2020 approximately 120 million persons will have multiple and/or minor disabilities.
  - Germany: 7.5 million people (9.4% of the population) were registered as “severely disabled” (2013). ⅔ are 55 years or older and ⅓ are 75 years or older.
Demographic change

Vicious circle of immobility

loss of quality of life → less activities outside

impairment to health → reduction of simuli to remain active

passiveness and isolation

Demographic change

- Transport systems have to be accessible to a wide range of potential passengers in varying states of health and personal mobility, in order to avoid immobility and exclusion of a high amount of elderly people from public life as well as a raise of medical and care costs of the future elderly!

- Growing proportion of elderly people is an important economic issue especially related to the tourism sector!

- In respect to the heterogenic group of elderly accessibility in terms of barrier-freedom is one of the preconditions but insufficient to satisfy all quality features of an age-friendly transport system
### Demographic change

**Quality features of an age-friendly transport system**

<table>
<thead>
<tr>
<th>System quality</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable</td>
<td>Use of the transport and mobility system should be possible within older people’s financial means.</td>
</tr>
<tr>
<td>Available</td>
<td>The transport and mobility system should exist in a way that older people recognize it.</td>
</tr>
<tr>
<td>Barrier free</td>
<td>The system’s facilities should be usable by disabled persons without any specific difficulty and without assistance from third persons. They should as such be designed to take into account the physical, sensory and cognitive impairments more likely to be experienced by older people.</td>
</tr>
<tr>
<td>Comfortable</td>
<td>The transport and mobility system should facilitate the performance of activities of daily living (ADL) and instrumental activities of daily living (IADL) without experiencing difficulties.</td>
</tr>
<tr>
<td>Comprehensible</td>
<td>Information about the system should be easy for older people to understand, so they can use it without difficulties.</td>
</tr>
<tr>
<td>Efficient</td>
<td>The transport and mobility system should use its resources as efficiently as possible.</td>
</tr>
<tr>
<td>Friendly</td>
<td>The system should be designed to have maximum accessibility and user-friendliness in particular need.</td>
</tr>
<tr>
<td>Reliable</td>
<td>The transport and mobility system should be predictable and avoid any unpredictability.</td>
</tr>
<tr>
<td>Safe</td>
<td>The transport and mobility system should be safe for use. They should not feel unsafe while using it.</td>
</tr>
<tr>
<td>Secure</td>
<td>The transport and mobility system should be dependable and should not present unnecessary risks to older people. They should feel confident that they are not at risk when using it.</td>
</tr>
<tr>
<td>Transparent</td>
<td>Older people should be aware of the existence of the transport and mobility options available to them, and understand how to use them.</td>
</tr>
<tr>
<td>Complementary</td>
<td>The transport and mobility system should be supported by policies capable of promoting accessibility for older people by means other than personal transport, e.g. internet access, mobile services.</td>
</tr>
</tbody>
</table>

Social aspects

The 100%: All users

• **Accessibility increases comfort of the system / system quality**
  – E.g.: low-floor busses
    • are necessary for wheelchair-users and reduce boarding time and alighting accidents
    • are more comfortable for all users, because it is easier and safer to board without steps at the entrance

• Many measures for people with disabilities also provide **high overall socioeconomic benefits**!
  ➢ **Design for All / inclusive design / universal design concepts**
Transport Studies

- Only a few studies exist, which investigate the economic benefit of accessibility measures in the transport sector.

- Lack of evaluation of accessibility interventions.

- UK study analysed several railway stations after improving their accessibility (see presentation of Tony Duckenfield).

- One Norwegian study analysed the passengers’ valuation of universal design measures in public transport (see presentation of Nils Fearnley).

- Another Norwegian study analysed public buildings and outdoor areas.
Transport Studies

public buildings and outdoor areas

- Usage of **stated preference method** (see presentation of Nils Fearnley)
- Selection of **18 accessibility measures**
- Definition of benefit rates based on **internet survey** with about **800 answers**
# Transport Studies

## Average valuations. NOKs per visitor.

<table>
<thead>
<tr>
<th>Effort</th>
<th>NOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good pedestrian walking surfaces outdoor</td>
<td>3</td>
</tr>
<tr>
<td>Visual marking of walkways</td>
<td>9</td>
</tr>
<tr>
<td>Visual and tactile marking indoors</td>
<td>9</td>
</tr>
<tr>
<td>Stair handrails</td>
<td>7</td>
</tr>
<tr>
<td>Automatically opening entrance doors</td>
<td>1</td>
</tr>
<tr>
<td><strong>Visual contrast on entrance doors</strong></td>
<td><strong>0.5</strong></td>
</tr>
<tr>
<td>Access ramps for entrances</td>
<td>1</td>
</tr>
<tr>
<td>Access ramps in swimming pools</td>
<td>1</td>
</tr>
<tr>
<td>Access ramps at beaches</td>
<td>1</td>
</tr>
<tr>
<td>Visual marking of doors and glass walls</td>
<td>2</td>
</tr>
<tr>
<td>Low counters</td>
<td>4</td>
</tr>
<tr>
<td>Universal designed toilet facilities</td>
<td>1</td>
</tr>
<tr>
<td>Installing elevators</td>
<td>5</td>
</tr>
<tr>
<td>Modernisation of existing elevators</td>
<td>2</td>
</tr>
<tr>
<td><strong>Indoor lighting</strong></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td><strong>Outdoor lighting</strong></td>
<td><strong>17</strong></td>
</tr>
<tr>
<td>Assistive listening system / hearing loop</td>
<td><strong>0.9</strong></td>
</tr>
<tr>
<td>Floor space for wheelchair access</td>
<td><strong>0.3</strong></td>
</tr>
</tbody>
</table>

• **Careful with average valuations!**
  – Importance of a single accessibility measure differs in reliance to the **abilities of the current user**
    • Some benefit many different groups of users, but benefit per user is rather low
    • Other affect only some user groups, but for some it’s indispensable for using the system
  • Interpretation of **average** benefit rates **cannot be separated from non-discrimination** purposes
Accessible tourism

European study about the *economic impact and travel patterns of accessible tourism in Europe* (GfK SE, University of Surrey, Neumannconsult and ProA Solutions (2013), economic impact and travel patterns of accessible tourism in Europe. final report, Nürnberg, Surrey, Münster, Barcelona,)

- no direct link to economic benefits for the transport sector
- **Transportation** is part of the services and facilities “which enable persons with special access needs, either permanent or temporary, to enjoy a holiday and leisure time with no particular barrier or problem.” (GfK SE et al., 2013)
Accessible tourism

• Tourists with disabilities spent less money and less nights during their journey than high-aged tourists
  – Economic benefit of “Tourism for All” in the EU produced by people with disabilities is less than the benefit produced by elderly people
  ➢ Both need accessibility features during their holidays!

• In the study both groups together spent within the EU27 approximately EUR 80 per one-day trip, about EUR 700 per domestic overnight trip and about EUR 1 100 per foreign overnight trip (2012).
Accessible tourism

Direct overall benefits of Tourism for All to the economy of the European Union

- **Gross turnover** of tourism-related service providers EUR 352 billion
- Gross value added (GVA) EUR 150 billion
- **Gross domestic product (GDP)** EUR 164 billion
- **4.2 million employees** in the EU tourism businesses

- Without effects induced by tourists not travelling alone
Accessible tourism

- **Multiplicator effects** = tourism-induced indirect economic effects
  - Indirect / induced effects on income and employment of up- and downstream economic sectors coming from expenses and investments (e.g. industries producing goods and services for the tourism sector like wholesalers or the manufacturing industry)

- Under consideration of all direct, indirect and induced effects and the key inbound markets the accessible tourism sector produced an economic output of EUR 820 billion, a GVA of EUR 371 billion, a GDP of EUR 411 billion and about 9.2 million employees within the EU
Accessible tourism

3 scenarios of improved accessibility measures to investigate potential increase of demand for accessible tourism offers in the EU by 2020

- **Scenario A** (minimum improvements): economic benefit would increase by **18.3 - 19.7%**
- **Scenario B** (medium improvements): economic benefit would increase by **24.8 - 26.6%**
- **Scenario C** (extensive improvements): economic benefit would increase up to **39.4%**
Accessible tourism

• Tourists with disabilities in Germany spent their one-site tourism expenses
  – to 39% for accommodation,
  – to 24% for gastronomy,
  – to 14% for other services,
  – to 13% for goods from the local retail sector,
  – to 7% for leisure offers and
  – to 3% for local transportation.

➢ Without consideration of the journey to a destination and back!
Accessible tourism

• By all journeys between 25% and 60% of the travel expenses account for changing of location.

➢ Significant part of the economic benefits of Tourism for All to the economy of the European Union accounts directly for the transportation sector
Benefits for transport based on Scenario C:

- **Transport to and from one's destination:**
  - Gross turnover EUR 92 billion up to EUR 130 billion,
  - GVA EUR 39.25 billion up to EUR 55.3 billion
  - GDP EUR 43 billion up to EUR 60.7 billion

- **Local transportation**
  - Gross turnover EUR 11 billion up to EUR 15.6 billion
  - GVA EUR 4.7 billion up to EUR 6.6 billion
  - GDP EUR 5.2 billion up to EUR 7.3 billion
Tourism is not possible without transportation and its elements like transport routes and means of transportation!

Touristic service chain, development of services and marketing

Source: Neumann / Reuber (2004), Ökonomische Impulse eines barrierefreien Tourismus für Alle. Münster, p. 54
Accessible transportation is one of the most important elements of the so-called “accessible touristic service chain”!
Touristic service chain

- Journey to and from a destination
- Arrangement and booking
- Arrival and orientation
- Catering
- Accommodation
- Leisure and sports
- Entertainment and culture
- Service and assistance
- Memories and confirmation

Preparation, provision of information, booking
Accessible transportation is one of the most important elements of the so-called “accessible touristic service chain”!

- All parts of the touristic service chain have to be accessible, because otherwise people with disabilities will meet several barriers during their holiday activities

“A journey is like a chain - it is only as good as its weakest link.” (European Commission - Directorate General Transport, 1999)
Transport and Tourism für All

• Accessible transport systems are an essential condition to reach the other accessible elements of the touristic service chain

  – At least half of the terms of the touristic service chain are directly hooked on barrier-free mobility:
    • Journey and departure
    • Arrival and orientation
    • Locomotion on location
    • Leisure time and sports
    • Entertainment and culture
    • Tours and shopping
Transport and Tourism für All

It’s indispensable to develop the transport sector of a destination in a way that it’s accessible for all, whenever a region wants to be successful in the accessible tourism sector!
## Importance of the elements of the touristic service chain for people with disabilities

<table>
<thead>
<tr>
<th>Relevance</th>
<th>Element</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>accommodation</td>
<td>82%</td>
</tr>
<tr>
<td>2</td>
<td>locomotion on location</td>
<td>76%</td>
</tr>
<tr>
<td>3</td>
<td>journey to and from one's destination</td>
<td>74%</td>
</tr>
<tr>
<td>4</td>
<td>tours</td>
<td>71%</td>
</tr>
<tr>
<td>5</td>
<td>travel preparation</td>
<td>71%</td>
</tr>
<tr>
<td>6</td>
<td>cultural activities</td>
<td>62%</td>
</tr>
<tr>
<td>7</td>
<td>arrival and orientation</td>
<td>61%</td>
</tr>
<tr>
<td>8</td>
<td>service on location</td>
<td>58%</td>
</tr>
<tr>
<td>9</td>
<td>health care on location</td>
<td>52%</td>
</tr>
<tr>
<td>10</td>
<td>catering</td>
<td>51%</td>
</tr>
<tr>
<td>11</td>
<td>shopping</td>
<td>37%</td>
</tr>
<tr>
<td>12</td>
<td>sports</td>
<td>19%</td>
</tr>
</tbody>
</table>

## Ranking of impairments during traveling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Impairment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>cultural activities</td>
<td>67%</td>
</tr>
<tr>
<td>2</td>
<td>locomotion on location</td>
<td>65%</td>
</tr>
<tr>
<td>3</td>
<td>tours</td>
<td>63%</td>
</tr>
<tr>
<td>4</td>
<td>sports</td>
<td>55%</td>
</tr>
<tr>
<td>5</td>
<td>journey to and from one's destination</td>
<td>52%</td>
</tr>
<tr>
<td>6</td>
<td>accommodation</td>
<td>47%</td>
</tr>
<tr>
<td>7</td>
<td>arrival and orientation</td>
<td>44%</td>
</tr>
<tr>
<td>8</td>
<td>shopping</td>
<td>42%</td>
</tr>
<tr>
<td>9</td>
<td>service on location</td>
<td>42%</td>
</tr>
<tr>
<td>10</td>
<td>travel preparation</td>
<td>40%</td>
</tr>
<tr>
<td>11</td>
<td>health care on location</td>
<td>35%</td>
</tr>
<tr>
<td>12</td>
<td>catering</td>
<td>24%</td>
</tr>
</tbody>
</table>

Accessible journey to the destination and back: private cars and public transport systems

Accessible locomotion on location: individual motorised transport, local public transport systems and local walkway networks

- For the transport to and from one's destination or at destination during the last 12 month 80% of people with special access needs used the private car, 50% used the airplane, 40% took the train, 40% used the local public transport, ⅓ used a taxi and ⅓ took a long-distance bus

- People with disabilities use public transport systems more often as tourists without special access needs
Transport and Tourism für All

Complexness of public transport

Accessibility for many tourists is expected as a matter of course because by now public transport systems are already accessible in many (at least in bigger) cities.

- It`s difficult or maybe not possible at all to convincingly impart an image of an accessible destination without accessible public transport offers.

- Accessible public transport offers are necessary also because of touristic marketing reasons!
Transport and Tourism für All

Example for the implementation of Tourism for All in a touristic marketing strategy

- City of Erfurt, capital of the federal state of Thuringia, Germany
  - Since 1999 the tourist marketing board is working on accessible tourism issues and Tourism for All is part of marketing plans and strategic planning
  - Accessible offers like tours by minibus with wheelchair-access or guided in German Sign Language as well as a special brochure “Erfurt erlebbar für Alle”
  - In 2008 the city of Erfurt was one of the founding members of the touristic marketing association “Barrier-free destinations in Germany”
Conclusion

• To make transport systems accessible mostly is not a voluntary task but a task bound by law

• An accessible environment is not only essential for people with disabilities and necessary for up to 40% of the population but also a matter of comfort for all users
Conclusion

• Two studies from Norway used the **stated preference method** to monetise and prioritise different accessibility measures
  – In general this **method seems to work** as a tool for analysing **economic benefits of accessibility measures**
  – The **results** have to be interpreted with **extremely caution in order to avoid discrimination**

• Especially in reliance to measures valued rather low on average, but are an indispensable condition for specific user groups to use the system
Conclusion

• **Accessible tourism** produces a **huge economic impact** on the tourism sector and beyond

• **By improving accessibility** in the future a **significant raise of economic benefits** is possible

  ➢ **Accessible transport systems** will directly **benefit** from an **increasing accessible tourism market**

• **Tourism** is **more dependent on transportation**, because transportation has more fields of action in reliance to passenger and freight traffic

  ➢ **Without accessible transport offers no participation** in the **economic benefits** of Tourism for All!
Thank you for your attention!