new innovative baggage transport system

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Initial position

GepäckLoS

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Initial position

"As long as the railway system is not able to replace the car boot suitable it will not be striking successful." (cit. Univ.Prof. Engel)

Baggage is the main reason why cars are used instead of sustainable modes of mobility. This counts for travels as for daily mobility.

Influence of baggage

Baggage elasticity

<table>
<thead>
<tr>
<th>Category</th>
<th>Elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baggage</td>
<td>0.685</td>
</tr>
<tr>
<td>Mobility at destination</td>
<td>0.655</td>
</tr>
<tr>
<td>Travel fare / price</td>
<td>0.630</td>
</tr>
<tr>
<td>Transfer</td>
<td>0.469</td>
</tr>
<tr>
<td>Travel time</td>
<td>0.386</td>
</tr>
</tbody>
</table>
Influence of baggage

Reasons, why the train is not chosen

![Bar chart showing percentage of hotel guests affected by baggage](image)

- Fare
- Mobility at destination
- Transfer
- Traveltime
- Station at destination
- Station at home

Percentage of hotel guests affected by baggage: summer vs. winter

Problems caused by baggage

- **General:** People with reduced mobility (PRM)
- **Combination** of different restrictions – e.g.:
  - baby pram, children
  - Different handicaps
- **Ageing Society**

Effects by baggage

- **Journeys:** The train is often not taken because the baggage transport is felt too uncomfortable (also e.g. for way to airports)
  - Shopping
  - Restaurants etc.

- **Daily mobility:** shopping, daily trips, taking along „bits and pieces“ → car instead of sustainable mobility

- **Train ride**
  - Boarding
  - Searching for free seats
  - Storing baggage
Actual baggage logistic systems

**Journeys:**
- Baggage-Check-In (air travel)
- Rail-Air (baggage check in)
- Checked baggage between rail stations (CH)
- Door-to-door baggage service (home delivery/shops)

**Daily routine:**
- Delivery service (home delivery)
- Pick-up in partner shops, post shops etc.
- Pick-up machine

Problems of actual systems

- **Unflexible**
  - Large time slot
  - Personal presence required
  - Long transport duration
  - Not on weekends

- **Expensive**

  Actual systems are more or less „crutches“—therefor uneconomical

Aim of BaggageLess (long term)

**Complete car boot replacement** (regarding flexibility, comfort, capacity etc.)

„Parallel system freight mobility“ to passenger mobility

- For intermodal trips
- For daily trips (e.g. for shopping, bits and pieces etc.)

Aim of project Gepäcklos

- **Conceptual design** different scenarios (also operation model)
- Definition of **customers needs** and expectations
- Definition of **technological** and **logistic challenges**
- Point out **IT-challenges** and solutions
- **Evaluation** of different systems regarding efficiency, customers benefits, feasibility, meaningfulness and general benefits
- Point out **technical challenges**, which are not or hardly realizable at the moment, show scenarios for future developements
Operator model

Baggage logistic operator as superordinate One-Stop-Shop → like transport association in passenger transport

Challenges in customer`s & operator`s sphere

Requested hand over

Logistic operator

Requested pick-up

General project aim

- All over the country logistic network
- Realtime baggage transport (regarding passenger transport)

New additional project partners

- Lufthansa
- Frankfurt Airport

Project structure

- WP 1 – project management & dissemination
- WP 2 – logistic case scenarios & customer needs
- WP 3 - technological, logistical and operational frame conditions
- WP 4 – system benchmark
- WP 5 – conceptual design and evaluation
- WP 6 – required measures, research- and development request
Thank you for your attention

Questions to:
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