Air-baggage drop-off during train ride to the airport

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TerminalOnRail

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Initial position

Limitation of temperature rise:
→ EU-wide *reduction of greenhouse* gases of approx. 70% by 2050

Flight path 2050
→ 90% of EU residents shall have the opportunity of *4 hour door-to-door trip*
Cooperation between air and rail

**Competition** between air travel and (high speed) trains for destinations up to 500/1000km

**Cooperation models** between air and rail system – general idea: use (high speed trains) as airport feeder instead of (ultra) short distance flights

- Low
- Moderate
- High
Cooperation between air and rail - Low

Easy trip to the airport: e.g. train ticket sold by airlines

Example - Rail&Fly (ÖBB or DB):

• Cooperation between rail operators and travel agencies or airlines

• Train tickets are included or offered to air travellers for a special price
Cooperation between air and rail - Moderate

Includes a code-share agreement between rail operators and airlines

Example - AIRail (ÖBB or DB) / tgvair (SCNF):

- Connecting flights include at least one train service
- Train service is handled like a plane flight
  - Train service has a flight number, passengers have to check in and get a boarding pass
  - In case of delay or cancellation the air-passenger rights are used (rebooking, hotel booking, compensation etc.)
Cooperation between air and rail - High

Like „moderate“ cooperation, but including baggage handling

Example - AirRail of DB until 2007:

- Check-in and baggage drop-off counter at train station
- Baggage is transported inside the train in a separate compartment
Usual air travel options

**plane - plane**
- Journey to hub (airport)
- Stay at hub (airport)
- Time buffer
- Airport
- Boarding
- Waiting time
- Boarding

**car - plane**
- Journey to hub (airport)
- Stay at hub (airport)
- Time buffer
- Airport
- Boarding
- At least 30 Min.

**train - plane**
- Journey to hub (airport)
- Stay at hub (airport)
- Time buffer
- Airport
- Boarding
- At least 30 Min.

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Options including baggage handling

Check in at train station

Train-plane baggage pick up at home

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- (longer) waiting time at transfer airport

  Longer buffer time required, e.g. for traffic jam

  Buffer time at station and/or airport because of potential irregularities

  Station: buffer time for queues, time needed for baggage transfer to the train, airport: e.g. time for shopping (e.g. travelling fare)

  Baggage drop off already one day in advance, airport: e.g. time for shopping

- All activities during trip to the airport, no buffer time at airport because of code sharing
Project idea

• Idea
  – Transfer of different actions from the **airport terminal into the train**
  – goal: increase of attractiveness of airport trains due to better time use facilities.

• Exploratory project
  – Collecting ideas, development of concepts
  – Feasibility study
  – Also define short term measures

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Airport activities

- Check in
- Baggage drop off
- Security check
- Passport control
- Changing money
- Withdrawing money
- (Duty free) shopping
- Eating and drinking, working or relaxing in a lounge
- Buying take away drinks (e.g. water bottle for the plane) or literature
- Etc.

Which activities can be transferred into the airport feeder train?
Airport activities

• Check in
• Baggage drop off
• Changing money
• Withdrawing money
• (Duty free) shopping
• Eating and drinking, working or relaxing in a lounge
• Buying take away drinks (e.g. water bottle for the plane) or literature
• Etc.

Which activities are meaningful and which can be realized in the train?

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Interest in taking airport feeder trains

- Interest is rising according to age

### Interest in taking an airport feeder train with reference to **age**

<table>
<thead>
<tr>
<th>Age</th>
<th>0% no</th>
<th>10% rather no</th>
<th>30% rather yes</th>
<th>60% yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>bis 29</td>
<td>5%</td>
<td>15%</td>
<td>47%</td>
<td>32%</td>
</tr>
<tr>
<td>30-59</td>
<td>3%</td>
<td>11%</td>
<td>43%</td>
<td>43%</td>
</tr>
<tr>
<td>60+</td>
<td>5%</td>
<td>10%</td>
<td>31%</td>
<td>54%</td>
</tr>
</tbody>
</table>
Interest in taking airport feeder trains

- Interest is nearly the same

Interest in taking an airport feeder train with reference to the **frequency of flights**

<table>
<thead>
<tr>
<th>Frequency of flights</th>
<th>Percent of all passengers questioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>no</td>
<td>11%</td>
</tr>
<tr>
<td>rather no</td>
<td>11%</td>
</tr>
<tr>
<td>rather yes</td>
<td>33%</td>
</tr>
<tr>
<td>yes</td>
<td>29%</td>
</tr>
</tbody>
</table>

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Incentives for using airport feeder trains

Incentives for taking an airport feeder train with reference to the frequency of flights

<table>
<thead>
<tr>
<th>Frequency of flights</th>
<th>Percent of all passengers questioned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
</tr>
<tr>
<td>little</td>
<td>10% 20% 40% 40% 30% 8% 17% 21% 56% 45% 11% 6%</td>
</tr>
<tr>
<td>high</td>
<td>28% 20% 20% 10% 35% 11% 14% 9% 11% 16% 10% 15%</td>
</tr>
</tbody>
</table>

- Prefer trains instead of cars
- Time use during a train trip
- Check in and baggage drop off in the train
- Shorter travel time
- Train trip is cheaper than other options
- Train trip is more comfortable than other options

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# Incentives for using airport feeder trains

## Incentives for taking an airport feeder train with reference to the travel purpose

<table>
<thead>
<tr>
<th>Travel purpose</th>
<th>Percent of all passengers questioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefer trains instead of cars</td>
<td>24% yes, 14% no, 19% rather no, 39% rather yes</td>
</tr>
<tr>
<td>Time use during a train trip</td>
<td>14% yes, 18% no, 7% rather no, 36% rather yes</td>
</tr>
<tr>
<td>Check in and baggage drop off in the train</td>
<td>9% yes, 9% no, 10% rather no, 15% rather yes</td>
</tr>
<tr>
<td>Shorter travel time</td>
<td>9% yes, 18% no, 10% rather no, 22% rather yes</td>
</tr>
<tr>
<td>Train trip is cheaper than other options</td>
<td>27% yes, 28% no, 23% rather no, 28% rather yes</td>
</tr>
<tr>
<td>Train trip is more comfortable than other options</td>
<td>5% yes, 32% no, 20% rather no, 28% rather yes</td>
</tr>
</tbody>
</table>

**Legend:**
- yellow: no
- grey: rather no
- orange: rather yes
- blue: yes
Interest in services on airport feeder trains

Interest in other services inside the train with reference to the frequency of flights

<table>
<thead>
<tr>
<th>Frequency of flights</th>
<th>Catering during train service</th>
<th>Newspaper service</th>
<th>Duty free shopping</th>
<th>Changing money</th>
<th>Withdrawing money</th>
</tr>
</thead>
<tbody>
<tr>
<td>little</td>
<td>13%</td>
<td>29%</td>
<td>11%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>high</td>
<td>62%</td>
<td>71%</td>
<td>26%</td>
<td>87%</td>
<td>87%</td>
</tr>
<tr>
<td>little</td>
<td>25%</td>
<td>14%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>high</td>
<td>75%</td>
<td>86%</td>
<td>73%</td>
<td>63%</td>
<td>63%</td>
</tr>
<tr>
<td>little</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>high</td>
<td>63%</td>
<td>68%</td>
<td>63%</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

- I don’t know
- Unimportant
- Rather unimportant
- Important
- Very important
Passenger expectations

- Shorter total travel time
- Guaranteed connection
- Shopping opportunities
- Newspapers
- Business area
- Catering
- Check in in the train
- Baggage drop off in the train

unimportant ↔ very important

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Incentives for train choice

- Baggage drop off in the train
- Check in in the train
- Shorter travel time

- No influence
- Little influence
- Some influence
- Large influence

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Airport activities

- **Check in**: Not necessary, just nice to have → Up to 80% use web check in
- **Baggage drop off**: High interest and high benefit
- **Security check**: Not possible inside the train, but eventually fast lane at the airport for TerminalOnRail passengers
- **Passport control**: Not necessary, just nice to have
- **Changing money**: Not necessary, just nice to have
- **Withdrawing money**: Not necessary, just nice to have
- **(Duty free) shopping**: Nice to have and easy to realise: Online shop → handover at gate
- **Eating and drinking, working or relaxing in a lounge**: Possible in the train
- **Buying take away drinks (e.g. water bottle for the plane) or literature**: Possible in the train

**Online shop → handover at gate**

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Challenges

• Baggage drop off in the train
• Baggage return in the train
  – Design of vehicle interiors
  – Efficient use of space, alternative use in all cases trains do not run to airports
  – Interface train-airport
  – Safety and customs

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Long term goal of project / benefit

• Development of an attractive system which leads to a shift of short-haul flights to the rail

  – Airport activities in the train (especially baggage drop off)
  – Connection (several stations on the way to the airport)
  – Shorter door-to-door travel time
  – Highly attractive service – airlines may be willing to cancel (ultra) short distance feeder flights

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Summary

• Approx. 80% are interested in airport trains

• Special requests and incentives for their use:
  – Shorter travel duration (~90%)
  – Guaranteed connection in case of delay (~85%)
  – Usability of travel time (~80%)
  – Baggage drop off and check in in train (~80%)

• Minimum Connecting Time can be reduced
Outlook

• Baggage drop off inside the train
  – is absolutely requested
  – is feasible

• Also the other way around (baggage return) is possible

• A lot of open-ended questions still remain

• Next steps will be deep research to find solutions for realization

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Thank you for your interest

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