

EXPERIENCES WITH ADVANCED AIR-RAIL PASSENGER INTERMODALITY – THE CASE OF GERMANY

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Deutsches Zentrum
für Luft- und Raumfahrt e.V.
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Agenda

1. Definition of Intermodality
2. Rail Access at German Airports
3. Intermodal Services and Ticketing Options
4. Case Study Cologne - Frankfurt
5. Conclusions



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- 1. Definition of Intermodality**
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1. Definition of Intermodality (I)

- ▶ Intermodality concerns the integration of different modes of transport with the aim of providing a seamless link to travellers!

... but not this kind of “seamless” link:



1. Definition of Intermodality (II)

“Intermodality is a characteristic of a transport system, that allows at least two different modes to be used in an integrated manner in a door-to-door transport chain.”
(European Commission, 1997).

Three levels of integration:

1. Infrastructure and transport means (“hardware”),
2. Operations and the use of infrastructure (especially terminals), and
3. Services and regulation (from a modal-based to a mode-independent framework).

Example of an intermodal transport system:



Source: Based on Sauter-Servaes (2007).

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2. Rail Access at German Airports

An important prerequisite for offering intermodal products is rail infrastructure at airports and the integration into the train network

Airports with long-distance train stations:



However, degree of integration into train schedules varies strongly:

Airport	Daily frequencies, Regional trains	Daily frequencies, long distance trains	Total daily train frequencies
Frankfurt	215	143	358
Düsseldorf	235	13	248
Berlin-Schönefeld	202	1	203
Cologne-Bonn	148	31	179
Munich	121	-	121
Stuttgart	111	-	111
Leipzig/Halle	57	34	91
Friedrichshafen	75	-	75
Hanover	40	-	40
Dresden	39	-	39

Source: German Aerospace Center (DLR), Air Transport and Airport Research Unit.





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3. Intermodal Services and Ticketing Options (I)



Rail&Fly

- Basically a train ticket at a special price when booked in combination with an air ticket, sometimes already included in airfare
- Wide acceptance by both passengers and airlines/tour operators (83 airlines and 42 tour operators)
- Considerable potential in the low cost carrier market: 65,000 sold by HLX in the first half year after introduction
- "Soft Alliance" – firm commitment, but low/no investments and sunk costs
- Low risk for airlines/tour operators and Deutsche Bahn
- No through baggage handling and no FFP mileage credit
- Focussed on PoS Germany, limited availability abroad
- Available since 1992



3. Intermodal Services and Ticketing Options (II)

Codesharing

- Train services of DB receive flight numbers and can be booked via CRS or Internet
- Limited number of partner airlines: **American Airlines**  **CHINA AIRLINES**  **TAP PORTUGAL**
- Limited number of destinations - AA: 15, NH: 3, CI: 7, TP: 8
- FFP mileage accrual
- Through ticketing, but no through baggage handling



3. Intermodal Services and Ticketing Options (III)

AIRail

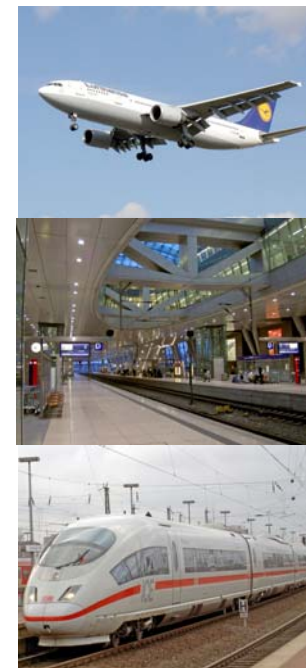
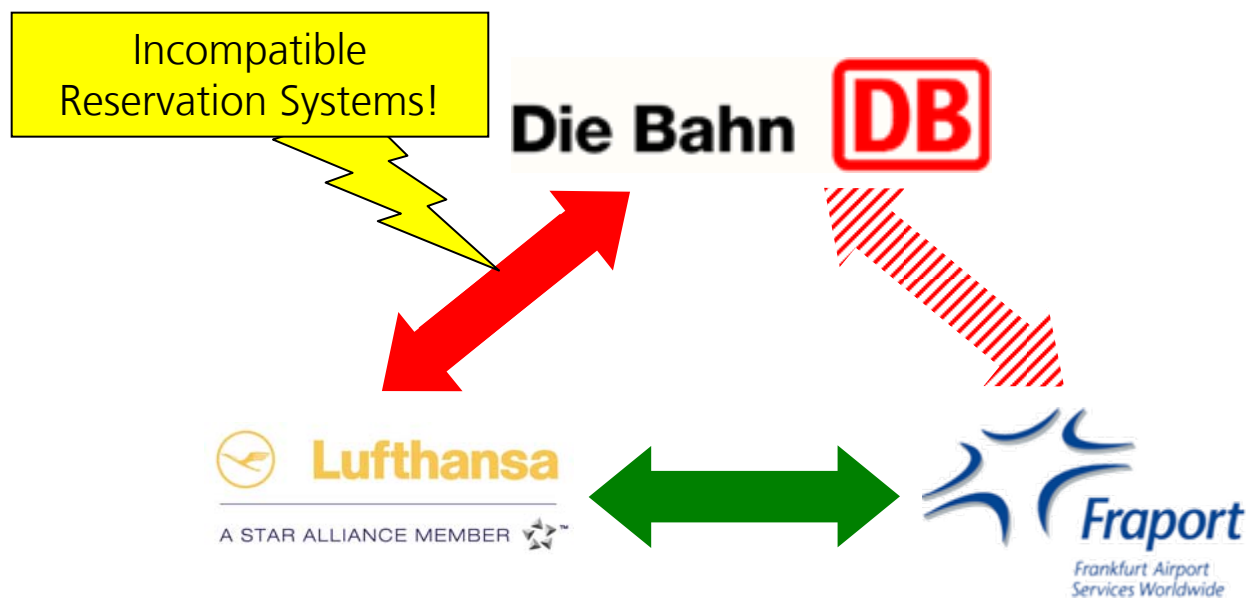
- Developed jointly by Deutsche Bahn, Lufthansa and Fraport
- Integrated ticketing and baggage handling -> seamless travel
- Available on two city pairs only: Cologne-Frankfurt Airport and Stuttgart-Frankfurt Airport
- Through baggage handling available in both directions
- Mileage Accrual in FFP
- About 30 air carriers use AIRail, among them many Non-Star-Alliance-Carriers
- approx. 170,000 passengers in 2005



3. Intermodal Services and Ticketing Options (IV)

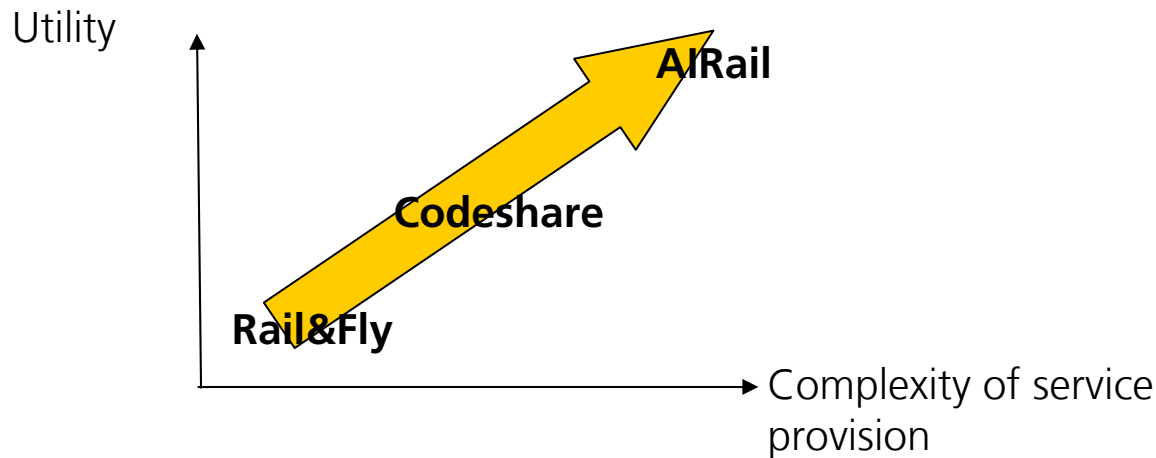
Challenges associated with setting up AIRail:

Examples: Incompatible IT systems and different corporate cultures



3. Intermodal Services and Ticketing Options (V)

The higher the utility for passengers, the higher also the complexity of service provision:



AIRail services do require high investments (e.g. baggage handling system), are associated with high operational costs

Business case?



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4. Case Study Cologne – Frankfurt (I)

- ▶ New high speed railway line opened in 2002, reducing journey times between Frankfurt and Cologne from 2:15 hrs to 1:15 hrs
- ▶ Journey time Cologne Central Station – Frankfurt Airport: 1:00 hrs
- ▶ AIRail services inaugurated in May 2003
- ▶ Heavy investments into infrastructure at Frankfurt Airport – extension of baggage handling system to the new station

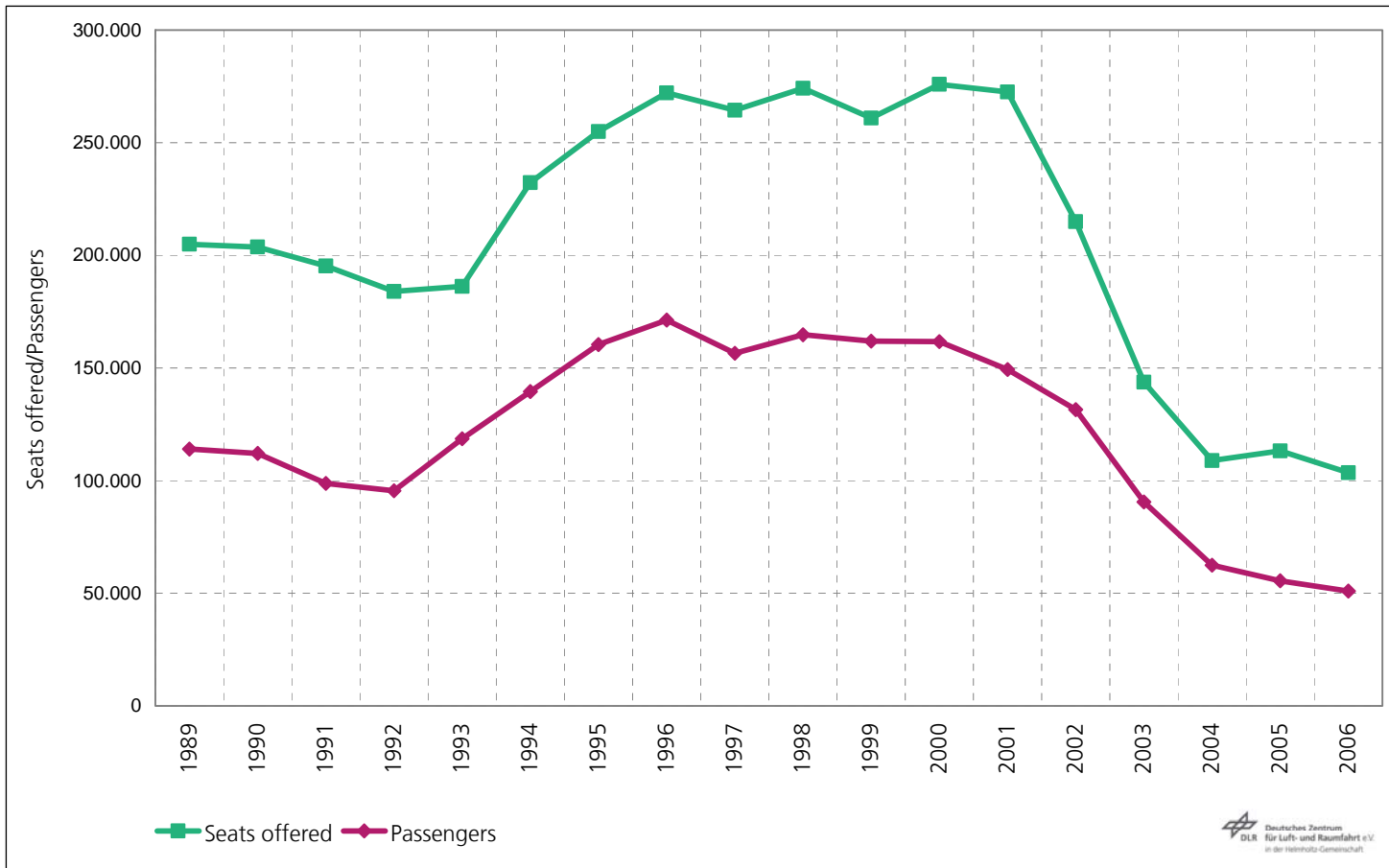


Source: WikiCommons, photographed by S. Terfloth



4. Case Study Cologne – Frankfurt (II)

Impacts on air transport demand and supply:





4. Case Study Cologne – Frankfurt (III)

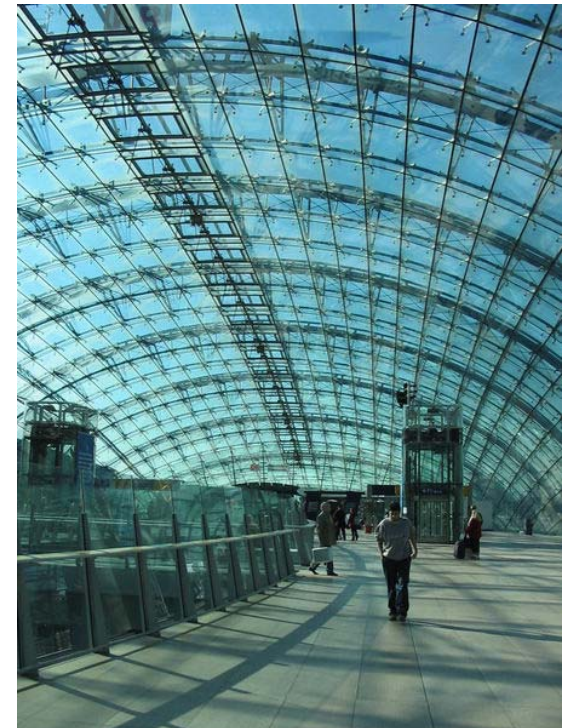
- ▶ Frequency of air services reduced from 8 daily flights to 4
- ▶ Average aircraft size reduction from 116 to 80 seats
- ▶ Load factor down to 48% in 2006

The future of air services between Cologne and Frankfurt:

- ▶ Opportunity costs of slot use in Frankfurt
- ▶ Opportunity costs of aircraft/crew utilisation
- ▶ Competitive situation in Cologne

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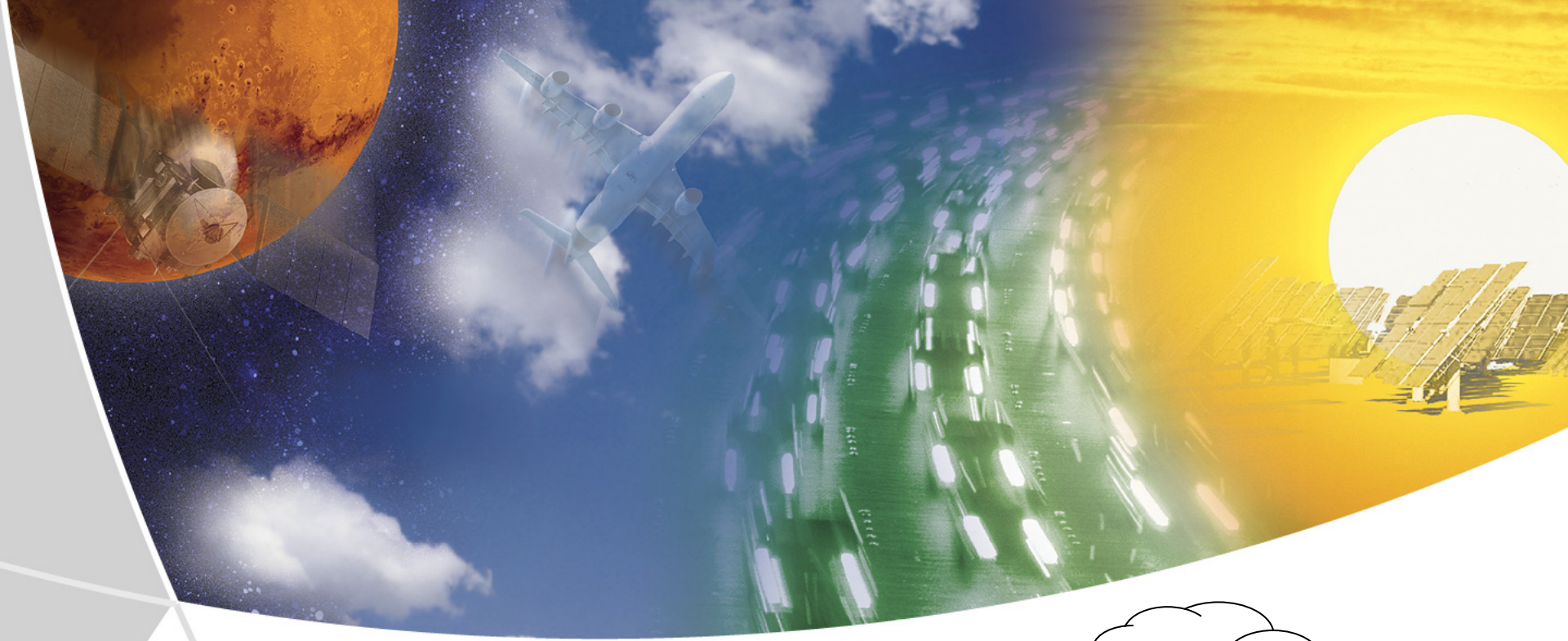
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5. Conclusions

- In Germany, intermodal services are differentiated and are to a varying degree successful in the market
- Several improvements could further encourage use of trains for airport access:
 - Door-to-door ticketing
 - Web-based meta-search engine
 - Improved information provision for inbound travellers
 - New AIRail destinations (Düsseldorf/Nuremberg)
 - New high speed railway lines



Thank you for your attention!

Time for questions and discussion.



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