



# **The Evolution of the Low Cost Business Model – Opportunities of Transfers and Interlining**

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# Agenda

- Motivation
- Low Cost Transfers and Interlining – Challenges and Solutions
- Opportunities for LCCs, FSNCs and Airports
- Case Study: Connectivity of LCCs at Cologne/Bonn
- Further Research
- Conclusions



# 1. Motivation

Why low cost carrier transfers and interlining?

- ⇒ Looking for an alternative to classic FSNC transfer itineraries for routes not directly served
- ⇒ Looking for an alternative for routes where FSNCs charge high fares
- ⇒ Looking for an alternative to circumvent high fares of both LCCs and FSNCs on routes where a peak in demand occurs



# 1. Motivation

## Example 1: Santiago de Compostela-Frankfurt

- Setting: Return trip from UEFA cup match Celta de Vigo vs. Eintracht Frankfurt on a Friday morning in October 2006
- By that time, Ryanair served SCQ-HHN only 3 times weekly (not on Fridays)
- Solution: Combining Ryanair flights SCQ-STN and STN-HHN, as used by ~70-80 fans. Combined fare was less than 50 EUR, which was less than the cost for spending another day in Spain
- Conclusion: Passengers are willing to take the inconvenience of do-it-yourself transfer itineraries including the risk of missed connections



# 1. Motivation

## Example 2: Cologne-Toulouse

- Setting: Business trip to visit a major European aircraft manufacturer in June 2007
- Cologne-Toulouse not served directly, very thin market with less than 2000 travellers a year
- Return fares offered by that time (booking four weeks in advance, one night stay during the week): Lufthansa ~1200 EUR, KLM ~900 EUR
- Solution: Do-it-yourself interlining itinerary CGN-HAM with TUIfly, combined with HAM-TLS by Germanwings. Final cost for the return trip: 250 EUR.
- Outbound trip time even shorter with the “accidental“ low cost interlining itinerary than with legacy carriers:
  - X3/4U: 5:25 hrs
  - LH: 5:30 hrs via MUC, 6:35 hrs via FRA
  - KL: 6:25 hrs
- Conclusion: Although LCCs have eroded legacy carriers' yields, high fare (transfer) routes still exist! Savings potential with LCC interlining can be substantial



# 1. Motivation

## Example 3: Cologne – Dublin

- Setting: Travel to the EURO 2008 qualifier of the German national football team in October 2008
- Fares offered from any point of departure in Germany to Dublin: between 200 and 400 EUR oneway for both LCCs and FSNCs on the days before the match
- Solution: CGN-STN with Germanwings/STN-DUB with Ryanair on the outbound leg, DUB-LPL with Ryanair and LPL-CGN with easyJet on the return leg, resulting in ~180 EUR for the roundtrip
- Conclusion: Building your own itinerary with LCC transfer flights circumvents yield management of LCCs and FSNCs



## 2. Low Cost Transfers and Interlining – Challenges and Solutions

- The “legacy system”: Interlining through multilateral (IATA-Interlining) or bilateral agreements (pro-rate agreements, codesharing)
- Transfers include through ticketing, through baggage-handling and guaranteed connections
  - ⇒ With rare exceptions (Southwest, JetBlue, Air Berlin, Virgin Blue), not suitable for low cost carriers due to operational complexity and high costs
  - ⇒ Pro-rate revenues in many cases not attractive for LCCs, when taking into account risks of missed connections and associated costs of rebooking, particularly on intercontinental connections
- Key requirement for a transfer system suitable for LCCs:

No increase in complexity of business processes!



## 2. Low Cost Transfers and Interlining – Challenges

- LCC one-way air fares are easily accessible for everybody over the internet
- Therefore: Transfer/Interlining itineraries may not only be offered by airlines alone, but also by airports/third parties
- Characteristics of a multi-segment LCC itinerary:
  - No through ticketing – search costs for most passengers prohibitive
  - No through baggage handling – inconvenience of additional check-in
  - No guaranteed connection – risk of missed connections



## 2. Low Cost Transfers and Interlining – Solutions

Possible solutions:

Prohibitive search costs:

- Introduction of an internet meta search engine that finds automatically the best LCC connection
- Booking could be conducted directly over the search engine, including a small commission for the service

No through baggage handling:

- Airports could introduce check-in counters at the baggage claim, as done in Cologne-Bonn

No guaranteed connection:

- Missed connections are a perfectly insurable risk: insurance premium could even be adjusted to missed-connection probability



### 3. Opportunities for LCCs and FSNCs

- Increase demand for existing services – create economies of density
- Earn margin on selling transfer insurances, hotel stays for stopovers
- Identification of demand – potential start-up of new routes
- Access markets that could not be served directly due to traffic rights restrictions: e.g. Germanwings is not allowed to fly London-Moscow, but sells tickets for transfer flights London-Cologne-Moscow
- New cooperation models: JetBlue/Aer Lingus
- Main advantages: “a very low cost booking process between two low-cost carriers.” “It costs virtually nothing” (Aer Lingus CEO Dermot Mannion)
- Could be an opportunity for generating “natural” feed for long-haul services of FSNCs – e.g. American Airlines serves New York JFK - London-Stansted



### 3. Opportunities for Airports

- Earn non-aeronautical revenues from transfer passengers (retailing, food and drinks, entertainment)
- Optimum situation: a stopover time long enough for the passengers to spend money at the airport, but short enough to discourage people from leaving the airport
- Potential for LCC transfer traffic identified first by Berlin Airports ([www.viaberlin.com](http://www.viaberlin.com)), followed by Cologne-Bonn ([www.cologne-bonn-connect.de](http://www.cologne-bonn-connect.de))
- Cologne-Bonn Airport even operates check-in counters at the baggage claim and bears the costs





## Cologne Bonn Connect

### Business Model of Cologne Bonn Connect:

- Combination of flights of Germanwings and TUIfly
- Minimum Connection Time: 120mins
- Flights can be booked directly via the website [www.cologne-bonn-connect.com](http://www.cologne-bonn-connect.com)
- Insurance is offered for 7.50 EUR per transfer – insurance up to a maximum of 500 EUR in case of missed connection (equals an implied missed connection probability of less than 0.015)
- Suggestions for stopovers in Cologne
- Check-In Counter directly at the baggage claim operated by the airport
- At the same time, Germanwings introduced its own transfer system “SmartConnect”: MCT 90 mins, 8000 passengers in September 2007





## Cologne Bonn Connect

Critical assessment of the scheme:

- Scheme does include only Germanwings and TUIfly – this reduces potential connections by about 50% compared to all LCCs at CGN
- Problem of directionality: several routes only connect in one direction with acceptable connection times – e.g. Lisbon-Leipzig has a total trip time of 6:25hrs with 2:30hrs layover in Cologne, Leipzig-Lisbon would be 16:40hrs with a layover of 12:35hrs
- Additional Schengen-Visa needed for non-EU-citizens when travelling between non-Schengen countries (e.g. UK-Russia)



## Case Study: LCC Connectivity at Cologne/Bonn

- Methodology: Analysis of OAG Data for Summer Period 2007 – Analysis of one exemplary day at CGN: Thursday, 12th July 2007
- No. of Arrivals: 158 total, thereof 111 LCC/Holiday Carriers
- No. of Departures: 153 total, thereof 105 LCC/Holiday Carriers
- Development of criteria for the identification of “useful” connections



## Assessment of the potential LCC transfer connections

Criteria	No of Connections
<b>LCC/Holiday Carrier Connections with minimum connection time 120mins and maximum connection time 360mins</b>	<b>1559</b>
City-pairs, where a direct non-stop-service exists	-1013
Exclusion of Connections with a level of circuitry > 2.0	-180
Exclusion of connections between holiday destinations: AGP, ALC, AYT, BOJ, FUE, IBZ, KGS, LPA, OLB, PMI, RHO, TCI, TFS	-22
<b><u>Remaining LCC/Holiday Carrier Connections</u></b>	<b><u>344</u></b>
Exclusion of all flights not operated by Germanwings or TUIfly	-159
<b><u>Connections available in the Cologne Bonn Connect Scheme</u></b>	<b><u>185</u></b>



## Assessment of the potential LCC transfer connections

“Level of circuitry” as criterion to exclude „non-sense“ connections:

$$\text{Level of Circuitry} = \frac{\text{Distance Origin to Cologne} + \text{Distance Cologne to Destination}}{\text{Direct Distance Origin to Destination}}$$

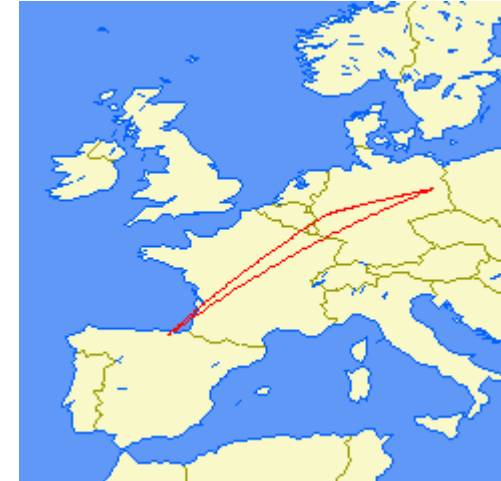
Example Bilbao-Berlin:

BIO-CGN: 1134km

CGN-SXF: 473km

BIO-SXF: 1585km

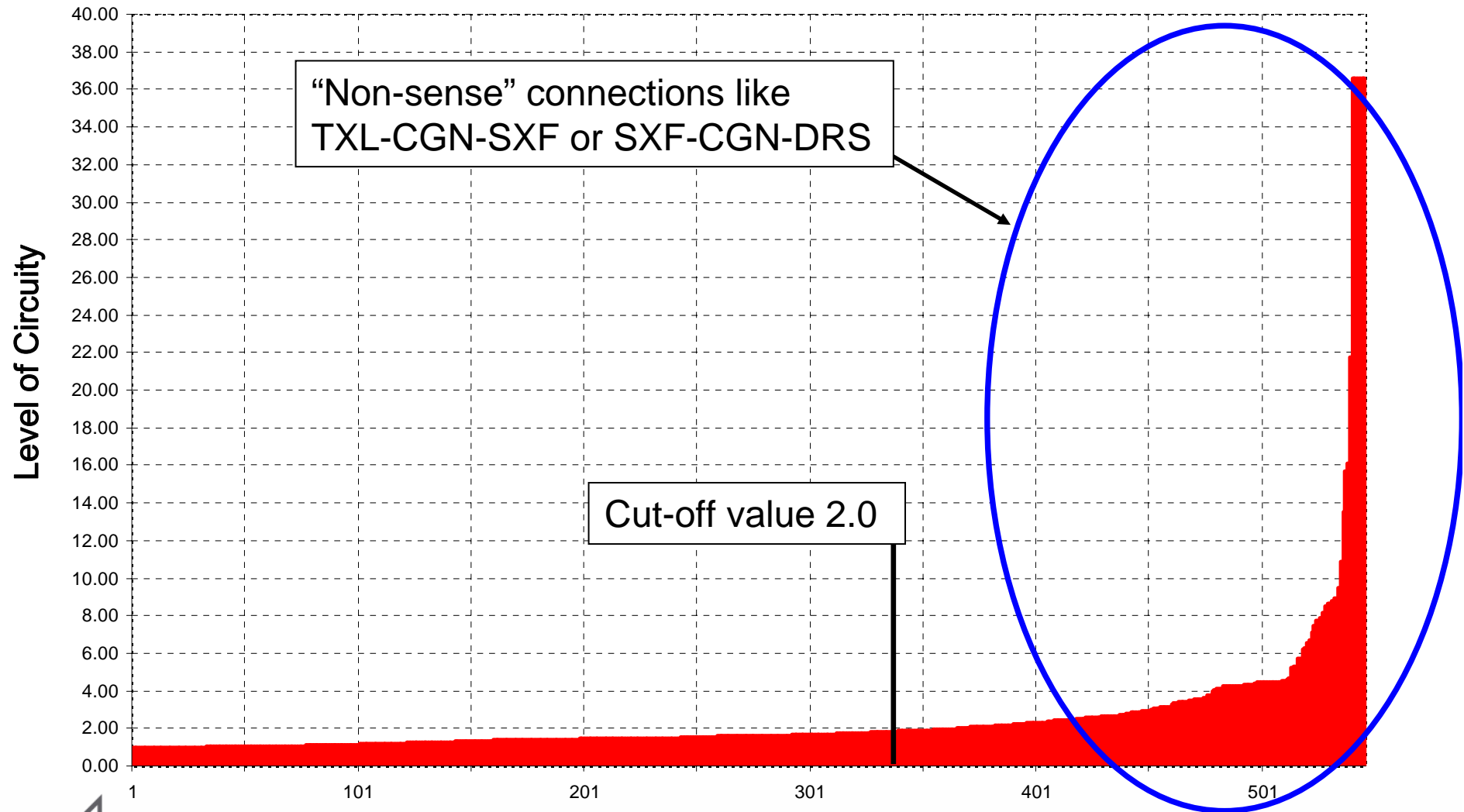
$$\frac{1134 + 473}{1585} = 1.014$$



⇒ Cologne lies almost on the great circle between Bilbao and Berlin

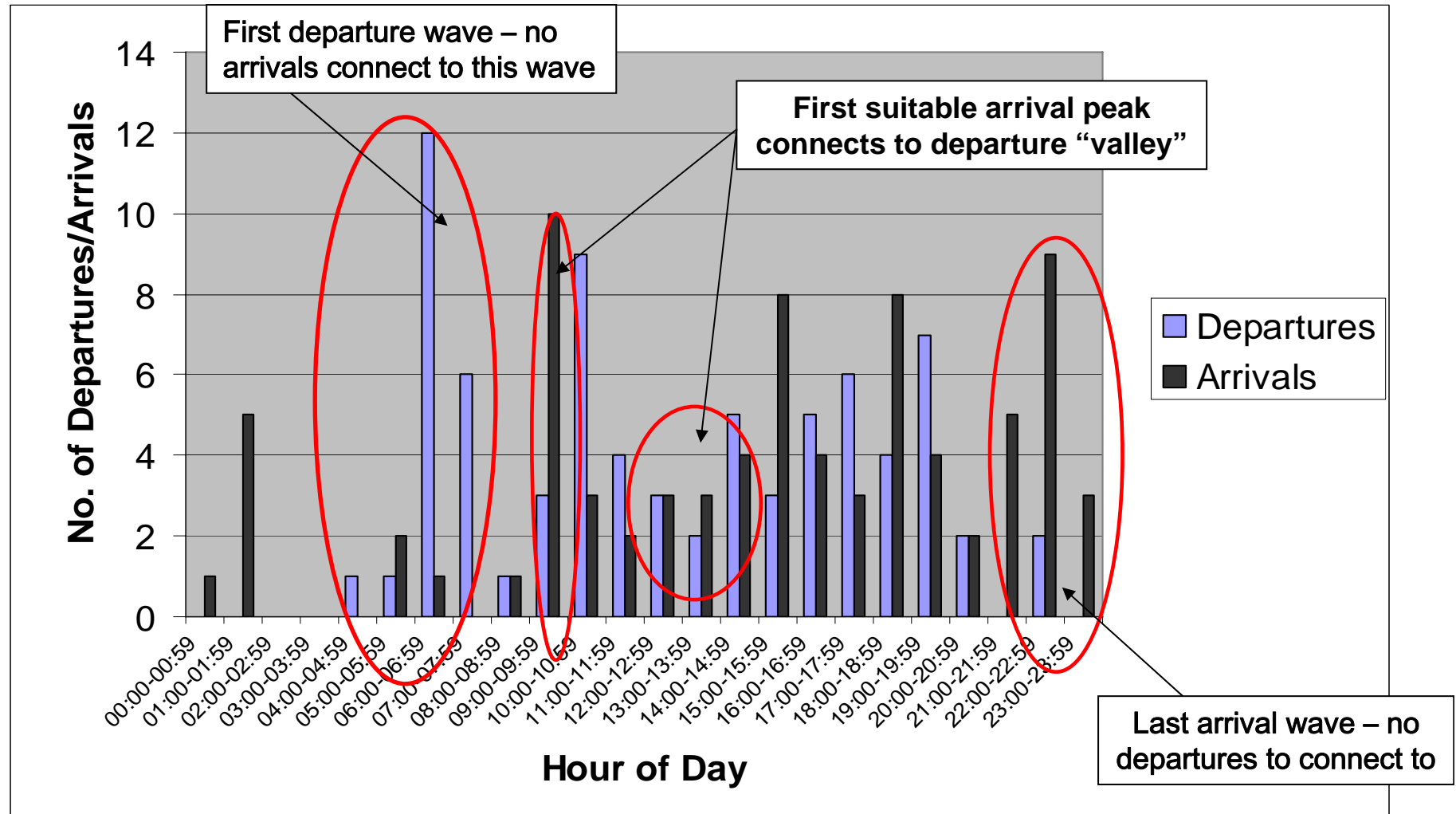


## Level of Circuity for LCC Connections via Cologne-Bonn Airport



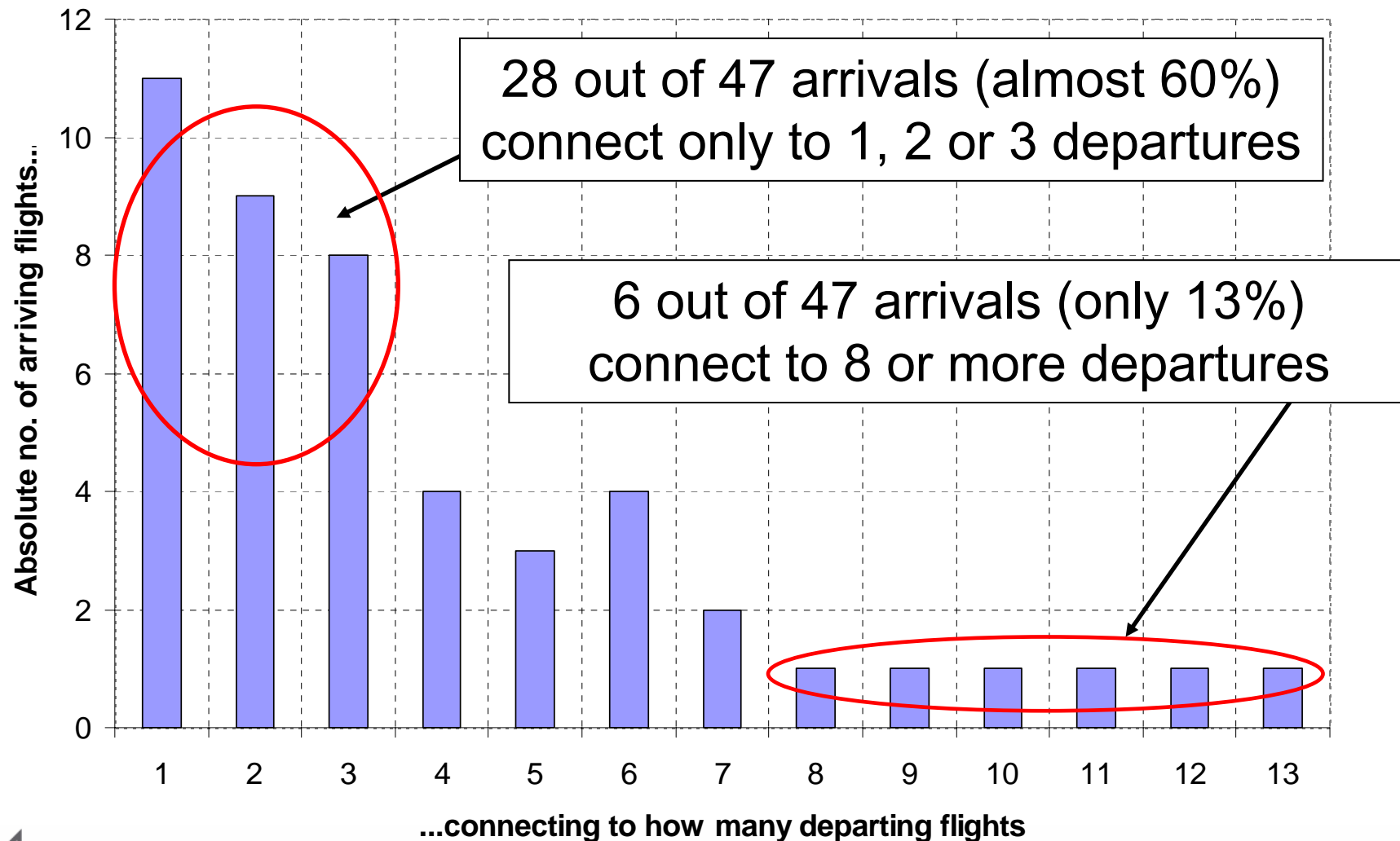


# Traffic Structure of 4U and X3 at CGN and its Impacts on Connectivity





## Structure of Connections within the Cologne Bonn Connect Scheme





## Structure of Connections within the Cologne Bonn Connect Scheme

List of Flights connecting to X3 2131 from Bilbao, arriving at 2:35pm:

Layover in CGN	Connecting Flight	Destination	Departure Time	Total Travel Time	Level of Circuitry
2:20	X3 1140	Palermo	16:55	6:55	1.79
2:25	4U 16	Berlin-Schönefeld	17:00	5:40	1.01
2:25	4U 768	Zurich	17:00	5:40	1.51
2:50	X3 160	Berlin-Tegel	17:25	6:05	1.01
3:15	X3 108	Hamburg	17:50	6:25	1.01
3:50	X3 162	Berlin-Tegel	18:25	7:05	1.01
4:00	4U 754	Vienna	18:35	7:35	1.17
4:25	4U 78	Leipzig-Halle	19:00	7:35	1.03
4:30	4U 788	Budapest	19:05	8:20	1.17
4:35	X3 1110	Venice	19:10	8:05	1.49
4:50	X3 4110	Manchester	19:25	8:40	1.64
5:05	X3 4120	Birmingham	19:40	8:45	1.73
5:30	4U 18	Berlin-Schönefeld	20:05	8:45	1.01



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**Not a single of these connections works in the other direction!**



# Case Study: LCC Connectivity at Cologne/Bonn

## Results for Cologne Bonn Connect



Total no. of potential connections on 12th July 2007: 185

Out of 81 Germanwings/TUIfly arrivals, only 47 connect to other flights under the criteria presented

Avg. no. of connections: 3.94

Maximum no. of connections: 13 (X3 2131 inbound from Bilbao at 2:35pm)

Avg. Connection Time: 243 minutes



# Case Study: LCC Connectivity at Cologne/Bonn

## Results for Cologne Bonn Connect

germanwings

TUIfly.com

Latest arrival connecting to another departure: 7:10pm – all flights arriving after 7:10pm are basically without use for connection services

29 connections have a very inconvenient waiting time between midnight and 6am – therefore the first departure wave between 6:30am and 8am is of limited value for connection services

Only five city pairs offer full bi-directionality:

- Bari-Berlin
- Leipzig/Halle-Rimini
- Dresden-Istanbul
- Leipzig/Halle-Split
- Dubrovnik-Palma de Mallorca



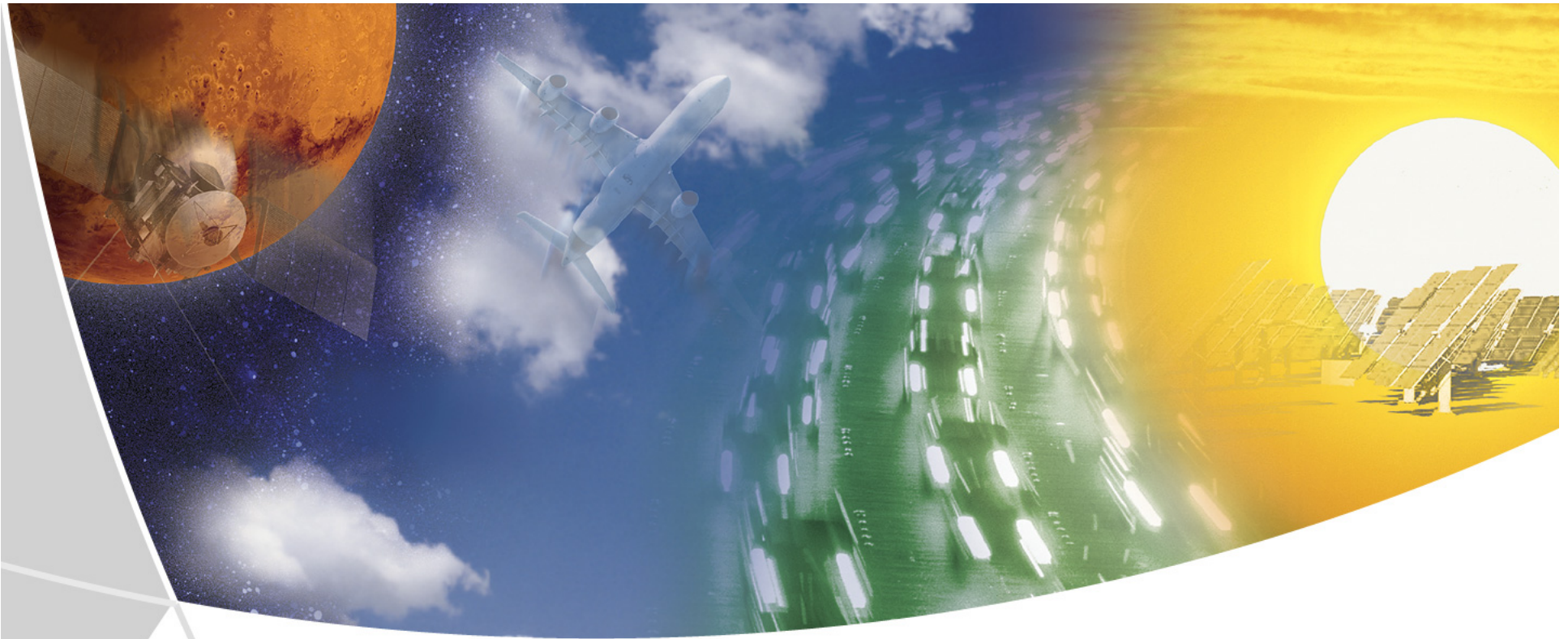
## Further Research Questions

- Estimation of the utility of seamless connections / disutility of do-it-yourself transfer
- Assessment of the “right” insurance premium: transfer connection-specific missed connection risk
- Systematic comparison of air fares offered by FSNCs on “thin”, not directly served markets in comparison to LCC transfer itineraries
- How much does geographical location matter? – Comparison of Cologne and London Stansted. A first guess: STN probably too far in the west of Europe to offer attractive connections



## Conclusions

- The presented business model does not increase complexity of the low cost business model
- It can be realised by either airlines, airports or third parties
- Potential legal problem: offering the combination of LCC flights could give the status of tour operator
- Due to its limitation to TUIfly and Germanwings, Cologne Bonn Connect could offer only 185 connections for the day analysed, vs. 344 for all low cost carriers
- Most severe problem affecting the transfer scheme: most transfer connections only work in one direction
- Flights into the European Low Cost “Capitals” (e.g. London, Milan, Barcelona or Dublin) are of limited value, because these cities are already connected directly to other cities served from Cologne
- Overall assessment: LCC transfers work theoretically, but will remain a niche phenomenon for very thin markets



Thank you for your attention!



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