18 May 2016
The Hague, Netherlands

Presented by:

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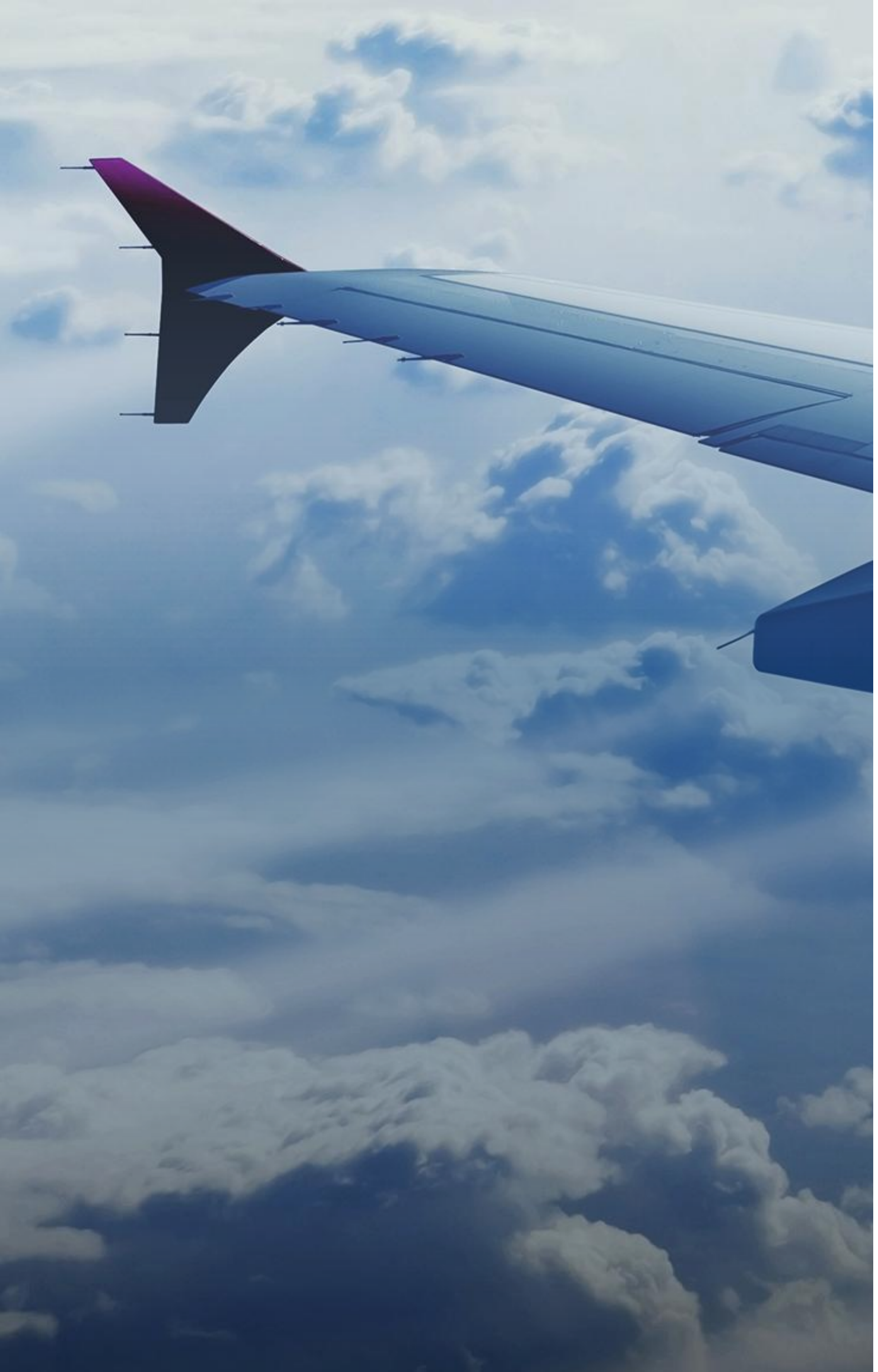
The future of self-connect and the implications for the Dutch aviation sector



Today’s Agenda

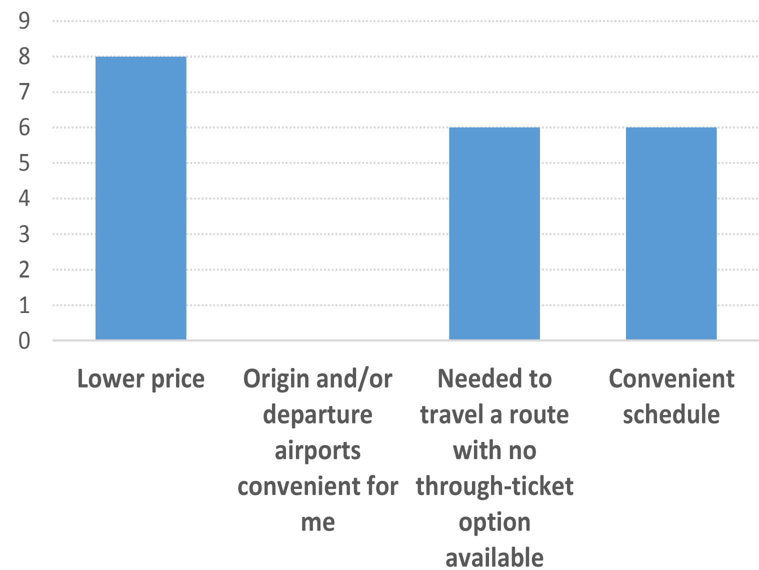
- Self-connect today
- Top candidates for growth
- Dutch Aviation: threat or opportunity?
- Where next?

Self-connections Today

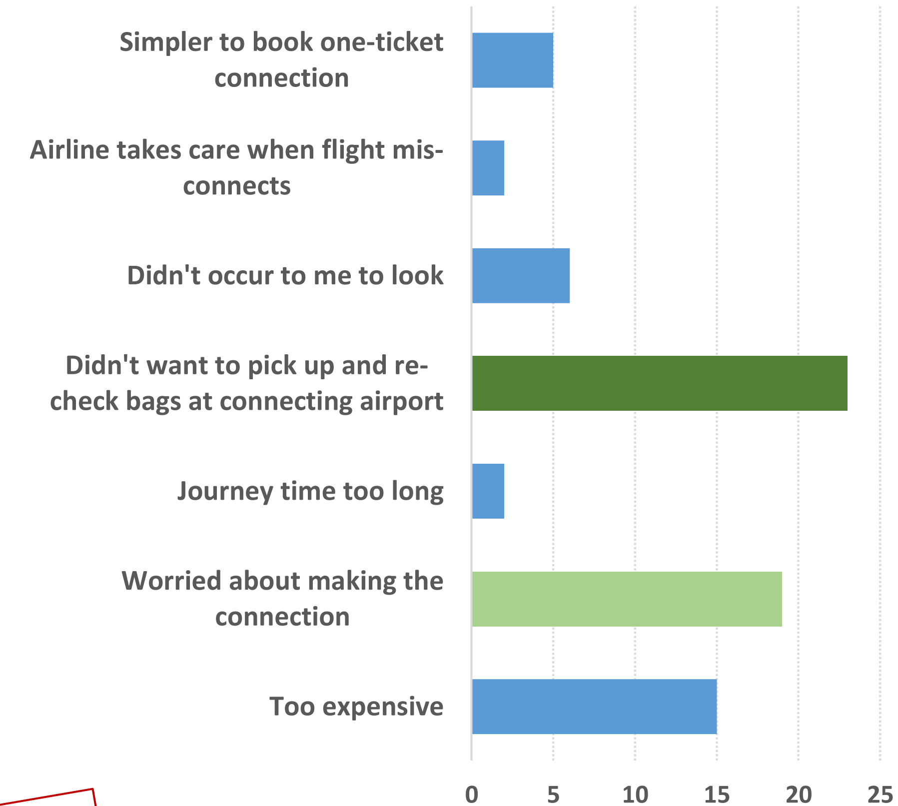
Why do people self-connect?

- Price
- Market not served direct, online or interline
- Schedule

Which factor was most important in your decision to make a self-connecting journey?



Why didn't you buy two separate tickets?



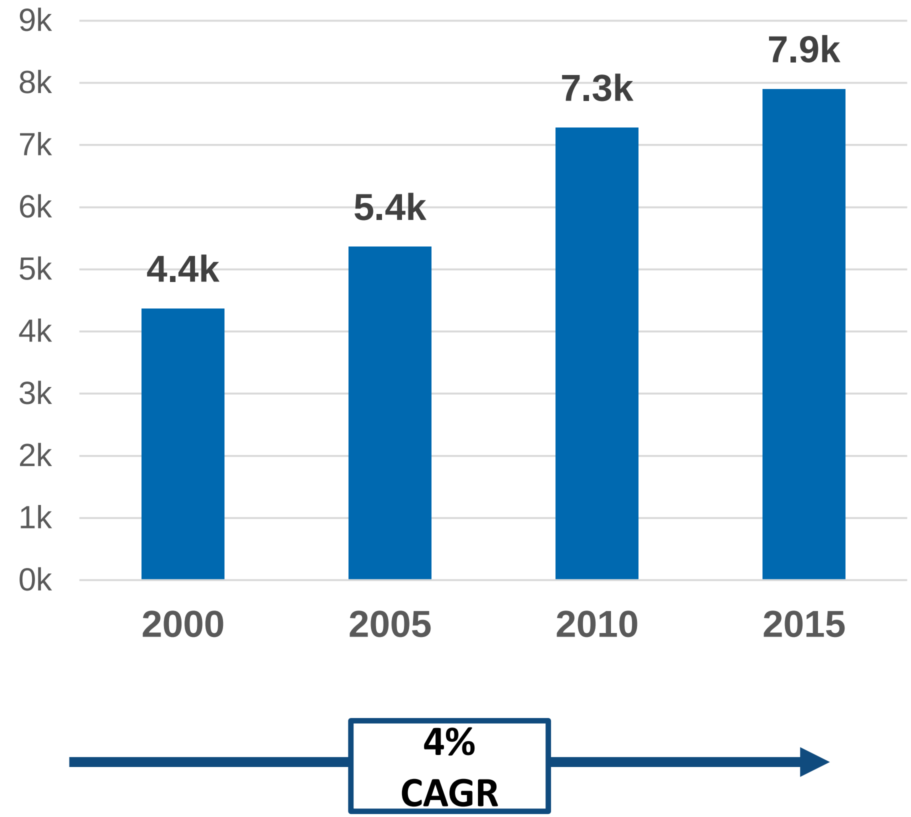
WARNING! ICF SURVEY RESPONDENTS ARE SAVVIER THAN AVERAGE AIR TRAVELLERS!

Source: ICF internal survey, March 2016

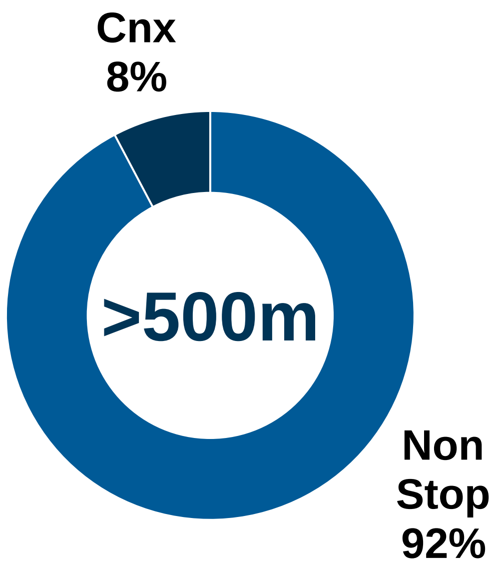
The traditional connections market in Europe is large, despite increasing direct services

- >500m intra-EUR journeys per year
- 42m (8%) journeys connect
- Equivalent to 84m connecting airport pax or 168m total airport pax across EUR airports

Intra-Europe Market Unique Direct Services
2000–2015



Intra-Europe Market Nonstop vs. Connecting Service
2015

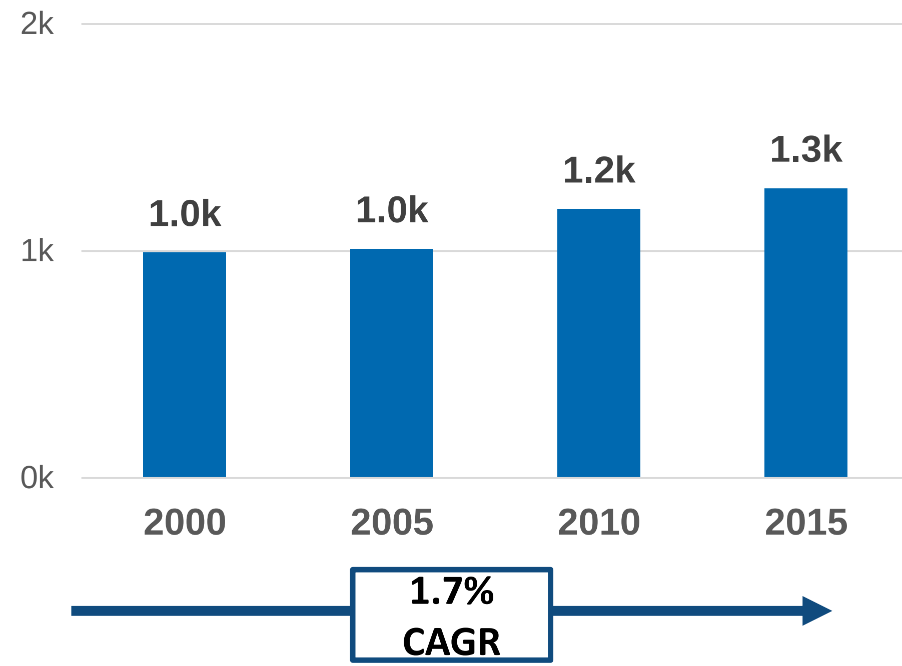


Unique services are non-directional and excluding Russian domestic services
Source: IATA PaxIS 2015, OAG Schedules

Long-haul markets have a higher proportion of connections

- >250m extra-EUR journeys per year
- 117m (45%) journeys connect
- Half connect at EUR end
- Equivalent to 150m airport pax across EUR airports

Europe-Long Haul Market Unique Direct Services
2000–2015



Europe-Long Haul Market Nonstop vs. Connecting Service
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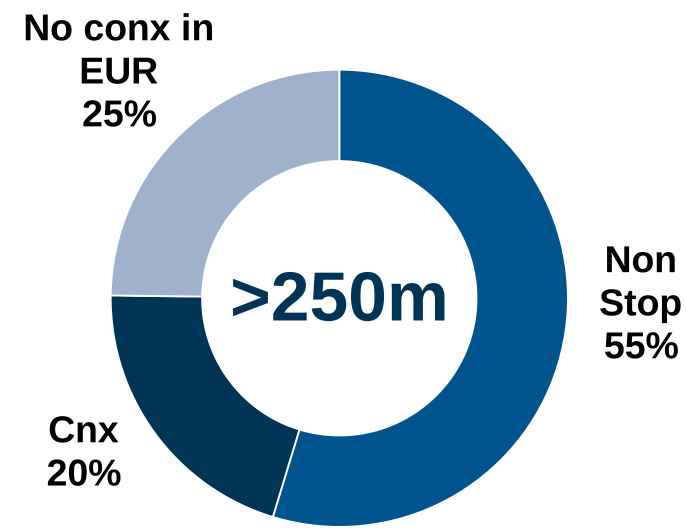


	Market Size (M)
Non Stop	142
Conx in EUR	53
No Conx in EUR	64
Total	**259**

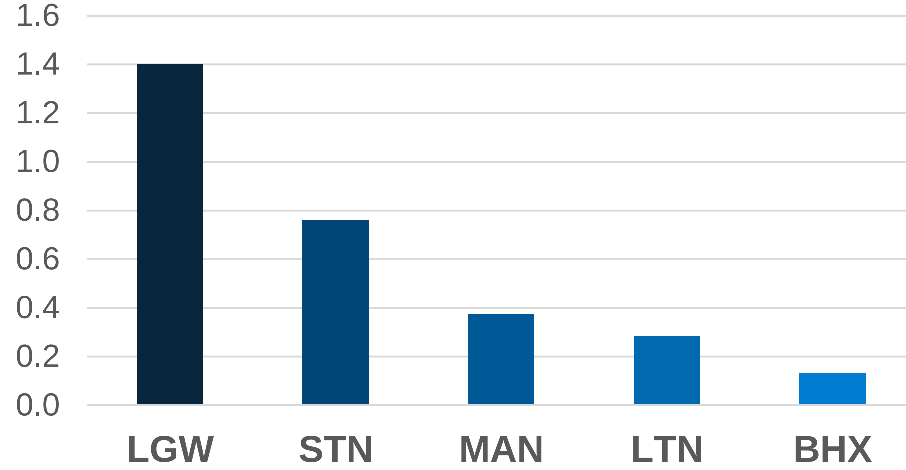
Source: : IATA PaxIS 2015, OAG Schedules

Self-connections are estimated at 15m a year in Europe

- **UK CAA surveys 100k+ passengers**
- **~4% of independent LCC pax connecting**
- **Europe-wide 16m airport pax or 4m O&Ds**

UK SURVEY:

Estimated Self-Connections, UK Airports
2015, In Millions



	Self Conx
Total	~3M
% of LCCs self-conx	3.7%

EUR ESTIMATE:

Survey Research on Conx Shares

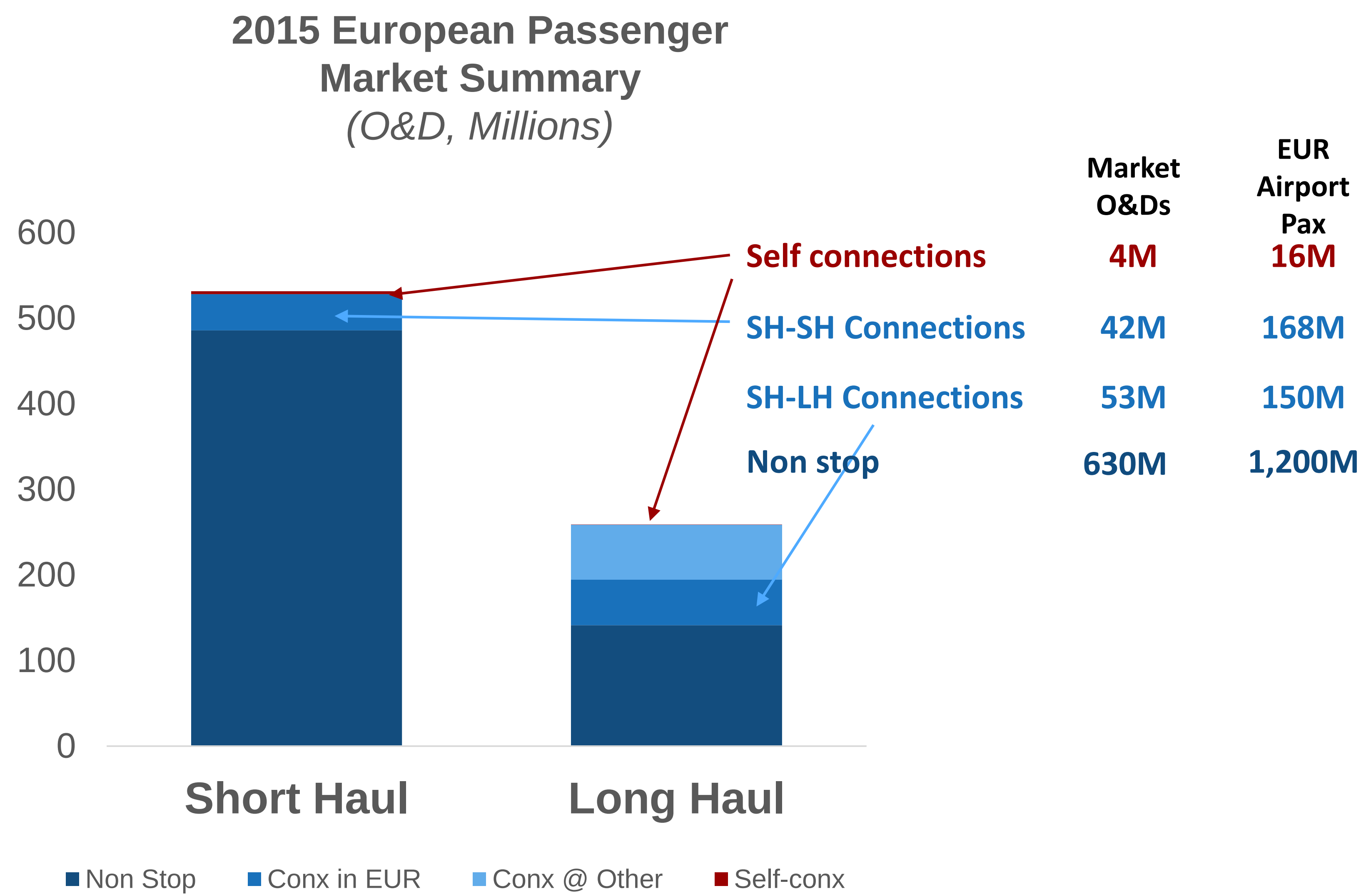
>220m Pax on top 'independent LCCs'

Other airline market demand

c16m
Self Conx airport pax

Source: CAA Survey, 2015
Independent LCCs are Ryanair, easyJet, Norwegian and Wizz

This represents <10% of all transfer pax or 1% of total European airport pax



Top Candidates for Self-Connect

Self-connect is most likely to take off at unaligned carriers

Incremental passengers and revenue are the name of the game… …ideally without incremental cost

UNALIGNED CARRIERS

Emirates

easyJet

RYANAIR

LONG HAUL LOW COST

norwegian

virgin atlantic

WESTJET

NON HUB

flybe.

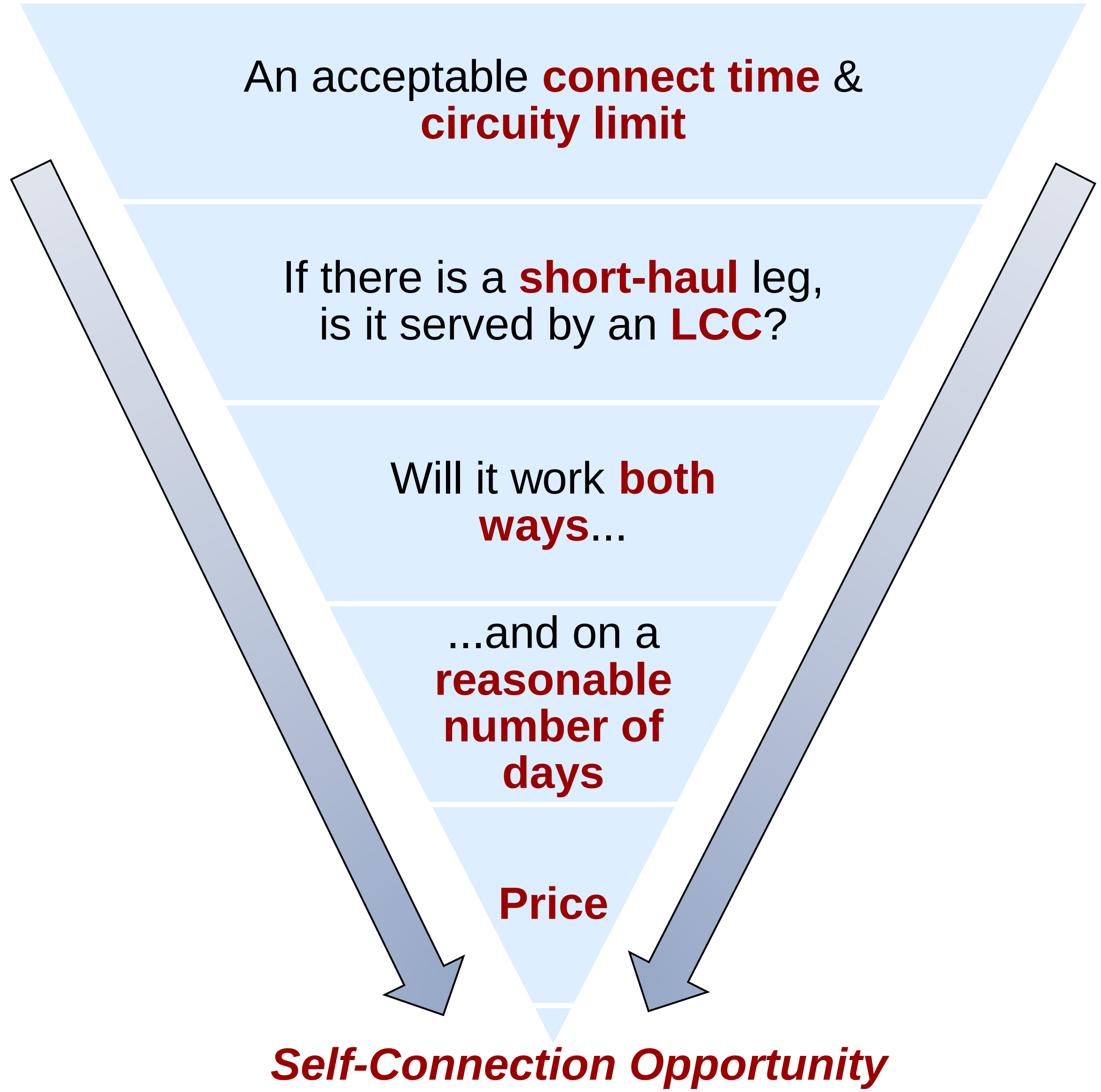
transavia ?

Source: BP Statistical Review of World Energy June 2015, ICF International Analysis

Airports with certain characteristics will be best placed to benefit

- **Scale of network**
- **Variety of business models, including LCC**
- **Long haul helpful**
- **Geography helpful**

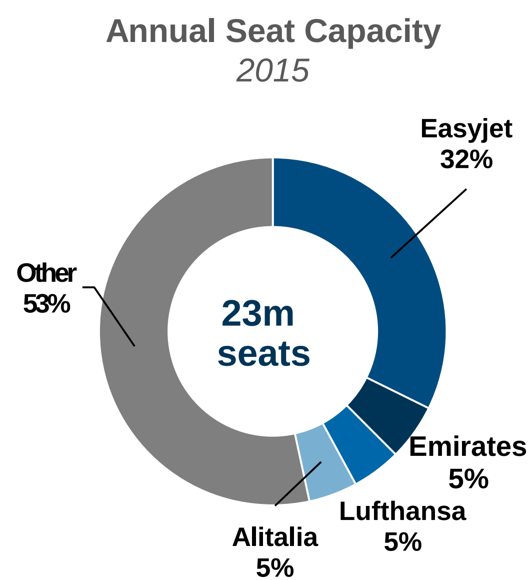
Identifying Suitable Self-Connect O&Ds

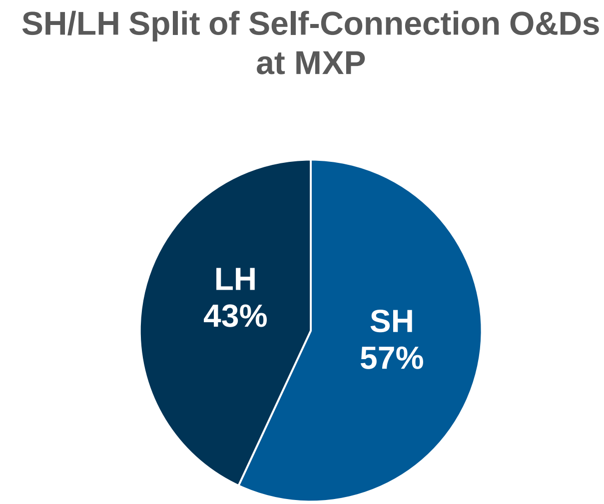


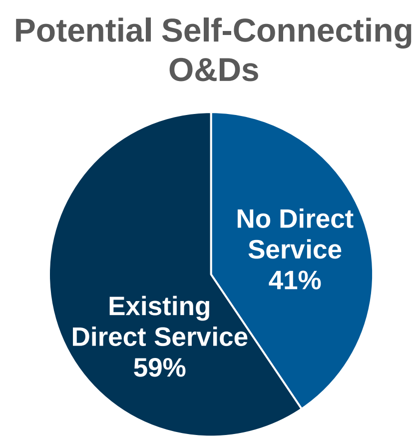
Source: ICF International Analysis

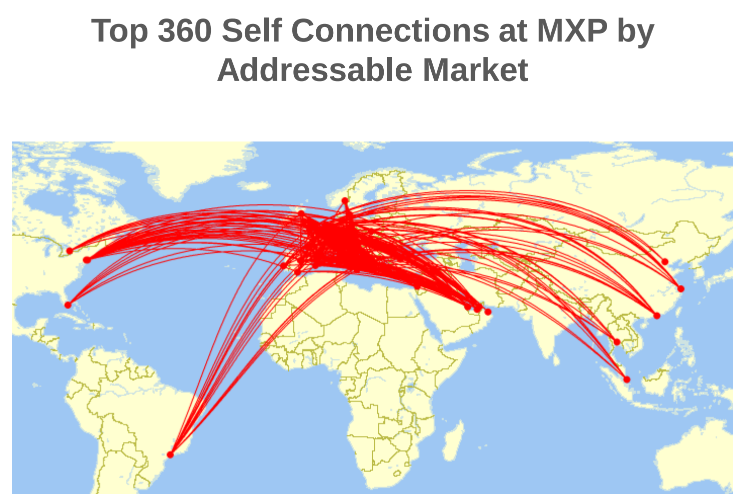
Milan is an obvious candidate for self-connections

- 132 destinations from MXP
- 17k theoretical connecting markets
- 2,500 with reasonable circuity and connection time
- 800 unique markets that work in both directions
- 360 more than 4pw
- 40% of these no direct service
- 13mppa in these O&Ds







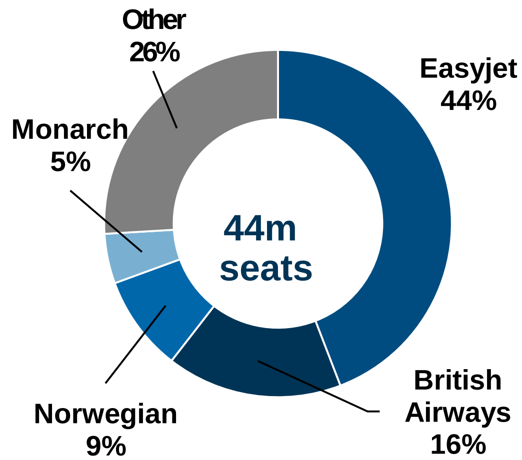


Source: ICF International analysis, PaxIS June 2016 schedules

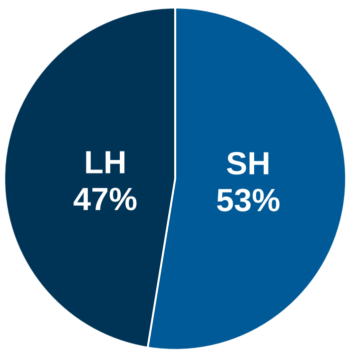
….So is Gatwick

- 188 destinations from LGW
- 36k theoretical connecting markets
- 5,600 with reasonable circuity and connection time
- 2,200 unique markets that work in both directions
- 900 more than 4pw
- 65% of these no direct service
- 30mppa in these O&Ds

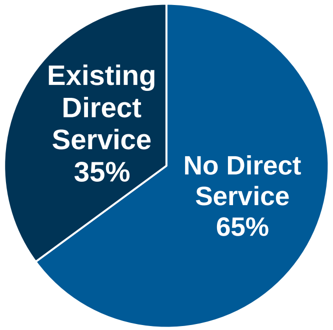
Annual Seat Capacity 2015



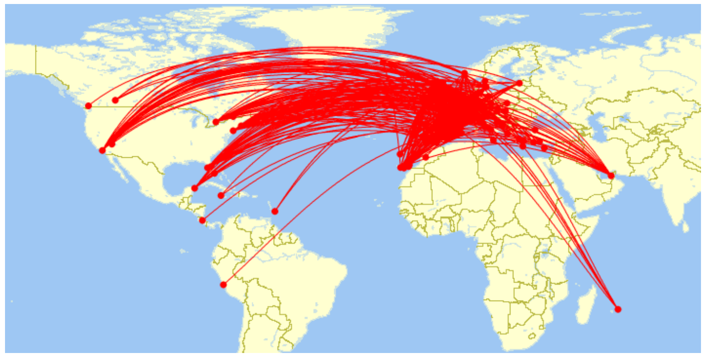
SH/LH Split of Self-Connection O&Ds at LGW



Potential Self-Connecting O&Ds



Top 500 Self Connections at by Addressable Market at LGW

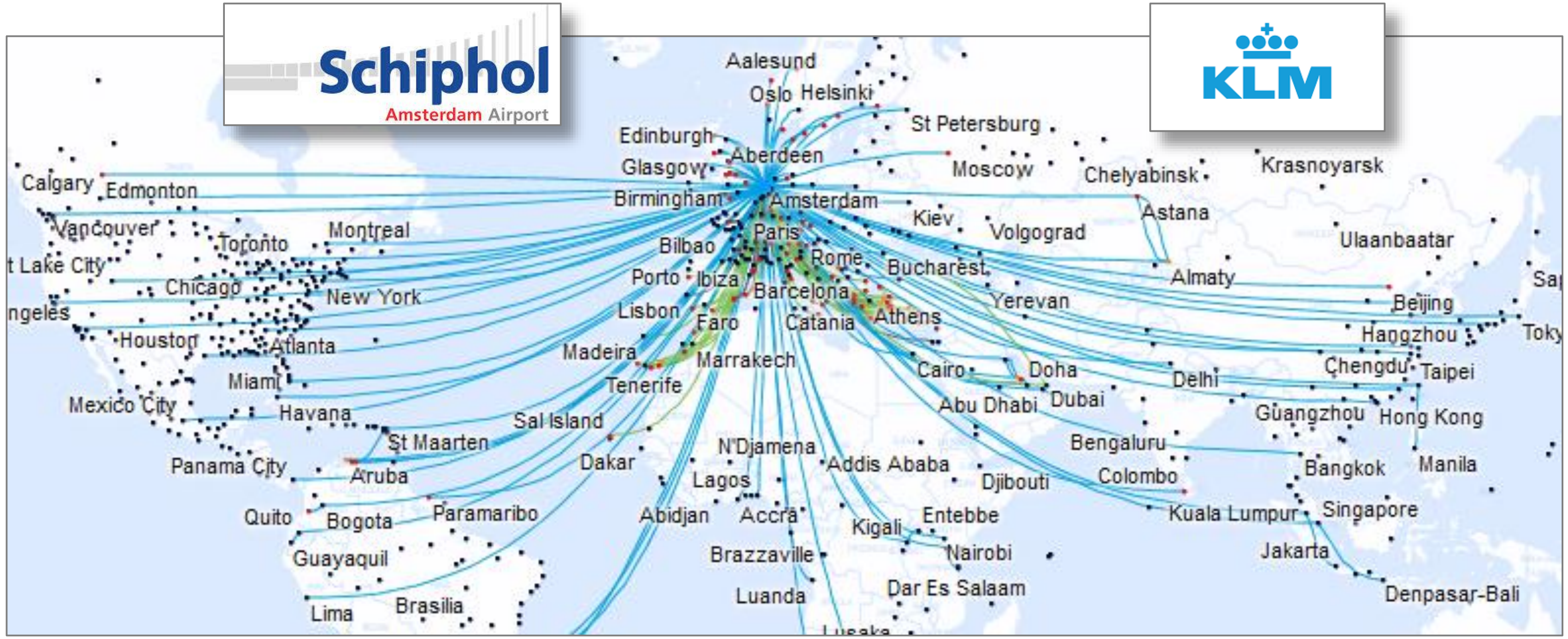


Source: ICF International analysis, PaxIS June 2016 schedules

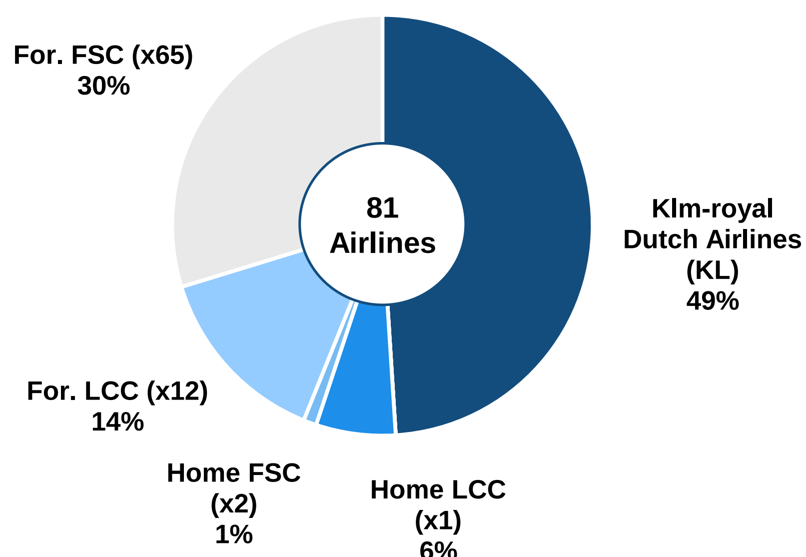
Dutch Aviation: *Threat or Opportunity?*

Schiphol and KLM and world class aviation names, dominating Dutch aviation

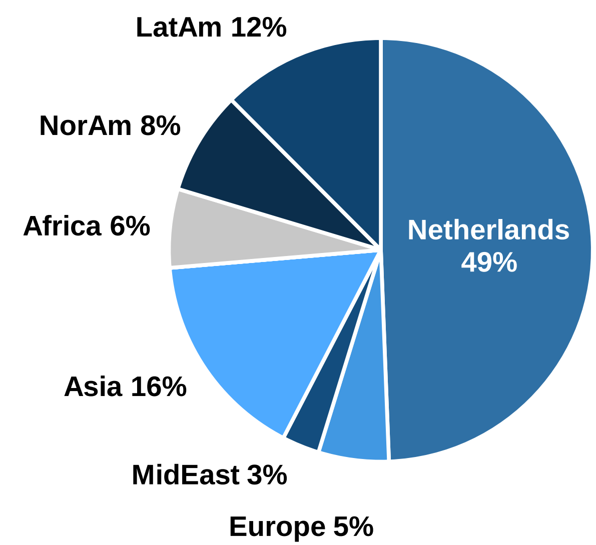
- **AMS 58mppa, 40% transfer**
- **5th busiest airport in Europe**
- **14th busiest airport globally**
- **KLM 28mppa, 70% transfer**
- **8th highest international pax**



AMS Airlines, 2016



KLM ASMs by Region, 2016

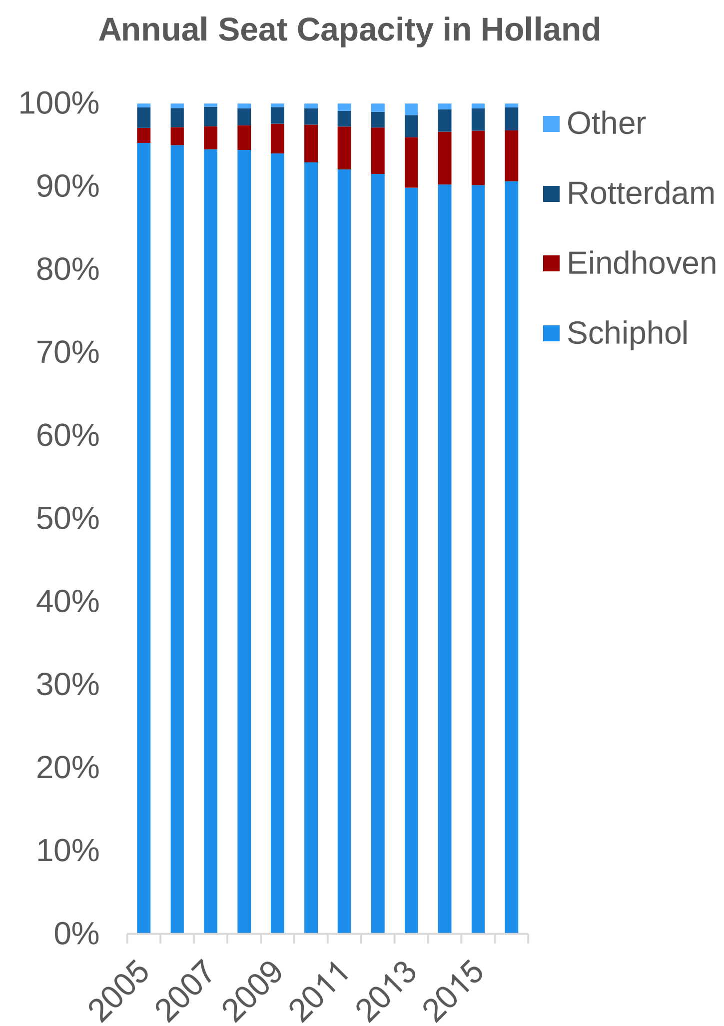


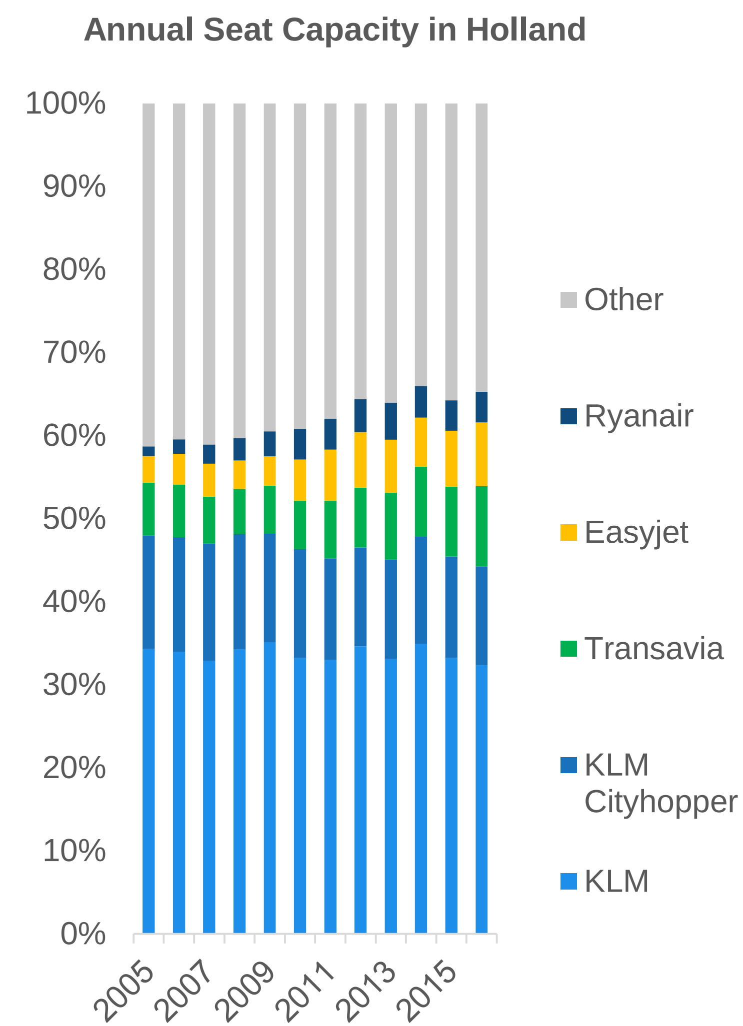
Source: ACI, OAG

Schiphol accounts for over 90% of Dutch aviation capacity

- LCC penetration remains low by European standards

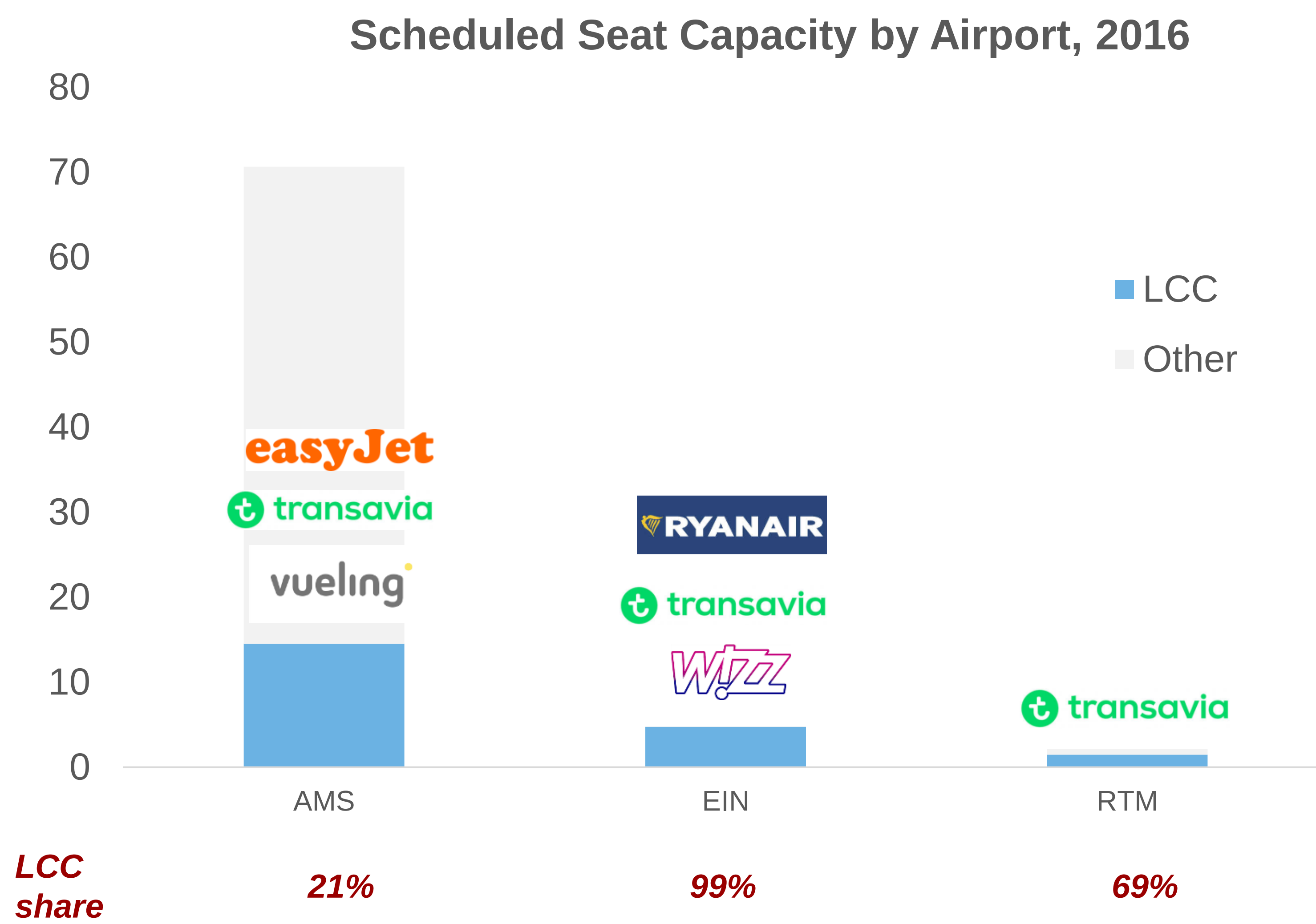
It's not all about KLM at AMS….but it is pretty much





Source: OAG

LCCs are making their mark outside AMS but scale is limited



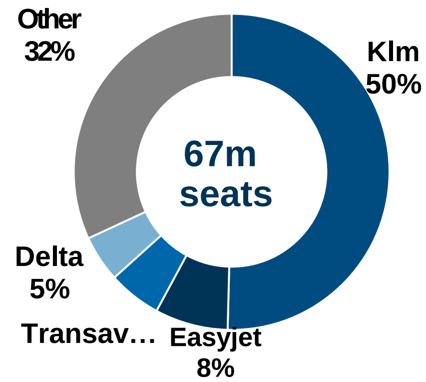
Source: OAG, 2016

Schiphol is not a typical self-connect airport….

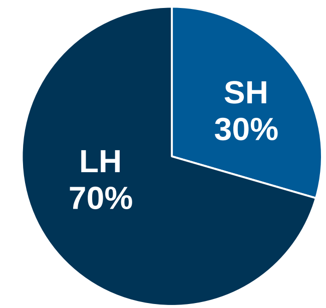
- 238 destinations from AMS
- 57k theoretical connecting markets
- 7,500 with reasonable circuity and connection time
- 2,400 unique markets that work in both directions
- 1,000 more than 4pw
- 50% of these no direct service
- 40mppa in these O&Ds

….but it offers significant self-connect potential for passengers, mostly on long-haul

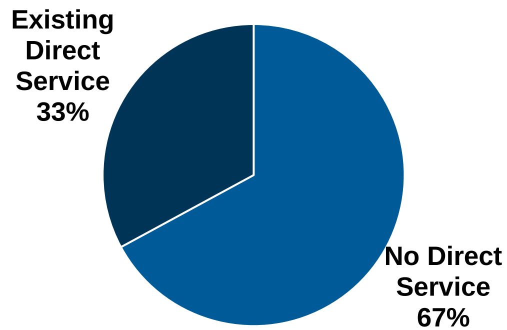
Annual Seat Capacity
2015



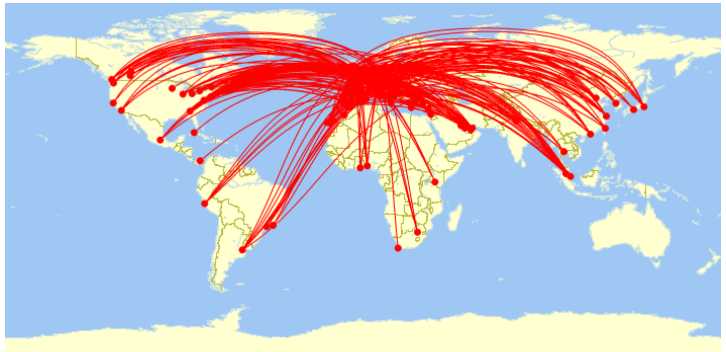
SH/LH Split of Self-Connection O&Ds at AMS



Potential Self-Connecting O&Ds

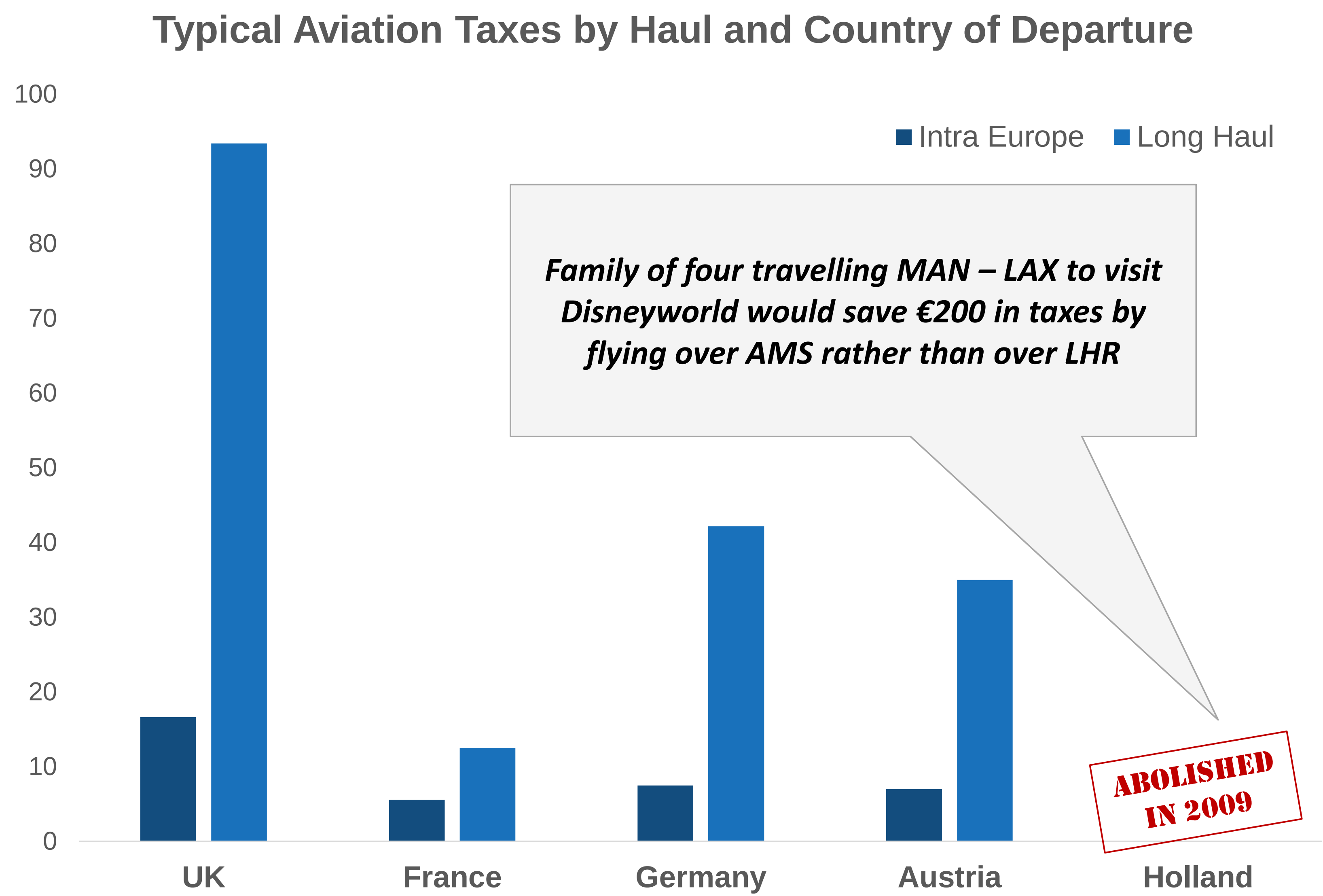


Top 500 Self Connections by Addressable Market at AMS



Source: IATA PaxIS, OAG, ICF analysis

Taxation adds a further element of risk or opportunity; depending on where you are

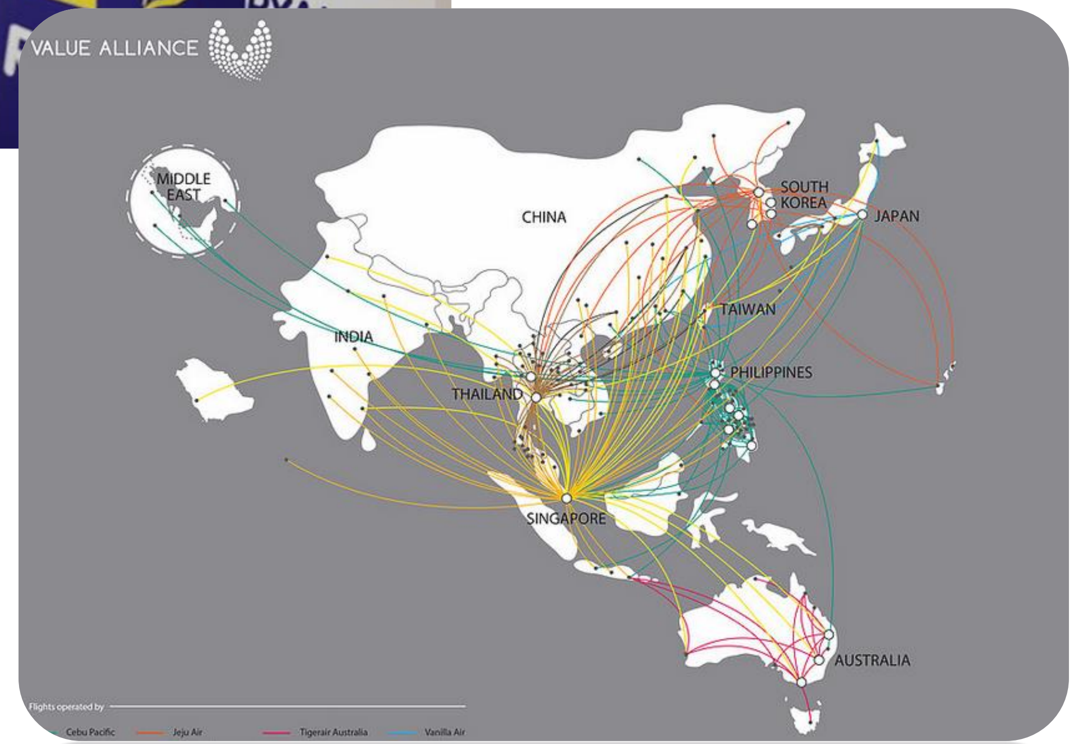


Source: UK govt; France CAA, EBAA, ITA Matrix

Where Next?

The LCCs are evolving, competing with each other and with legacy carriers

Own metal Cnx



LCC Alliance in Asia

Source: OAG Data, ICF International Analysis

ICF believes that distribution and risk sharing are the key hurdles

Who will raise awareness and availability of self-connections?

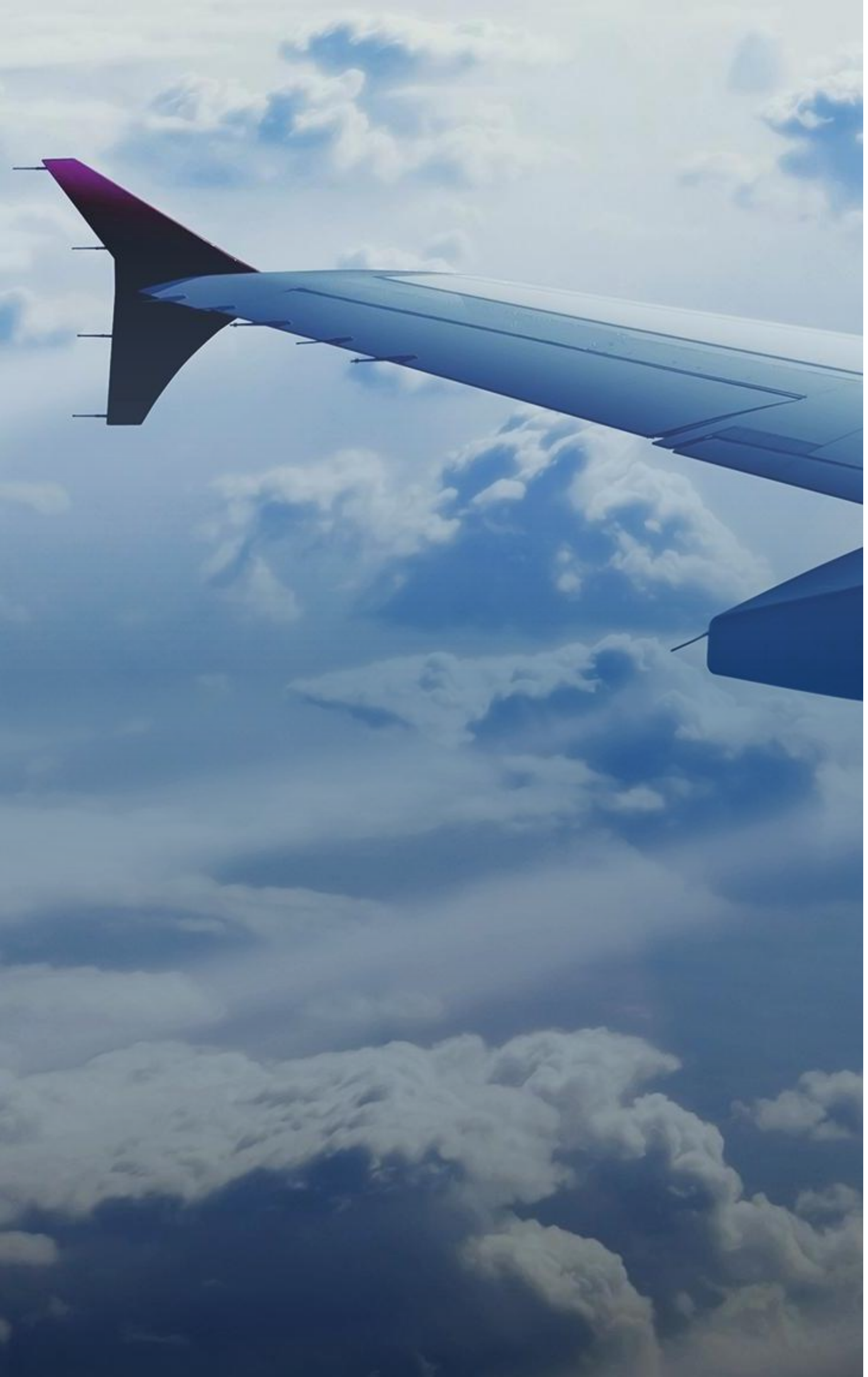
Meta search	Airports	Airlines	OTAs	Other??
skyscanner, dohop	ViaMilano THE FLIGHT CONNECTION, Gatwick CONNECTS Your flight connection service	RYANAIR, norwegian	SKYPICKER, Expedia	Google, Facebook

Who will shoulder the risk of missed connections?

- Schedule risk
- Lost bags
- Directionality
- Compensation (EC261)

→

- Operating airline
- Travel Agent
- Airport
- Third party insurance
- Handling Agent



In Summary…

- Self-connections have always existed, mostly used by independent, price-sensitive travellers on unusual itineraries
- Technology, network densification and passenger acceptance are leading to increased opportunities for self-connections
- Some of this activity will compete with traditional connections; some will lead to new demand
- Largest opportunity at airports with network scale, large share of LCC, some long-haul and helpful geographic location
- Even hubs such as AMS may see some opportunity, especially in the face of large taxation differences (e.g. ADP)
- Although potential is significant, hurdles to large-scale take-up remain and self-connect is not likely to replace traditional online and interline connections any time soon
- The key business decision for airlines and airports is whether this is a threat or an opportunity and to plan accordingly

18 May 2016
The Hague, Netherlands

THANK YOU!

For questions regarding this presentation, please contact:

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With thanks to Nishaan Rama and Rob Walker, ICF

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