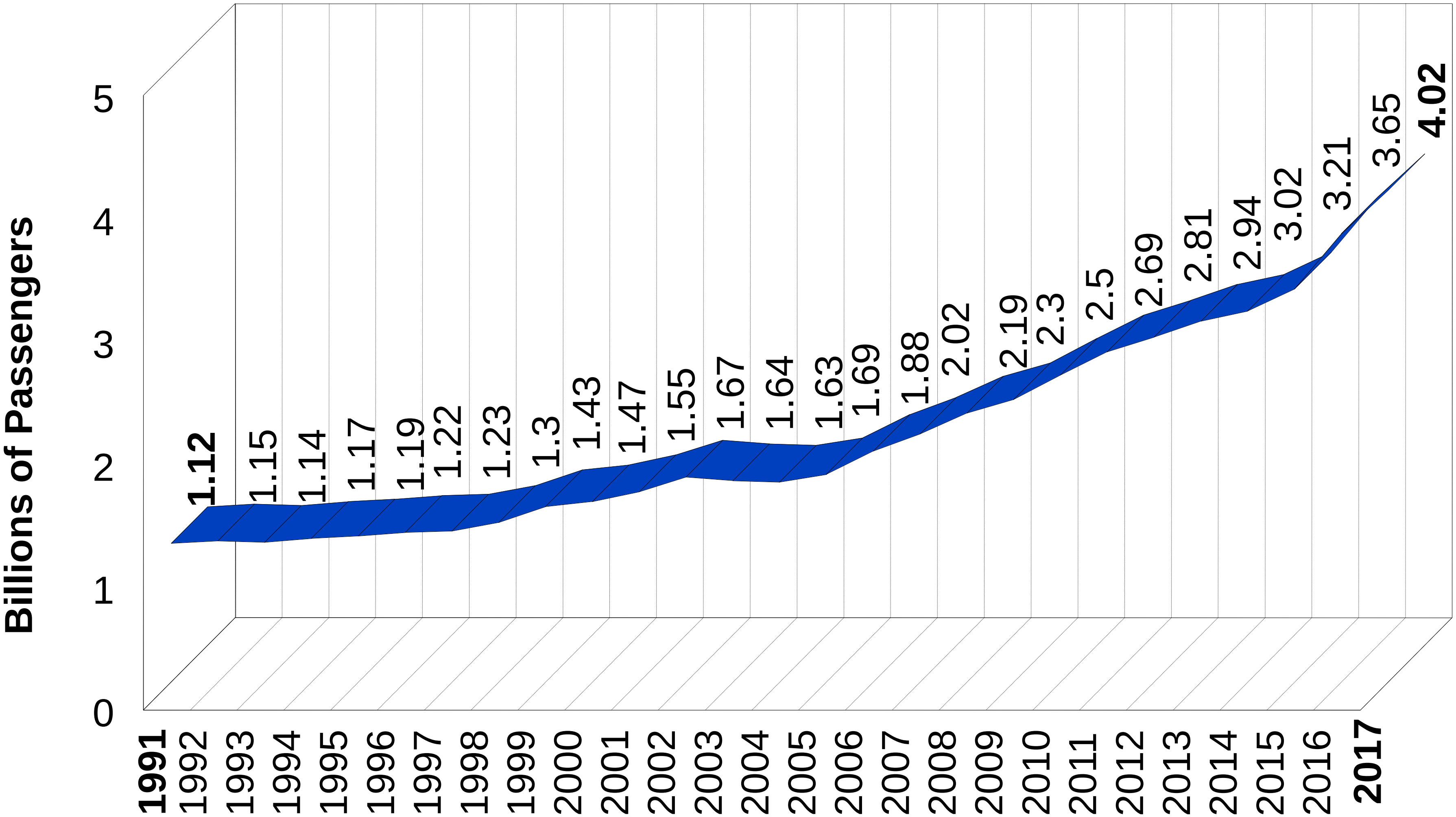
Global Trends in Aviation

Dr Frankie O'Connell

Ninth Annual Tourism Policy Workshop

Dromoland, 2018

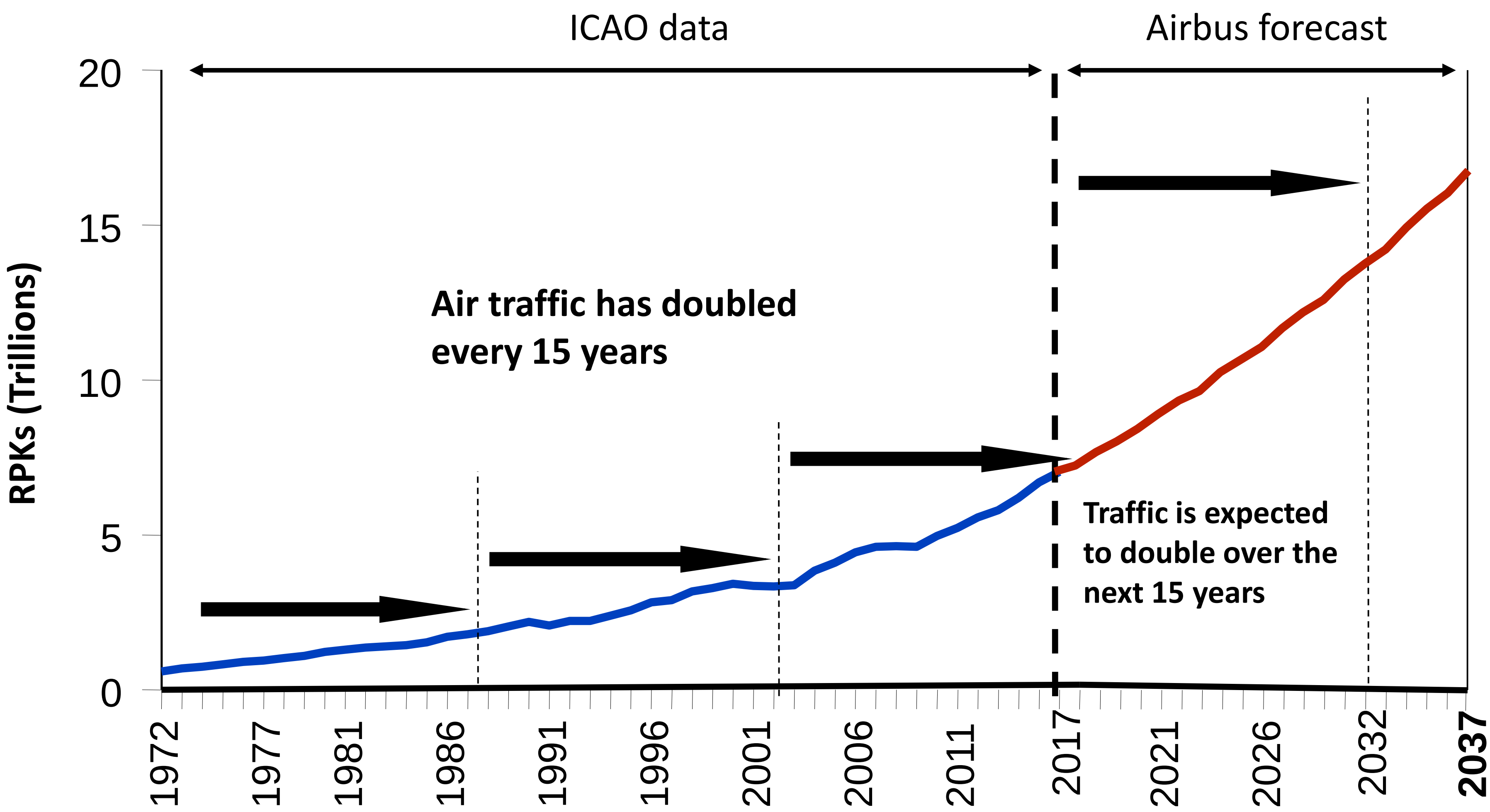
Number of passengers carried worldwide (1991 – 2017)



Source: O'Connell analysis from IATA, ICAO, AEA, AAPA, Airlines for America, ALTA, AACO, AFRAA

World Traffic Forecast (measured in Revenue Passenger Kilometres)

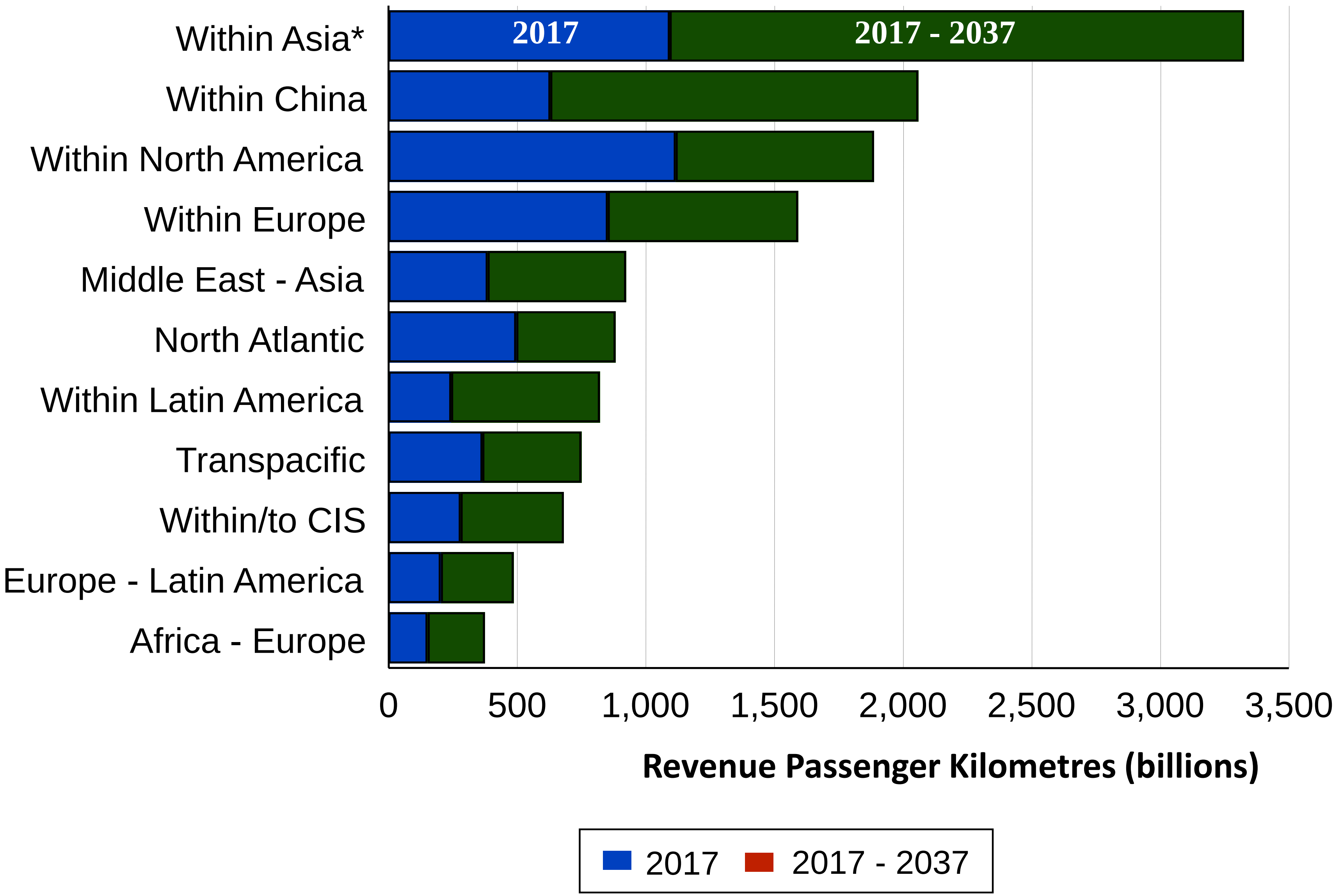
1972 - 2037



Source: IATA, ICAO, AEA, AAPA, Airlines for America, ALTA, AACO, AFRAA, Airbus, Boeing, O'Connell

Long term growth prospects of air traffic (2017- 2037)

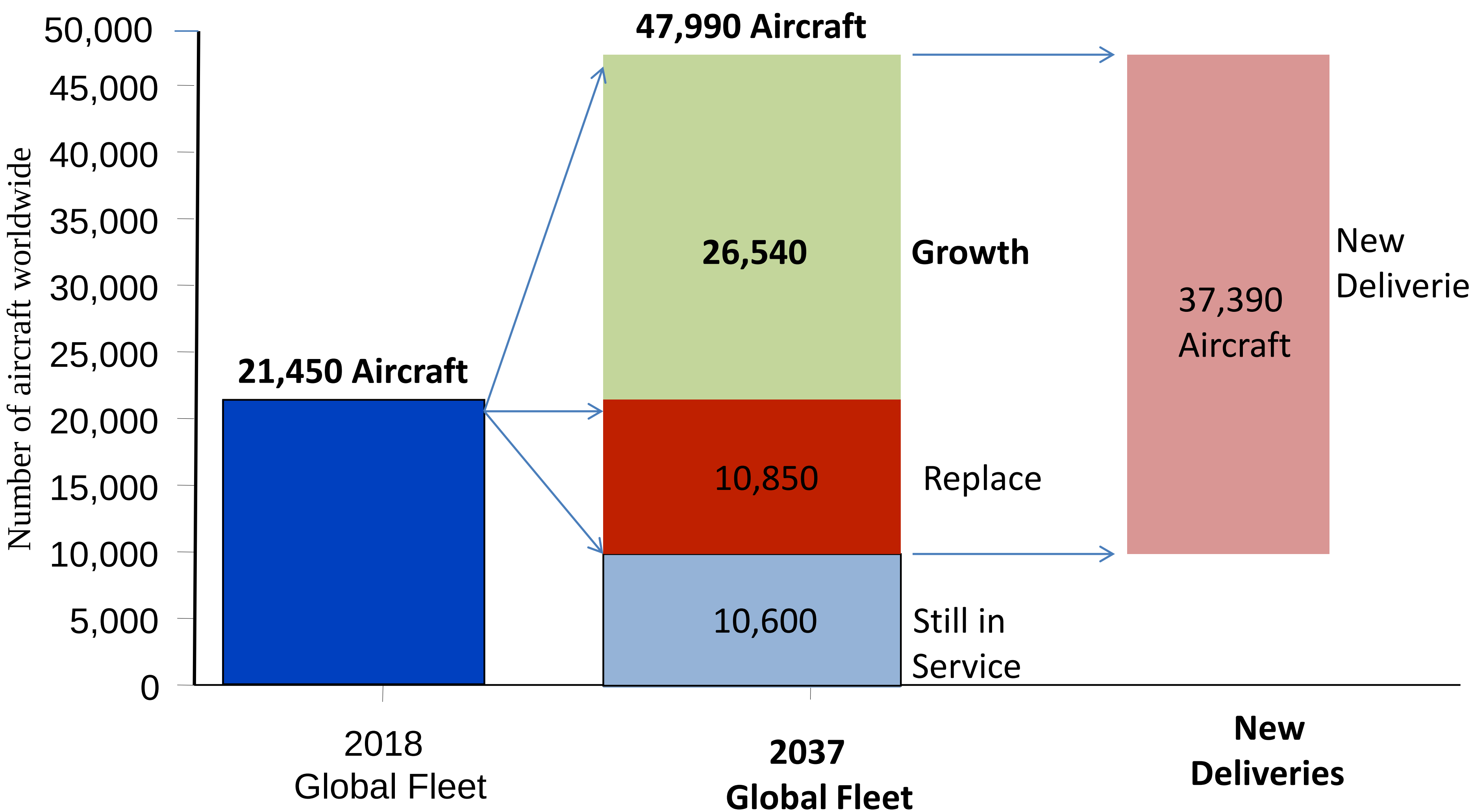
In terms of Revenue Passenger Kilometres (Demand)



* Does NOT include travel within China

Source: Boeing Market Forecast

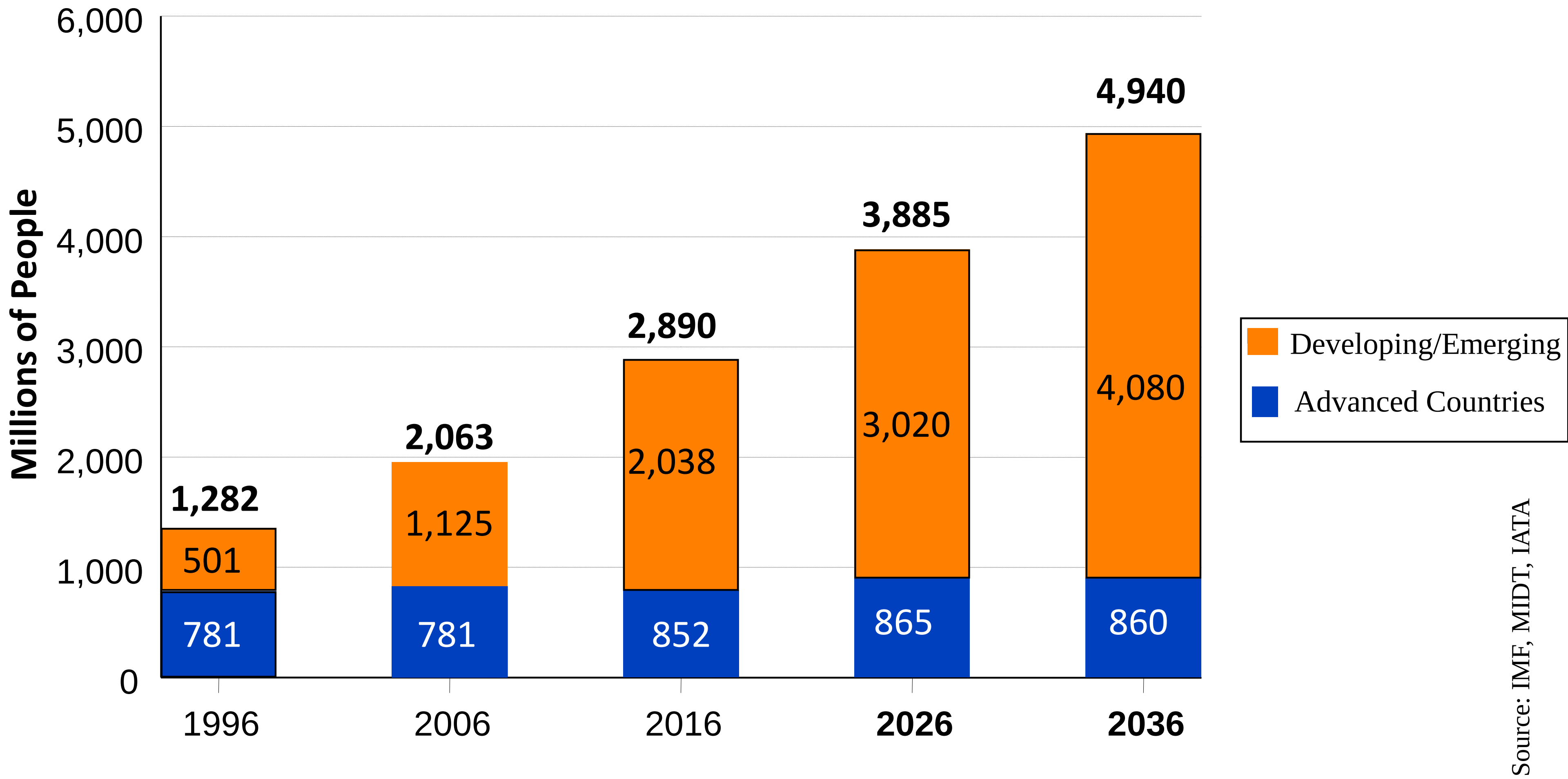
Fleet Evolution: 2018 - 2037



The number of outstanding firm orders at the start of 2018 was ~17,000 aircraft

Source: Airbus General Market Forecasts 2018

Growth of the Middle Class Global Population
1996 - 2036



	1996	2006	2016	2026	2036
World Population	5.8 billion	6.6 billion	7.4 billion	8.2 billion	8.9 billion
% of world Population flying	23%	30%	39%	47%	56%

People Movement from Rural to Urban

% of people living in urban/suburban areas

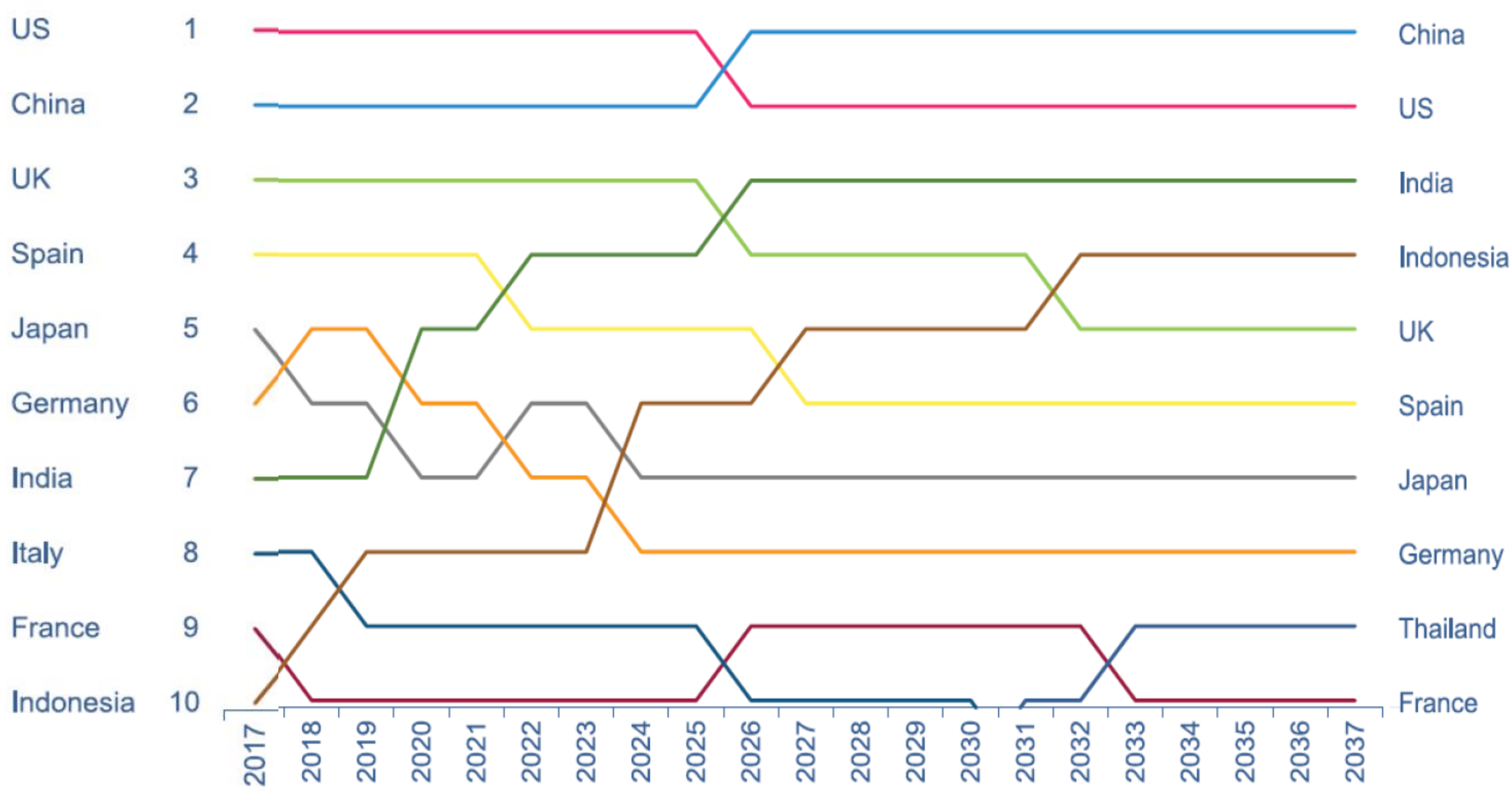
	1960	2017	Gain
South Korea	28%	83%	55 pts
Saudia Arabia	31%	83%	52 pts
Turkey	32%	74%	42 pts
China	16%	57%	41 pts
Brazil	46%	86%	40 pts
Indonesia	15%	54%	39 pts
Nigeria	15%	49%	34 pts
Thailand	20%	52%	32 pts
Japan	63%	94%	31 pts
Mexico	51%	80%	29 pts
Greece	56%	78%	22 pts
Russia	54%	74%	20 pts
Global Average	**34%**	**54%**	**20 pts**
Vietnam	15%	34%	19 pts
India	18%	33%	15 pts
Ethiopia	6%	20%	14 pts
United States	70%	82%	12 pts
United Kingdom	78%	83%	5 pts
Germany	71%	76%	5 pts

Source: World Bank

Most important Passenger Traffic - Country markets 2017 to 2037

Rank by size of O-D passenger flows in, out & within country

2017 rank **2037 rank**



Source: IATA Economics, 2018

Connectivity around the world and its potential – 2018 data

International City Pairs	Daily Flights
New York – London	30
Hong Kong – Taipei	39
Jakarta – Singapore	38
Los Angeles – Mexico City	13
London - Dublin	**52**

China to India City Pairs	Daily Flights
China – India?	6
Shanghai – Mumbai	0
Beijing – Delhi	<1
Beijing – Mumbai	<1
Shanghai – Delhi	2
Guangzhou – Delhi	2

There are only 6 daily direct flights joining 2.7 billion people between China and India

Source: OAG, AerCap, O'Connell

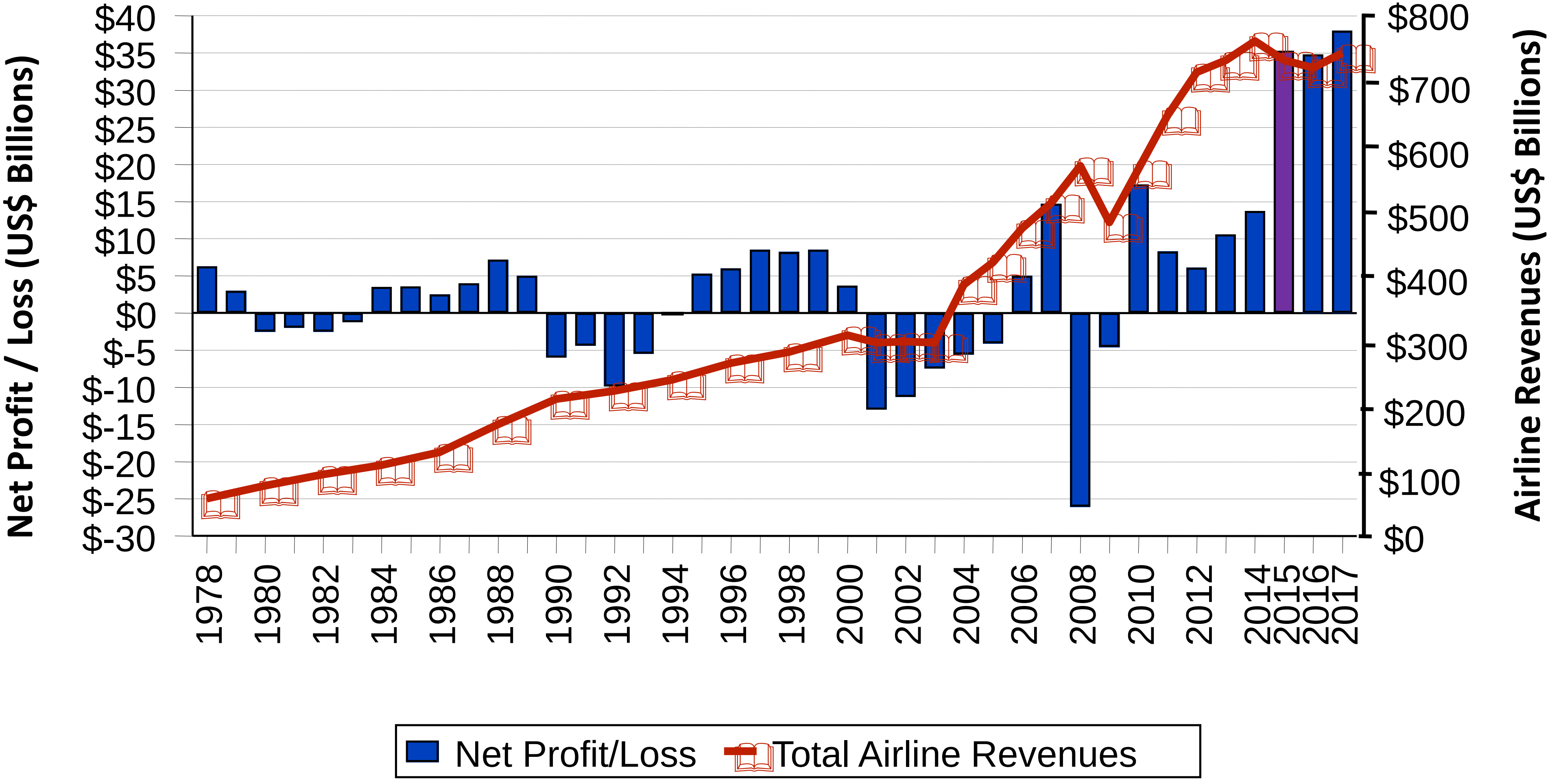
Social Media-Fuelled Tourism

A new trend that is helping drive tourism is the growth in social media, and sights like Instagram, with more than 500 million active users popularising many sites through the power of the image.

Now you're less than 10 clicks away from seeing an image on Instagram to purchasing a ticket to go there.

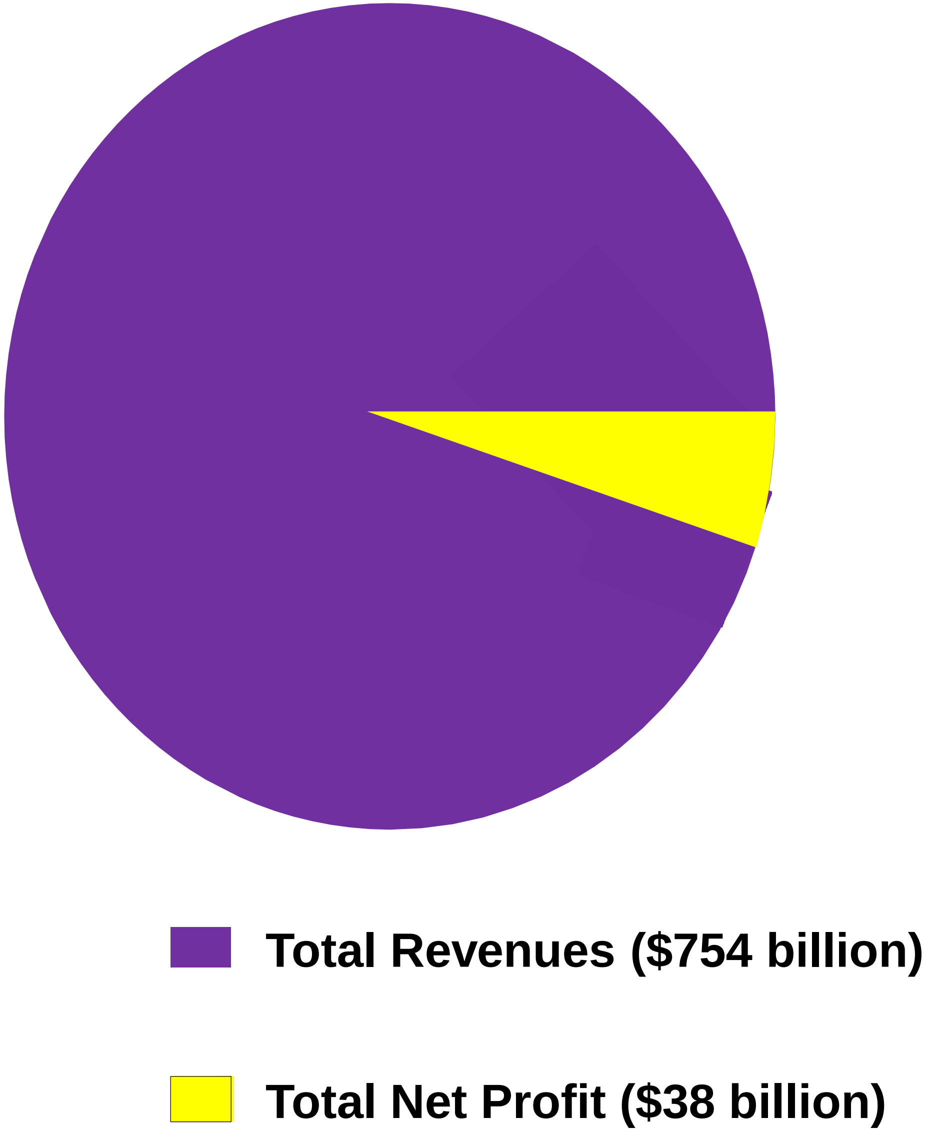
Net Profit/Loss and Revenues for World Commercial Airlines

1978 - 2017



Source: ICAO, IATA, O'Connell, $38

Proportion of Total Revenues to Total Net Profit (2017 data)



Source: IATA, O'Connell

Airline Consolidation in Europe

2004

- AIR FRANCE
- KLM

2005 - 2006

- Lufthansa / SWISS Swiss International Air Lines
- Lufthansa / eurowings
- airberlin / dba flydba.com

2007

- flybe. / BA CONNECT
- easyJet / GB AIRWAYS
- AB AIRLINES / Germania
- airberlin / LTU
- bmi / BMED

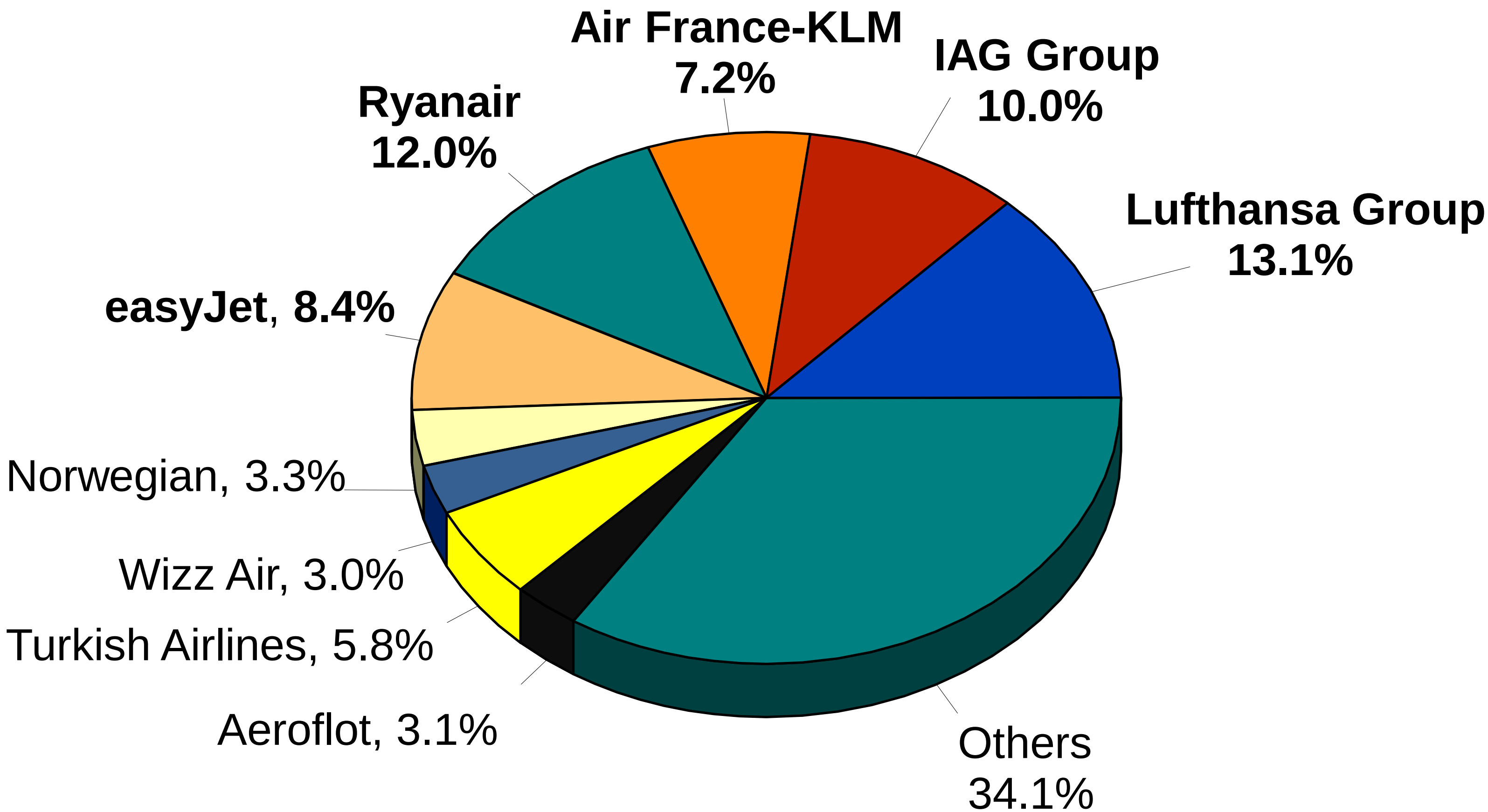
2008 - 2018

- AIR FRANCE KLM / fly VLM
- bmi / Lufthansa → BRITISH AIRWAYS bmi
- Lufthansa / SN Brussels Airlines
- clickair / vueling.com → BRITISH AIRWAYS
- Lufthansa / Austrian
- Alitalia / Air One
- IBERIA / BRITISH AIRWAYS
- Thomas Cook / MYTRAVEL
- airberlin ↕ TUIfly
- airberlin / NIKI
- Thomson / First Choice
- Aer Lingus / BRITISH AIRWAYS

Source: O'Connell

European market fragmentation - 2018

European market is still highly fragmented compared to the US



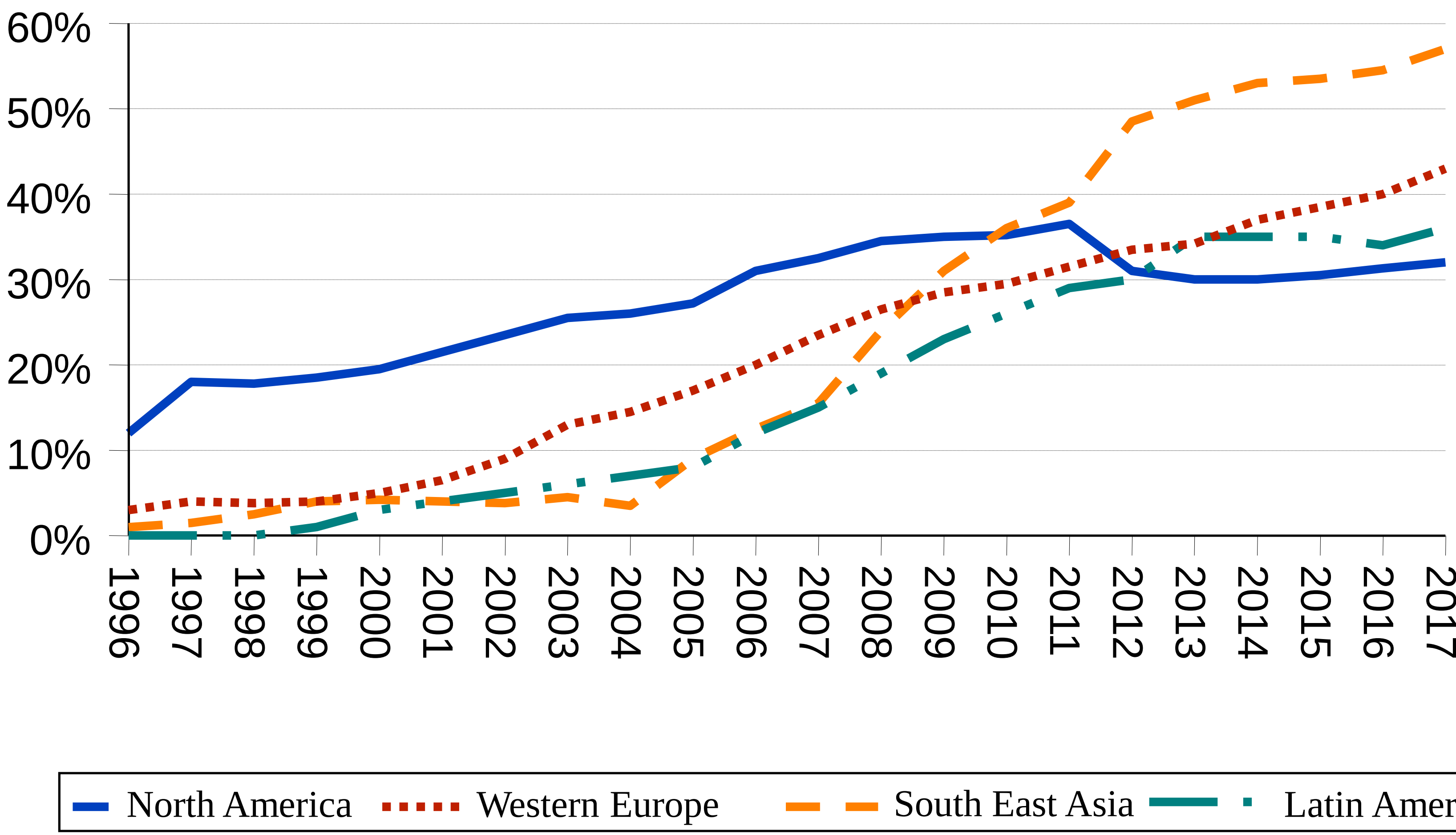
Top 5 Airlines have ~51% of EU market

Source: Citi Research, Diiio Mi

Major Issues

- Rising Oil Prices ($74 per barrel October 2018 vs $43 per barrel October 2016)
- **Falling Fares**
- Incessant competition
- **New airline business models (Long Haul LCCs increasingly entering global marketplace)**
- Currency fluctuations (27% of Ryanair's revenues is in UK£, while 40% of its Costs in US$)
- Global Economic Cycles
- Seasonality in Leisure and Business travel
- Overcapacity – Too many seats being supplied to the market
- Labour unrest (Airline crew strikes – Ryanair, Air France, Lufthansa; ATC strikes - in France)
- Runways and Airport Terminals close to full capacity
- **Navigational Airspace approaching Full Capacity**
- Political and Regulatory Environment (Open Skies)
- Shortage of Skilled labour (in the next 20 years: 800,000 pilots; 750,000 maintenance technicians)
- Changes in consumer preferences, expectations, demographics
- Weather, natural disasters, pandemics and other external shocks
- Aviation Taxes
- **Industry Merging and development of Joint Ventures through Alliances and Equity Partner**
- **Brexit uncertainty** (easyJet purchased Austrian AOC; Ryanair bought UK AOC)
- Technology game changing initiatives (Block Chain)

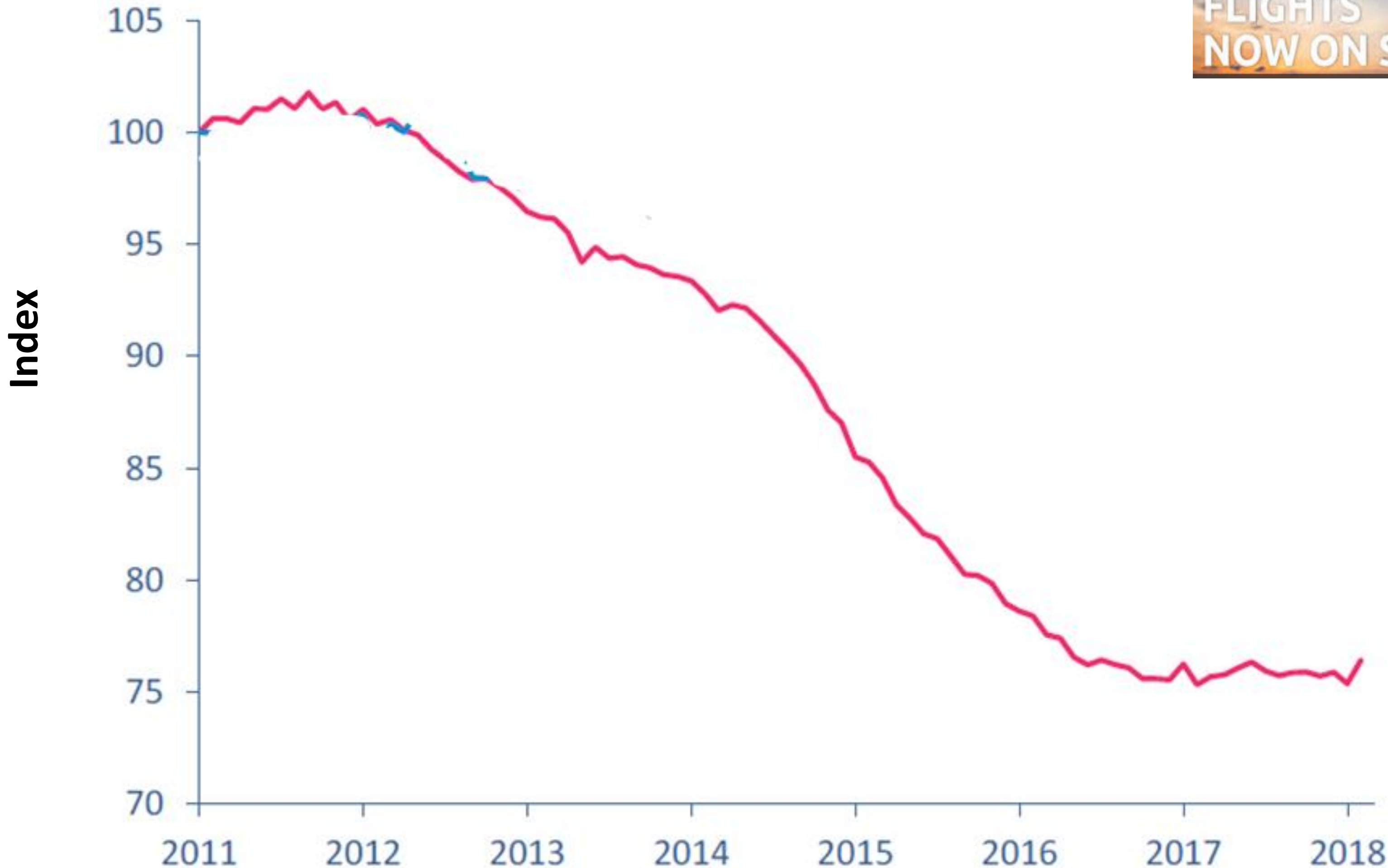
LCC Penetration in N. America, W. Europe and S.E. Asia
1996 - 2017





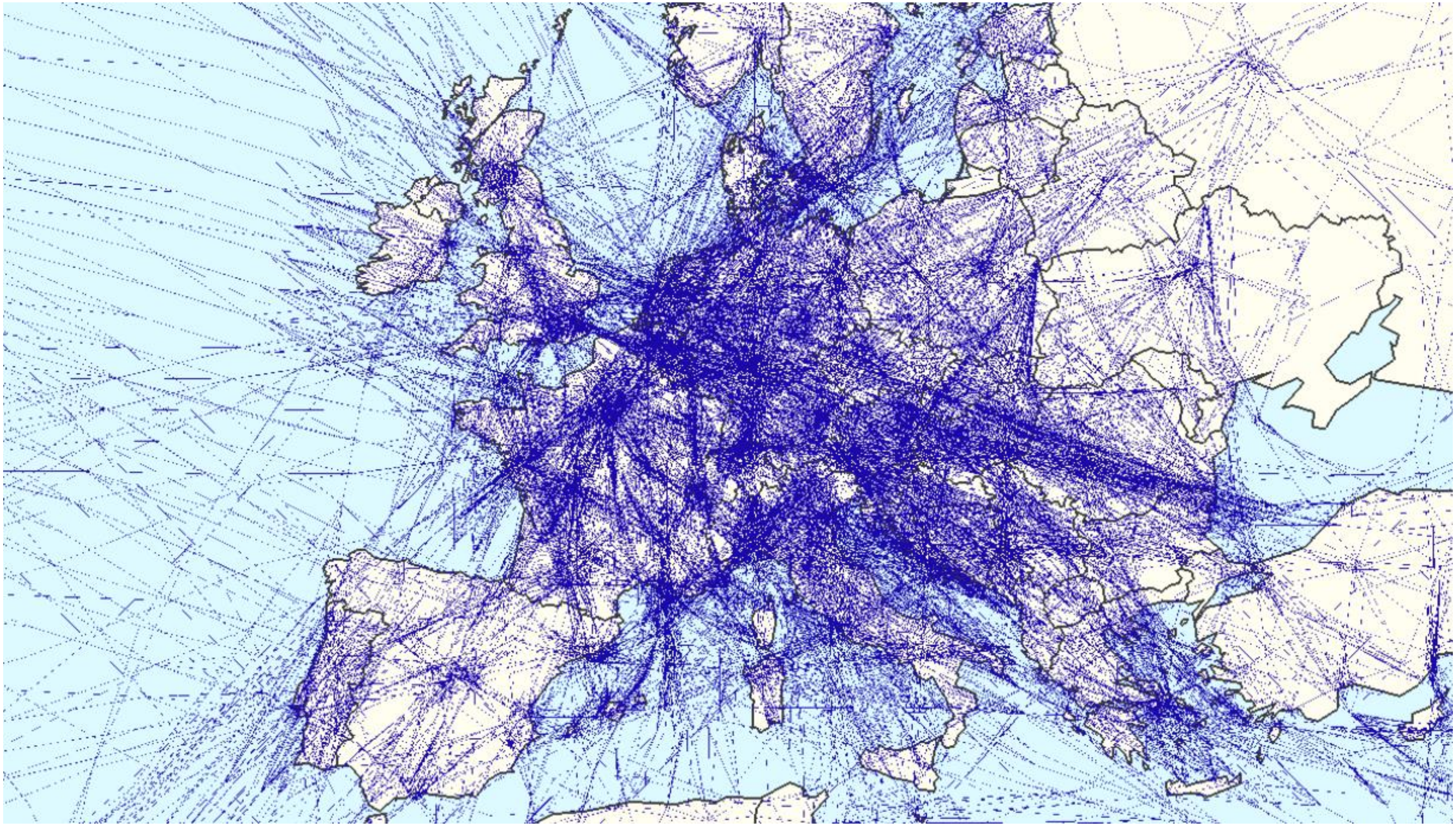
Source: OAG analysis by O'Connell

Global Passenger Yields (excluding surcharges & ancillaries)



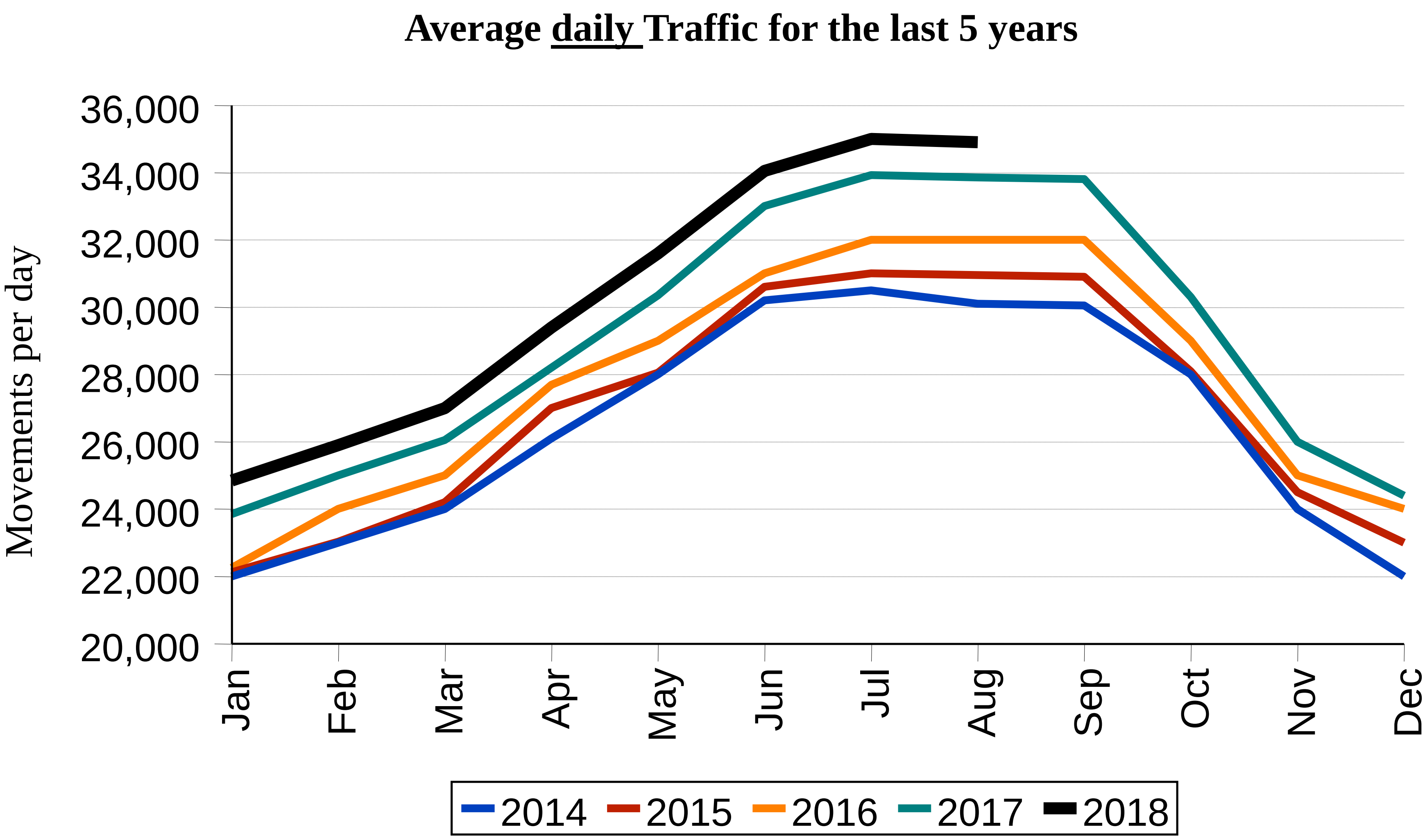
Source: IATA

AIRSPACE CAPACITY

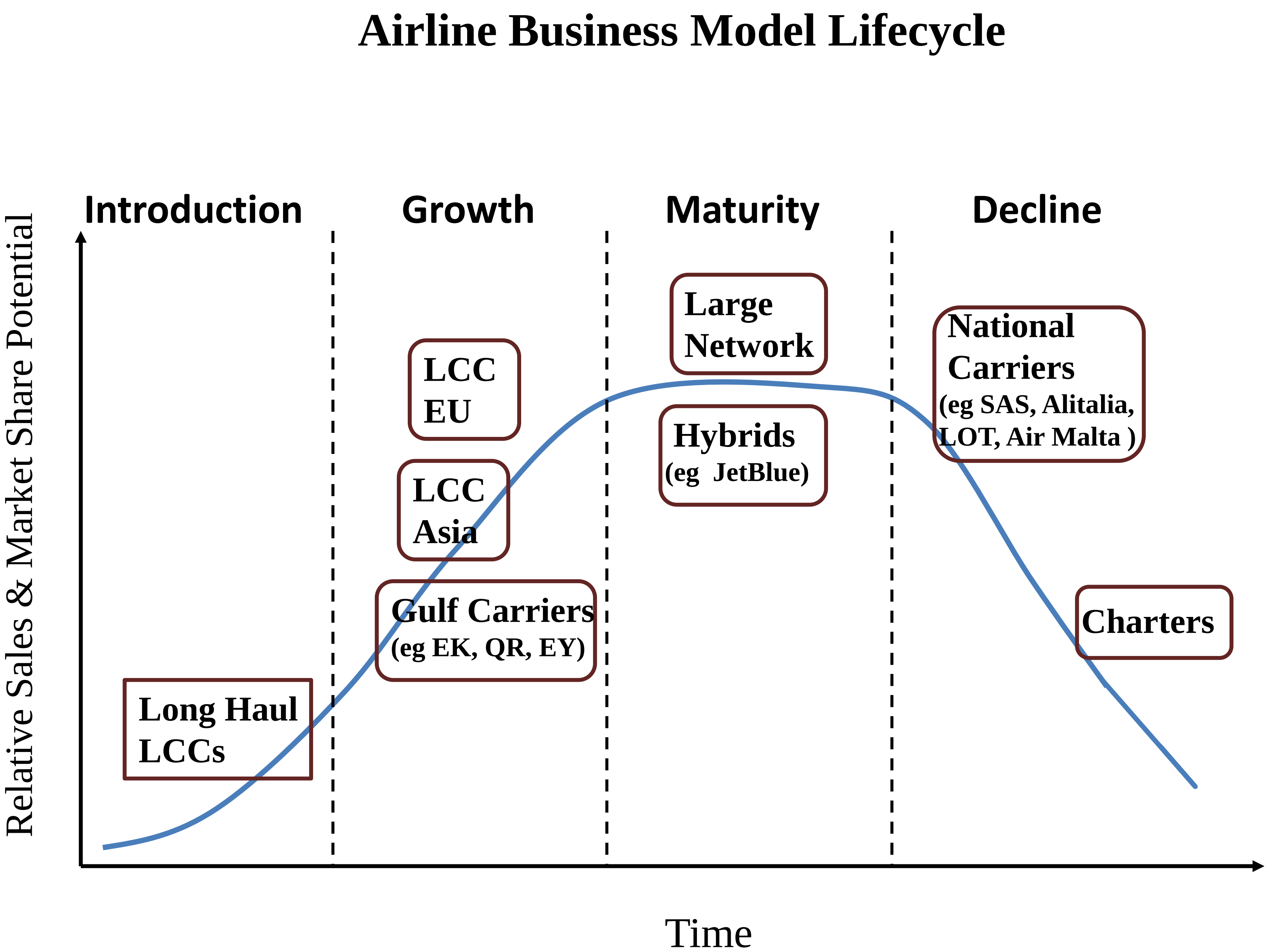


Source: Eurocontrol

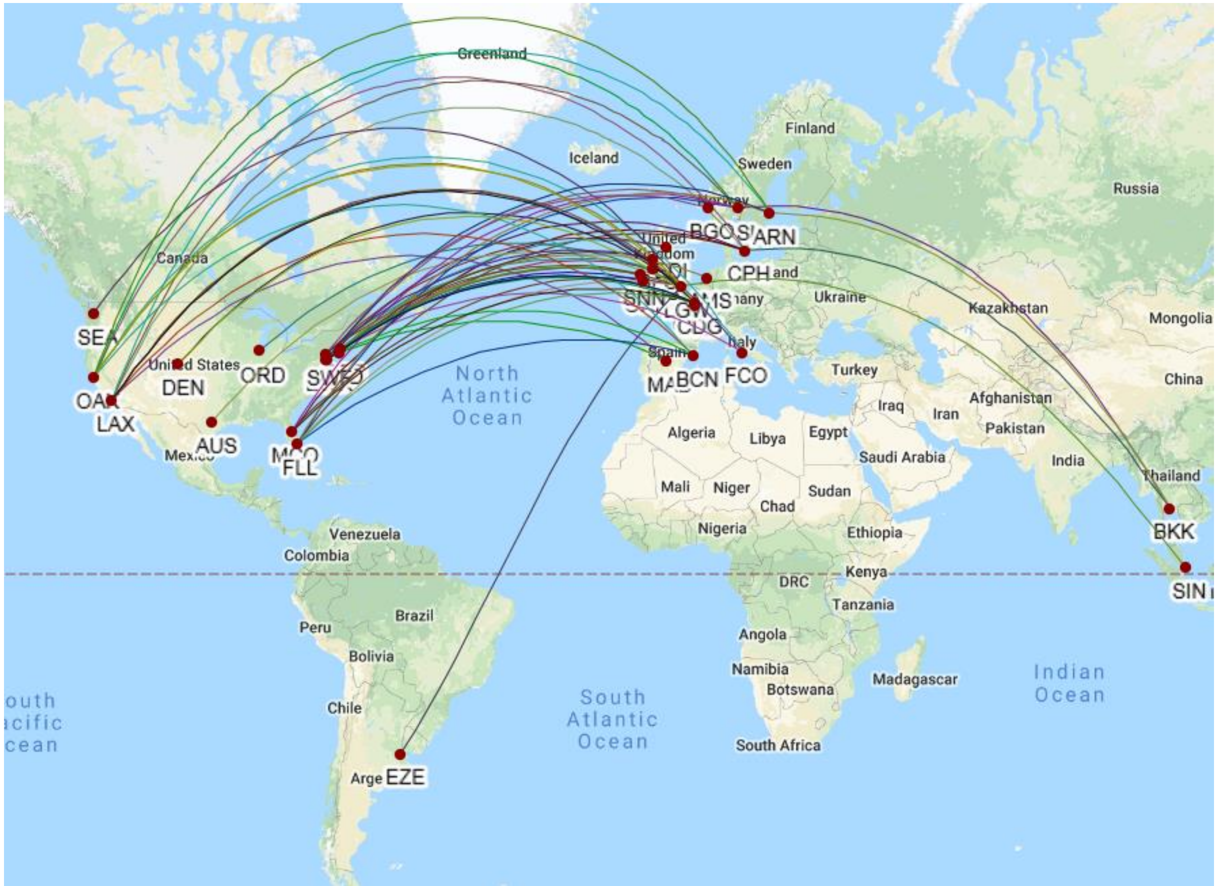
European Airspace is getting maxed out



Source: Eurocontrol


Airline Business Model Lifecycle
Introduction
Growth
Maturity
Decline
Relative Sales & Market Share Potential
Long Haul LCCs
LCC EU
LCC Asia
Gulf Carriers (eg EK, QR, EY)
Large Network
Hybrids (eg JetBlue)
National Carriers (eg SAS, Alitalia, LOT, Air Malta)
Charters
Time

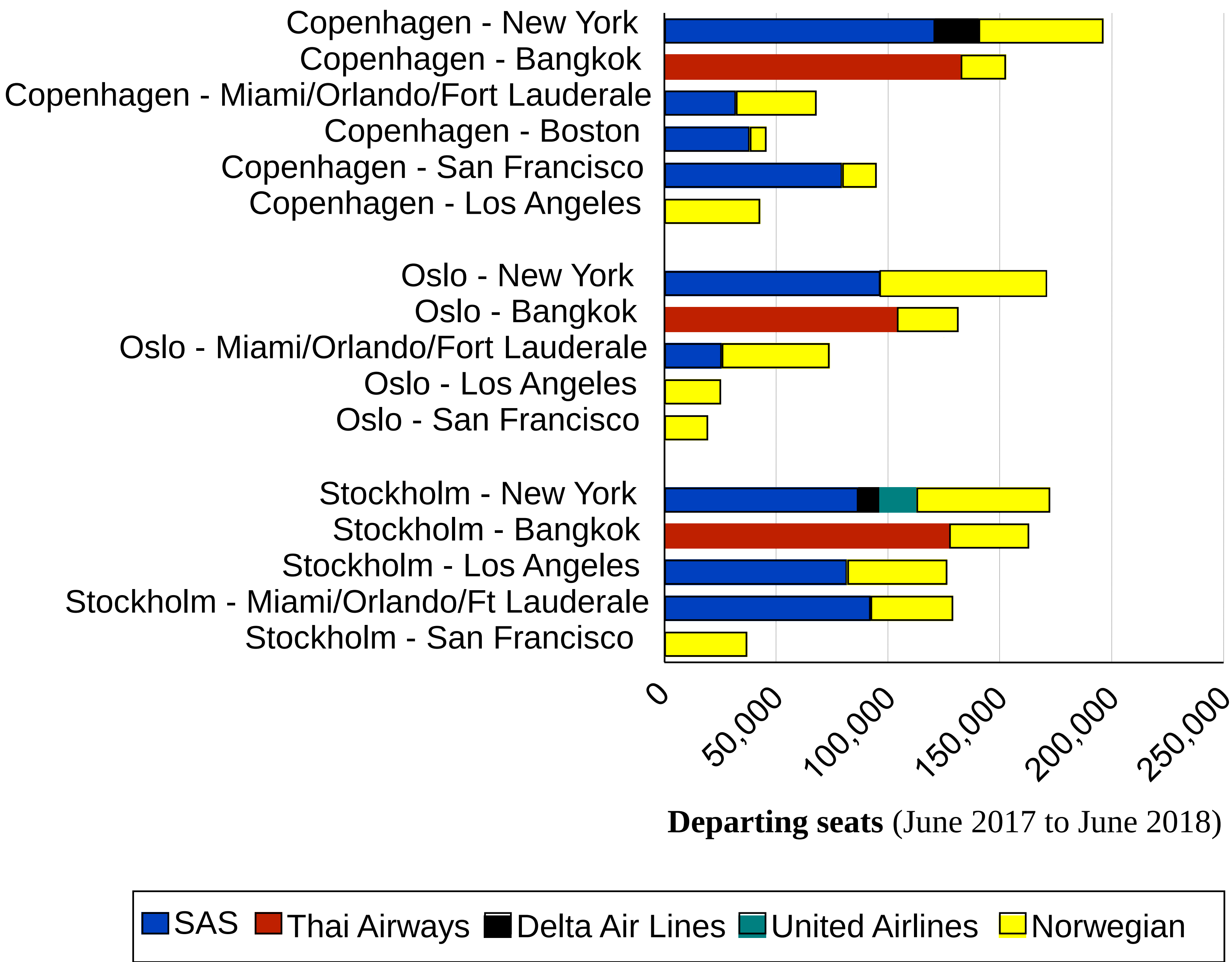
Norwegian Airlines International Route Network – Summer 2018



- 2014: 41 Flights a week across the Atlantic
- 2018: 215 Flights a week Across the Atlantic
- **However, there is limited Feed to Norwegian flights in North America**

From Scandinavia – Norwegian is Strong

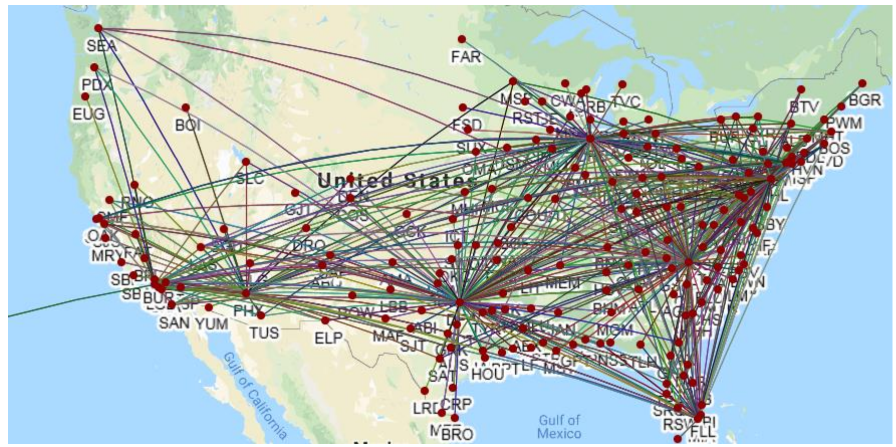
Summer 2017 – Summer 2018



Are Airline Alliances are becoming Fractured?

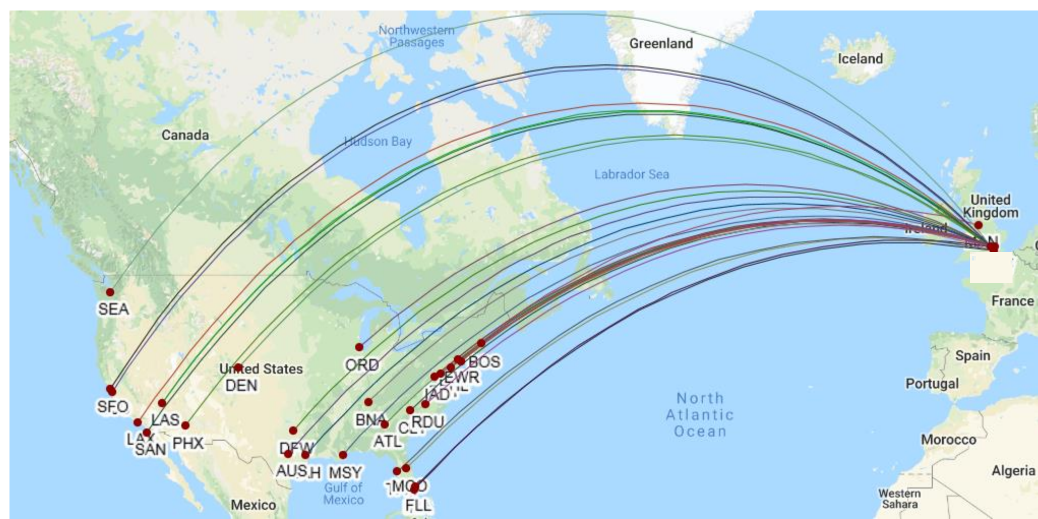
Are Airline Alliances becoming Irrelevant?

American Airlines domestic network



British Airways European network

Connectivity between BA and AA



Alliances are becoming increasingly Fractured

Joint Ventures & Equity Partners are becoming more relevant

Alliances/Cooperations

- Provides access to new markets without investing in aircraft
- Provides **Traffic Feed** at Partners hub airport which is redistributed along Partners network
- Overcomes bilateral restrictions
- Reciprocal FFP
- Synergies: Joint Purchasing, Co-Location at Airports, Joint Products
- **Alliances have Matured**
- **Existing Alliances provide limited additional potential for members**

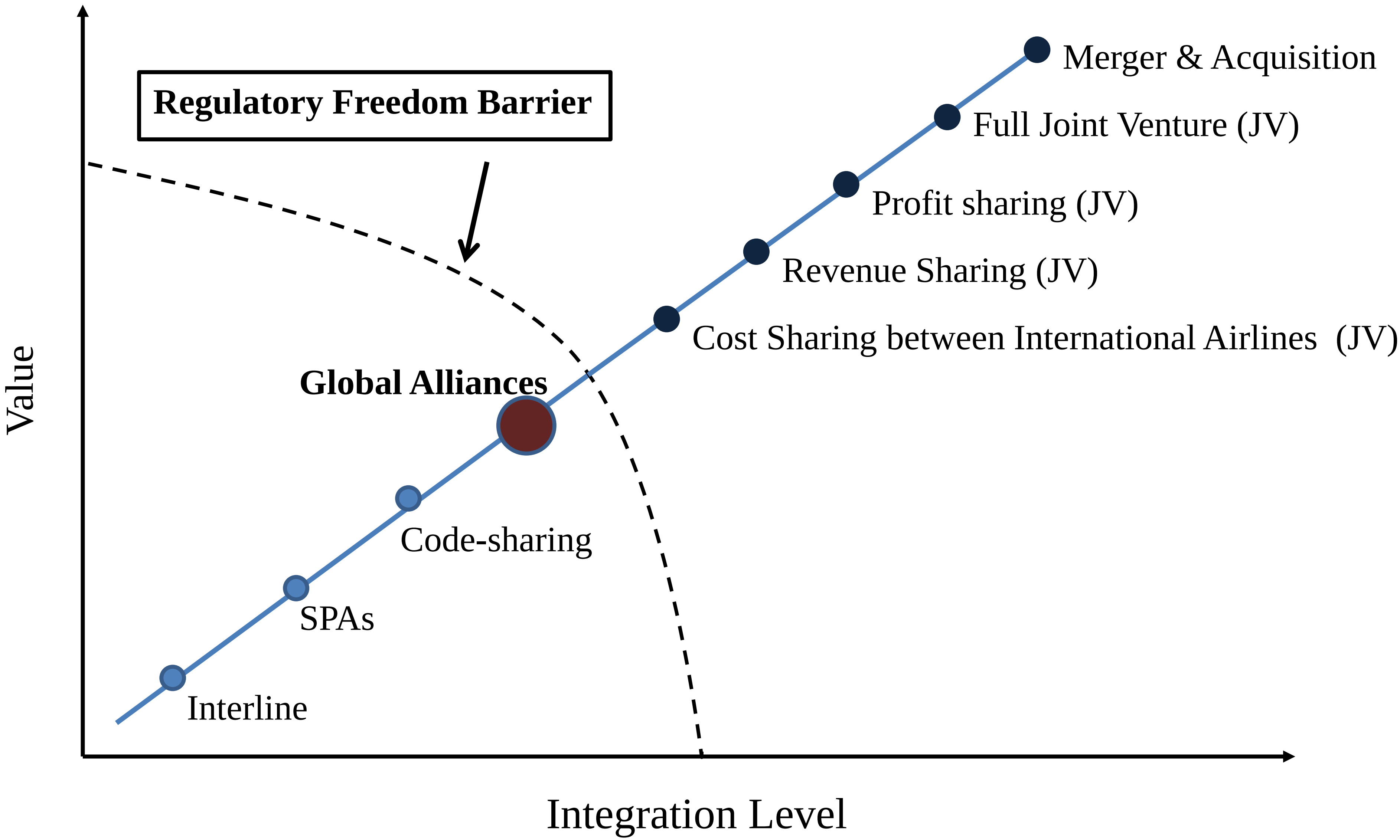
Joint Ventures

- Increasing number of airline JVs being created
- Sharing Costs and/or Revenues on Routes
- Co-ordination of Schedules and Pricing Thru Anti Trust Immunity
- Metal Neutral: irrelevant which carrier is used
- Emirates who is **not** in an Alliance is generating value from JV with Qantas
- Joint Ventures are becoming important where 100% merger is not possible due to ownership restrictions

Equity Partnerships
(eg Delta, Qatar and Etihad Airways)

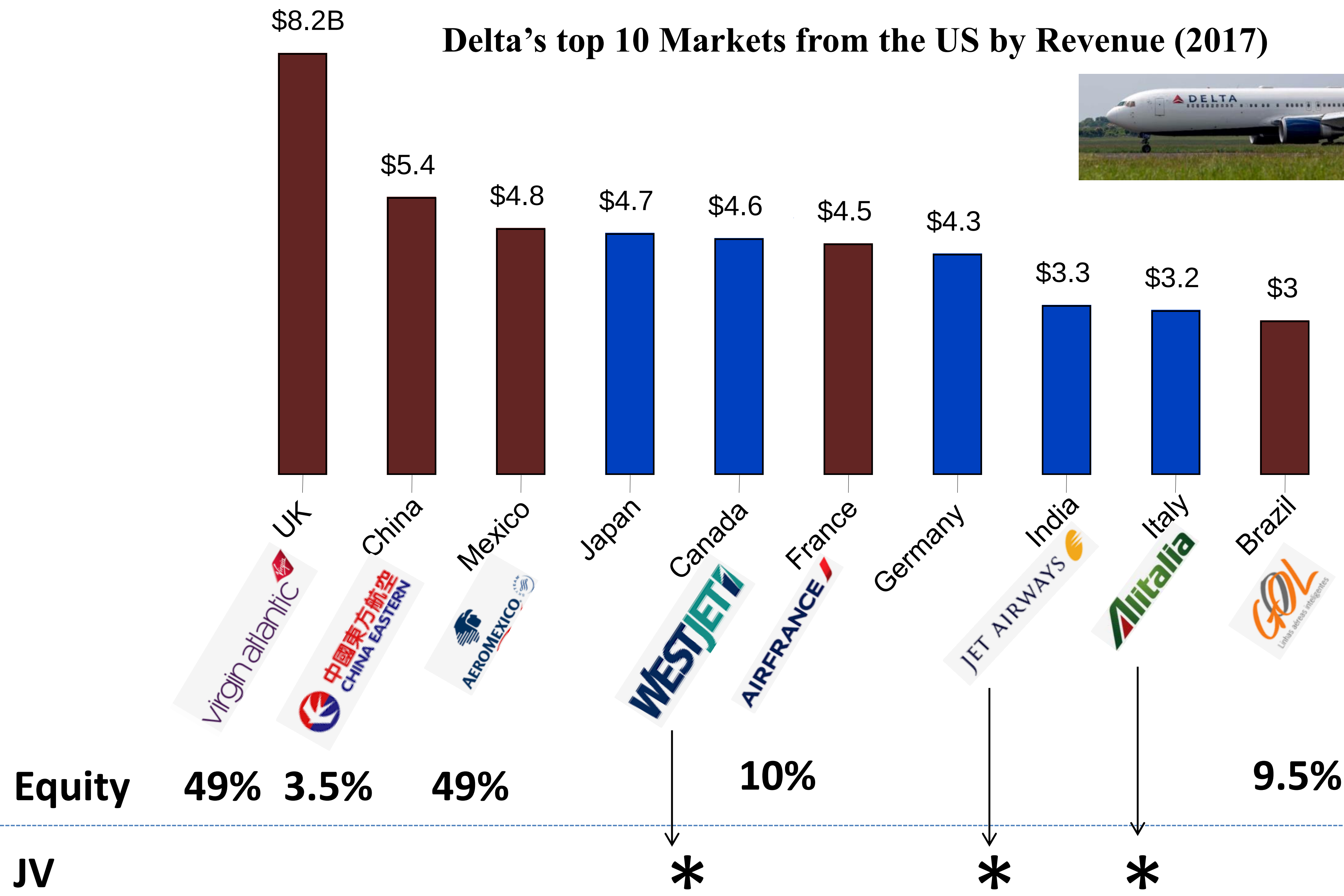
- Cross-border consolidation remains very challenging
- Equity partnerships prioritises items such as Traffic Feed, Market Access, Connectivity over Alliance partners
- Builds Synergy (eg Joint Maintenance)
- Allows for Management Influence

Airline Business Model Lifecycle

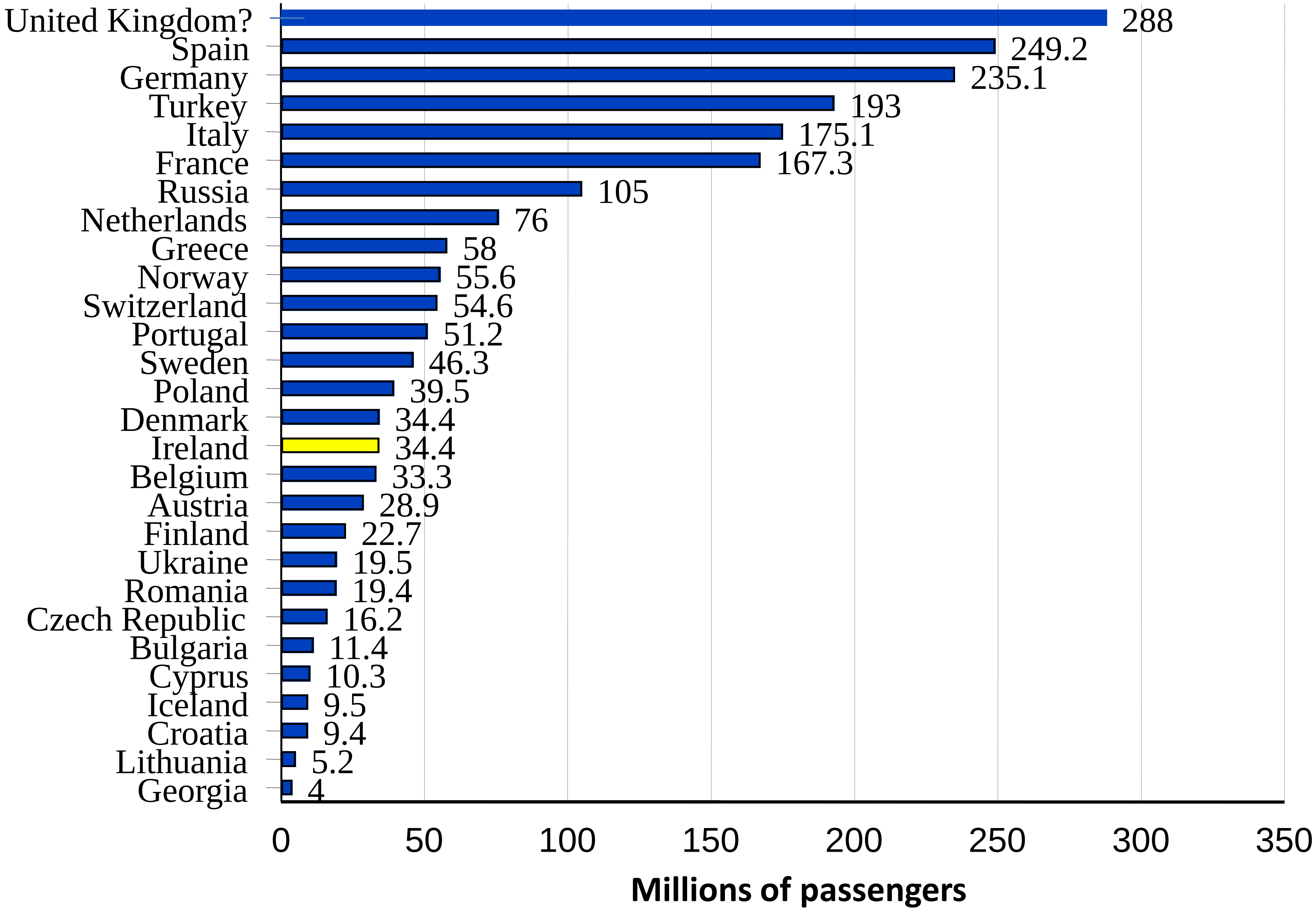


Source: O'Connell

Delta Air Lines partnership based on its top International markets

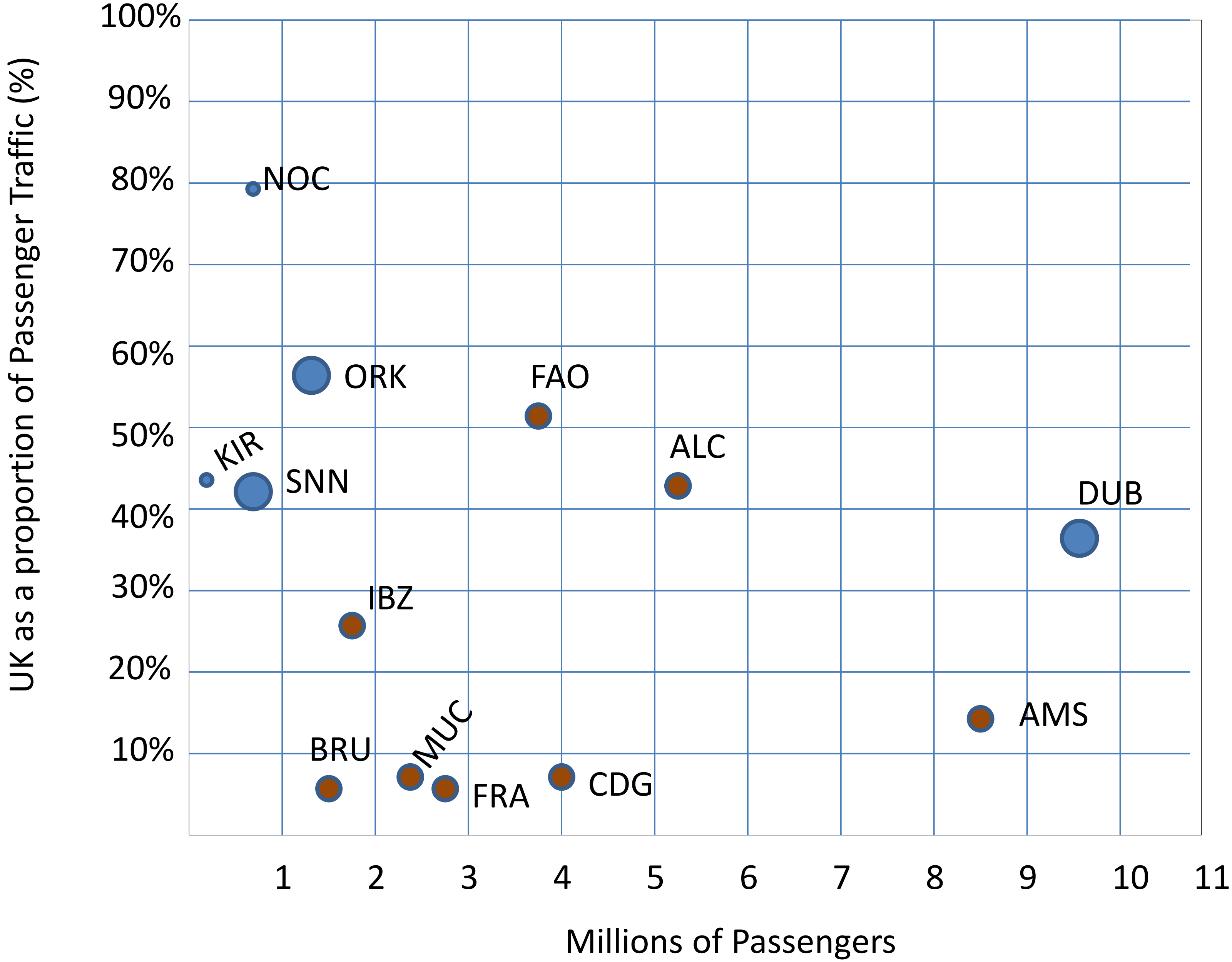


European Airport Traffic Statistics by Country (EATS) - 2017



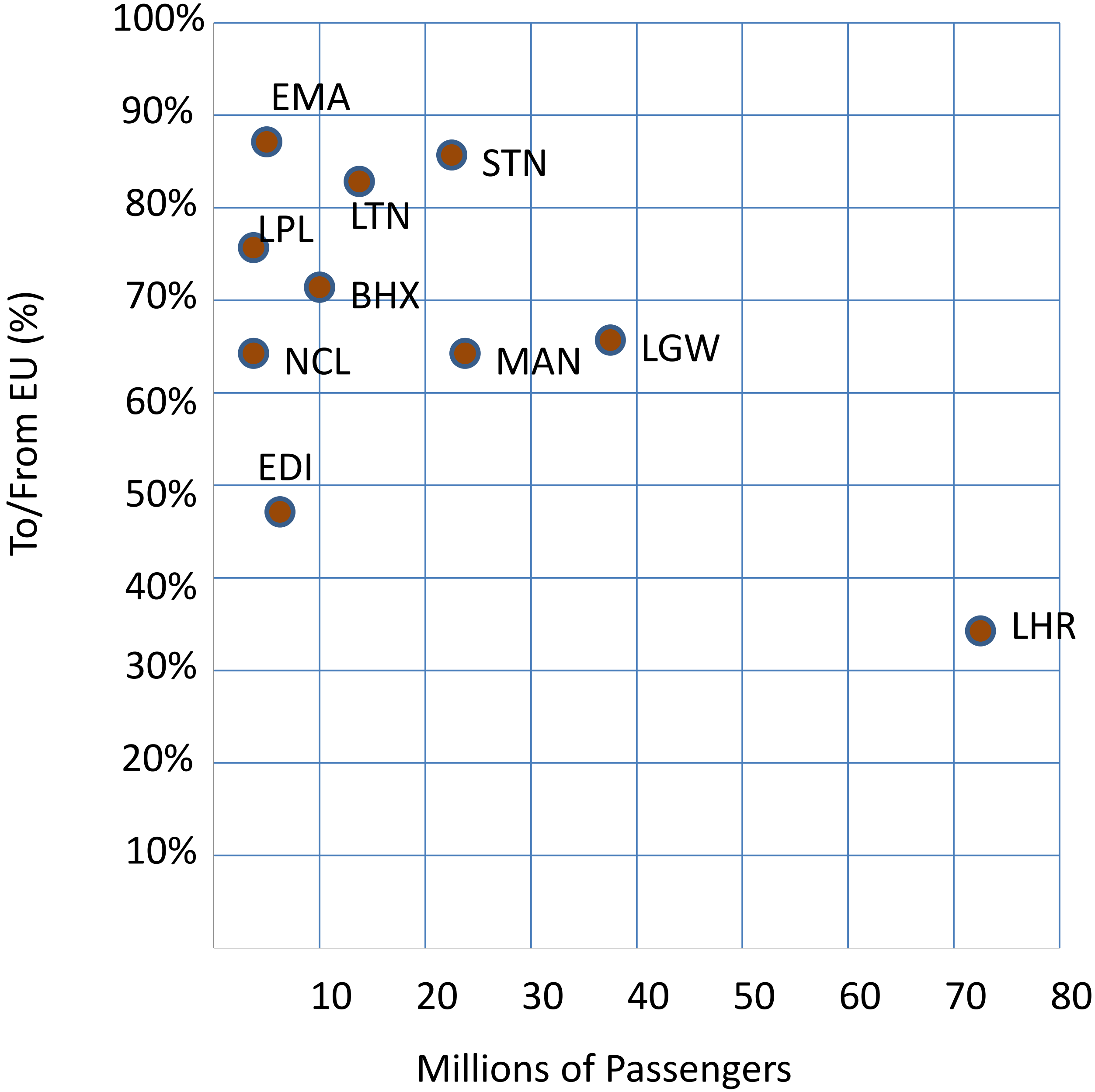
Sources: ADV, AENA, Assaeroporti, Avinor, Finavia, DHMI, HCAA, Transportstyrelsen, UAF, UK CAA, ACI Europe and individual airports

Dependence of UK by European airport (2017)



Source: O'Connell

Dependence by UK airport on "EU 27" pax flows



Source: O'Connell

Conclusion

- Traffic is doubling every 15 years
- Global Markets are shifting fast with large Middle Class demographics
- Many industry challenges: Tight Financial Margins, Consolidation,
  Long-Haul LCCs, Bottlenecks, Falling Fares
- Joint Ventures and Equity Partners are increasing in importance
- Large impact on UK regional airports with Brexit
- Large impact on Irish airports with Brexit

Thank you all very much

BREXIT

Global Connectivity to the UK – Summer 2018

The UK was served by 17,520 flights a week or 3.2 million seats a week in Summer 2018

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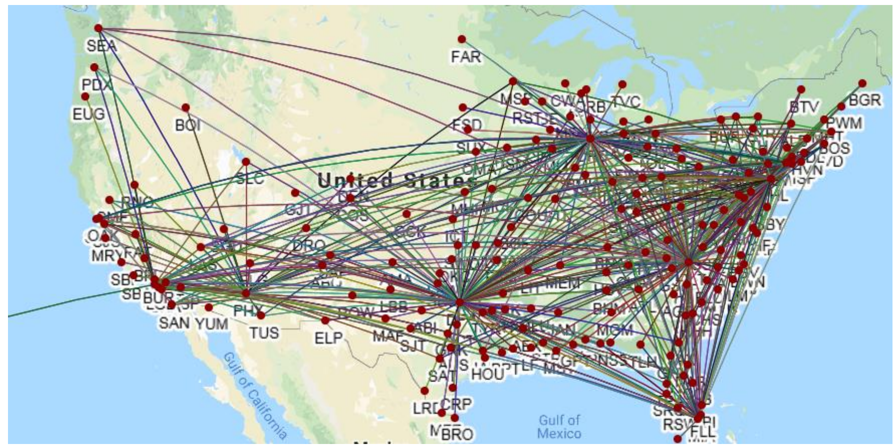

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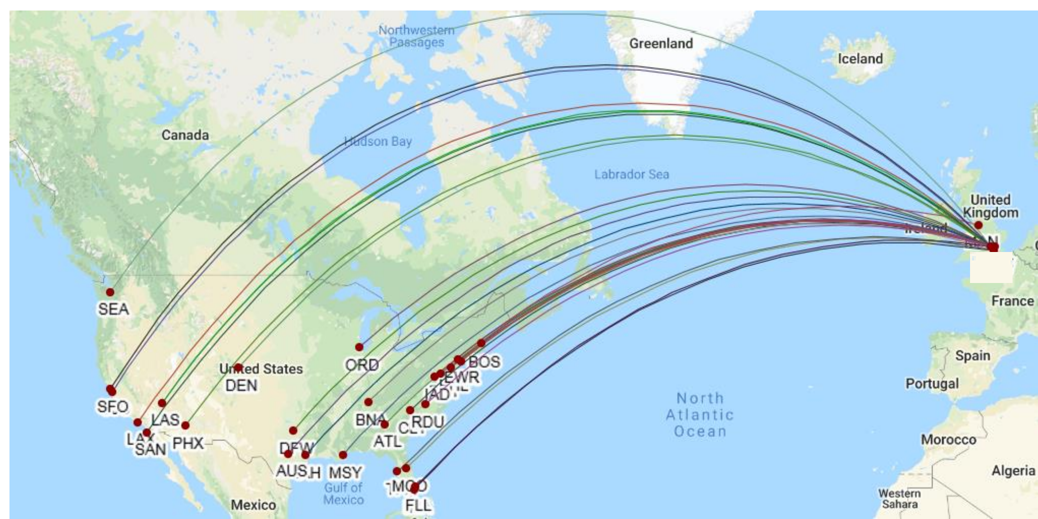
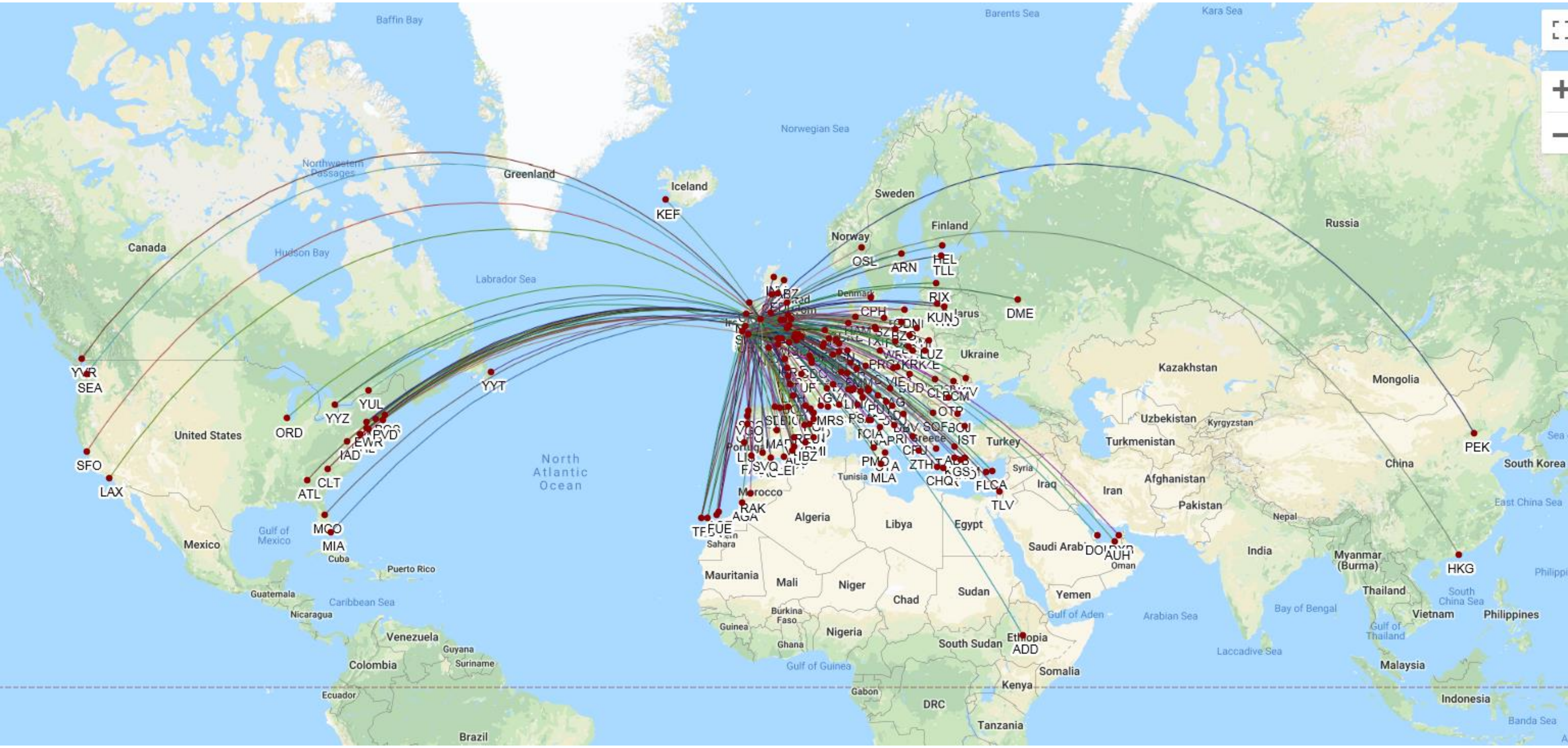


Global Connectivity to the UK – Summer 2018

The UK was served by 17,520 flights a week or 3.2 million seats a week in Summer 2018

84% of total flights came from the EU or 78% of the seats came from the EU

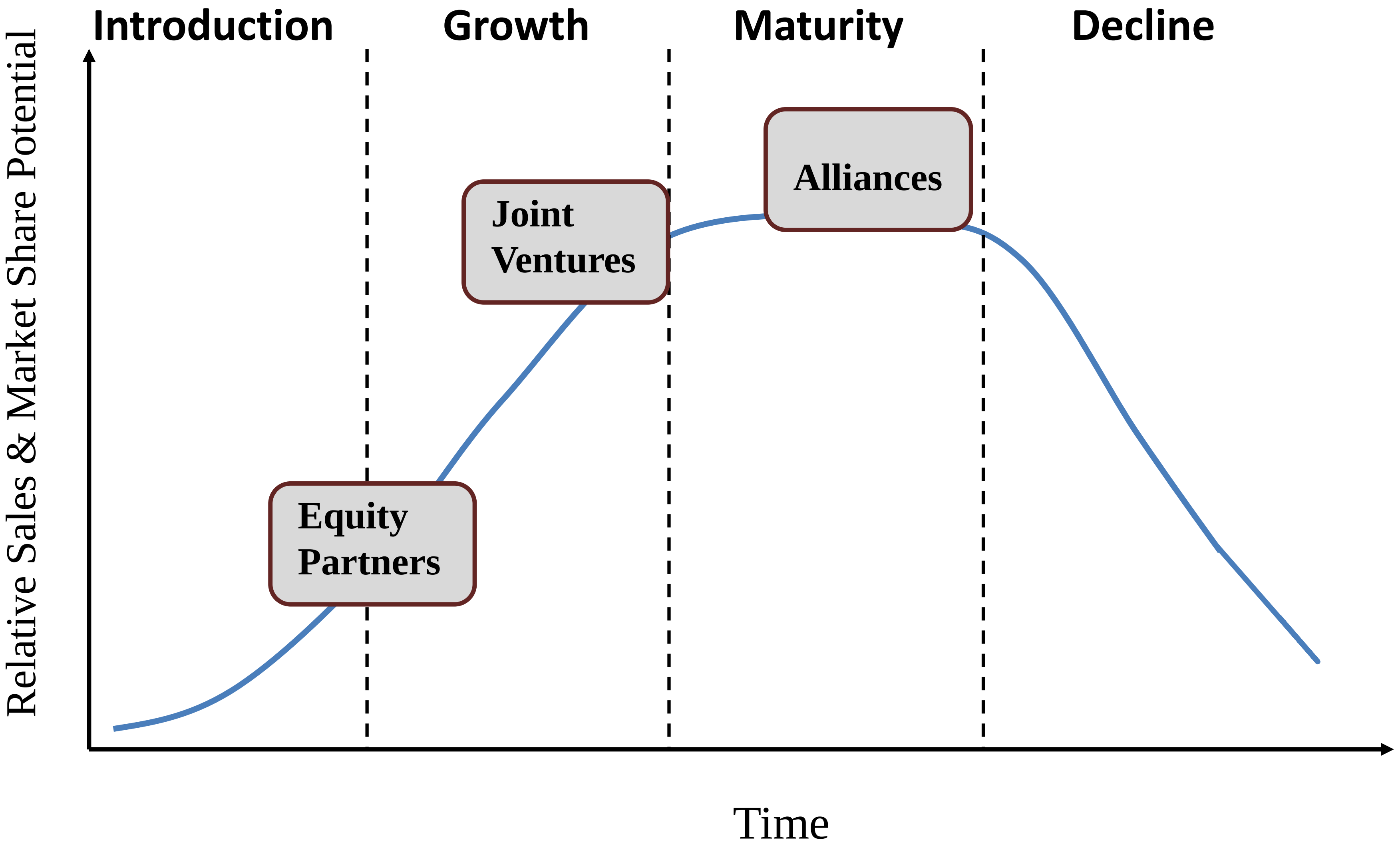
Global Connectivity to Ireland – Summer 2018



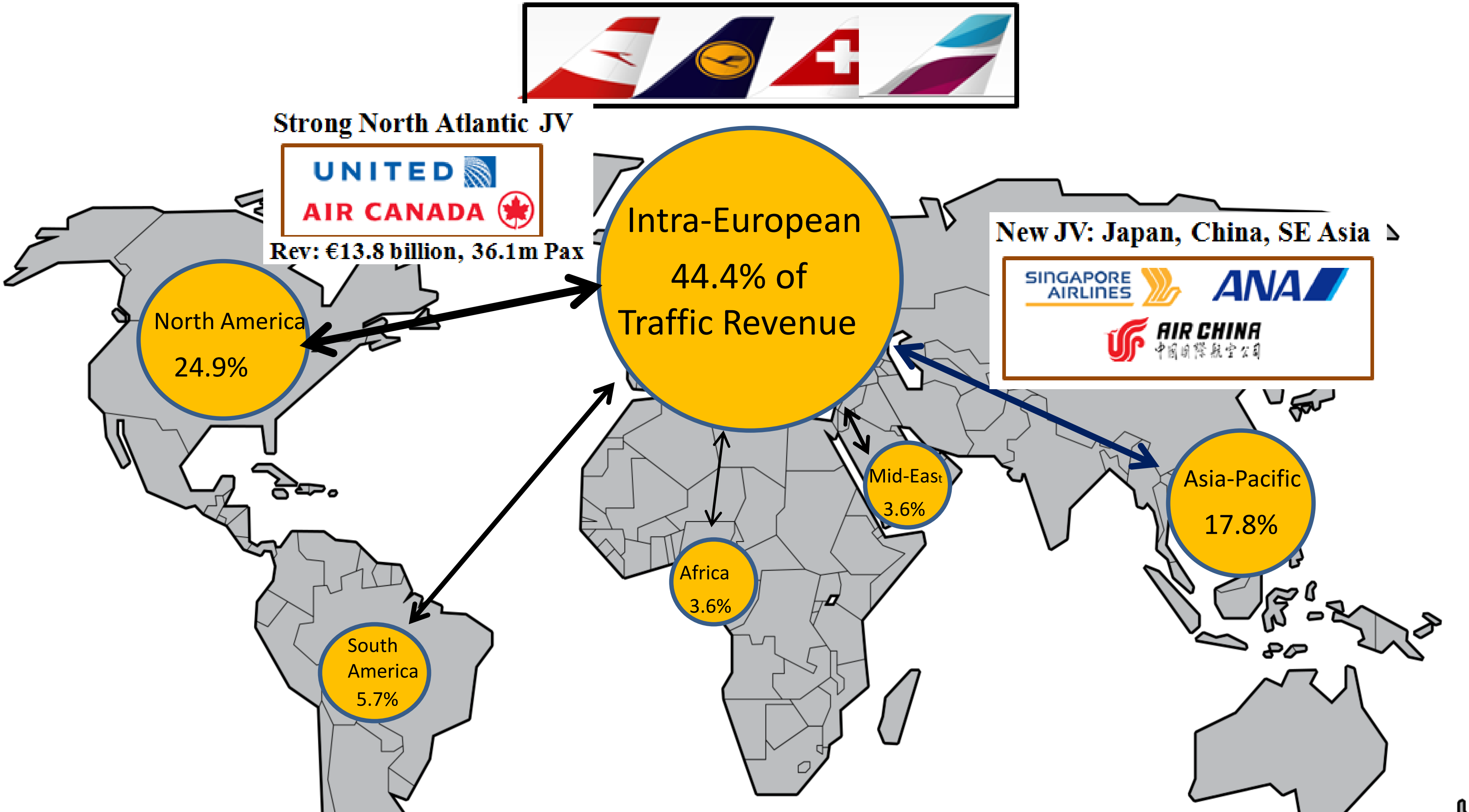
Ireland was served by 2,870 flights a week or 487,000 seats a week in Summer 2018

86% of total flights came from the EU or 81% of the seats came form the EU

Airline Business Model Lifecycle



Lufthansa Group - 2015



The basic principle behind the **joint ventures** is so-called "metal neutrality" which is achieved through close cooperation in capacity and price planning as well as revenue management. This allows travellers to freely combine flights from a harmonized range of offers and take advantage of additional travel options and the increased availability of special fares and connecting flights. Passengers do not need to choose a preferred partner when buying a ticket – instead, they are "neutral" in terms of the "metal" they fly with. For the airlines to reach their targets together, revenues are managed in a single "pot," itemized according to the share of production and then distributed.

3 airline alliances

STAR ALLIANCE

oneworld

SKYTEAM

27 Members

13 Members

20 Members