Aviation Demand
2018 Results – Air Traffic

- 11 Million Flights +3.8%
- 30,168 Average Traffic p/day
- Busiest Day 37,101 Flights on 7 Sept.
- 19 Days over 36,000 flights (none in 2017)

CO₂ Emissions +5.2%

EUROCONTROL

2018 Traffic Results Per State

ECAC 3.8%

EUROCONTROL
Total IFR Movements: Calendar Year 2018

No Forecast
>12%
0 -12%
0 -0%
0 -3%

Dated: 10 Jan 19  Last data: DEC 18
(C) EUROCONTROL 2019 www.eurocontrol.int/STATFOR
Airport Demand 2018

2.34 billion pax
+6.1%
136.6 million more than 2017!

Individual Airline Rankings 2018

diagonal shading indicates LCC

Pax m %chg
0 5% 10% 15% 20% 25%
0 20 40 60 80 100 120 140 160
Pax m

Prorail
easyJet
Turkish
Air France
Norwegian
Air Berlin
Wizz Air
SAS
Pegasus
Eurowings
Alitalia
SWISS
Iberia
Ryanair
Transavia
TAP Air Portugal
Airline Group Rankings 2018

Onwards Growth of LCCs

Top six point-to-point/LCC brands by aircraft numbers, 7-Jan-2019

<table>
<thead>
<tr>
<th>Rank</th>
<th>Airline</th>
<th>Widebody</th>
<th>Narrowbody</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ryanair</td>
<td>0</td>
<td>449</td>
<td>0</td>
<td>449</td>
</tr>
<tr>
<td>2</td>
<td>EasyJet</td>
<td>0</td>
<td>316</td>
<td>0</td>
<td>316</td>
</tr>
<tr>
<td>3</td>
<td>Norwegian</td>
<td>29</td>
<td>125</td>
<td>0</td>
<td>154</td>
</tr>
<tr>
<td>4</td>
<td>Eurowings</td>
<td>7</td>
<td>109</td>
<td>7</td>
<td>123</td>
</tr>
<tr>
<td>5</td>
<td>Vueling</td>
<td>0</td>
<td>116</td>
<td>0</td>
<td>116</td>
</tr>
<tr>
<td>6</td>
<td>Wizz Air</td>
<td>0</td>
<td>106</td>
<td>0</td>
<td>106</td>
</tr>
</tbody>
</table>

Source: CAPA Fleet Database
## European Aviation in 2040

**Challenges of Growth Report**

### 7-year Forecast 2019-25 (Feb 2019)

**Forecast for ECAC**

<table>
<thead>
<tr>
<th>ECAC</th>
<th>2018 Movements (millions)</th>
<th>2025 Movements (millions)</th>
<th>AAGR 2019-2025</th>
<th>2025 V 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>13.6</td>
<td>23.9</td>
<td>3.1%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Baseline</td>
<td>11.0</td>
<td>15.2</td>
<td>2.0%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Low</td>
<td>11.5</td>
<td>4.8</td>
<td>0.7%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Curve label gives average annual growth 2019-2025

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BY 2040
16.2 MILLION FLIGHTS ARE EXPECTED

FLIGHT INCREASE
+53%
Compared to today
By 2040
1.5 Million Flights
not accommodated

160
Million
Passengers

16
very congested
airports
Vs. 6
in summer 2016

People want to fly
but...NIMBY
No New Runways!! No More Noise!!

Dublin Airport New Runway Sod turning ceremony
An Taoiseach, Leo Varadkar
14th February 2019

No New Terminals!! No More Noise!!

Proposed 4th terminal at Paris CDG

The Benefits?
- 40 million pax
- 450 Extra flights per day
- 50,000 new jobs

The downside?
Noise & Emissions!!!
Position Paper for EU-wide airline tax to curb carbon emissions.

Menno Snel, Dutch State Secretary for Finance

12th February 2019

“...emissions don’t stop at the border...so neither should taxes.”

Myriad of challenges

- Fragmentation of ATM - Delays
- Capping emissions
- U-Space integration
- Preserving competition
- Passenger Rights – EU261
- Airport/ Runway expansion
- Social Pillar
2018 All-Causes
Delay and Operational cancellations

- % of flights with departure delay >15 minutes: 26%
- Average Delay Per Delayed Flight >15 minutes: 49 mins

Delays grow disproportionately vs. traffic

European Network Traffic and en-route ATFM delays
(EUROCONTROL Member States)

- Delays: +279%
- Flights: +14%

Source: EUROCONTROL, Performance Review Unit
### Most Delayed European Airports

#### Summer 2018

<table>
<thead>
<tr>
<th>Airport</th>
<th>Summer 2017</th>
<th>Summer 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>London Stansted</td>
<td>27%</td>
<td>42%</td>
</tr>
<tr>
<td>Lisbon</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>Barcelona</td>
<td>26%</td>
<td>38%</td>
</tr>
<tr>
<td>London Gatwick</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Geneva</td>
<td>29%</td>
<td>35%</td>
</tr>
<tr>
<td>Milan Malpensa</td>
<td>27%</td>
<td>32%</td>
</tr>
<tr>
<td>Palma de Mallorca</td>
<td>27%</td>
<td>32%</td>
</tr>
<tr>
<td>Dublin</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>Nice</td>
<td>24%</td>
<td>30%</td>
</tr>
<tr>
<td>Vienna</td>
<td>19%</td>
<td>24%</td>
</tr>
</tbody>
</table>

#### Effect on the European Economy in 2018

- **Cost of Delays**: €14.2 billion (+24%)
- **Cost of Cancellations**: €3.4 billion (+38%)
- **Total Cost**: €17.6 billion (+28%)
- **Passengers Impacted**: 334 million (+26%)
Storms on the horizon?

Airline Failures
FlyBmi, Germania, Air Berlin, Small Planet, Primera

...facing challenges
Alitalia, Norwegian, WOW

Airline Overcapacity

Political Uncertainty
Tariffs, Populism, Brexit
2019 Traffic Forecast

Wider Uncertainty

±1.5pp

Strong downwards Risks

Worst Case Brexit?

More Airline failures?

ECAC 2.8%

European Civil Aviation Conference

300k more flights

The Four Business Phases of the airline industry

Descent
Margins deteriorate

Expansion
Peak Margins

Contraction
Margins bottom out

Recovery
Improving demand

Descent
Margins deteriorate

Expansion
Peak Margins

Contraction
Margins bottom out

Recovery
Improving demand
“The global airline industry has left the expansion phase and is now in the descent phase. Profits are declining, revenue momentum is slowing, and unit costs are on the rise”

John Slattery, President & CEO, Embraer Commercial Aviation
European Aviation needs to **improve** Continue to build capacity Don’t use this as an **excuse** to pause!!

So What’s Next?
EUROCONTROL NM Actions - Summer 2019
New Traffic Flows & Other Measures to Reduce Network Delays

eNM/ S19

Network Measure Benefits in 2018:
Saved 5 Million delay minutes

Target in 2019:
To Save 19 Million delay minutes!!
The long-term solution?

- Network Centric Airspace & Capacity Management
- Airspace Reorganised - Managed around traffic flows
- Independent European regulation
- Output based Cost Performance Scheme
- Incentives for early movers - technologies
- Market based reforms – CNS, data, towers, etc

...AND BUILD AIRPORT / RUNWAY INFRASTRUCTURE !!!

Supporting European Aviation

Thank you
Eamonn Brennan, Director General

@eurocontrolDG