The A330neo
Powering into the future

John Leahy
Chief Commercial Officer - Customers
A330 - Airbus best selling widebody programme

A330 cumulative net orders

100% increase in order book since A350 XWB launch
A330neo has an accessible market of 4000 aircraft

- **Open demand**
  - A330 operators: ~4,000
  - Non-A330 operators: ~1,400

- **Range not accessible**: ~600

- **A330neo**
  - Will sell over 1000 aircraft
  - A330ceo and A330neo offer complementary solutions
  - Will continue to be the preferred solution beyond 2030

Source: GMF

Open demand = demand not already satisfied by aircraft in backlog
Well-defined Airbus A330 Family product strategy

Efficiency

- 12% fuel burn saving per trip
- More seats
- More range
- 14% fuel burn savings per seat

A330neo
Building on proven values

- 242t: more productivity and fuel efficiency
- Regional: optimised for domestic and regional operations

Today 2015 2017
A330neo

Aerodynamic improvements
- New A330 sharklets
- 4% Aerodynamic gain from re-optimisation
- Span extension to 64m

Cabin developments
- up to 10 more seats
- Cabin modernization

New Generation Engine
- Increased fan size (from 97.5 to 112in)
- 11% Lower fuel burn at Powerplant level
- Latest engine performance improvements

Commonality
- 95% spares commonality with A330
- Same type rating as A330ceo
- Common type rating as A350 XWB
Trent 7000 - a step change in power plant efficiency

- Building on 28 million hours A330/Trent 700 experience
- Trent 1000-TEN architecture with Trent XWB technology
- From 97.5” to 112” fan
- From 5:1 to 10:1 bypass ratio
- From 35:1 to 50:1 overall pressure ratio
- 68-72k lb take off thrust with great hot & high capability
- Electrical bleed air system (EBAS)
- Comparable economics for core TotalCare services and LLPs combined for new Trent 700 and 7000 proposals

Engine efficiency

11% fuel burn improvement vs. current A330 at Powerplant level

Maturity from in-service experience
A330neo aerodynamic optimisation

- New sharklet
- Optimised Slat 1
- Optimised upper belly fairing
- Optimised wing twist
- Wing span increased to 64m (+3.7m)
- Stays within Code E category

Aerodynamic optimisation

Improving lift-to-drag ratio using A350 wing philosophy

4% fuel burn savings vs. current A330
A330neo sharklet

With current A330 winglet
60.3m span

Composite A330neo sharklet

A330 sharklet
Improving lift-to-drag ratio using A350 XWB wing philosophy
**Scheduled maintenance**

**MPD evolution:**
- 2C evolution from 42 to 48 months

**MPD optimisation:**
- Deletion of fatigue sampling tasks

**MPD evolution on re-designed parts*:**
- A check evolution to 2000FH/ 6 months
- 50% less man hours for A330neo over 12 years

**EBAS**

**Electrical Bleed Air System**
- Pneumatic controls replaced by full electrical regulation,
- Higher reliability
- Already successfully in service on A380

**DMC:**
-3%

**DMC:**
-2%

**Airframe DMC reduction**

- 5% reduction

* Applicable to Propulsion system, Pylon and Engine Bleed, fire Extinguishing systems, wing, sharklets (or similar), center wing box, RFE, CLS...
A330neo net block fuel efficiency improvement vs. A330-300

**Powerplant & Aerodynamics**

- **A330-900neo**
  - -11% lower fuel burn per trip
  - -4% lower fuel burn per seat
  - +2% weight
  - +1% drag
  - Sharklets + aero optimization

**Datum** is a A330-300 235t MTOW with Trent 772B engines Vs. A330-900neo 242t MTOW with Trent 7000 engines.

Max passenger payload – 4,000 nm mission

A330neo fuel efficiency

- 14%

lower fuel burn per seat
A330neo cabin

- Superior passenger appeal
- Harmonized with A350 XWB
A330neo cabin

- 18in economy seat width
- Wider than 16.9in 787 seat

A330 at 8 abreast, 787 at 9 abreast
A330neo Increased Cabin Efficiency (ICE)

New design lavatory
Based on A320 Family experience:
- Space-Flex
- Smart Lav

Optimized Crew rest
Segregated Flight Crew Rest and Cabin Crew Rest in LDMCR

A330neo cabin efficiency
- Up to 10 additional seats
- Superior level of comfort

(*) subject to certification

LDMCR - Lower Deck Mobile Crew Rest
## A330neo basic aircraft data

<table>
<thead>
<tr>
<th></th>
<th>A330-800neo</th>
<th>A330-900neo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard seating</td>
<td>252 seats (36B/C 216 Y/C)</td>
<td>310 seats (36B/C 274 Y/C)</td>
</tr>
<tr>
<td>Maximum design weights</td>
<td>MTOW 242t MLW 186t MZFW 172/176t</td>
<td>MTOW 242t MLW 191t MZFW 177/181t</td>
</tr>
<tr>
<td>Engines</td>
<td>Trent 7000 (72,000 lbs)</td>
<td>Trent 7000 (72,000 lbs)</td>
</tr>
<tr>
<td>Maximum Fuel Capacity</td>
<td>139,090 l</td>
<td>139,090 l</td>
</tr>
<tr>
<td>Maximum passenger range</td>
<td>7,450nm</td>
<td>6,200nm</td>
</tr>
<tr>
<td>A330neo Max passenger range Per Boeing assumptions</td>
<td>A330-800neo: 8,200nm</td>
<td>A330-900neo: 7,000nm</td>
</tr>
<tr>
<td>787s Max passengers range Per Boeing assumptions</td>
<td>787-8: 7,850nm</td>
<td>787-9: 8,300nm</td>
</tr>
</tbody>
</table>
A330neo range from London

A330-800neo Trent 7000, 252 pax. 7450nm
A330-900neo Trent 7000, 310 pax. 6200nm

Nominal performance
JAR 3%, 200nm diversion
85% reliability max annual head winds
A330neo: the better overall solution, with greater comfort

- More seats than the 787
- Equal fuel burn to the 787
- Lower Engine thrust 72k vs 74k: Lower EMC
- Proven Airframe maintenance cost
- 1% Lower cash operating costs than the 787
- 7% Lower total cost than 787
A330neo cost efficiency

Greater efficiency

1% Cash cost per seat advantage against 787-9

Operating cost

Cash Operating Cost per seat

Datum

A330-900neo
242t
310 seats
8 abreast
18in seat

787-9
253t
304 seats
9 abreast
16.9in seat

+1%

Lease rates (USD)
A330-900neo – 1.05 M
787-9 – 1.25 M

Airbus standard economic rules
787 with GE engines,
4000nm route, JAR 3%, 200nm diversion,
fuel price 3 US$/Usg
A330neo cost efficiency

Operating cost

Cash Operating Cost per seat

Total Operating Cost per seat

Datum

A330-900neo
242t
310 seats
8 abreast
18in seat

+1%

787-9
253t
304 seats
9 abreast
16.9in seat

+7%

787-9
253t
304 seats
9 abreast
16.9in seat

Greater efficiency

7% Total cost per seat advantage against 787-9

Lease rates (USD)
A330-900neo – 1.05 M
787-9 – 1.25 M

Airbus standard economic rules
787 with GE engines,
4000nm route, JAR 3%, 200nm diversion,
fuel price 3 US$/Usg
A330 Programme timeline

- **2012**: MTOW 242t launch
- **2013**: A330 Regional launch
- **2014**: A330neo launch
- **2015**: EIS 242t
- **2016**: A330neo Design freeze
- **2017**: Integration / FAL / flight tests
- **2018**: A330-900neo EIS, A330-800neo EIS
The A330 neo Family

- 14% fuel efficiency improvement per seat
- 400nm range increase
- More revenue potential with up to 10 more seats
- Full commonality with A330
- The perfect combination with A350XWB
- Beats 787 on trip cost and seat cost