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ECAM 6

Prague

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# New Technologies in Commercial Air Transport

**AIRBUS**

# Current State of the Art

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A330neo

**-25%** fuel burn  
(vs. previous gen competitors)

- New wing with composite sharklets
- New nacelle and pylon for best aerodynamic performance
- Latest generation engine technology

**AIRBUS**

## Current State of the Art

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A350-1000

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**-25%** fuel burn  
(per seat vs. Competitors)



- Advanced aerodynamic
- 53% composite materials
- Latest generation engine technology

**AIRBUS**

# Current State of the Art

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A321neo

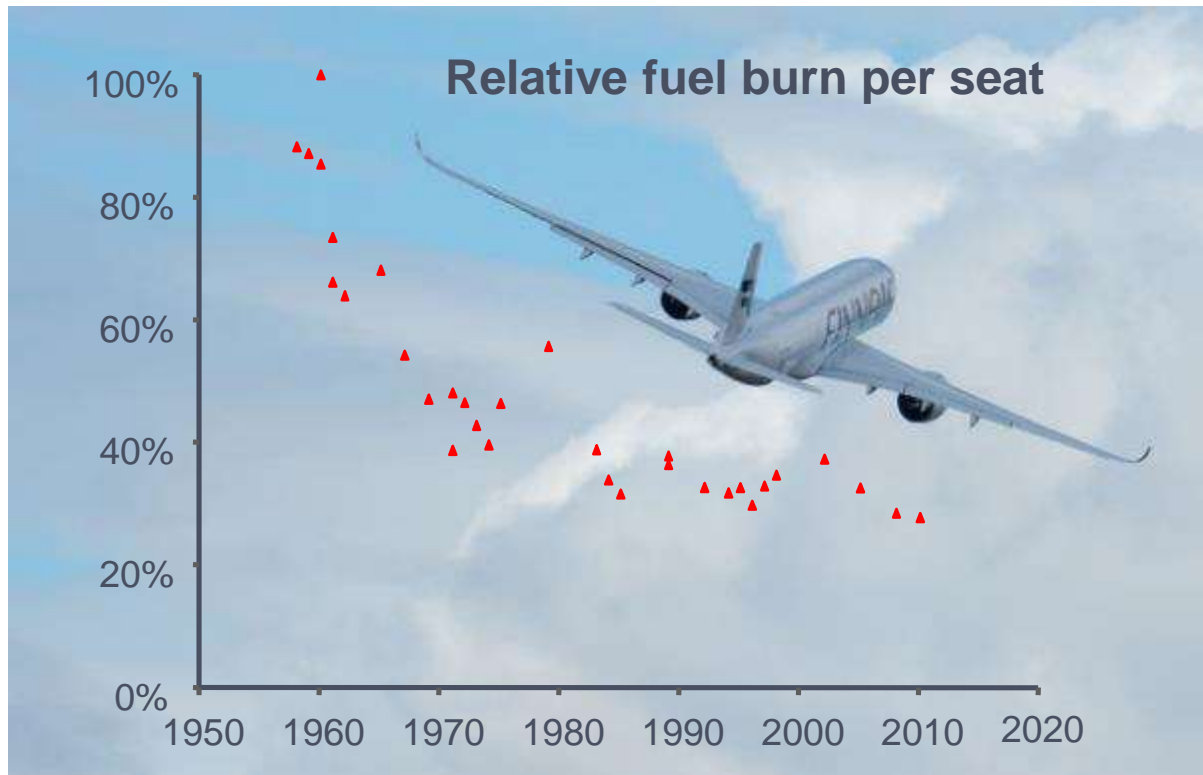
**-20%** fuel burn  
(per seat vs. A321)

- Sharklets
- Latest generation engine technology

**AIRBUS**

Aviation has achieved a lot in 50 years ...

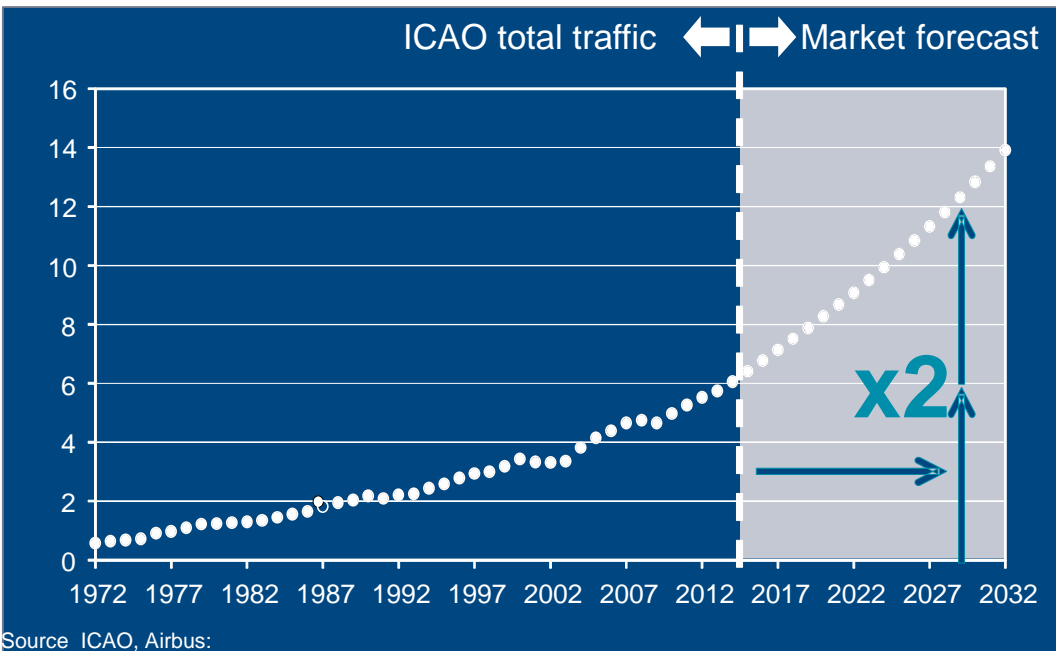
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Fuel burn  
—  
**-70%**

Noise  
—  
**-90%**

**AIRBUS**



## 20-year General Market Forecast



23,530



8,060

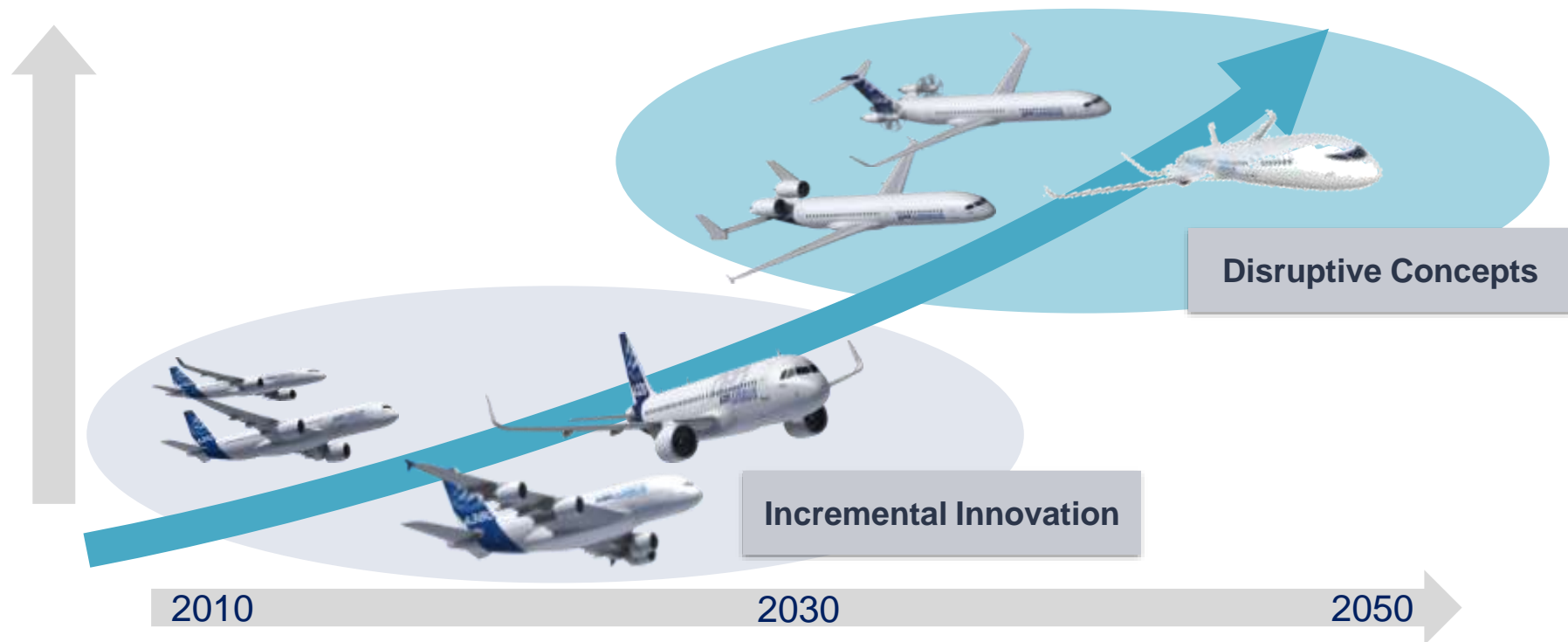


1,480

**33,070** new aircraft

> Potential for more than **33,000 deliveries** in the next 20 years

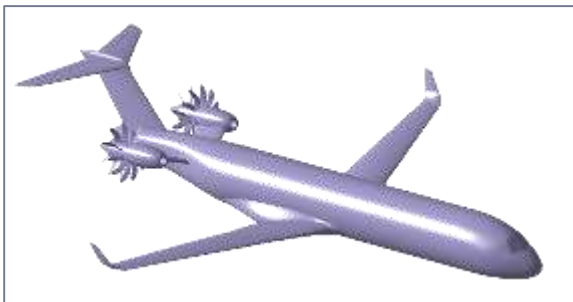
## Balance between incremental and breakthrough



## Turbofan



## Advanced propulsion



## Electrical propulsion



## Hybrid propulsion





## E-Fan X: an Airbus, Rolls-Royce, Siemens partnership

- Hybrid-electric technology demonstrator anticipated to fly in 2020
- Provisionally on a BAe 146 flying testbed
- One of the aircraft's four gas turbine engines replaced by a 2MW electric motor.
- Provisions will be made to replace a second gas turbine with an electric motor once system maturity has been proven

→ A significant step forward in hybrid-electric propulsion for commercial aircraft.

## Airbus Hybrid Configurations

- Ongoing exploration of disruptive hybrid configurations



SHAREHOLDERS

2<sup>ND</sup>  
MANUFACTURING  
REVOLUTION

LEAD-TIME

PRODUCTION COSTS

MARGIN

INVESTMENT

INDUSTRY 4.0

CASH FLOW

SELLING PRICE

TECHNOLOGY

CUSTOMER

RETURN ON SALES

INDUSTRIAL EFFICIENCY

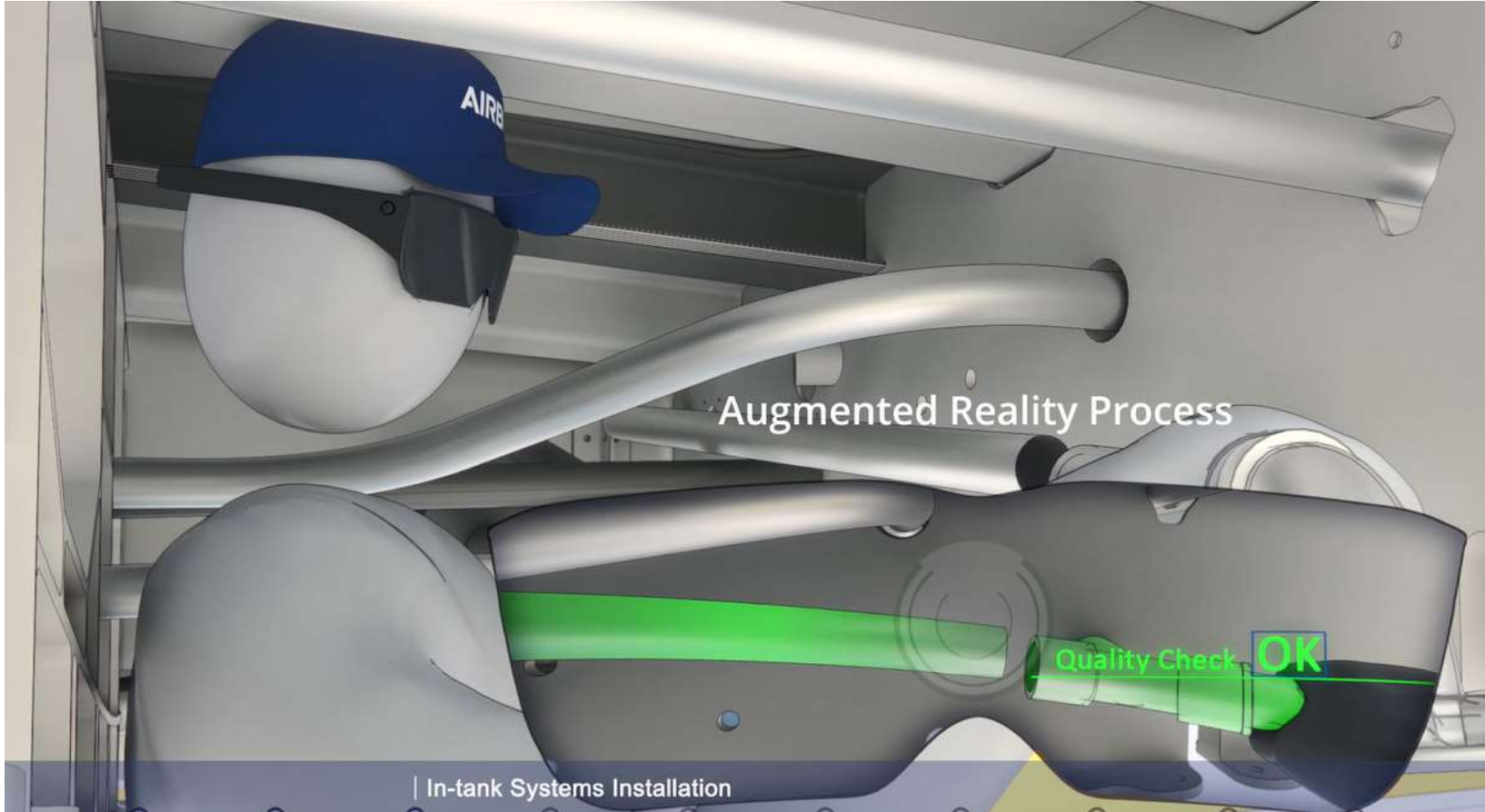
INNOVATION

PRODUCTION QUALITY

BOOK TO BILL

DIGITAL REVOLUTION







## Surface Check And Activation



# Digital



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# Urban Air Mobility



**Thank you for listening.**

**AIRBUS**