

## Airbus Runway to Sustainable Aviation

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### The Current Landscape of Aviation



# Airbus is a global leader in aeronautics, space and related services



Airbus, Airbus Defence and Space and Airbus Helicopters

157K

Total workforce

€629bn

Order book

€69bn

2024 revenue

Source: Airbus Annual Report 2024

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#### The four revolutions of aviation



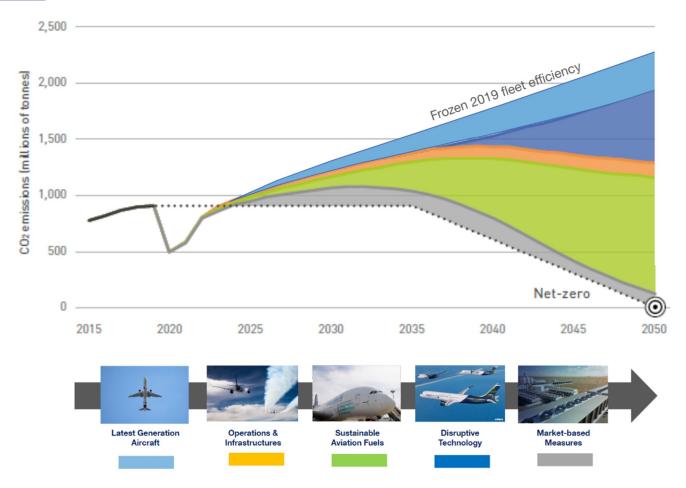








#### A Vision for 2050 and Beyond



> ATAG CO, Roadmap based on most ambitious technology scenario & central traffic growth scenario: 3.1% CAGR 2019-2050

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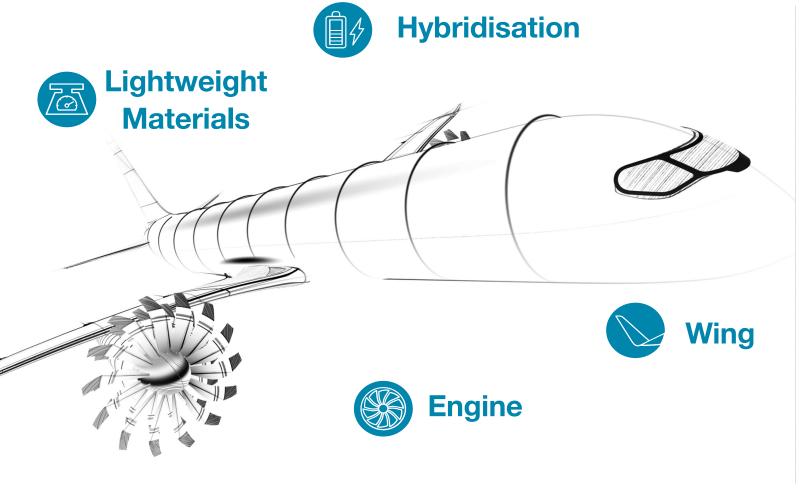
Decarbonisation in 2050

Multiple solutions are required

Collaborative spirit is key

**AIRBUS** 

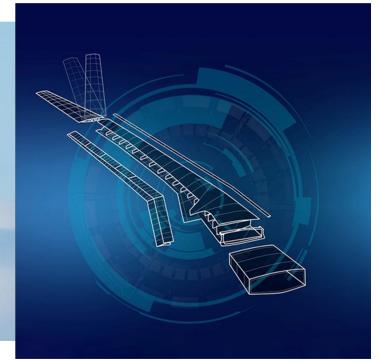
## Innovating disruptive technology for NGSA





## **eXtra Performance Wing**





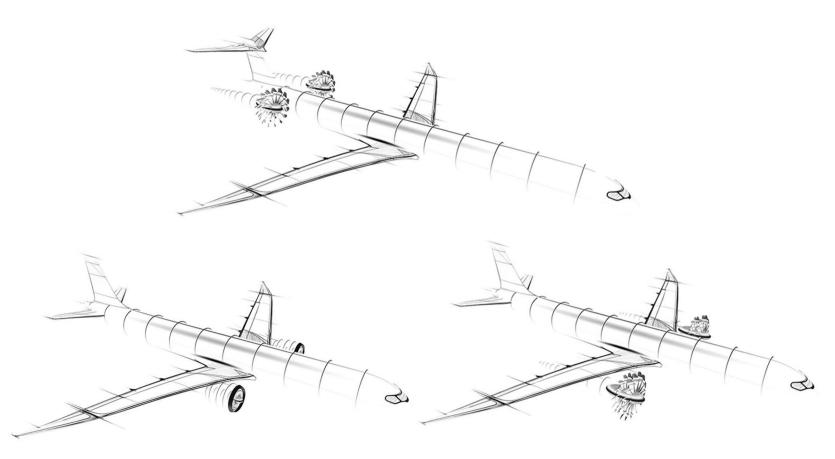


## **eXtra Performance Wing**



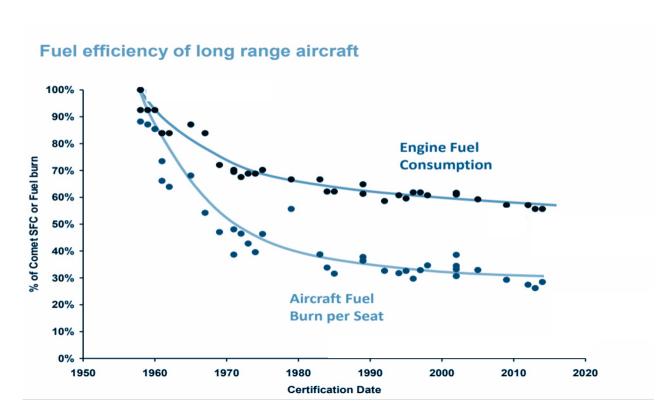


## **Propulsion options for NGSA**

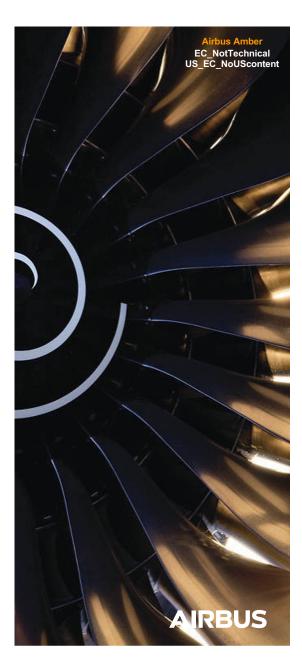




#### Fuel efficiency - yesterday and today



Source: Peeters et al, Fuel efficiency of commercial aircraft Fuel efficiency of commercial aircraft: An overview of historical and future trends, November 2005, Amsterdam - extended with newer data



## **Future Propulsion Architectures**









Open Fan Technology





Accelerate advanced propulsion technologies through ground & flight testing

**Evaluate propulsive system efficiency and performance** 



flightlab

Assess aircraft engine integration and aerodynamics



Evaluate internal & external noise prediction models

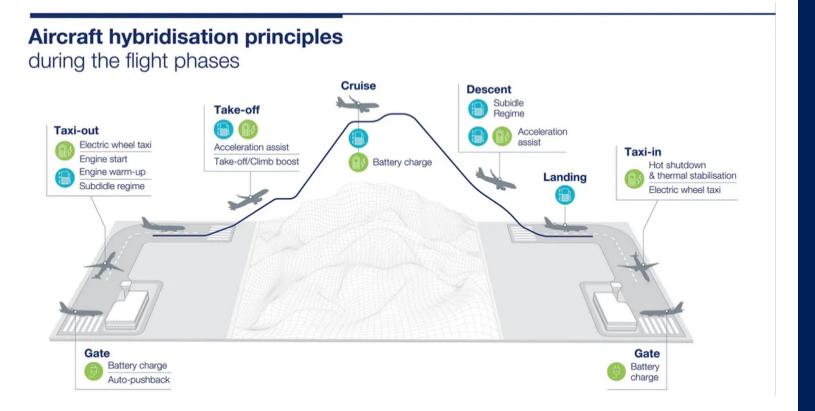


Understand the use of hybrid-electric capabilities



Ensure compatibility with 100% Sustainable Aviation Fuel

#### **Hybridization of Propulsion Systems**



Integrating traditional jet engines with electrical generators and motors will optimize energy management in the aircraft

Hybrid propulsion systems will allow to manage off-design performance more effectively

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#### A staged, bold and coherent decarbonisation journey



Prepare options for a sustainable short-, medium- and long-term future for aviation ZEROe roadmap adapted to the ecosystem development pace with a focus in the coming years on maturing technologies



## Thank you

Dr Frank Haselbach Senior Vice President - Propulsion Engineering, Airbus SAS

