

**Axel FLAIG**

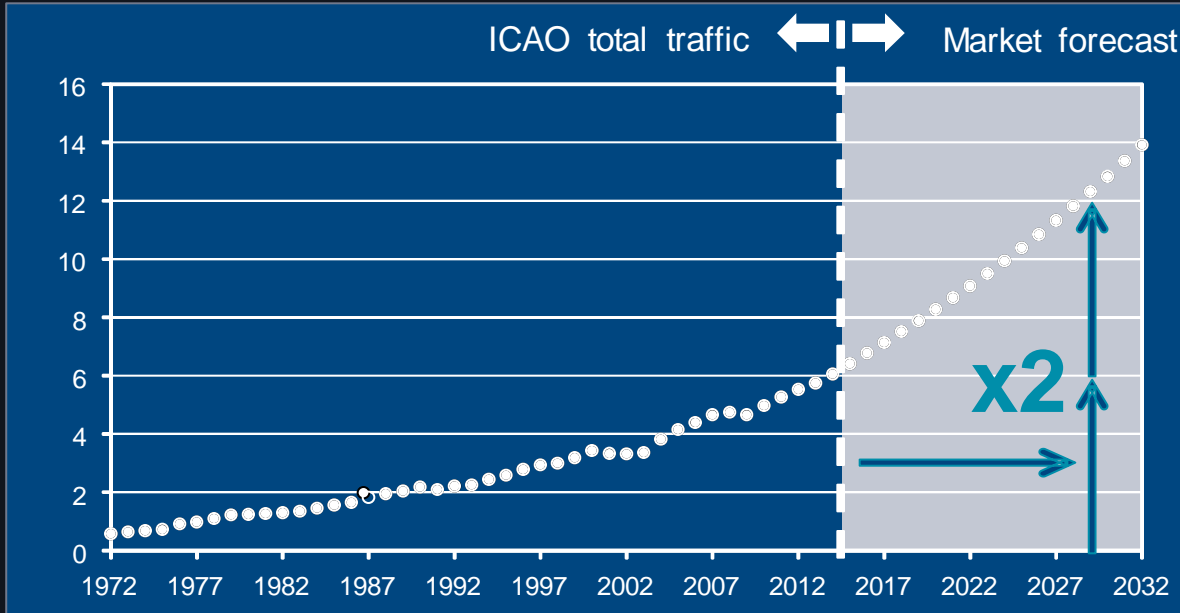
Head of Research & Technology  
AIRBUS

## Innovation in Aviation

World Science Forum  
Budapest



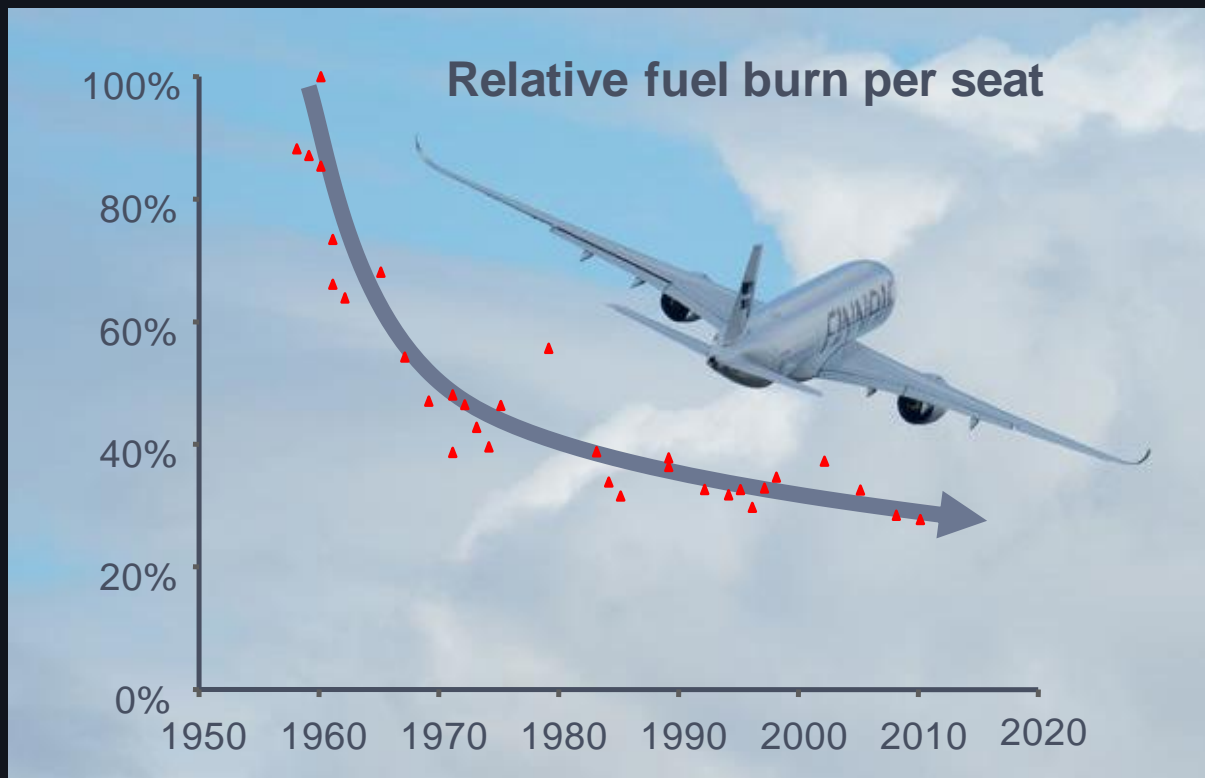
# The Challenge: Air travel is doubling every 15 years



Source ICAO, Airbus



# Aviation has achieved a lot since 50 years ...



Fuel burn  
—  
**-70%**

Noise  
—  
**-90%**

# The goal: sustainable eco-efficient air transport



Targets 2050

-75% CO<sub>2</sub>

-90% Nox

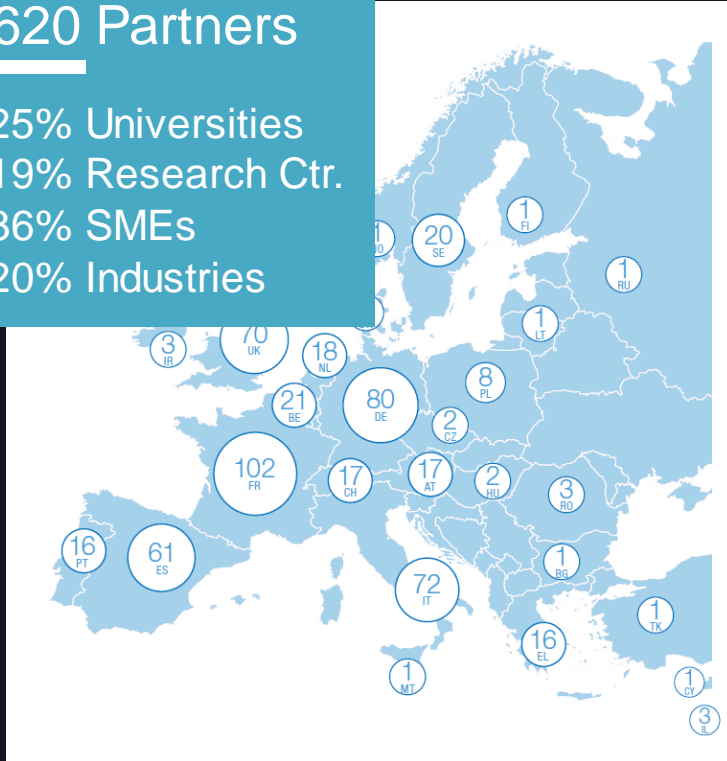
-65% noise

Reference: 2000

# Addressing the challenges through joint research initiatives

620 Partners

25% Universities  
19% Research Ctr.  
36% SMEs  
20% Industries



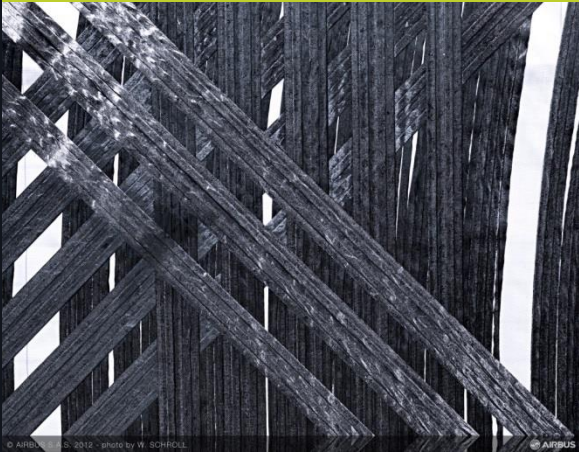
Flight Test Demonstrator BLADE  
Breakthrough Laminar Aircraft Demonstrator  
in Europe



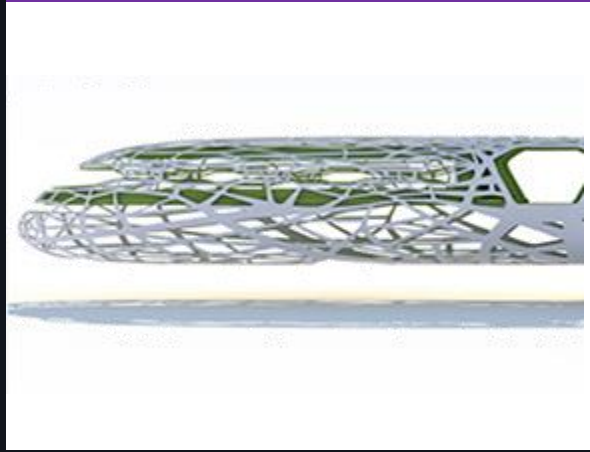
# Materials and structures

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## Advanced composite



## 3D Printing & Bionic design

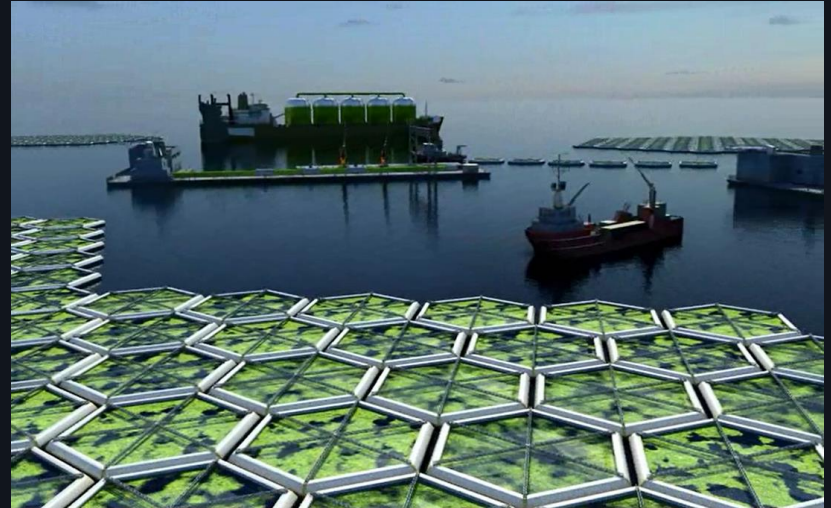
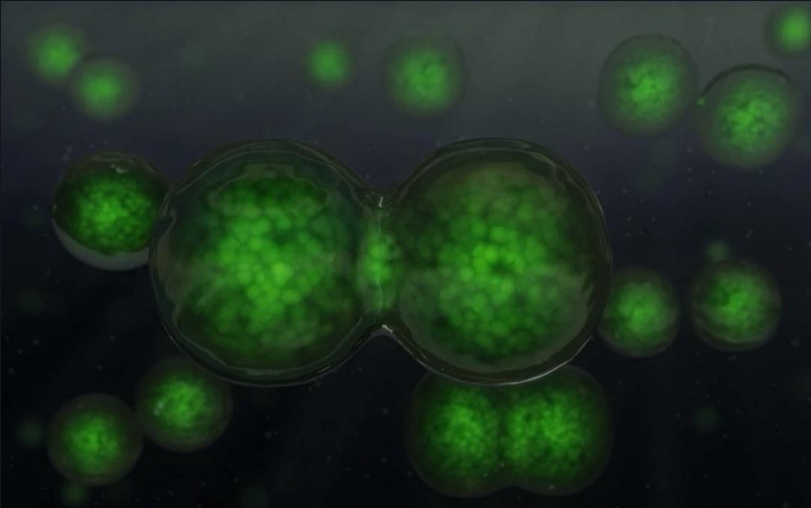


## Printing Electronics



# Renewable fuel

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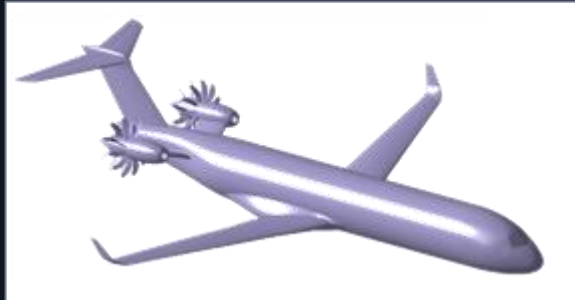
# Novell configurations

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## Turbofan



## Advanced propulsion



## Hybrid propulsion





# The Future of Flight .....

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# ..... Inspiring the next generation

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