

Dr. Markus Fischer
DLR | Divisional Board Member for Aeronautics

ObjectivesShaping the aviation of tomorrow

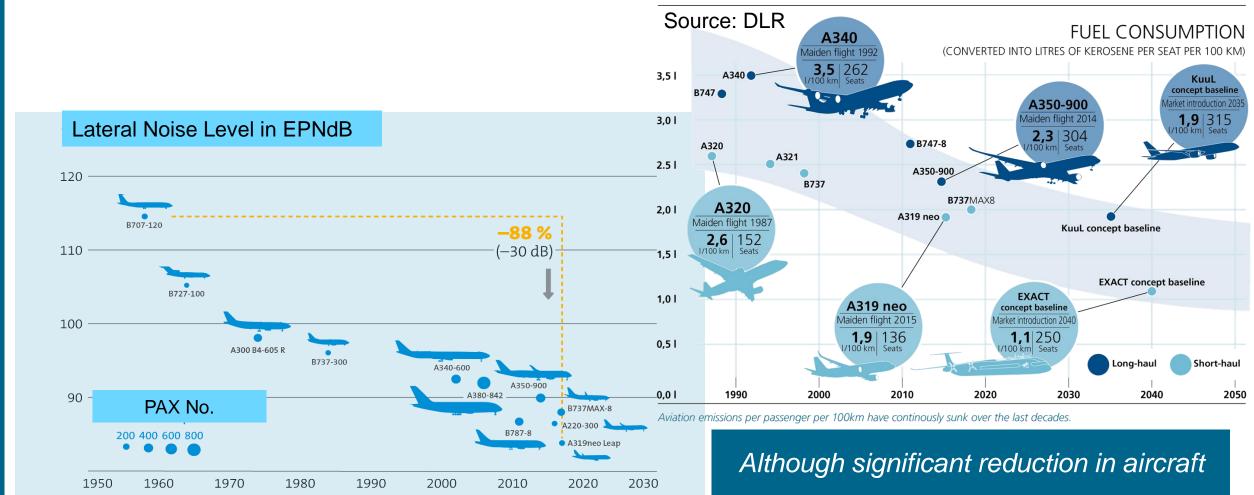


- Meet future mobility demands and social acceptance
- Stay at the forefront of high-tech research and development in Europe
- Aviation as part of a resilient, competitive and an autonomous European economy
- Assure the key role of aviation as fastest, most reliable and indispensable means for the whole economy
- Maintain safety and security at highest level
- Achieve climate compatibility including noise reduction



Have we achieved enough?





Source: BDL/ICAO Noise Certification Data Base

how to cope with air traffic growth?

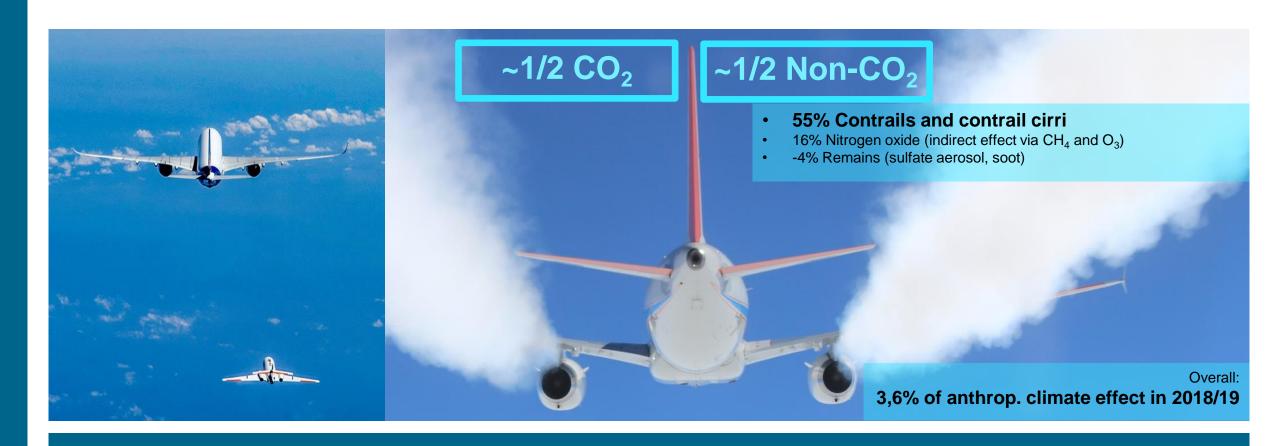
noise and fuel burn

Year of Entry into Service

Climate Impact of Aviation







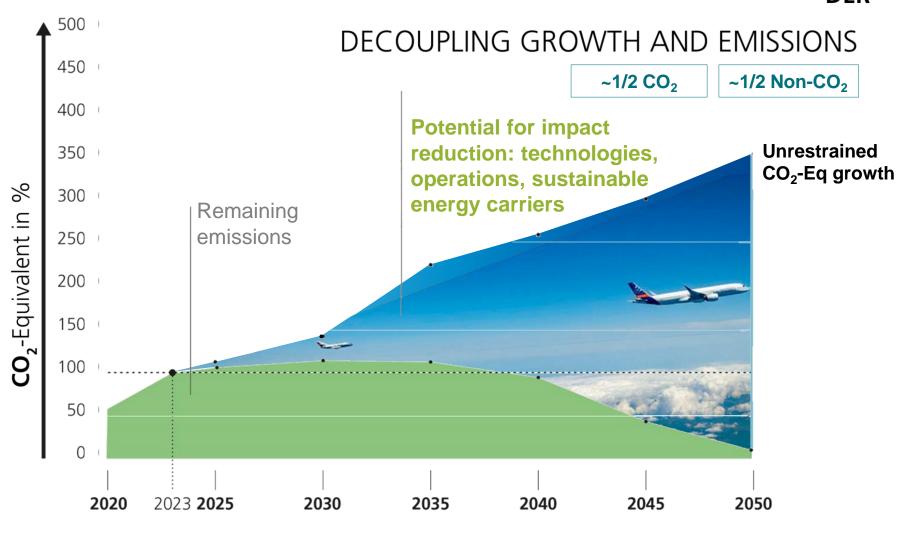
Climate-compatible air transport is more than decarbonization

Challenges and Opportunities



Air Transport System
of Tomorrow
@
resilient, competitive

and economic



DLR's Aeronautics Research

DLR Contributions in National Programm (LuFo) to today's Air Transport



REDUCING THE EFFECTS OF TURBULENCE, GUSTS **AND WAKE VORTICES**

> **NUMERICAL AEROACOUSTICS**

COMPOSITE MATERIAL TECHNOLOGY **FLUID MECHANICS IN** TURBOMACHINERY

SATELLITE-BASED PRECISION LANDING SYSTEM

NUMERICAL FLOW **SIMULATION**

> **AERODYNAMIC ENGINE INTEGRATION**

PILOT ASSISTANCE GATE-TO-GATE

> **ALTERNATIVE FUELS**

HIGH-LIFT SYSTEMS

System

WING

TIPS

AIRCRAFT ENERGY SYSTEMS

LOW-EMISSION COMBUSTION CHAMBERS

ROLLING TRAFFIC MANAGEMENT

LOW-NOISE **ENGINES NOISE**

PILOT

SELECTION

REDUCTION **GROUND VIBRATION TESTS**

INTEGRATED AIRPORT MANAGEMENT ARRIVAL AND DEPARTURE MANAGEMENT



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