Decarbonising aviation

An ambitious roadmap with unprecedented challenges
Decarbonising aviation | There is no silver bullet to reach Net Zero by 2050

- Since 2021, the target of aviation industry is Net Zero CO\textsubscript{2} emissions by 2050.
- Target residual emissions represent ~2% of the remaining anthropogenic carbon budget to keep 2°C.
- No “silver bullet”: need a basket of measures.
- In 2022, 41st ICAO Assembly adopted a long-term global aspirational goal (LTAG) for international aviation of net-zero carbon emissions by 2050.

\textbf{ATAG CO\textsubscript{2} Roadmap based on most ambitious technology scenario & central traffic growth scenario: 3.1% CAGR 2019-2050}

\textbf{Frozen 2019 efficiency}

\begin{itemize}
  \item Latest Generation Aircraft
  \hfill -25% CO\textsubscript{2}
  \hfill Airbus SBTi 2035: -46%
  \item Operations & Infrastructures
  \item Sustainable Aviation Fuels
  \hfill 2030: 100% SAF compatible A/C
  \hfill 10% SAF
  \item Disruptive Technology
  \hfill 2035: ZEROe
  \item Market-based Measures
  \hfill DACCs Scale-up & advocacy
\end{itemize}
Introducing Airbus ZEROe

Turboprop

- <100 Passengers
- Hydrogen Hybrid Turboprop Engines (x 2)
- 1,000+nm Range
- Liquid Hydrogen Storage & Distribution System

Blended-Wing Body

- <200 Passengers
- Hydrogen Hybrid Turbofan Engines (x 2)
- 2,000+nm Range
- Liquid Hydrogen Storage & Distribution System

Turbofan
Reducing Aviation’s Climate Impact | The energy roadmap

Hydrogen

Hydrogen economy and infrastructure deployment

Hydrogen production for aircraft

Synthetic fuel / PtL

Usage

Direct Air Carbon Capture

Sequestration

Biomass-based fuel

2020+

2030+

2050+

Enable Deployment

Accelerate cost-efficient energy transition

Carbon neutral aviation

Availability of affordable low carbon energy is at the core of aviation sustainable development
Thank you