



*austriatech*



**CAMERA**

# **CAMERA Final Dissemination Event**

**21 October 2021**

# Aviation Background

## Aviation accounted in 2019 for:

- 4,4 billion passengers
- Commercial aircraft fleet: 29,697
- 25.9 billion net profit
- 1,9% of global CO<sub>2</sub> emissions (~1 Gt)

## EU target:

- to halve CO<sub>2</sub> emissions by 2030
- net zero emissions by 2050

**“There is no national answer to the vision of zero emission aviation”**

(Rosalinde van der Vlies, European Commission, DG RTG, Director Green Planet)

# Looking back

## Flightpath 2050

- Published 2011
- Aircraft centred

## Example Mobility goal: 4 hours door to door

lesson learned:

- stronger link to other modes of transport
- Holistic view necessary



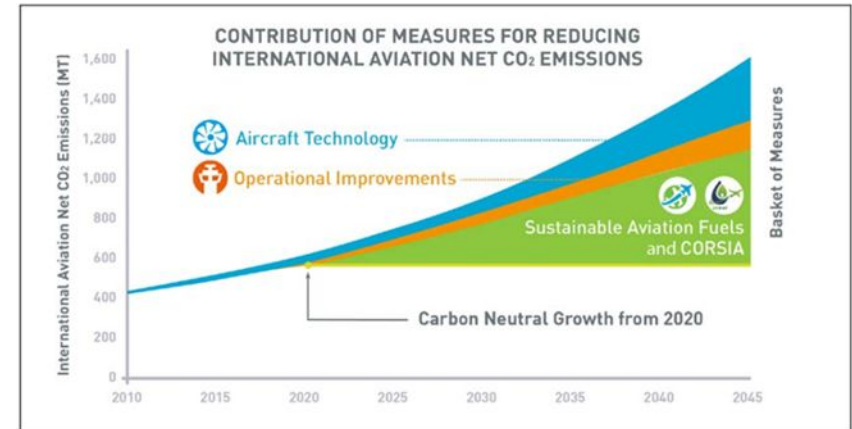
# Current policies and activities - targets and challenges

## Measures to reduce CO<sub>2</sub>

- advancements in aircraft technologies
- operational improvements
- sustainable aviation fuels

## Challenges

- Digitalisation
- Batteries
- Hydrogen
- SAF
- Unmanned aircraft vehicles
- New aircraft architectures



Bringing together elements. Source : ATAG

## Indicative overview of where CO<sub>2</sub> measures could be deployed globally

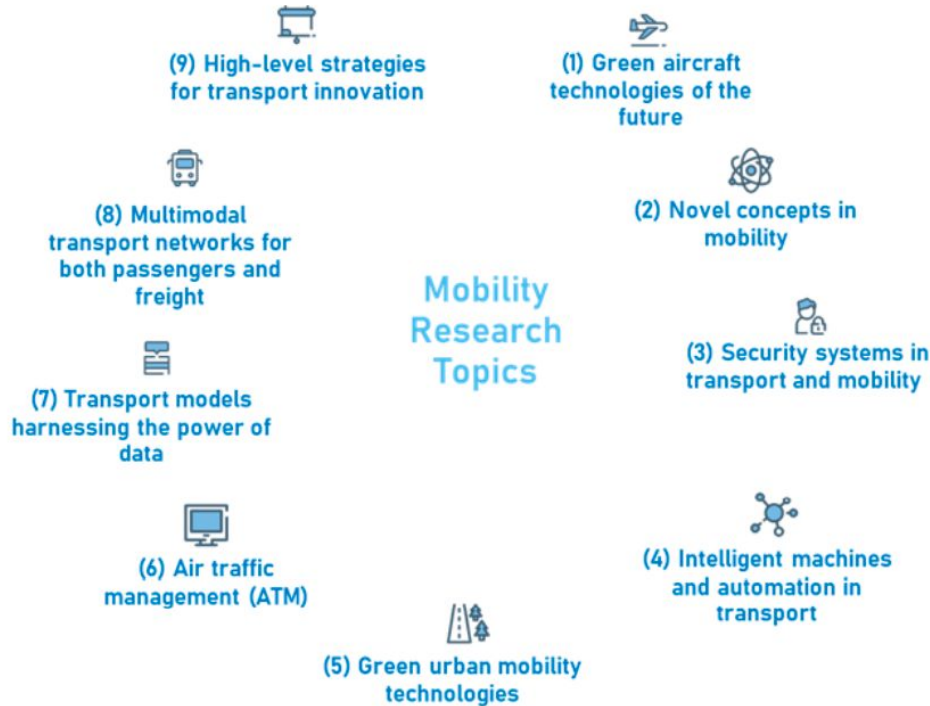
	2020	2025	2030	2035	2040	2045	2050	
<b>Commuter</b> > 9-50 seats > <60 minute flights > <1% of industry CO <sub>2</sub>	SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	Electric and/or SAF	~27% of CO <sub>2</sub> emissions
<b>Regional</b> > 50-100 seats > 30-90 minute flights > ~3% of industry CO <sub>2</sub>	SAF	SAF	Electric or hydrogen fuel cell and/or SAF	Electric or hydrogen fuel cell and/or SAF	Electric or hydrogen fuel cell and/or SAF	Electric or hydrogen fuel cell and/or SAF	Electric or hydrogen fuel cell and/or SAF	
<b>Short-haul</b> > 100-150 seats > 45-120 minute flights > ~24% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	Electric, hydrogen combustion and/or SAF	Electric, hydrogen combustion and/or SAF	Electric, hydrogen combustion and/or SAF	
<b>Medium-haul</b> > 100-250 seats > 60-150 minute flights > ~43% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	SAF	SAF	SAF potentially some Hydrogen	
<b>Long-haul</b> > 250+ seats > 150 minute + flights > ~30% of industry CO <sub>2</sub>	SAF	SAF	SAF	SAF	SAF	SAF	SAF	
								~73% of CO <sub>2</sub>

# New Strategies

- **New ACARE Vision Document**
- **New national strategies**

A closer look on what has been done is necessary to understand the present and to formulate the future!

# Where CAMERA can contribute



**Nine identified most common research topics of mobility-relevant projects**

Mobility Report 3

# Thank you for your attention

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