



# Welcome to Finnair flight AY2045

6.10.2022, Tuomo Karppinen

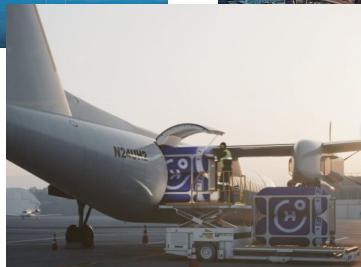
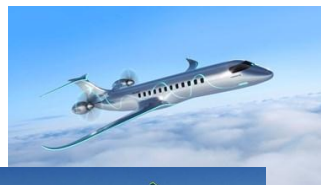
# The future of air travel

- Even faster point-to-point traveling
  - Efficient multimodality
  - Optimised routing
  - Extended flight ranges
  - Supersonic flying
- Lower emissions
  - Net-zero GHG emissions
  - Quieter airspace
- Sustainable cabin
  - Simple and easy Accessible design
  - Biosafe
  - Light, Recycled and Recyclable
- Increased travelling comfort
  - Complete digital experience
  - Easy transfer from transport mode to another and at airports
  - Less noise and hassle at airports
  - Less noise and more personalised space in aircraft



# The greatest challenge to address today is the CLIMATE

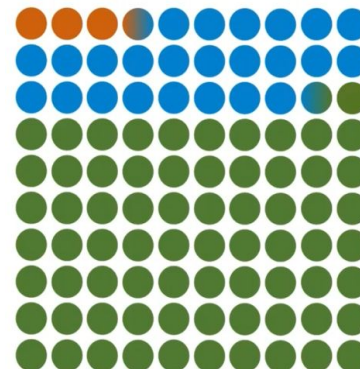
2020's	2030's	2040's	2050's
100 % SAF Engines		Revolutionary design	
Open rotor engine retrofits			<ul style="list-style-type: none"> <li>• SAF (&gt; 4000 km)</li> <li>• Hydrogen (&lt; 4000 km)</li> <li>• E-Hybrid (&lt; 1000 km)</li> <li>• Electric (&lt; 500 km)</li> </ul>
H2 fuel cell retrofits	New H2 and electric flying concepts		



Electric

Hydrogen

Liquid /  
SAF



ATAG schematic indication of potential energy use in 2050



# To secure SAF supply in flying we need to address four challenges



Define the amount of SAF to reach the needed track (e.g. SBTi)



How to secure the volume that is needed?



How to maintain profitability regardless of the SAF price and take benefit from the SAF value?



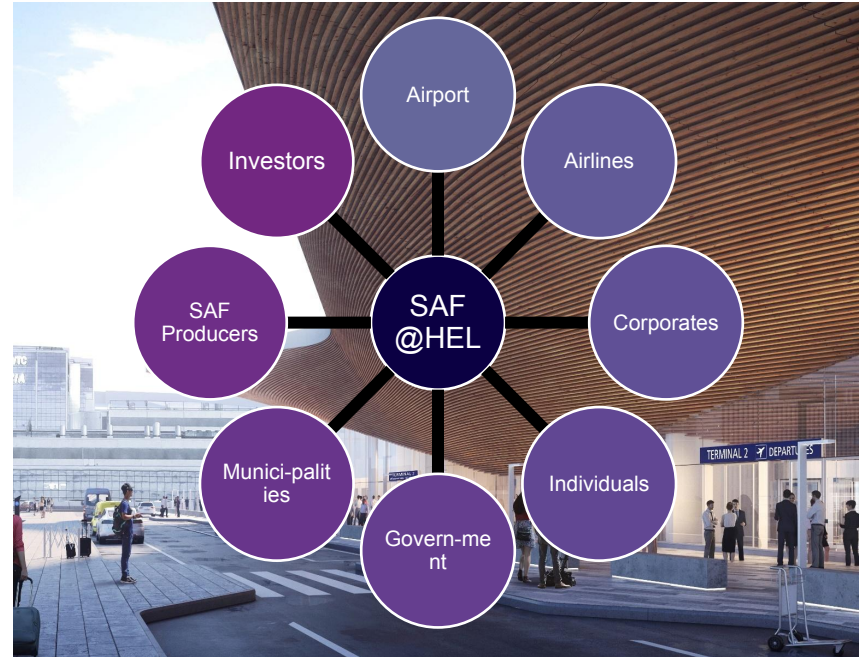
How to ensure SAF are produced sustainably?



# Case Helsinki-Vantaa Airport: Currently there is no continuous demand @HEL for SAF uptake

To enable that we need to engage broad stakeholder group to **resolve the 'chicken and egg' scenario**

- Finding the demand
- Sharing the SAF Premium
- Increasing investments in SAF production
- Ensuring sustainable resources





# Welcome onboard to the journey to make the future of flying.

We need early action in this decade boosting  
technological innovation and economies of scale  
enabling large-scale GHG emissions reductions  
in the 2030's and 2040's.



***FINNAIR***