Industry Roadmap for Decarbonization

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June 2022

EASA Regional Workshop on climate change in the aviation sector for the African Region

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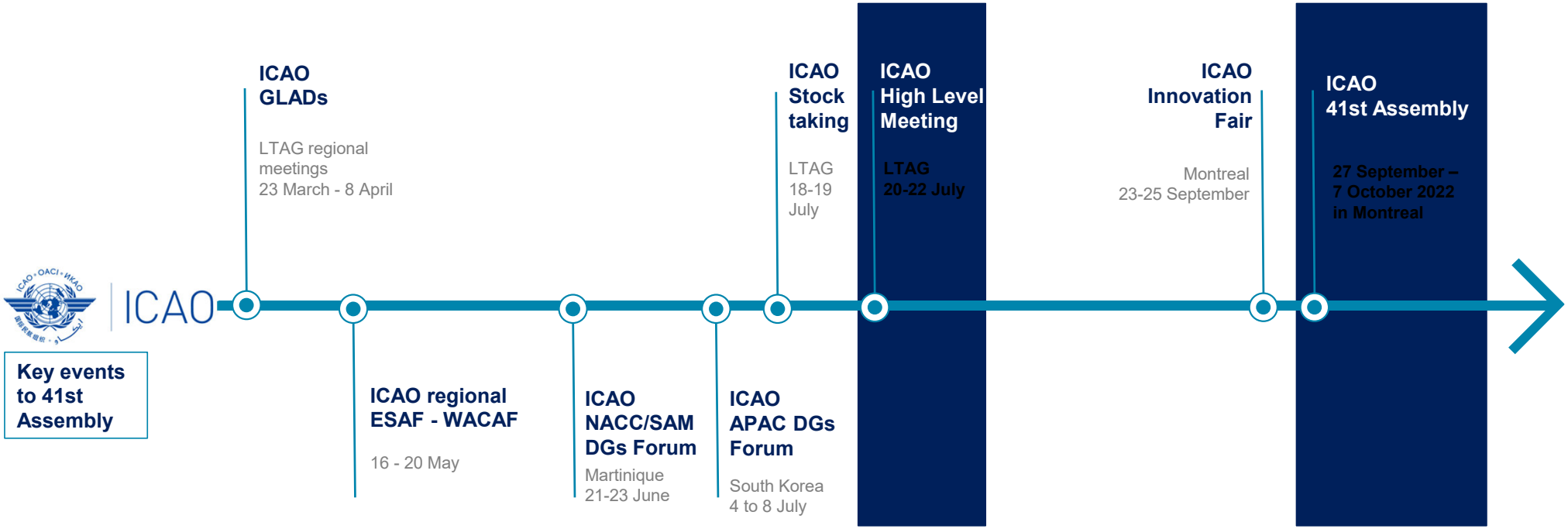
ICAO 41st Assembly in 2022: a major milestone for **L**ong **T**erm **A**spirational **G**oal ***"LTAG"***



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Why an LTAG at ICAO is needed?

Need for an LTAG at ICAO
• Need to demonstrate aviation alignment with Paris Agreement objectives to enable sustainable growth • Align ICAO Member States and industry on a common objective • Create a level playing field to allow industry to invest globally and avoid competitive distortions • Create roadmaps for implementation and set up the right policy frameworks

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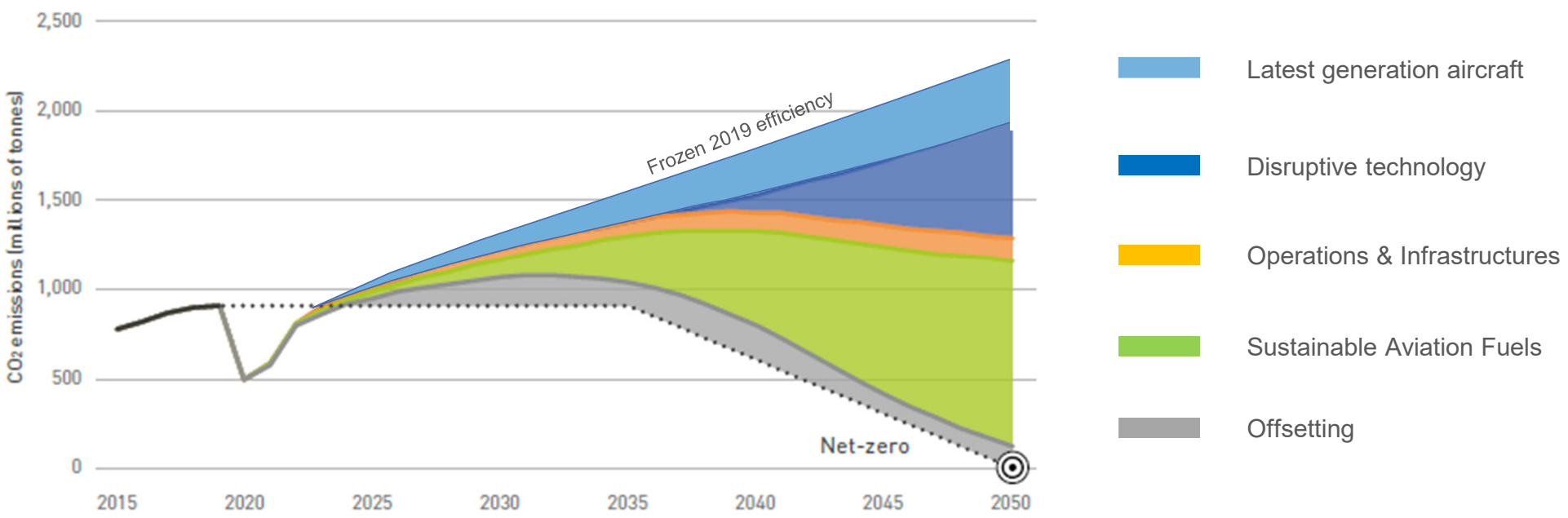
Industry Roadmap: net zero in 2050, decarbonisation of air transport is compatible with traffic growth

Needs collective efforts of States, Energy & Fuel producers, Aircraft Manufacturers, Airports, Airlines and ANSPs



ATAG CO_2 Roadmap (most ambitious technology scenario & central traffic growth scenario: 3.1% CAGR 2019-2050)

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Aviation's path towards zero emissions

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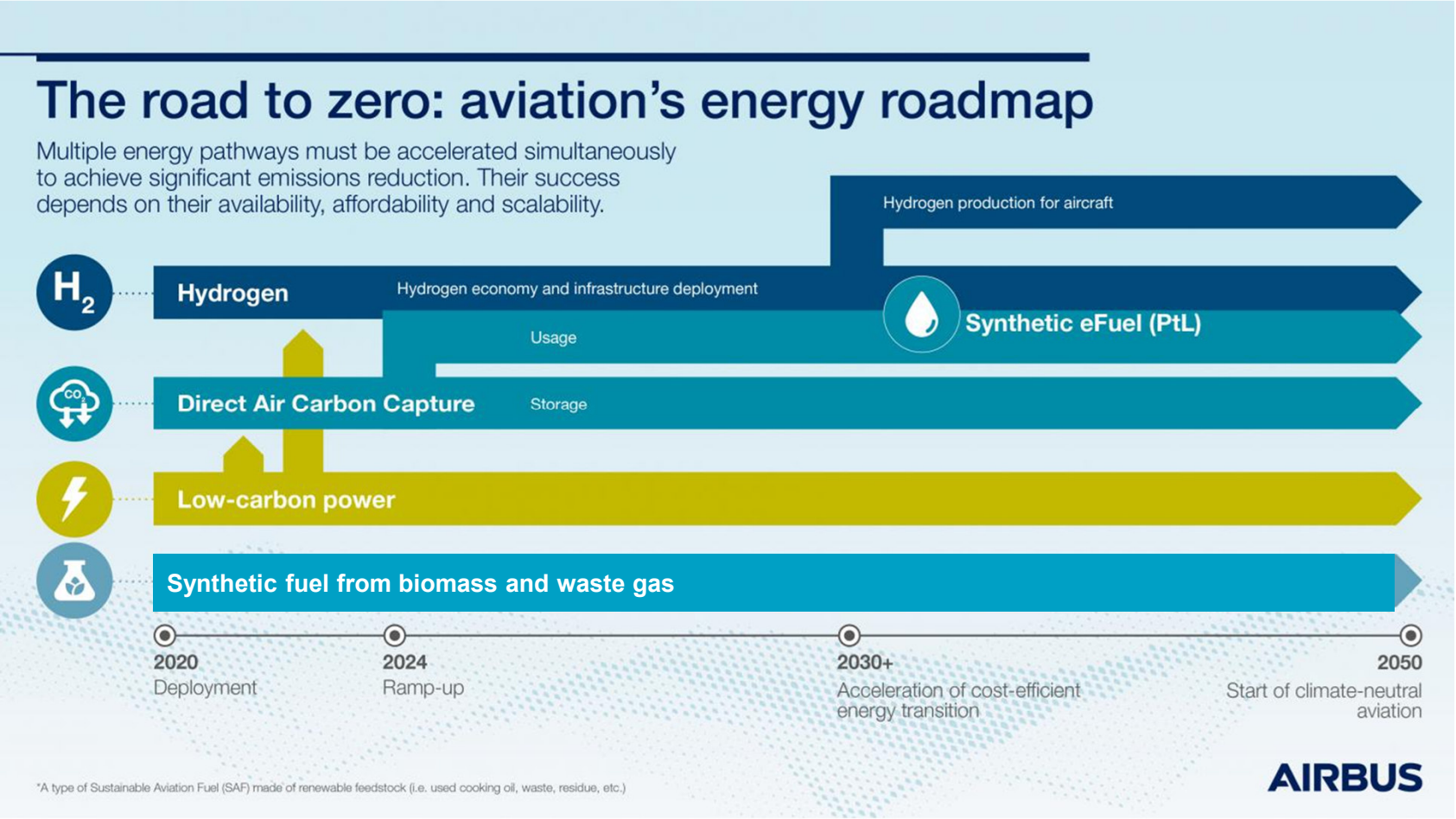
Introducing new low carbon fuels



All sources of decarbonised/low carbon energy or fuels will have to be used

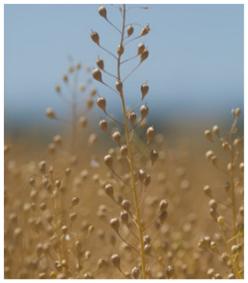
From Biomass-based fuels, to E-Fuels and Hydrogen powered aircraft

This means an access to high quality feedstock, low carbon energy, Hydrogen production and carbon capture

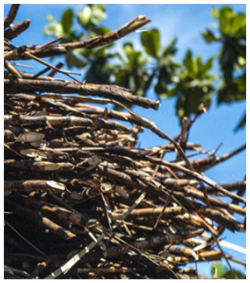
Potential sources for SAFs

Current most common options → **Future**

Waste oils

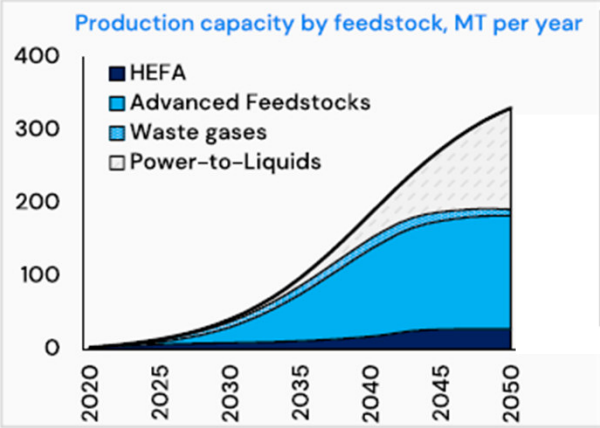


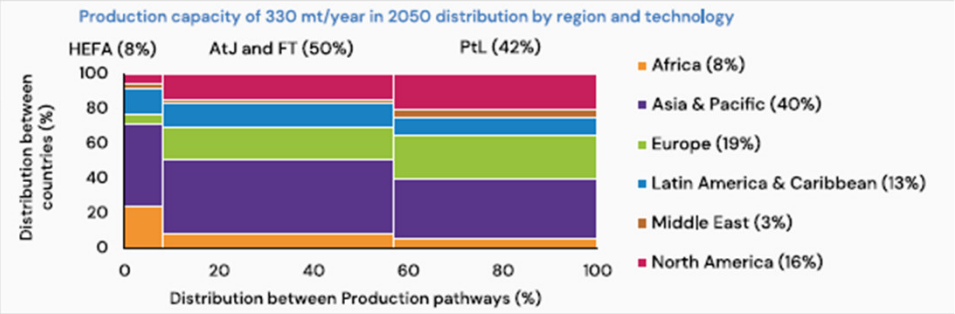
Oil and cellulosic crops



Wood processing and forestry waste
Agricultural waste
Municipal solid waste and industrial off-gasses

Power To Liquid (PtL) sources





Sustainability Criteria need to be ensured through International certification schemes

No silver bullet solution, all pathways and feedstocks need to be supported

Feedstock availability is very regional and will therefore offer opportunities for all regions and all countries to develop infrastructure and jobs

ATAG AIR TRANSPORT ACTION GROUP ICF

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Opportunities

A sustainable development of Air Transport allows to secure all the benefits that aviation can deliver to worldwide economies and societies. But it also offers new opportunities for the States to develop new activities and jobs supporting this transformation. According to ATAG, SAF development has, as an example, the potential to generate the creation of more than 13 million jobs across the world :

Indicative job creation potentials for SAF production worldwide.

Scenario		Global	Africa	Asia - Pacific	Europe	Latin America & Caribbean	Middle East	North America
1	Pushing technology and operations	13.5 m	1.2 m	5.6 m	2.4 m	1.9 m	0.4 m	2.0 m
2	Aggressive SAF deployment	14.1 m	1.2 m	5.9 m	2.5 m	2.0 m	0.4 m	2.1 m
3	Aspirational and aggressive technology perspectives	13.0 m	1.2 m	5.4 m	2.3 m	1.9 m	0.3 m	1.9 m

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Conclusion: LTAG at ICAO is needed, to deliver a clear signal and align States and Industry on the same objectives

- Most of Decarbonisation investments will be supported by the industry: aviation and energy sectors

- But to make these investments achievable by the Industry:
  - Clear goals must be set to unroll a decarbonization strategy globally
  - Harmonized regulations, standards, incentives must be defined so as to
  - Set a level playing field, with no distortion of competition

- This is what the States can achieve through the LTAGs and the subsequent ICAO policies

- ICAO Assembly is a unique opportunity to support a sustainable growth of Air Transport and generate economic development and jobs

- As an example SAF only can generate up to 14 Million new jobs in the world according to ATAG

- **Dialogue between Industry and ICAO member states is key:**
  - Through Capacity building & International cooperation such as ICAO ACT-SAF programmes or EASA programmes
  - To helps states elaborate roadmaps, with the setting for example of an objective on SAF uptake in 2030, and,
  - To define robust State Action Plans

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Thank you

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