



ICAO EUR/NAT and ACI EUROPE



ICAO

REGIONAL GREEN AIRPORTS SEMINAR

**Hosted by the Ministry of Transport of the Republic of
Uzbekistan**



Financing SAFs:

Boeing SAF Partnerships and Investments

Mark Stolze - Regional Sustainability Lead, Europe



Reducing Aviation's Emissions

Supporting the Industry's Commitment

FLEET RENEWAL



OPERATIONAL EFFICIENCY



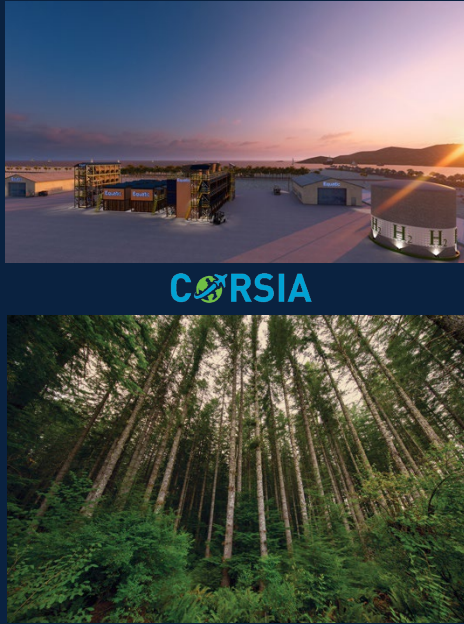
ALTERNATIVE FUELS



ADVANCED TECHNOLOGY



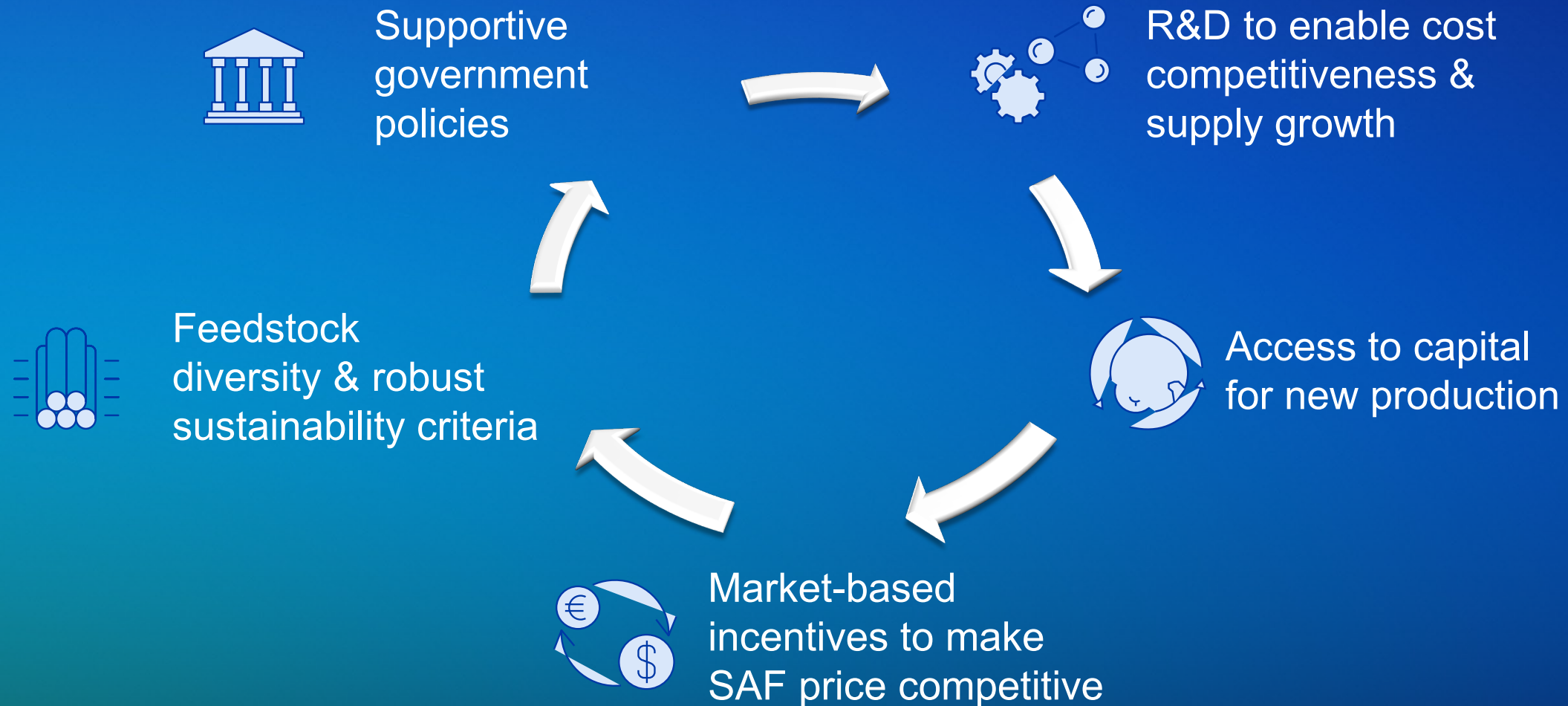
MARKET-BASED MEASURES



Industry View

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

Keys to accelerating SAF supply growth



Pioneering SAF for 15+ years

TECHNOLOGY & TESTING

2008

First biofuel test flight with Virgin Atlantic



2010

U.S. Navy F/A-18 supersonic flight on 50/50 SAF blend



2011

Led research for ASTM approval of HEFA pathway

2008

2010

2012

2014

2016

2018

2020

2022

2024

OPERATIONS



2012-current

Use biofuel on every Boeing ecoDemonstrator program

PARTNERSHIPS & POLICY

2009

Sustainable Aviation Fuel Users Group (SAFUG)

2011

First regional multi-stakeholder roadmaps in the US, Australia

2014

Proposed and partnered with Neste on Green Diesel pathway

2021

Partnered with SkyNRG

2022

Region-specific roadmaps and SAF feedstock analyses with local partners (ongoing)

2023

Studied SAF's impact on contrails with NASA, DLR, FAA, GE, United

2023

Spearheaded AirCRAFT, a UAE SAF consortium
Launched APEC SAF initiative with U.S. Government
Collaborated with Masdar and Zero Petroleum

2024

Partnered with Wagner Sustainable Aviation Fuels

2025

Partnered with Norsk e-Fuel

2021

Committed to 100% SAF compatible airplanes by 2030
100% SAF flight with Rolls-Royce
First 100% SAF passenger flight with United Airlines, one engine

2023

Developed jet reference fluid to test 100% SAF compatibility
First 100% SAF transatlantic commercial flight with Virgin Atlantic, dual engine

2024

IAEG 100% SAF Compatibility Working Group

2021-ongoing

SAF emissions testing with NASA

2018

Launched program for biofuel delivery flights from Boeing Delivery Centers

2022

7.5M liters of SAF procured

2023

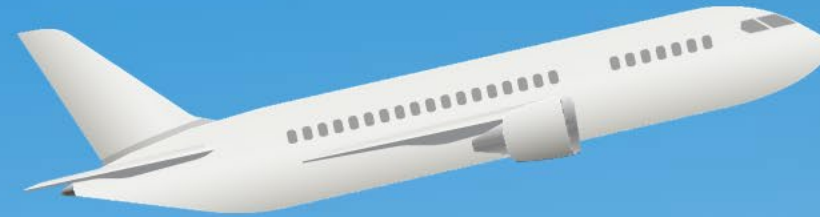
21.2M liters of SAF contracted

2024

23.8M liters of SAF bought



Taking off with 100% SAF



Deliver 100% SAF-compatible airplanes

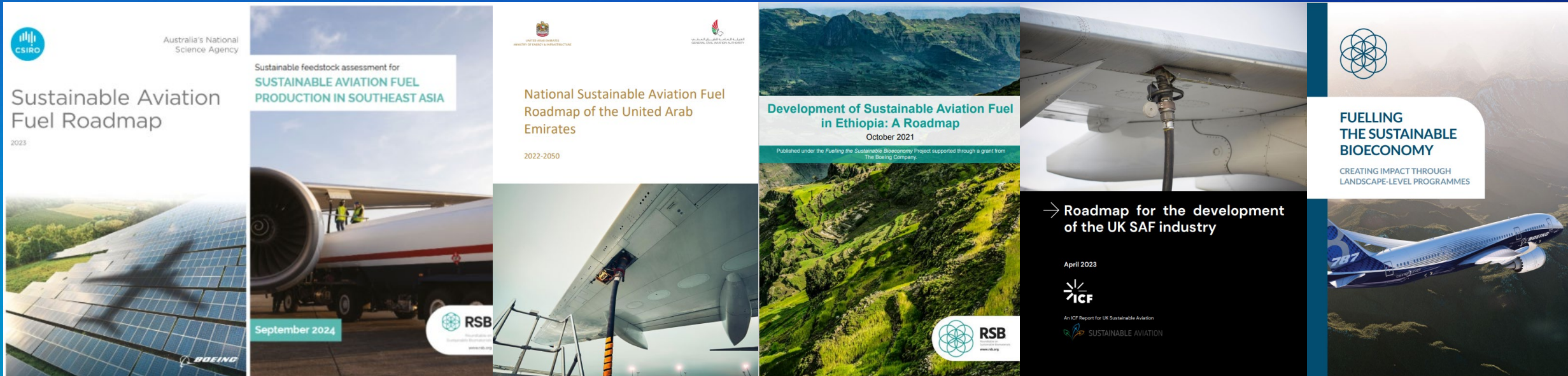


2021

2030

SAF Policy Advocacy

Developing Roadmaps



Convening/Leading Stakeholder Groups

Partnering with Financiers

Boeing SAF Project Participation



- Boeing, KLM, Macquarie
- Pacific Northwest SAF Production
- “Best in class” future offtake contracting language
- EIS: 2029 SAF Production



- Boeing, DOE, Honeywell UOP
- Strategic partner for technology development for biocrude to SAF pathway
- EIS: 2027 Pilot Scale SAF Production



- Boeing, SkiesFifty
- Sewage waste to SAF technology
- Provide training, direction and facilitation on testing
- EIS: 2029 SAF Production



- Boeing, Queensland Government
- C&D and MSW to SAF facility in Brisbane Australia (LanzaTech/LanzaJet)
- Build on Australia SAF assessment by CSIRO and Boeing



- Boeing investment into development capital fund
- Targeting first e-SAF projects in the Nordics
- Carbon capture & green H₂ production with renewable energy

