WAYPOINT2050

AN AIR TRANSPORT ACTION GROUP PROJECT

ATAG

AIR TRANSPORT ACTION GROUP

Waypoint 2050 and the road ahead on net zero aviation

Joint Undertaking Conference, 1 October 2026, Brussels, Belgium

Felix Eggert, Policy & Communications Advisor, ATAG

Support from across the industry

WAYPOINT 2050
AN AIR TRANSPORT ACTION GROUP PROJECT

149 experts

45 companies

ASL Airlines Belgium · ATR · cargolux · ACI Airports Council International · GIFAS · IATA · GAMA · Rolls-Royce

Airlines for America · AIRBUS

Cathay Pacific · Bombardier · Thales · Boeing · AIA

climeworks · DHL · CANSO · American Airlines · Carbon Engineering

Heathrow · EMBRAER · world energy · IHI · FedEx · AAPA

AerCap · gevo · IAG International Airlines Group · Japan Airlines · Singapore Airlines · SITA

Jetzero · IBAC International Business Aviation Council · LANZAJET · YCD Nanaimo Airport · NESTE · Southwest

ICCAIA · United · Pratt & Whitney An RTX Business · SAFRAN · GE Aerospace

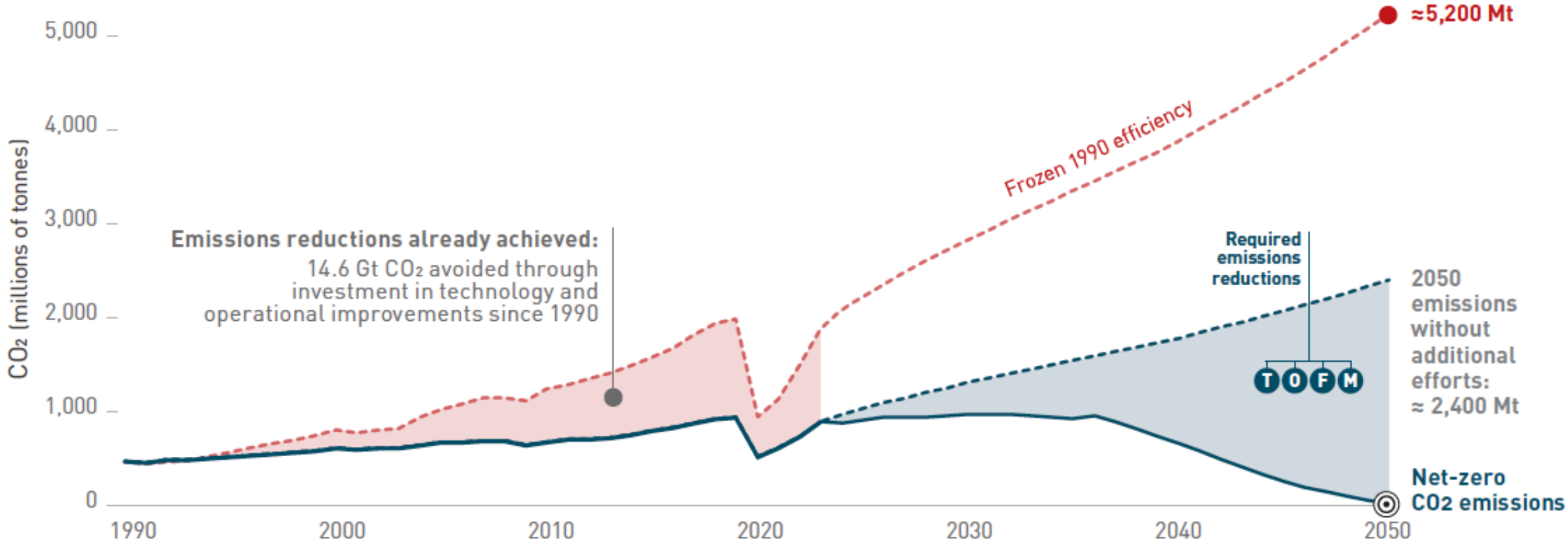
Net zero is still important

Aviation's **net zero vision** is essential to…

1. **…align** the sector with global climate action and meet society's demand for more sustainable mobility
2. …**encourage** joint action from the aviation industry, governments, and the finance and energy sectors
3. … **accelerate** the scale-up and deployment of key measures over the next five years

Historic progress, but significant shift required

How do we ensure continuation of the historic efficiency improvements alongside a shift to low-carbon fuels and carbon removals (MBM) to meet net zero?

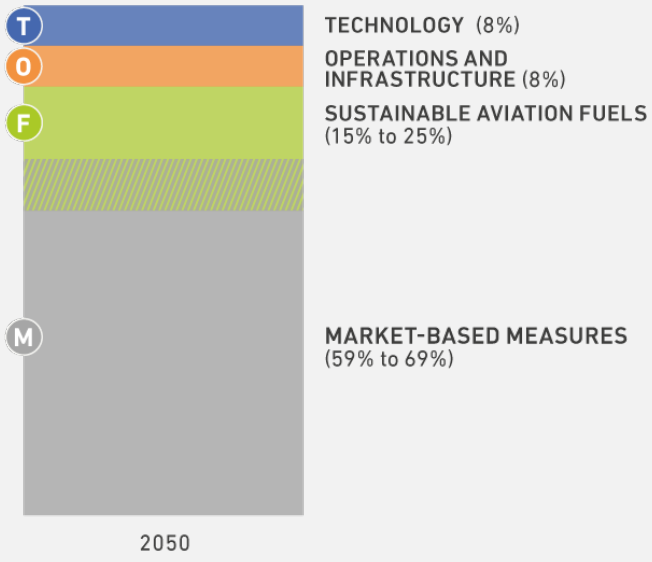


Scenarios for net zero aviation

Illustrative pathways to reach net zero carbon for aviation, using the four pillars of action.

Scenario 0:

Reference/baseline

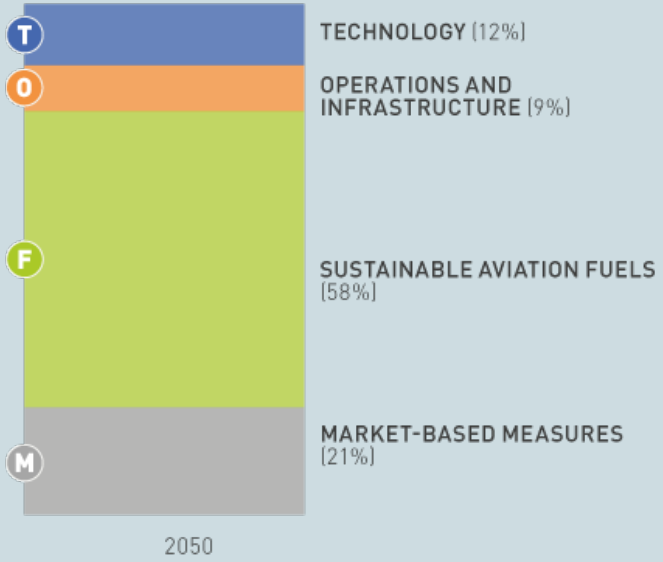


CO_2 emissions reductions in 2050

Getting to net-zero with calls to action

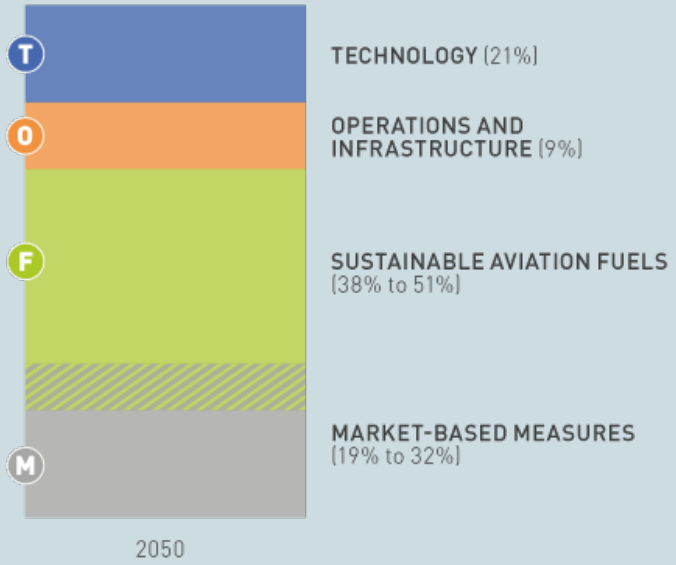
Scenario 1:

Sustainable aviation fuel is the primary decarbonisation lever.



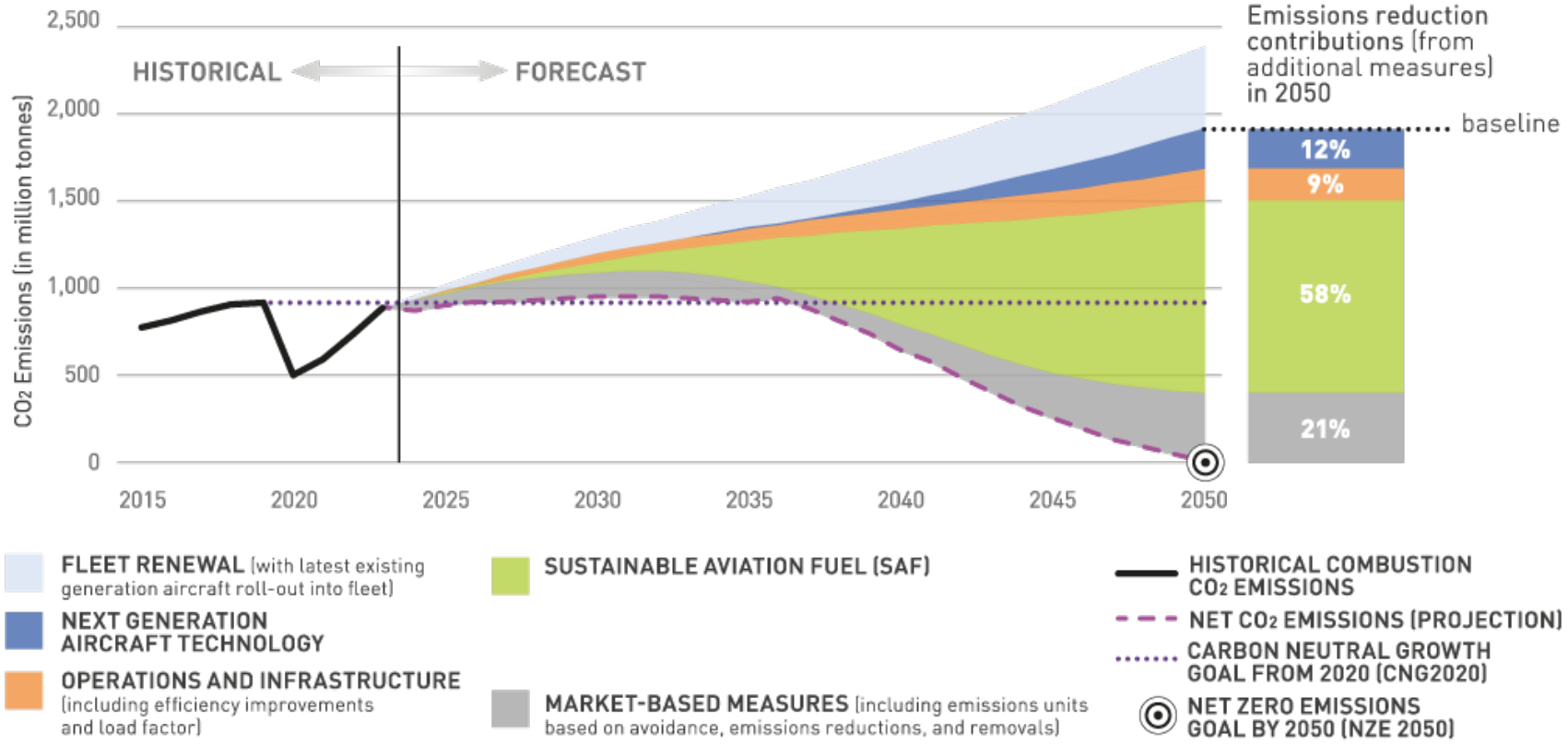
Scenario 2:

Technology push, with some market-driven decision of SAF or MBMs in the latter years.



Scenario 1: Focus on SAF deployment

Moderately ambitious technology improvements, and higher investments in operations and infrastructure. SAF makes up most of the decarbonisation pathway. Residual CO_2 emissions would be addressed by market-based measures.



T3 Technology improvements are **moderately ambitious** with advances in both traditional and open rotor engines. Limited use of new aircraft configurations.

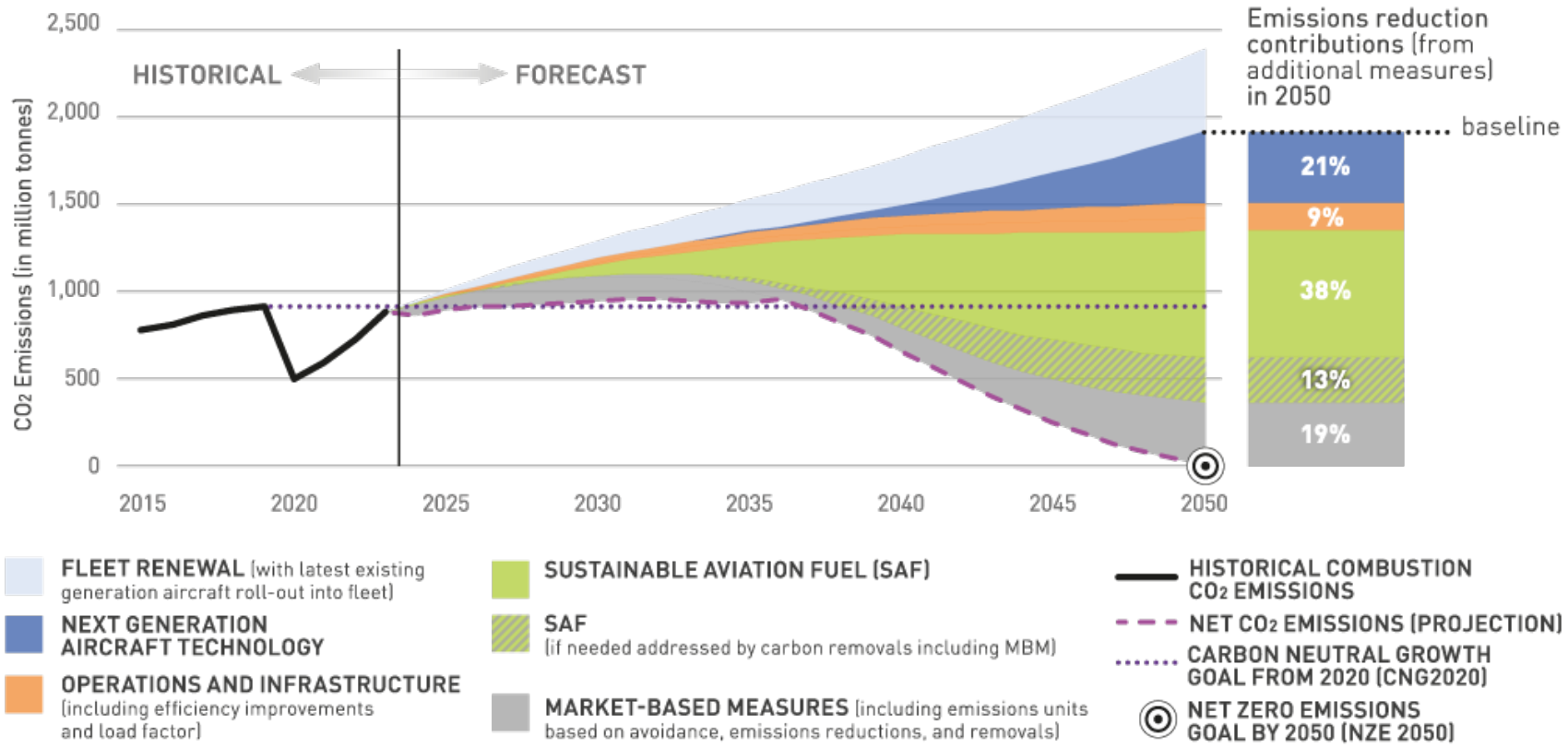
O3 **High-range improvements**

F2 **Focus on SAF.** Around 1,100 Mt CO2 reduction through replacement of 90% of jet fuel: 430 – 500 Mt of SAF by 2050.

M2 **Market-based measures** to meet the 2050 goal: ~400 Mt CO2.

Scenario 2: Technology-centric market scenario

Alternative scenario to achieve net zero carbon by 2050, via ambitious technology improvements, and high investments in operations and infrastructure. Market cost dynamics guided by policy support will determine the split between SAF and MBM (carbon removals).



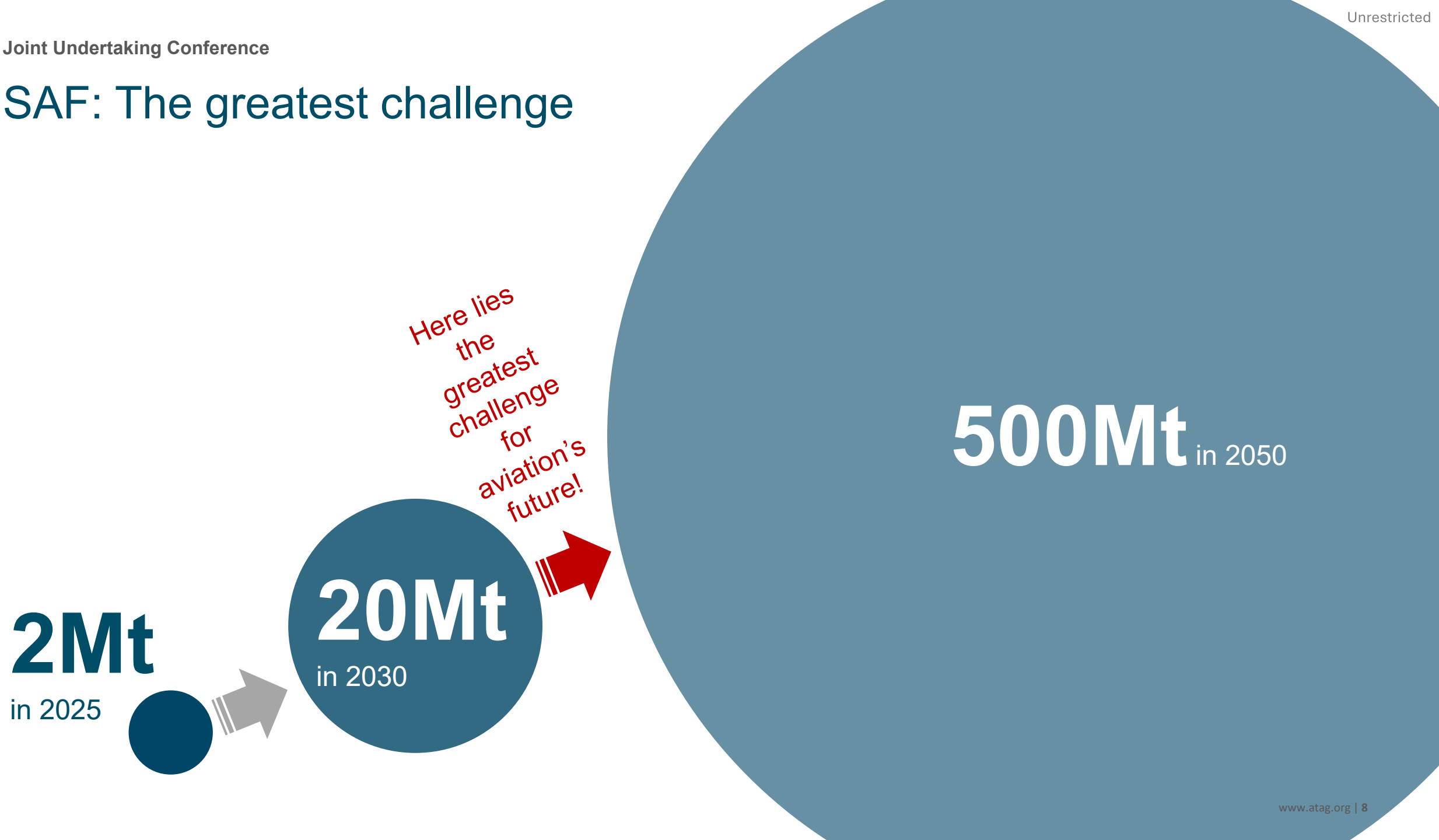
T4 **Towards hybridization and non-drop-in energies** for narrow-body and wide-body aircraft. Electric and hybrid electric aircraft in the short-range and <100 seat category.

O3 **High-range improvements**

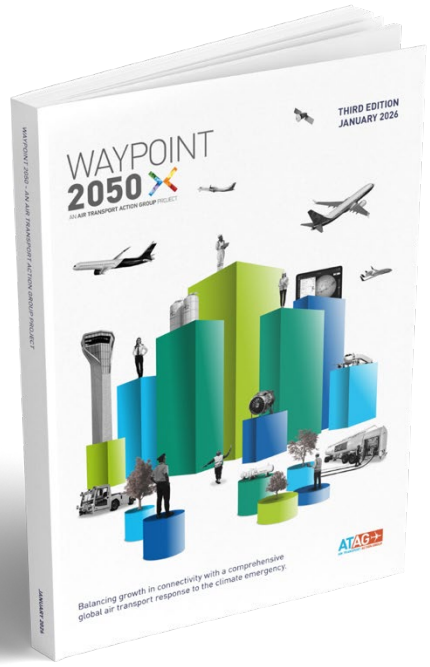
F3 **SAF and CDR.** Around 720-980 Mt CO_2 reduction to replace up to 66-90% of conventional jet fuel: 280-380 Mt of SAF by 2050.

M3 **Market-based measures** to meet the 2050 goal: ~ 370 - 620 Mt CO_2.

SAF: The greatest challenge



From sustainability to security…



1. Net zero carbon 2050 for aviation is an important and ambitious goal. It is very challenging but is still within reach if action is taken now.

2. The next five years are critical to ensure air transport is on course to decarbonise.

3. This is a collective effort, which requires joint action from the aviation industry, governments, and the finance and energy sectors.

However, the scale up of SAF globally is not just an avenue for **decarbonisation**. It can support **energy diversity** (of sources and geography), help **balance supply logistics and security**, stabilise energy **cost dynamics** for air transport connectivity, create **economic opportunity** and **green energy jobs** in more countries around the world..

A five-year window to:

Scale the production of SAF globally to match demand

- Strengthen government policies to support the production and use of SAF, on both supply and demand sides.
- Accelerate commitments and use of SAF
- Energy suppliers must invest in and build new and converted SAF capable facilities and logistics globally through global cooperation with solid and sustained commitment from the aviation sector.
- Encourage the use of innovative, globally-harmonised SAF accounting

Reaffirm the support for and continue to implement CORSIA

- The success of CORSIA is critical to short- and mid-term goals: expanded participation in CORSIA and supply of CORSIA-eligible emissions units with letters of authorisation (LoAs) is vital.

A five-year window to:

Deploy fuel-efficient aircraft faster into the fleet

- Ensure timely delivery and in-service time of latest generation fuel-efficient aircraft.
- Accelerate research, development, certification, infrastructure readiness and deployment of next generation disruptive fuel-efficient airframe and propulsion technologies, i.e. hydrogen

Modernise air traffic management systems

- Upgrade national and regional ATM systems to ensure safe and efficient operations and enable early climate action.
- Advance the opportunities for contrail mitigation as research and operational concepts develop.

Accelerate the develoment and scaling of carbon removal

- Incentivise carbon removal solutions and secure supply of sufficient volumes of affordable removals for the aviation sector

WAYPOINT2050

AN AIR TRANSPORT ACTION GROUP PROJECT

ATAG
AIR TRANSPORT ACTION GROUP

THANK YOU

Download the report:
www.aviationbenefits.org