



Department
for Transport

Jet Zero: UK progress and prospects

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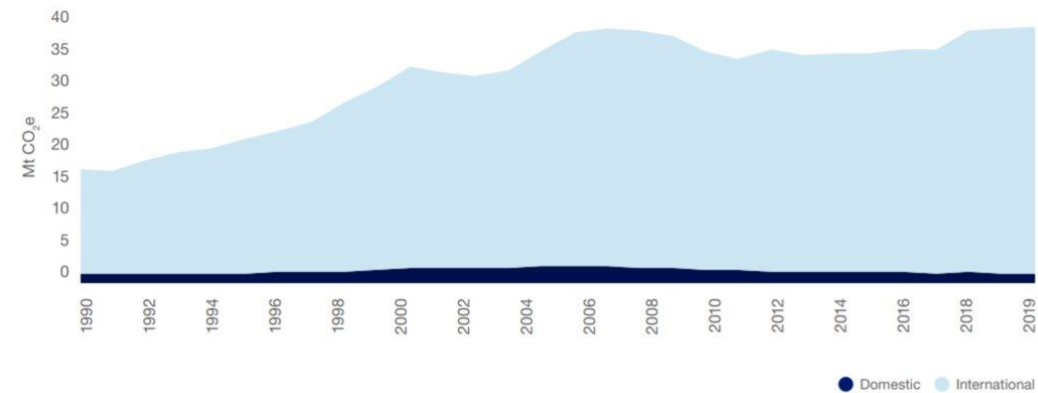
Sustainable Skies World Summit 2022

6 April 2022

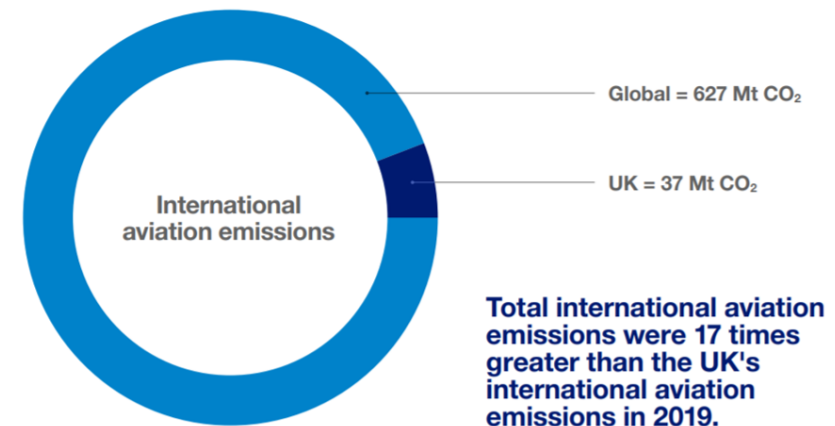
Aviation's role in achieving Net Zero

- In 2019, domestic aviation was responsible for 1.4 Mt CO₂ (1.2% of domestic transport emissions), however, emissions from the UK's share of **international flights are more significant** – 37 Mt CO₂ in 2019, contributing to **6% of global international aviation emissions**.
- In June 2019, the Government amended the Climate Change Act to set a **legally binding target for the UK to achieve net zero emissions by 2050**.
- In April 2021, the Government announced that the sixth carbon budget will for the first time formally include the UK's share of international aviation and shipping emissions and **cut emissions by 77% by 2035 compared to 1990 levels**.
- In July 2021, we published the **Jet Zero Consultation** which outlined our vision for the aviation sector to reach net zero by 2050 and the final strategy will be published later this year.
- The **Net Zero Strategy published in October 2021**, set out the UK's economy wide plan for achieving net zero and showed that Aviation is expected to have the highest residual emissions in 2050.

UK Aviation Emissions 1990–2019⁵



UK share of international aviation emissions in 2019⁹



Our approach to achieving Jet Zero

Clear goal, multiple solutions

We will **commit to the UK reaching net zero by 2050**, with earlier milestones to monitor progress.

We will focus *domestically* in the 2020s on accelerating efficiency gains and developing the technological solutions on **SAF, ZEF, CCS and H₂** to find the optimal mix for net zero in 2050.

International leadership

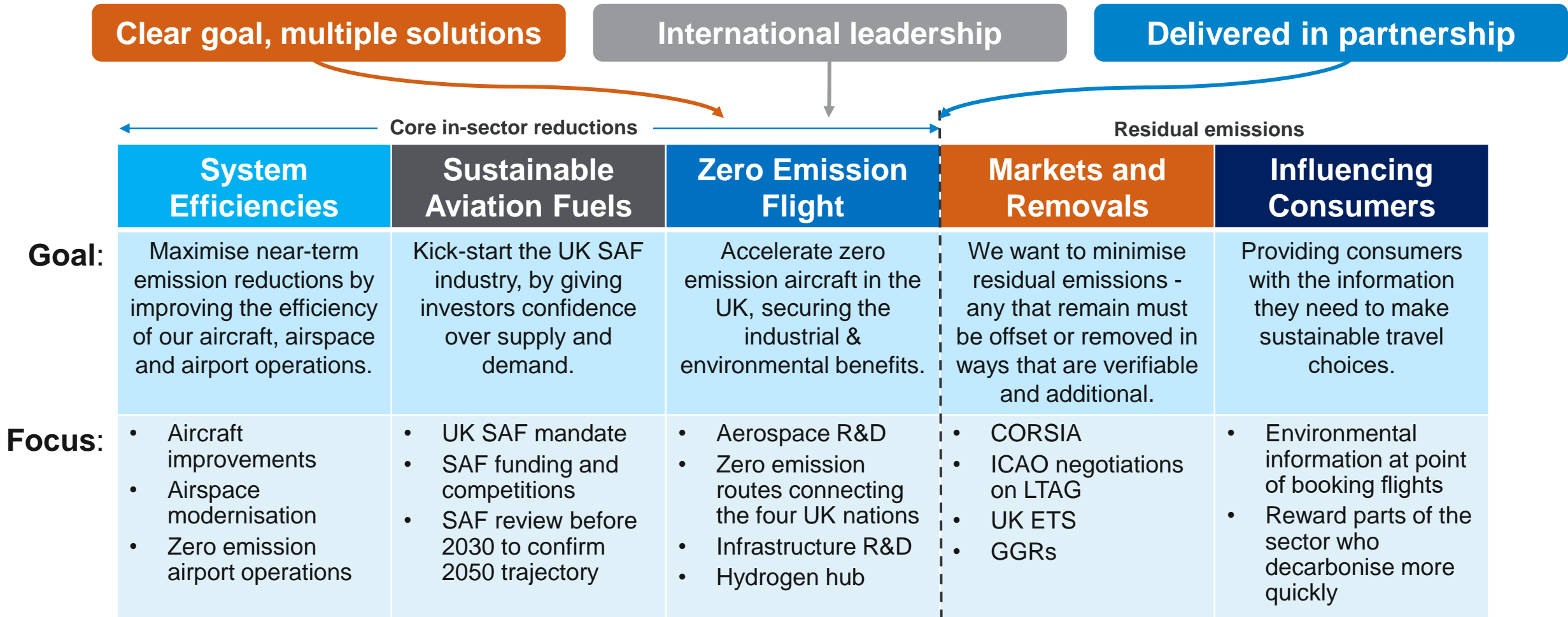
We will **lead global efforts** to tackle international emissions, leading work in **ICAO** to improve **CORSIA** and agree an ambitious **LTAG** that provides further economic opportunities and minimizes leakage and competitive distortion.

Delivered in partnership

Success requires collaborative working with stakeholders. The **Jet Zero Council** will work to accelerate take up of SAF and ZEF in the UK; **ACOG** will lead work on domestic airspace modernisation; the **ATI** will lead on greening the UK aerospace sector and maximizing the UK's share of the market.



The measures underpinning our approach



The Jet Zero Council

The **Jet Zero Council** brings together government and senior leaders from industry and academia to deliver **zero-emission** transatlantic flight within a generation. The Council aims to:

- Provide government advice on how to develop the UK's capabilities for achieving net zero aviation;
- Identify the benefits of developing these new industries in the UK;
- Find solutions to overcome barriers faced by the industry;
- Find opportunities to drive down production costs; and
- Support grass roots innovation and challenge existing approaches by involving disruptors and innovators.

Key areas of focus for the Council are:

Sustainable Aviation Fuels (SAF)

Accelerate the establishment of UK production facilities for SAF and commercialising the industry by driving down production costs.

Zero Emission Flight (ZEF)

Accelerate the design, manufacturing, testing, certification, infrastructure and commercial operation for ZEF in the UK.

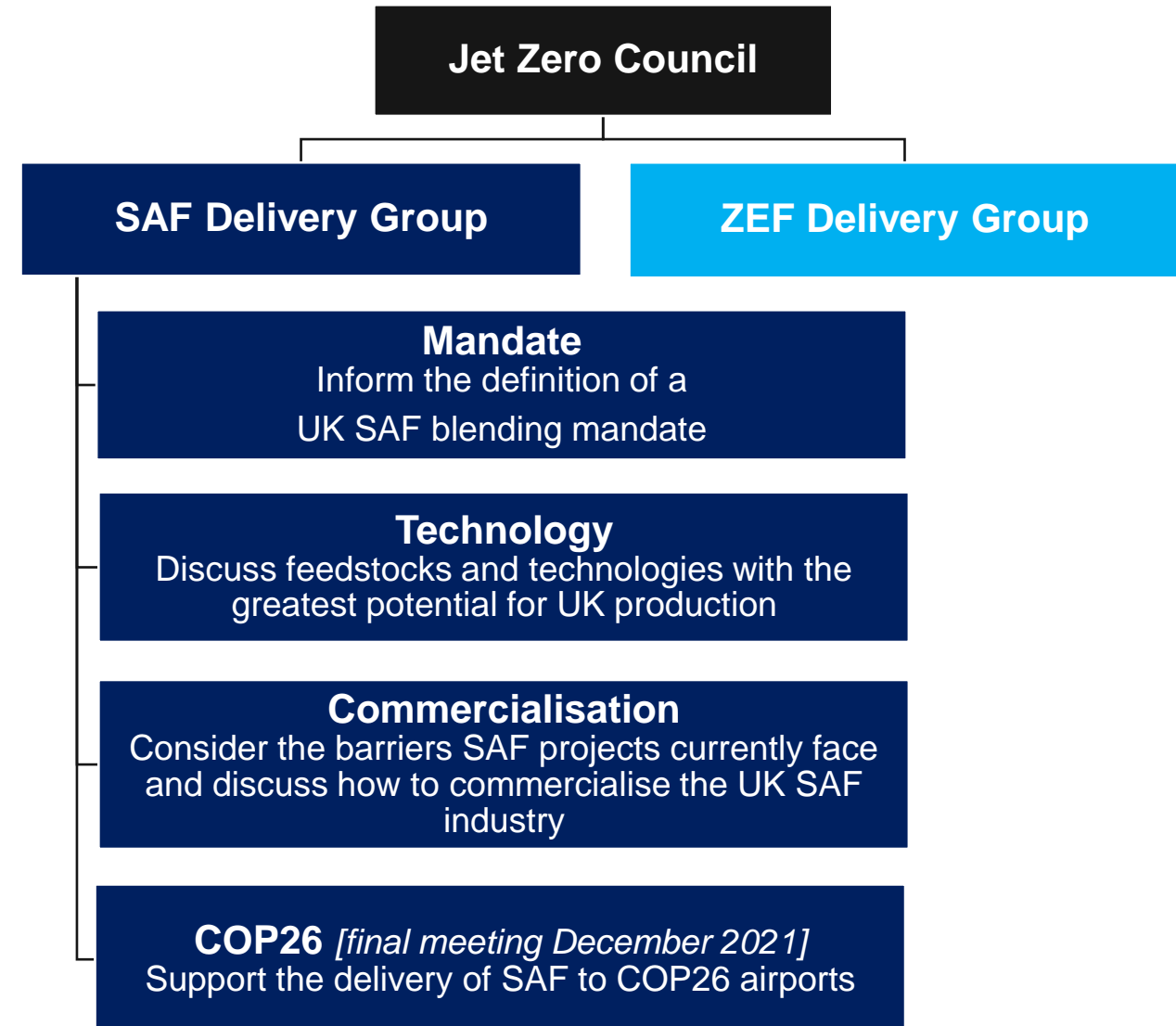
Policy & Regulatory Framework

Developing a co-ordinated approach to the policy and regulatory framework needed to deliver net zero aviation by 2050.



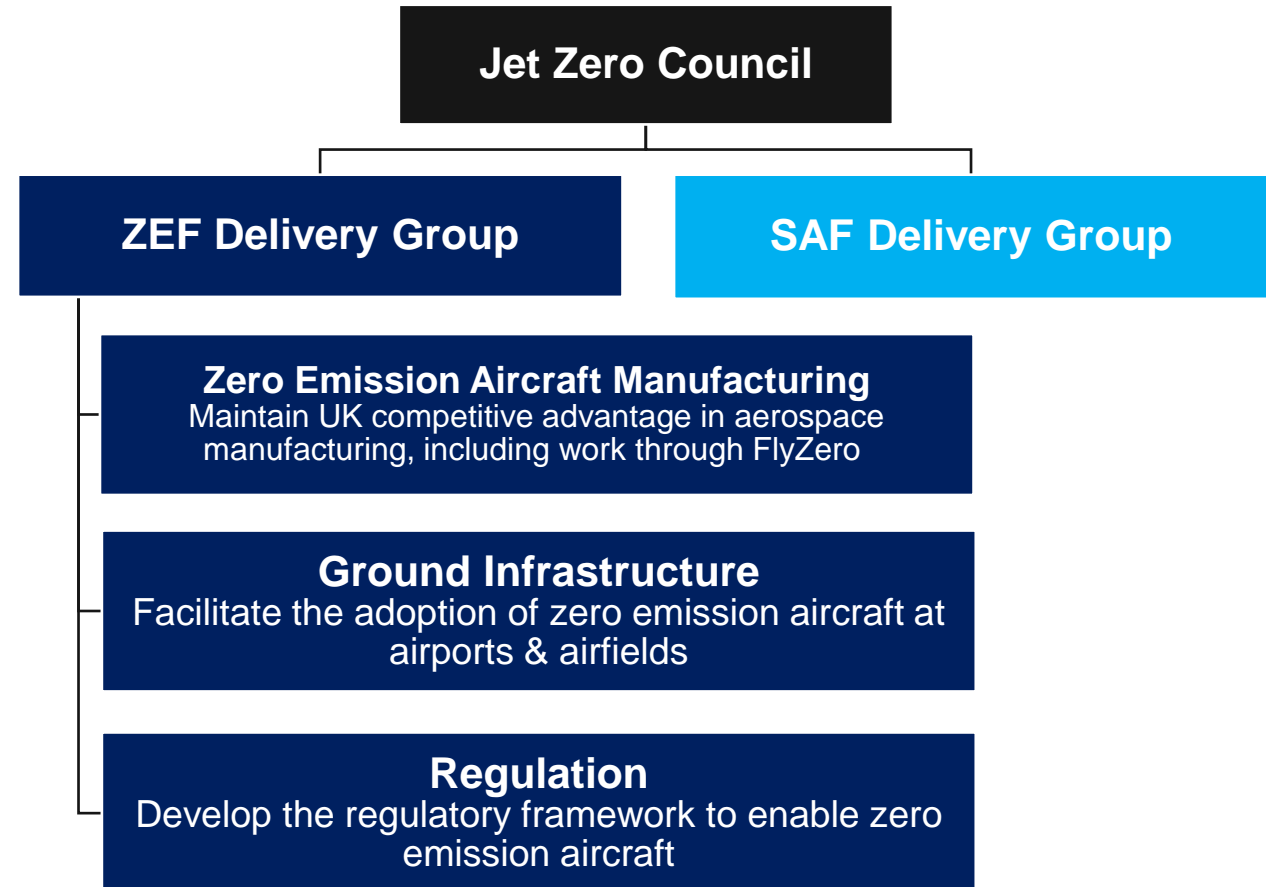
Sustainable Aviation Fuels Delivery Group

- The Sustainable Aviation Fuels (SAF) Delivery Group was established in November 2020.
- The group aims to support the Government establish UK SAF production facilities and accelerate the delivery of SAF to market.
- The delivery group is chaired by Jonathon Counsell, Group Head of Sustainability, International Airlines Group.
- There are three subgroups with over 100 members from SAF producers, fuel suppliers, airports, airlines, academics and investors.
- Members have met over 30 times since the delivery group and its subgroups were launched, making significant progress on the SAF mandate consultation, and delivering SAF for COP26



Zero Emission Flight Delivery Group

- The Zero Emission Flight (ZEF) workstream of the JZC has primarily been focused on zero emission aircraft technology through BEIS, the Aerospace Technology Institute (ATI) and the FlyZero project.
- Given the completion of FlyZero and the Zero Emission Flight Infrastructure project (ZEFI), we are seeking to expand the work on ZEF into a formal Delivery Group to ensure continuity and include wider enabling measures to support the arrival of ZEF.
- Three subgroups are under development, which will have broad industry membership.
- We are also planning to establish an additional Trade and Investment subgroup in the longer term, which will span the ZEF and SAF Delivery Groups.



Key Jet Zero milestones and achievements

Sustainable Aviation Fuels (SAF)

- Publication of SAF mandate consultation in July 2021 and publication of the summary of responses in March 2022.
- Supply of SAF during COP26.
- Secured £180 million of funding for the development of SAF plants in the UK, building on the progress made through previous competitions.
- Government partnered with Breakthrough Energy to provide £400m funding through which SAF projects can bid for additional capital.
- Announced winners of the Green Fuel, Green Skies competition, to support the development of UK SAF production.

Policy & Regulatory Framework

- Published the Jet Zero consultation and the Further Technical consultation.
- Published the Net Zero Strategy.
- Published the Transport Decarbonisation Plan
- Published the Developing the UK ETS consultation.

JZC Governance

- The JZC CEO worked with industry to develop two-year plans to support delivery of net zero aviation in the UK by 2050.
- Between its establishment in July 2020 and March 2021, the Jet Zero Council and its subsidiary groups have met 40 times.

Zero Emission Flight (ZEF)

- £15m FlyZero project concluded its research, showing how the UK might achieve zero-emission aircraft by 2030.
- Government and industry match funded £3.9 billion towards aerospace R&D through the ATI and the ATI programme was extended to 2031.
- Conclusion of the Zero Emission Flight Infrastructure Competition and published findings, including a Blueprint Report and Roadmap to Zero Emission Flight Infrastructure.
- The Government provided £3m in 2021/22 for research into preparing airports for the advent of electric flight.



International Leadership

The international nature of aviation emissions means it is essential to cooperate internationally. A key priority for the UK this year is the 41st ICAO Assembly.

Key objectives:

An ambitious long-term goal for international aviation that is consistent with the Paris Agreement

Ensuring that CORSIA is not weakened through its first periodic review.

Working bilaterally and multilaterally including through fora such as the International Aviation Climate Ambition Coalition.



What's next?

Jet Zero Strategy

On 21 March, we published a further technical consultation for the Jet Zero Strategy, based on updated modelling and scenarios. This will help inform the final policies for the Jet Zero Strategy, due to be published later this year.

The road to ICAO

We will leverage JZC members to build momentum towards the ICAO's 41st Assembly in the Autumn, supporting the UK's objective to negotiate the adoption of an ambitious Long Term Aspirational Goal (LTAG).

Sustainable Aviation Fuels

Work continues to deliver a SAF mandate and we will be launching a second consultation this year. We are also progressing measures needed to commercialise UK SAF production.

Zero Emission Flight

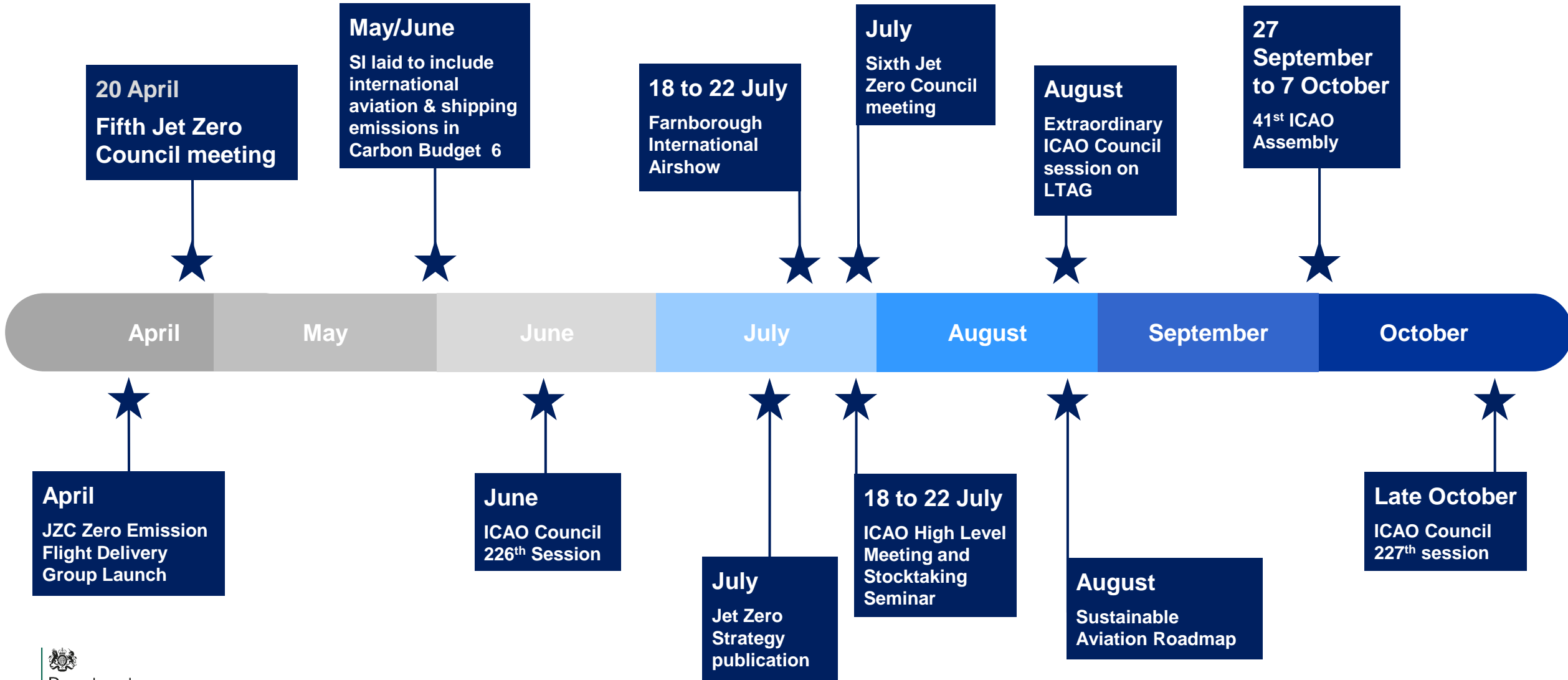
We are working to establish the Zero Emission Flight Delivery Group to continue to drive work forward following the completion of the FlyZero and ZEFI projects and prepare for the arrival of ZEF.

ATI Programme

The Aerospace Technology Institute (ATI) Programme will receive record government funding that will enable research and development of zero-carbon and ultra-low-emission aircraft technology - key to the Green Industrial Revolution.



Jet Zero Forward Look 2022





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Thank you for listening