UK Civil Aviation Authority

National Air Traffic Management Advisory Committee (NATMAC) Meeting

NATMAC 95 Thursday 11th April 2024

NATMAC 95 Agenda

- **11:00 - Meeting Start / Introduction**
- 11:05 – Minutes of NATMAC 94
- 11:10 – Action List / Progress Report
- 11:15 – Chair's Report
- 11:30 – Airspace Modernisation Delivery Team Update
- 12:15 – Introduction to the Integration Sandbox
- 12:35 - Airspace Change Proposal Update
- ***12:55 to 13:25 – Lunch***
- 13:25 – Airspace Change Organising Group Briefing
- 13:45 – ICAO FIS alignment implementation
- 13:50 – 2023 AMS Annual Progress Report
- 14:00 – Any Other Business
- **14:05 – Wrap Up**

UK
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Authority

Airspace Modernisation Delivery Team Update

Colin Chesterton

Electronic Conspicuity
Where are we now?

UK
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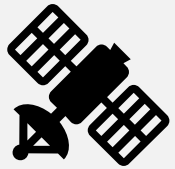
Authority

Deliverables from Con Ops Supplier

The CAA was tasked by DfT to “develop Surveillance specifications that take into account future requirements for all aviation including drones and not be an unintended barrier to innovation in future electronic conspicuity functionality”





Workstream 1: Capacity modelling for 1090MHz and 978MHz

Workstream 2: Probability of detection for 978MHz and 1090 MHz

Workstream 3: Airspace risk

Workstream 4: Airspace Architecture

Workstream 5: Human Factors

Workstream 6: Report
Scope: Will bring together all the above studies into a concise report

Workstream 1: Capacity modelling for 1090MHz and 978MHz

Assessing the capacity limits for ADS-B

This workstream will allow all stakeholders to have confidence that the planned use of ADS-B will have the capacity to cope with the numbers of airframes in the worst-case scenario.

Workstream 2: Probability of detection for 978MHz and 1090 MHz

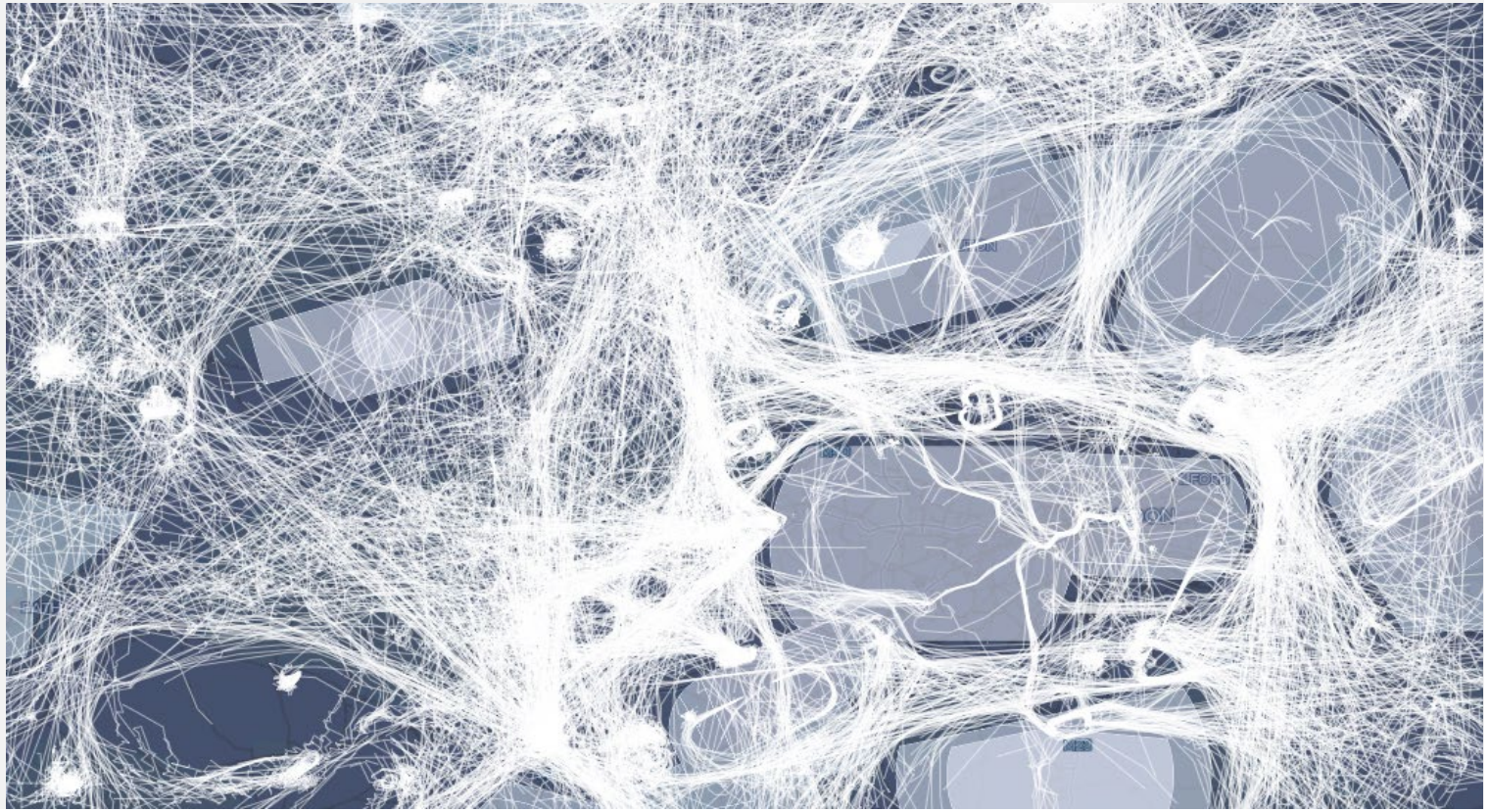
Will internal antennas be reliable enough / what are the considerations for best installation?

This workstream aims to model the radiation patterns in a range of airframe scenarios. The aim is to assess the best compromise between installation cost and adequate reliability.

Workstream 3: Airspace risk

What is the risk in the airspace now / What will be the risk in the future?

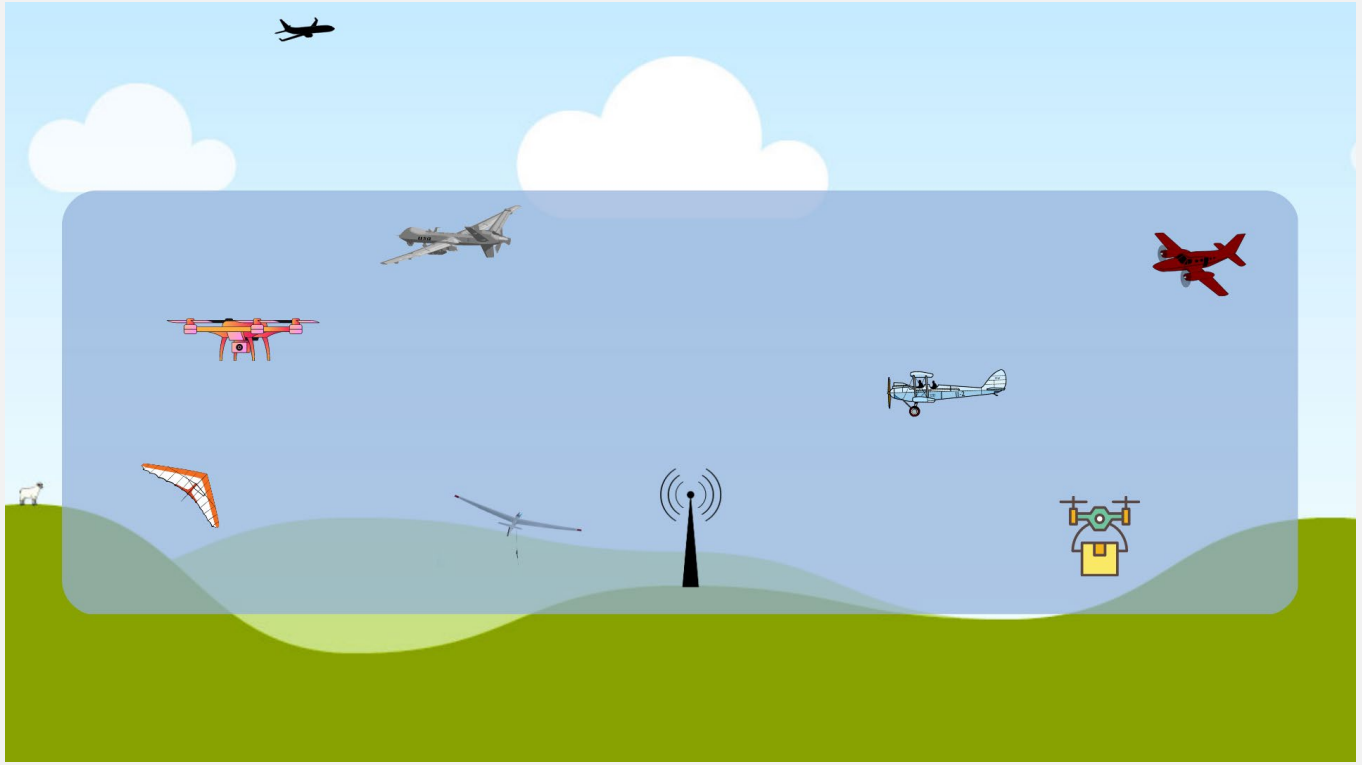
This workstream aims to characterise the UK airspace risk today. We can then model the risk for future operations and use that risk to build a safety case. This will allow a decision to be made on the Detect and Avoid / EC solution we need in each case.



Workstream 4: Airspace architecture

What is the infrastructure / whole system concept needed to support EC deployment?

This workstream aims to give options for several different scenarios and what will be required in each case.



Workstream 5: Human Factors

What effects do Human Factors have on the whole EC system?

We have already conducted a brief HF study. This study will cover a more in-depth look at the Human Machine interface as well as dealing with RPAS HF.

Future of Flight

April 2024

UK Civil Aviation Authority

Together we will

Do the right thing

Never stop learning

Build collaborative relationships

Respect everyone

The FFIG and the Future of Flight Plan

The DFT set-up the Future of Flight Industry Group (the FFIG) in early 2023, to bring together government, industry and other key stakeholders to collaborate on the development and delivery of a Future of Flight Plan that will accelerate the growth of Future of Flight safely and securely in the UK

UK Future of Flight Action Plan

By 2030, the UK will be a leader in emerging aviation technologies, with a sustainable industry and thriving ecosystem at home and UK companies providing a range of services around the world. UK industries and the public will enjoy economic, social and environmental benefits thanks to the widespread availability of these technologies within our economy, communities and transport networks.

NATS
Bristow
Skyports INFRASTRUCTURE
aerospace defence security space ADS
Joby AVIATION
LOGISTICS UK
VERTICAL
UKRI UK Research and Innovation
ALTITUDE ANGEL
DRONE INDUSTRY ACTION GROUP
CATAPULT Connected Places
AEROSPACE TECHNOLOGY INSTITUTE
Local Government Association
Regional & Business Airports Group
BBGA BRITISH BUSINESS & GENERAL AVIATION ASSOCIATION
UK Civil Aviation Authority
ARPAS-UK Association of Remotely Piloted Aircraft Systems
Department for Transport

*The Action Plan is sponsored by the **Future of Flight Industry Group**. Chaired by the **Aviation Minister** and **Senior Industry Representative** – it has the above **membership**.*

Future of Flight Action Plan

UK FUTURE OF FLIGHT

Airspace

At the core of the Airspace Modernisation Strategy (AMS) is the safe integration of all future airspace users alongside existing users. We will continue to work closely with the delivery of the AMS to ensure the requirements of new owners and operators are fairly considered and supported to meet the timescales sought by industry

UAS

For UAS, our SOs relate to achieving routine operations beyond the pilot's visual line of sight (BVLOS). These operations are currently only carried out in segregated airspace, due to unmitigated risk of mid-air collision resulting from the lack of approved solutions for UAS to see, be seen by and avoid other aircraft in the absence of an onboard pilot. Enabling BVLOS operations at scale by mitigating this risk will broaden the range of potential uses and deliver the significant benefits of UAS.

SO 1 Demonstration

BVLOS UAS operations in non-segregated airspace

UAS operating BVLOS will move away from segregation from other airspace users to accommodation alongside them in new airspace structure and existing ones supported by new services, expanding UAS potential applications and uses.

SO 3 Routine

BVLOS UAS operations in integrated airspace at scale

BVLOS operations will be routine across the country, using significant blocks of controlled, uncontrolled and service supported airspace, providing UAS' full potential range of applications including inspections, surveillance, critical health care and emergency response.

2024 2025 2026 2027 2028 2030

eVTOL

For eVTOL, our SOs are focused on delivering initial, and then routine operations carrying passengers or cargo and achieving demonstrations of autonomous operations – during which the aircraft is operating without pilot intervention in the management of the flight. These SOs set out a clear pathway from the current innovation phase to an industry delivering services at scale.

SO 2 In Operation

Piloted eVTOL flight

The UK will see cargo and passenger operations by eVTOL aircraft for the first time, capitalising on new infrastructure, regulation and technology supported by existing airspace operating and aerodrome rules.

SO 4 Routine

Piloted eVTOL flight operations

Commercial cargo and passenger operations by eVTOL aircraft will occur at scale from nationwide networks comprising adapted existing aerodromes and new vertiports.

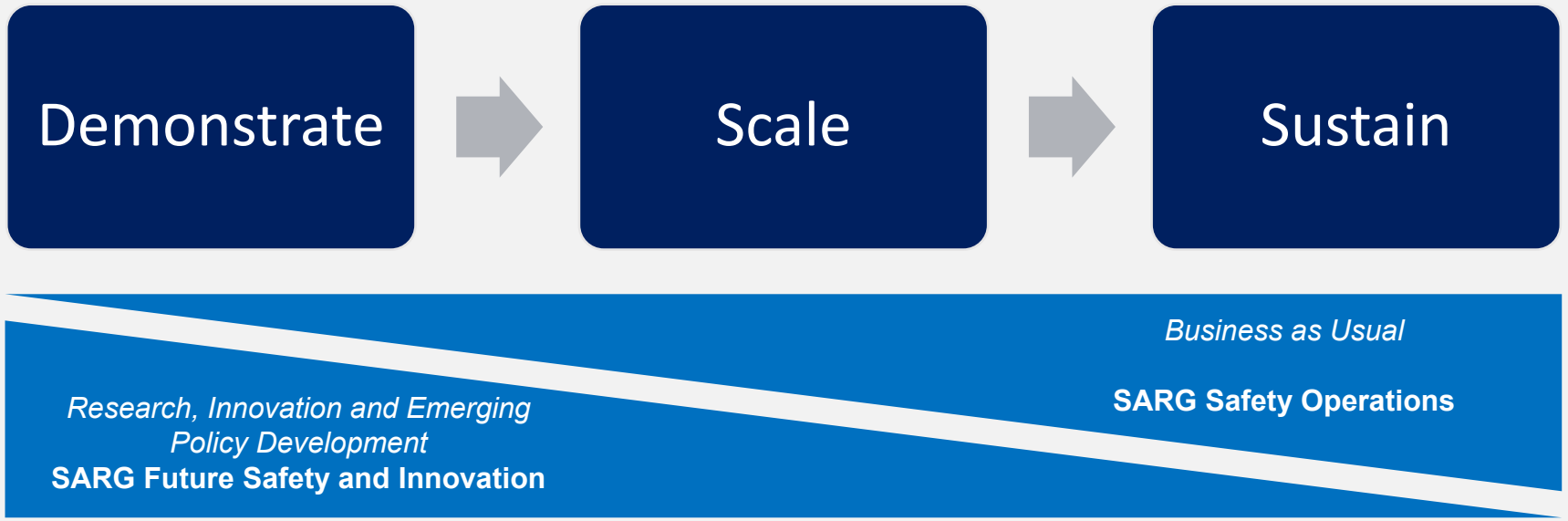
SO 5 Demonstration

Autonomous eVTOL flight

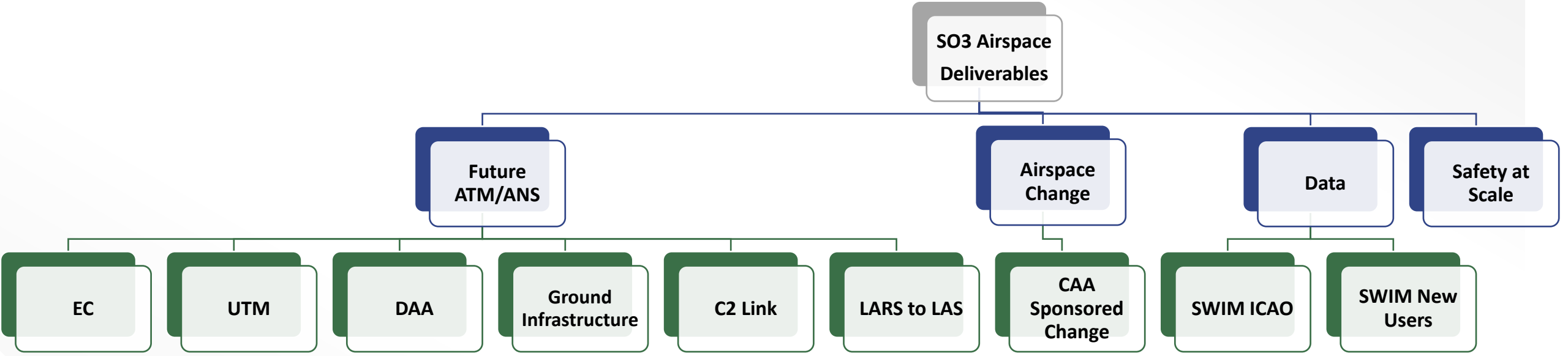
These operations will offer a path to scaled commercial activity and longer-term sustainable operations.

High Level Strategy

Delivery horizons provide clarity on accountability during the ‘Future to BAU transition’



Airspace Deliverables for SO3



UK Civil Aviation Authority

Airspace Classification Review

UPDATE

THE MANCHESTER LOW LEVEL ROUTE

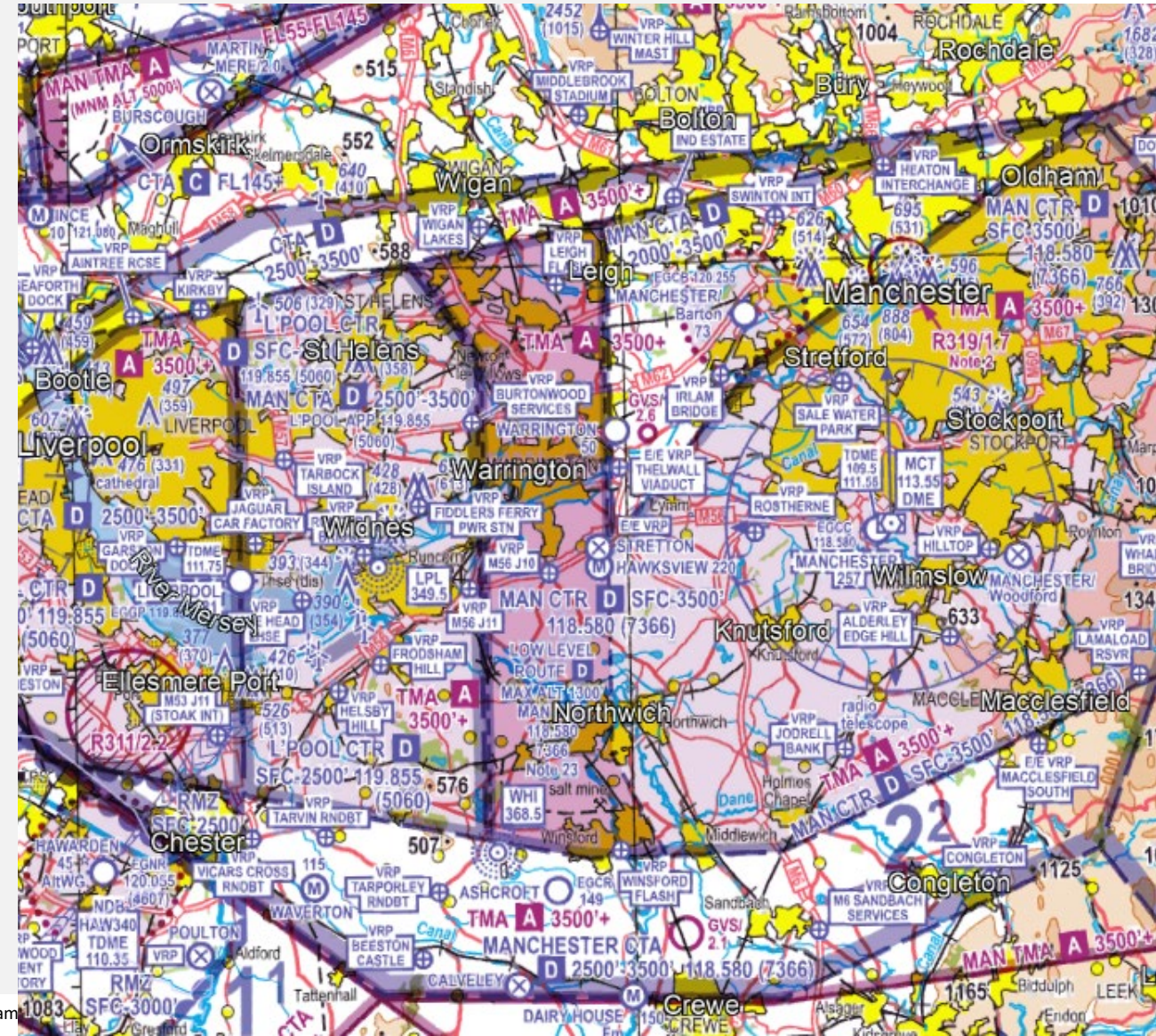
Why the MLLR must change

Class D Exemption Expiry

MAC Risk

Airspace Infringements

Ability to land safely



Proposed Solution Elements

UK Civil Aviation Authority

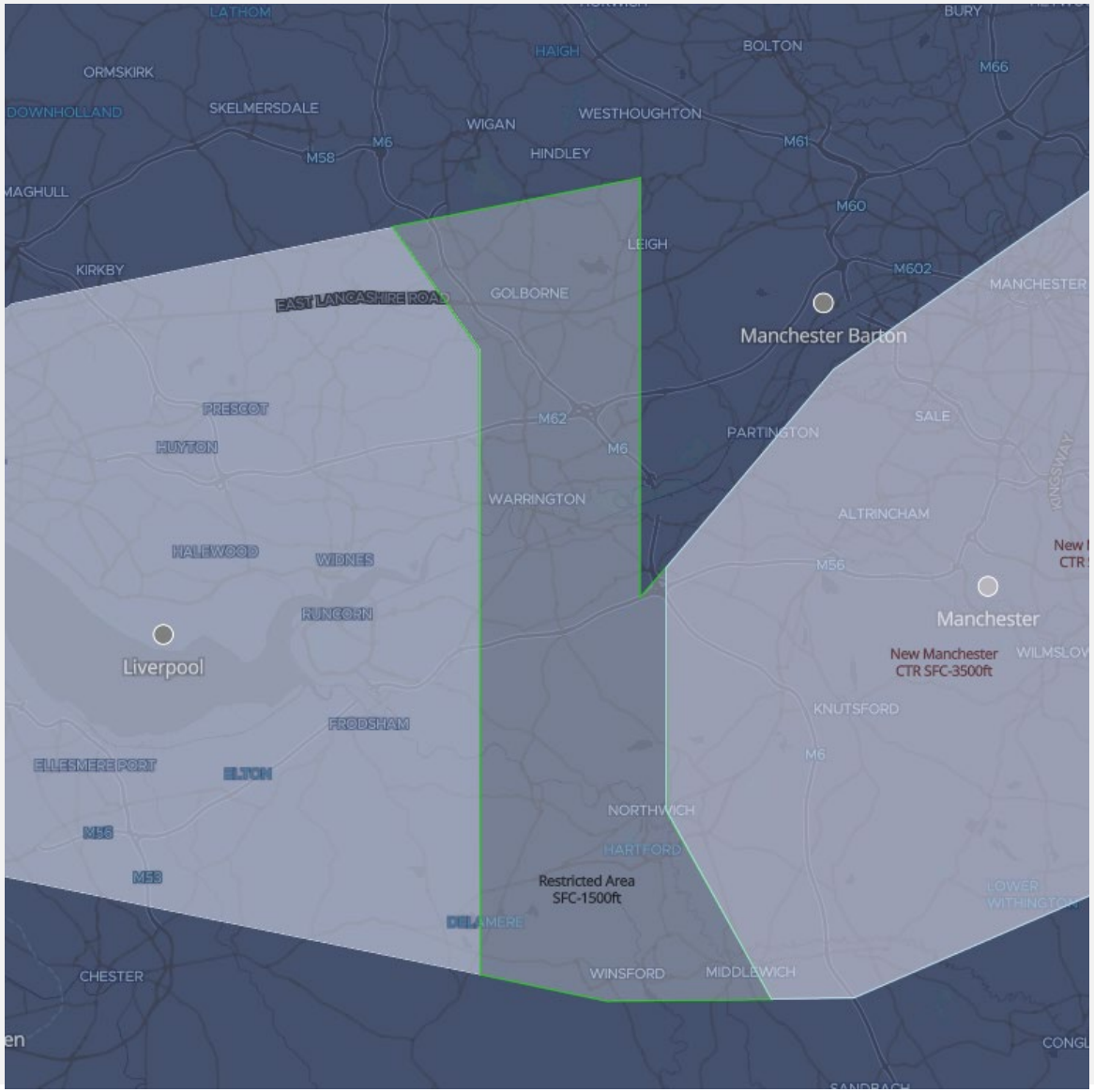
Reclassification to Class G

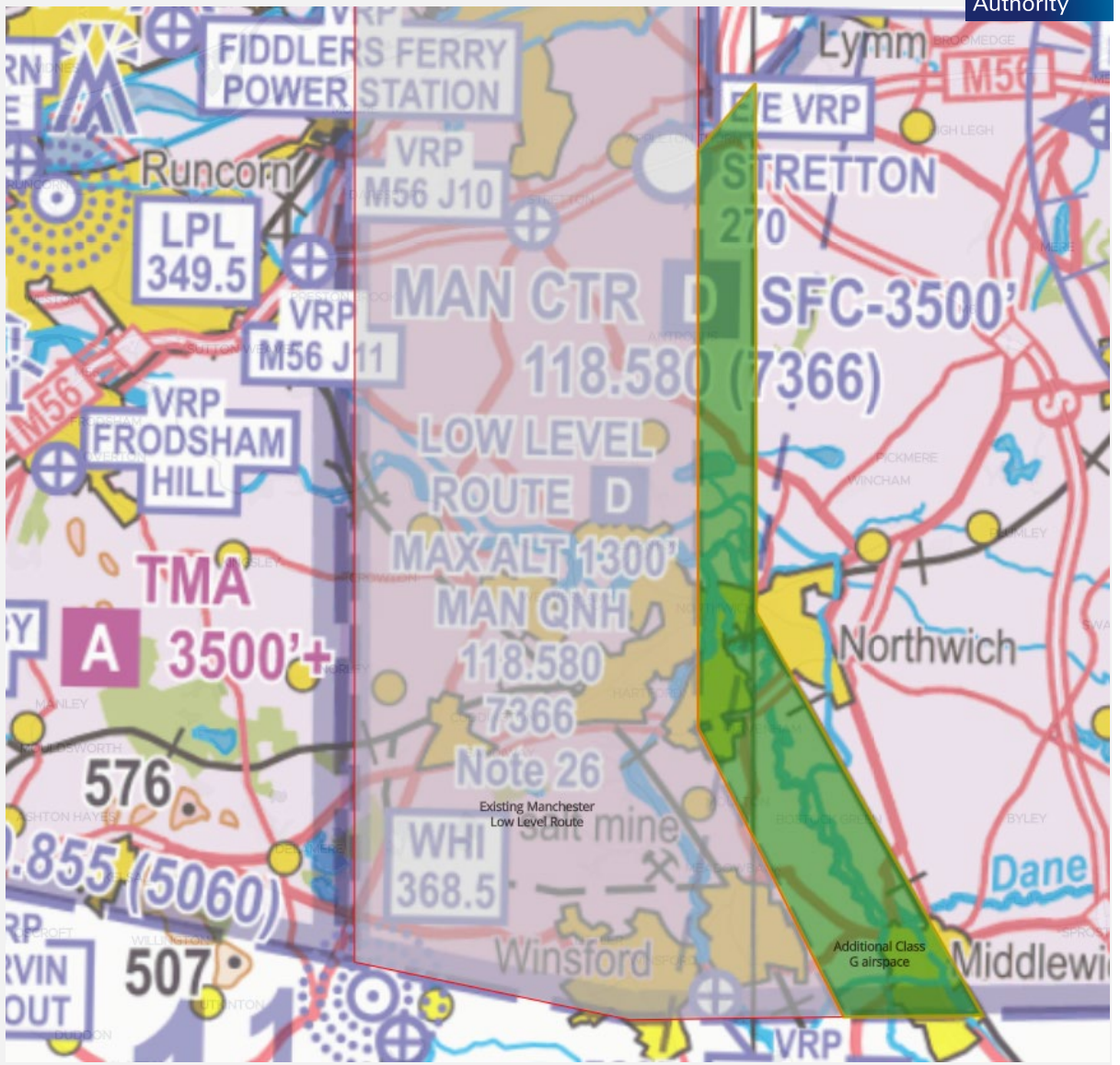
Raising the altitude available to 1500ft

Implementation of a Restricted Area

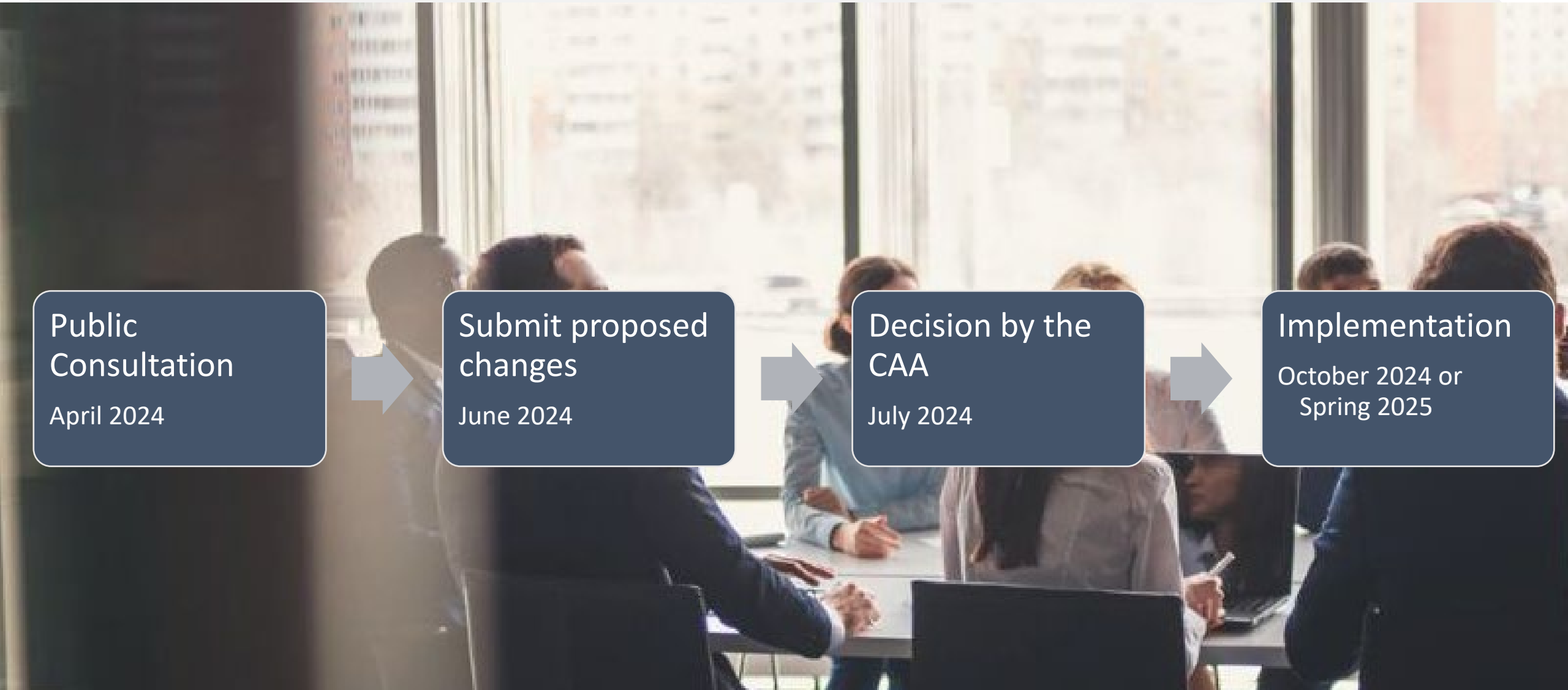
Increasing the width of the MLLR

Increasing the width of the MLLR





Next steps



Public Consultation

April 2024

Submit proposed changes

June 2024

Decision by the CAA

July 2024

Implementation

October 2024 or Spring 2025

Atypical Air Environment

April 2024

Together we will

Atypical Air Environment

- The challenge of scaled, sustainable BVLOS.
- The ‘Atypical Air Environment’ concept. What it is and is not.
- 18-month programme of detailed, SME led hazard analysis and policy development.
- Six-week public consultation on policy proposal, closed 2nd April. 242 respondents.
- Next steps.

UK Civil Aviation Authority

Questions?

UK Civil Aviation Authority

Introduction to the Integration Sandbox

Briefing Session

10th April 2024

Delivering the Vision

UK Future of Flight Action Plan

5 Delivering the Vision

Strategic Outcomes

Achieving our vision of unlocking the full range of services and benefits offered by Future of Flight Technologies entails collaborating to deliver key Strategic Outcomes (SO).

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CAP 2616

- Full detail of the Sandbox Application Call and the application process can be found in CAP 2616: Regulatory Sandbox for the development of capabilities to integrate Uncrewed Aerial Systems (UAS) in unsegregated airspace.

Objectives of the Integration Sandbox

- Demonstrate and validate any specific technologies, airspace management procedures and Air Traffic Services (ATS) provisions, and flight operation procedures that may enable the safe and managed integration of BVLOS UAS and crewed aircraft.
- Enable participants to progress beyond segregation towards integration of BVLOS UAS flights with crewed aircraft and deliver integrated use of airspace.
- Enable the CAA to validate the use of the airspace policy concept with real world use cases to evidence how it supports and enables the accommodation phase.

How the sandbox works

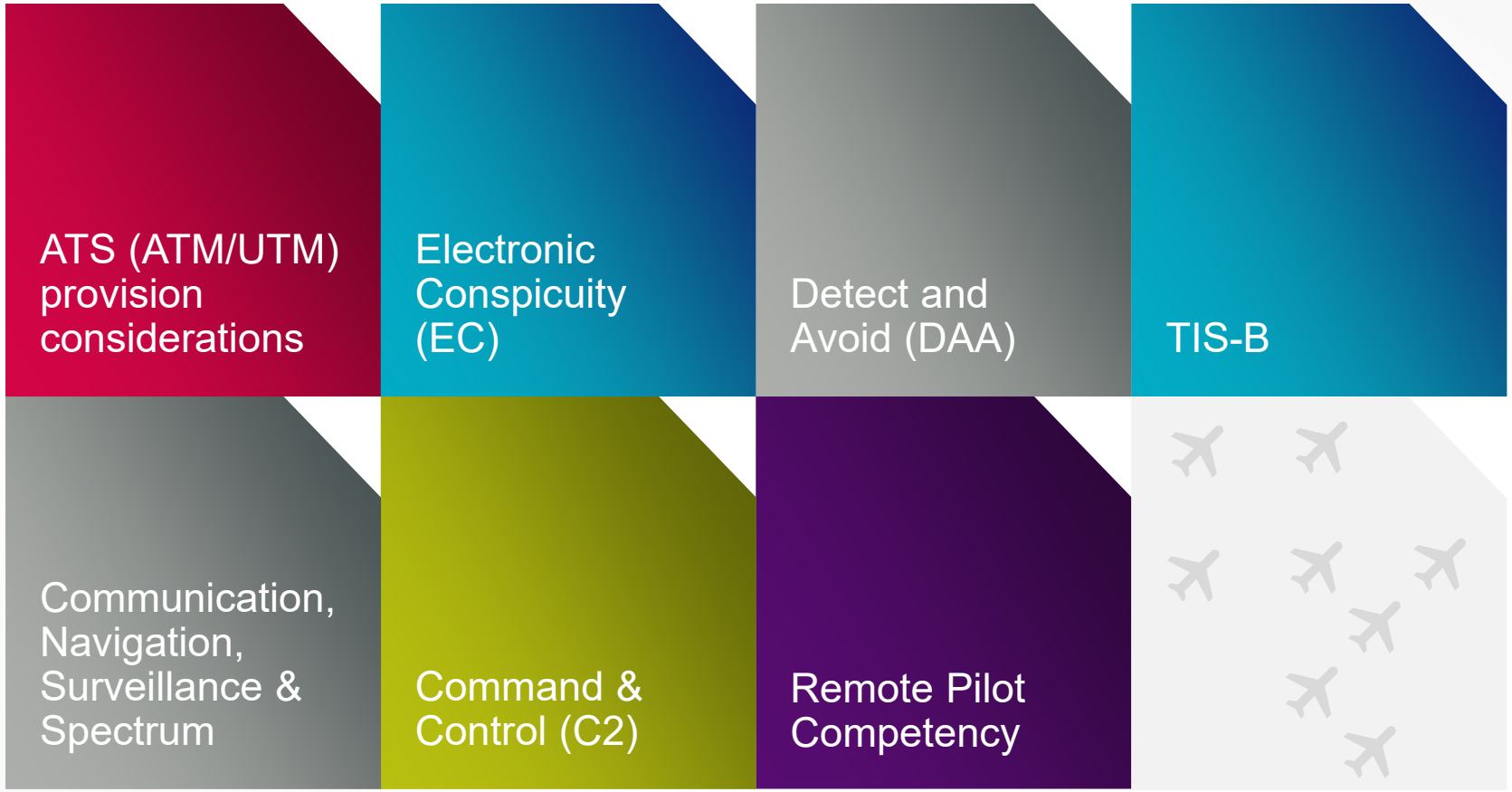
Organisations apply to be part of the sandbox.

Organisations are then selected based upon criteria and best fit.

IAS and SMEs work closely with the selected organisations to progress them towards the desired outcomes.

We are expecting to onboard six organisations, across three tranches.

CAA key learnings to achieve



Outcomes for organisations

- Receive support in progressing towards integrated BVLOS operations in unsegregated airspace
- Test and develop technical and operational solutions to integration
- Collect data and evidence to support the construction of a safety argument
- Work collaboratively alongside the CAA to support the development of CAA policy for Integration of BVLOS activities
- Organisations will benefit from the learnings the CAA has gathered the previous sandbox activities

New trials move the UK closer to allowing everyday drone deliveries and flying beyond visual line of sight | Civil Aviation Authority (caa.co.uk)

Airspace Policy Concept: Airspace Requirements for the Integration of Beyond Visual Line of Sight (BVLOS) Unmanned Aircraft

CAP 2533 - Airspace Policy Concept

Segregation, Accommodation, and Integration

Segregation – Required for operations where the UAS cannot take action to avert a collision with another aircraft, and/or there is no assurance that it will not be operated in such proximity to other aircraft as to create a collision hazard

Accommodation – An option when the BVLOS UAS can demonstrate a capability to be aware of the position of other aircraft and have a capability to take appropriate action to avoid the risk of collision with those aircraft. However, the UAS may not necessarily operate within the accepted ‘ruleset’. The BVLOS UAS may be integrated with other permitted airspace users within the TRA managed by the ANSP and supported by specific airspace management arrangements and procedures.

Integration - The BVLOS UAS is capable of operating in the same environment as other airspace users, without the need for additional requirements to be placed upon them to address their specific operating characteristics. Essentially, the BVLOS UAS must be able to comply with, or demonstrate equivalence with all the applicable requirements.

CAP 2533 - Airspace Policy Concept

- CAP 2533 was developed because it was recognised that segregated operations in Danger Areas would not further the development of safe integration solutions for unmanned aircraft.
- An airspace environment was required that could enable the transition out of segregation to start to develop the Accommodation Phase.
- It was determined that Temporary Reserved Areas (TRA) could be used for that purpose:

  'Temporary Reserved Area (TRA)' - an airspace that is temporarily reserved and allocated for the specific use of a particular user during a determined period of time, and through which other traffic may or may not be allowed to transit in accordance with the air traffic management arrangements notified for that volume of airspace

- The TRA is effectively an airspace 'wrapper' that enables an operational solution to be designed that effects safe managed integration of manned and unmanned aircraft within it.
- Most importantly, it must be recognised that it is not the airspace in and of itself that makes the operation safe. It is the equipment, technology and associated operational procedures within that airspace that will provide a safe operation.

CAP 2533 - Airspace Policy Concept

- Standard ICAO classes of airspace are governed by a comprehensive set of rules specific to the particular class of airspace concerned. Those rules place requirements and obligations on all parties that operate within it, and the agencies such as ANSPs that manage it.These rulesets are a major element of the safe operation of that airspace.
- It is recognised that in most cases, UAS cannot comply with all the requirements of those rulesets in standard classes of airspace.
- The establishment of the TRA enables air traffic management arrangements and operational procedures to be put in place which may be different to the standard ruleset of the airspace, but which facilitates the safe operation of the TRA.
- Nevertheless, it is considered that there are some minimum Rules of the Air requirements that UAS operators must be able to satisfy to operate outside segregated airspace in a TRA. These are:

  (a) SERA.3201 – requires the pilot-in-command to take such action, including collision avoidance manoeuvres based on resolution advisories provided by airborne collision avoidance system (ACAS) equipment, as will best avert a collision.

  (b) SERA.3205 - requires that an aircraft shall not be operated in such proximity to other aircraft as to create a collision hazard

CAP 2533 - Airspace Policy Concept

Applying CAP2533 in the Sandbox

- Each TRA will be a trial operation and will require an operational proposal that considers all the aircraft that will be flying in it and will detail how those operations will be safely accommodated.
- This will require the BVLOS operator and the associated ANSP to look at the demands of the various operations and determine how they will all be able to safely co-exist in the TRA, both under normal conditions and if unexpected situations or emergencies arise.
- How that will be achieved will depend on multiple factors including (but not limited to)

ATC service

Air Traffic Management arrangements

Surveillance capability

Conspicuity performance of all aircraft operating in the TRA

Traffic mix

UAS/remote pilot station technical capability

Operational procedures of all parties

UK Civil Aviation Authority

Thank you

Any questions, please email:
innovation@caa.co.uk

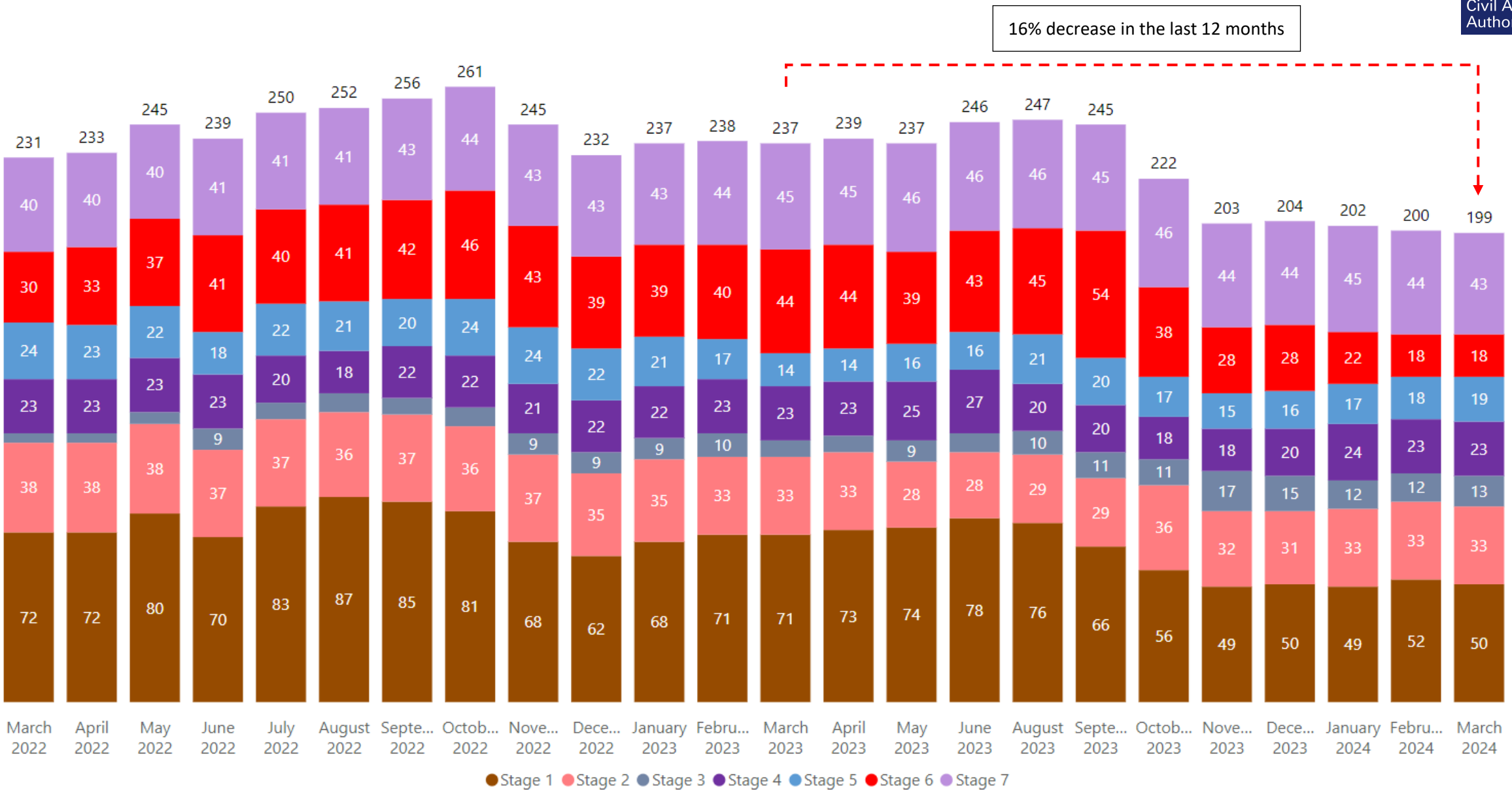
NATMAC 95 – Thursday 11th April 2024

Airspace Change Proposal Update

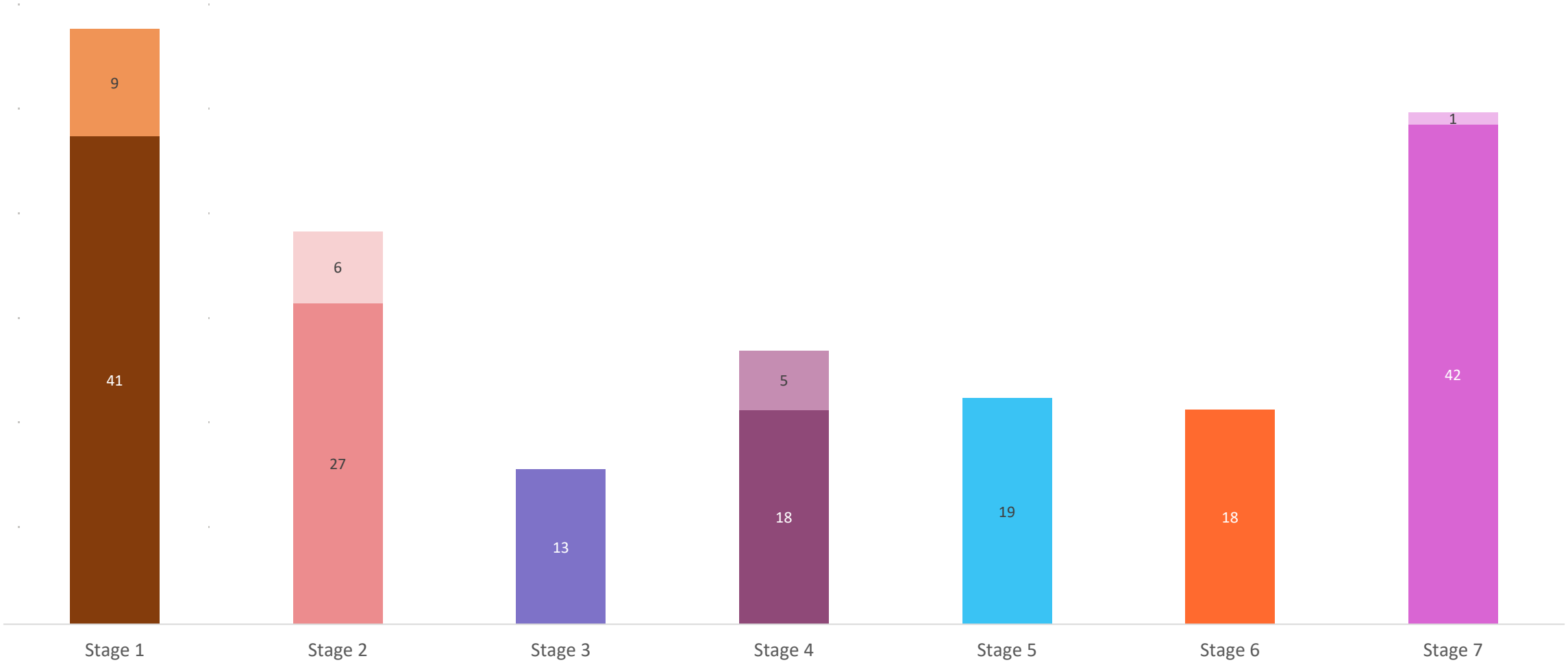
Manager Airspace Regulation – Ben Lippitt

Dataset: 21st March 2024

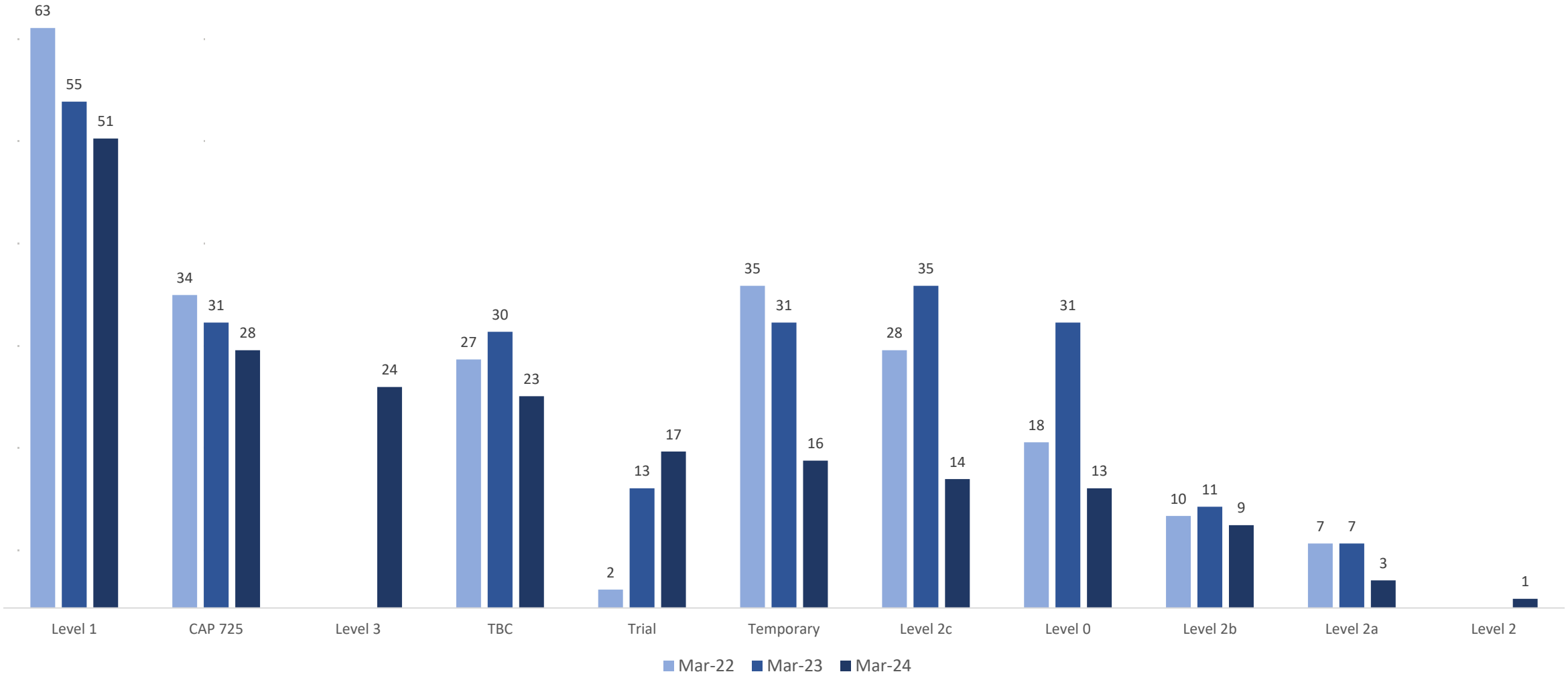
Trend Analysis (2 Years) – Live Airspace Change Proposals



Current Stage of Airspace Change Proposals ('In Progress' and 'Paused')



ACP Types year on year comparison



CAP 725 Airspace Change Proposals

CAP 725 total is 28 (26 ongoing & 2 paused)

- Pre-decision (with Sponsor): 1 (Stapleford)
- Decision Stage (with CAA): 6
- Implementation (post decision): 1
- Post Implementation Review: 18

Post Implementation Review

- ACP-2013-07 Farnborough: PIR completion due Q3 2024

Airspace Change Programmes
Future Airspace Strategy Implementation (FASI)

- **'LTMA' Cluster**
  - **15** ACPs currently within this Cluster
    - **15** 'In Progress',
    - **4** in Develop & Assess (Stage 2)
    - **10** in Consult (Stage 3).

- Heathrow R2 (Gateway June 2024)
- Bournemouth (Gateway TBC)
- Farnborough (Gateway Oct 2024)
- Southend (Gateway TBC)

- Southampton (Gateway TBC)
- Gatwick (Gateway Jan 2025)
- LAMP2 D2 (Gateway Jan 2025)
- LAMP2 D3 (Gateway TBC)
- LAMP2 D4 (Gateway TBC)
- Manston (Gateway TBC)
- Northolt (Gateway TBC)
- Biggin Hill (Gateway TBC)
- Stansted (Gateway TBC)
- Luton (Gateway TBC)
- London City (Gateway TBC)

- **'WTA' Cluster**
  - **5** ACPs currently within this Cluster
    - **5** 'In Progress', **0** 'Paused'
    - **1** in Develop & Assess (Stage 2)
    - **3** in Consult (Stage 3)
    - **1** in Stage 6 (Implement).

- Exeter (Gateway TBC)
- Bristol (Gateway TBC)
- Cardiff (Gateway TBC)
- LAMP2 D1.2 (Gateway TBC)
- LAMP2 D1.1 (PIR TBC)

Airspace Change Programmes
Future Airspace Strategy Implementation (FASI)

- **'ScTMA' Cluster**
  - **4** ACPs currently within this Cluster
    - **4** '**In Progress**', **0** '**Paused**'
    - **4** in **Consult (Stage 3).**

- ~~Aberdeen*~~
- **Edinburgh (Gateway Sept 2024)**
- **Glasgow (Gateway Sept 2024)**
- **NERL ScTMA (Gateway Sept 2024)**

- **'MTMA' Cluster**
  - **5** ACPs currently within this Cluster
    - **5** '**In Progress**', **0** '**Paused**'
    - **1** in **Develop & Assess (Stage 2)**
    - **4** in **Consult (Stage 3).**

- **Leeds Bradford (Gateway May 2024)**
- **Liverpool (Gateway June 2025)**
- **East Midlands (Gateway June 2025)**
- **NERL MTMA (Gateway June 2025)**
- **Manchester (Gateway June 2025)**

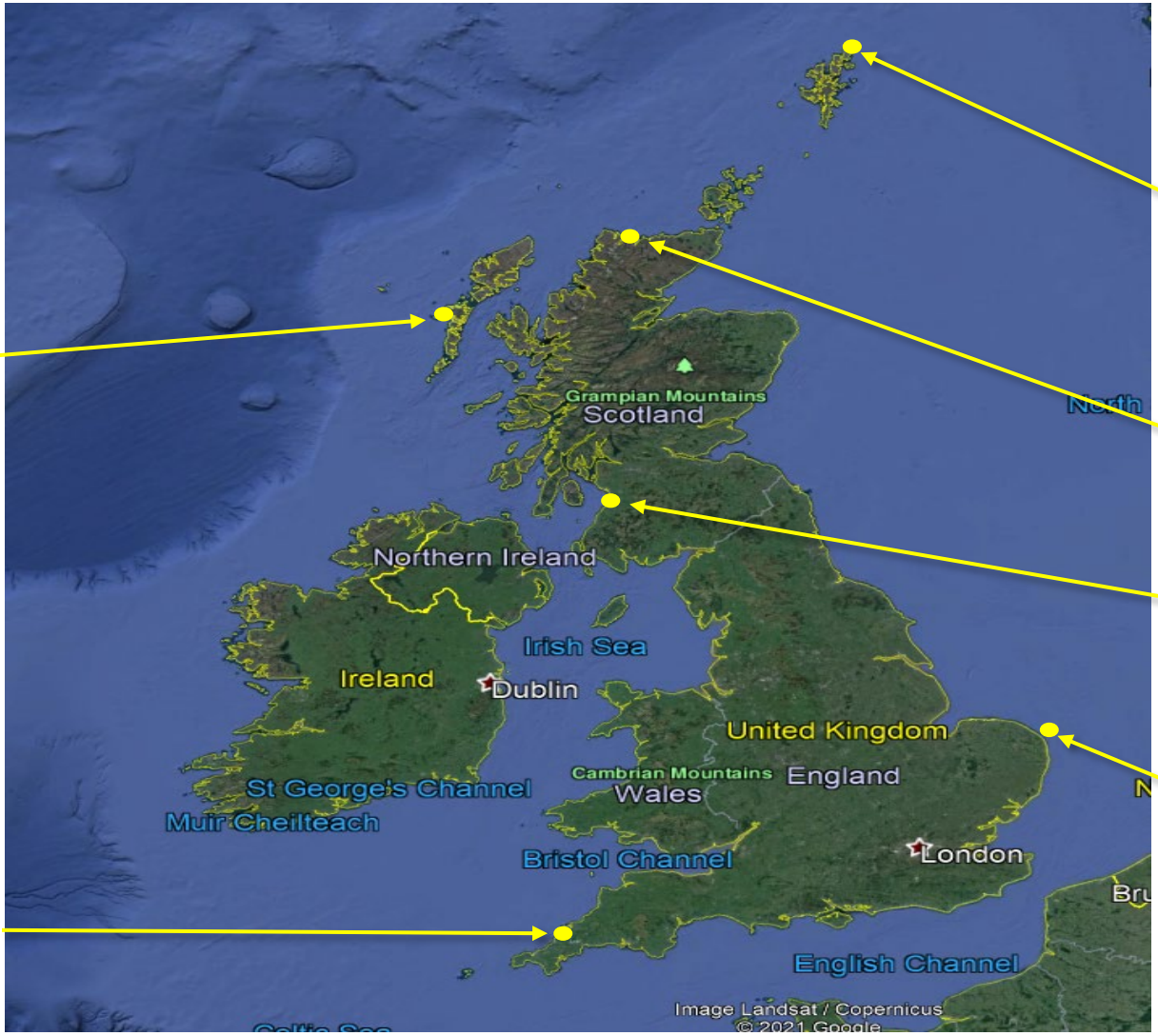
*Aberdeen – removed from airspace change Masterplan coordinated process in Sept 2023

Space Launch Sites
ACPs Ongoing

UK Civil Aviation Authority

Spaceport-1
Launch Operator tbc

Spaceport Cornwall
Launch Operator tbc



SaxaVord Spaceport
ABL
HyImpulse
B2Space
Skyrora

Space Hub Sutherland
Orbex

Prestwick Spaceport
Astraius

Raptor Aerospace
Raptor (Paused)

Airspace Change Proposals
Space Launches

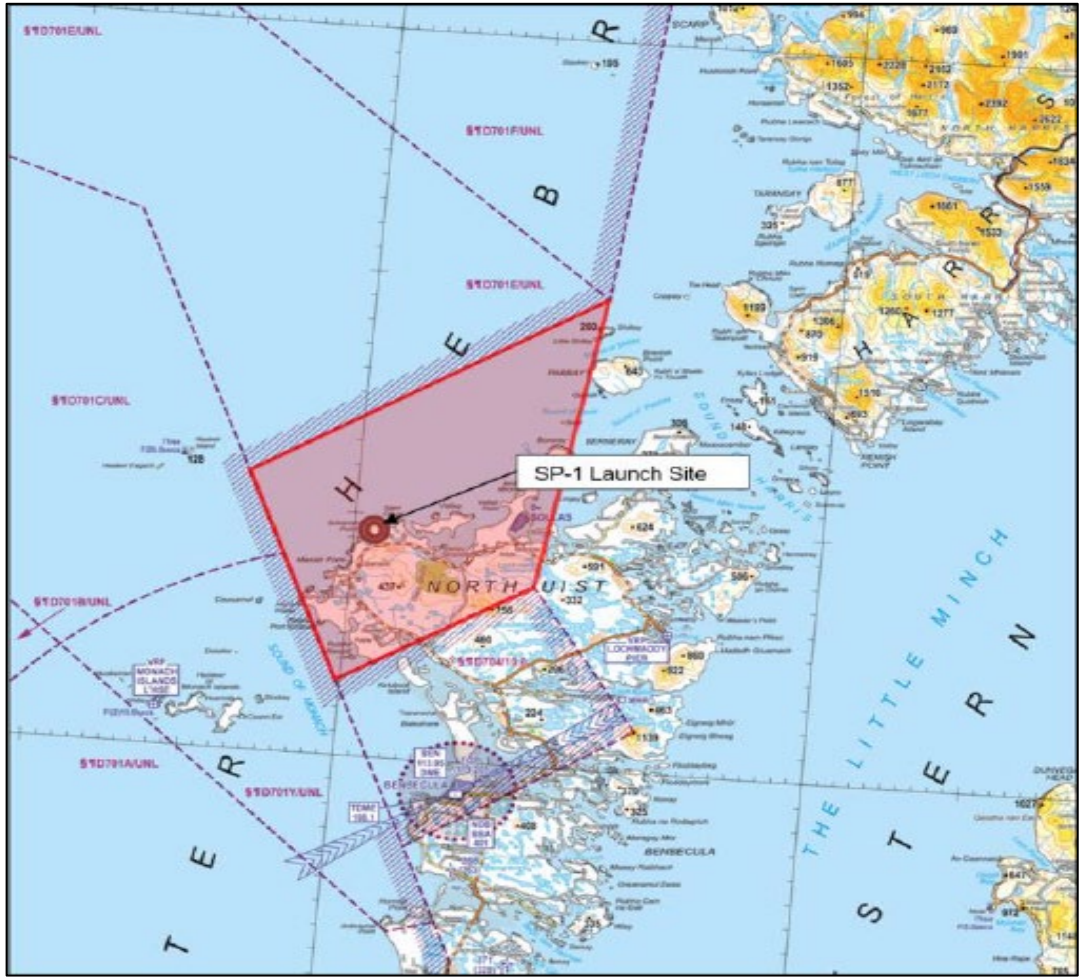
UK Civil Aviation Authority

Spaceport-1 (North Uist – Outer Hebrides)

- Permanent (ACP-2021-012):
- Currently in Stage 3 (Consultation launched on 20 March 2024)
    - CAA Decision expected December 2024
    - Target AIRAC 04/2025

- Temporary (ACP-2021-037):
    - Paused by Change Sponsor in August 2023 due to the delay in gaining final planning consent (achieved in late July 23) and uncertainty regarding rocket providers obtaining the necessary permissions/approvals to launch.

ACP-2021-037 Spaceport-1 TDA



Airspace Change Proposals
Space Launches

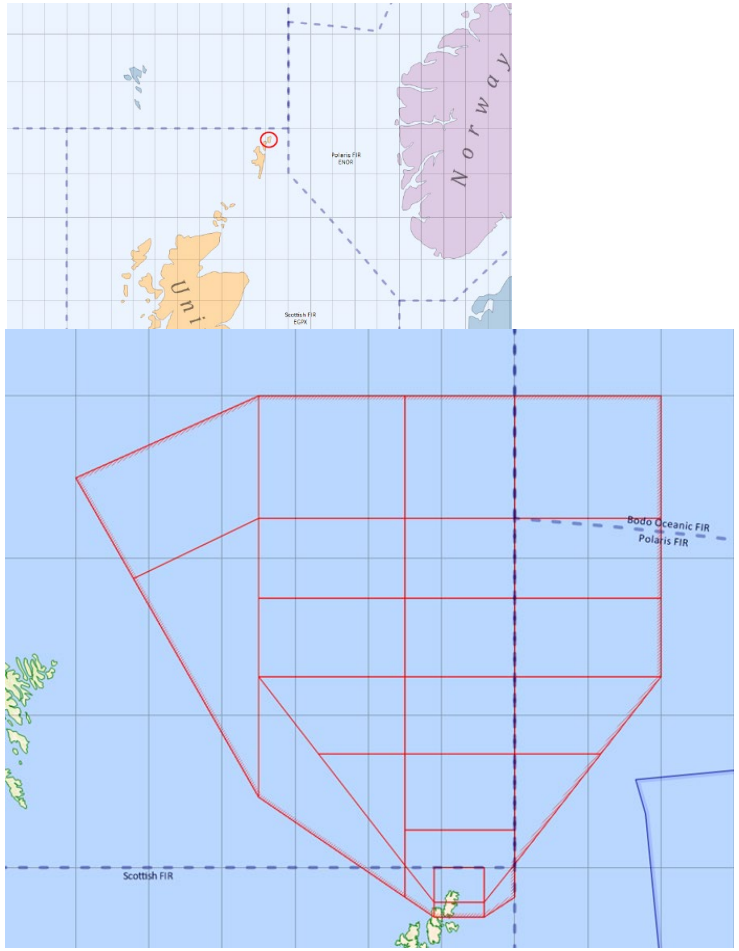
UK Civil Aviation Authority

SaxaVord Spaceport (Shetland Islands)

- Permanent (ACP-2017-79):
  - Consultation closed 12 June 2023
  - Currently in Stage 5 (CAA Decide)
  - CAA Decision expected 31 May 2024
  - Target AIRAC 09/2024

- Temporary (ACP-2021-090):
  - Paused in Stage 5 (CAA Decide)
  - Pending outcome of permanent ACP decision

Final proposed airspace design
ACP-2017-79 SaxaVord Spaceport permanent



Airspace Change Proposals
Space Launches

UK Civil Aviation Authority

Space Hub Sutherland (A' Mhòine Peninsula)

- Permanent (ACP-2019-04):
  - Paused by Change Sponsor in February 2024 (Stage 2 Develop & Assess)
  - Pending outcome of Trial ACP results

- Trial (ACP-2023-046):
  - Assessment Meeting held in February 2024
  - CAA Decision expected TBC
  - Target AIC/AIRAC TBC

ACP-2019-04 Space Hub Sutherland

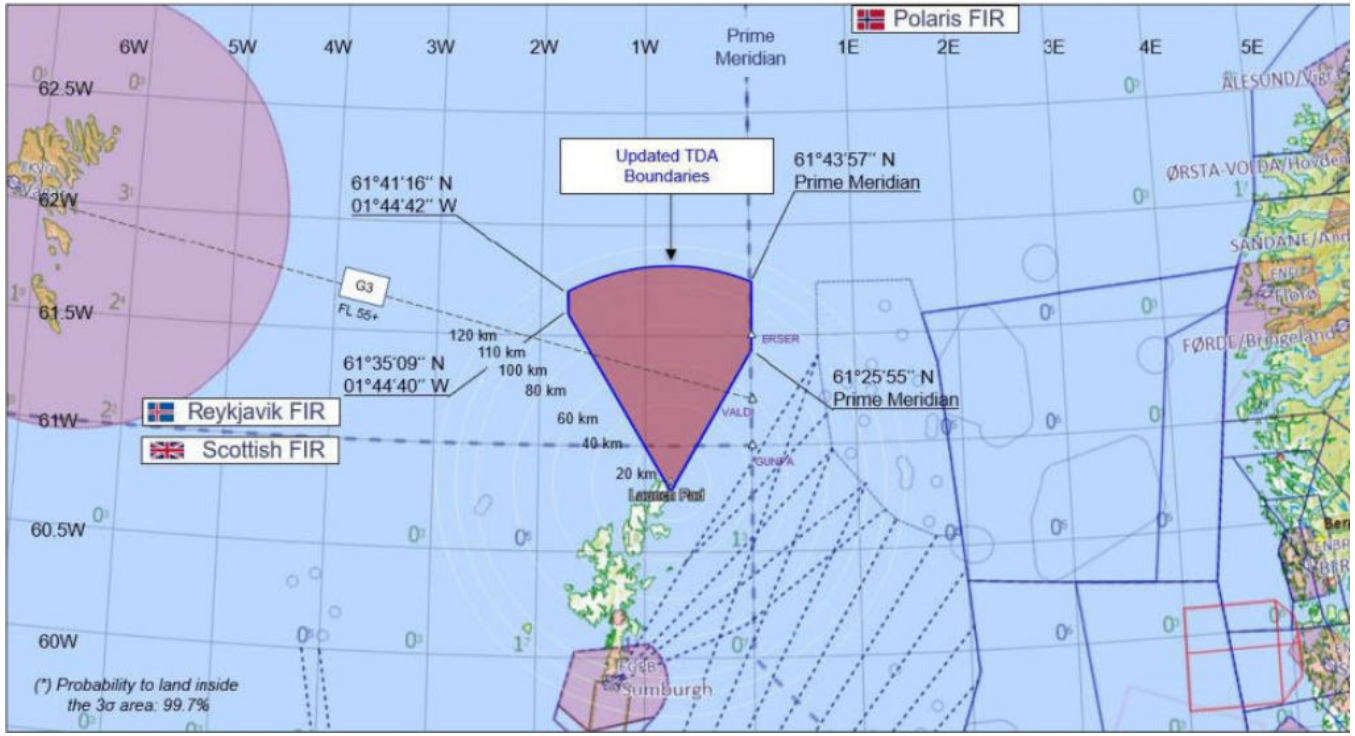
Airspace Change Proposals
Space Launches

UK Civil Aviation Authority

HyImpulse (Shetland Islands)

- Temporary (ACP-2021-058):
  - Paused by Change Sponsor in February 2024
  - Since the location of the Change Sponsor's first launch has been moved from the UK to Australia, HyImpulse elected to pause ACP-2021-058 with the intent to resume their temporary ACP for a possible second launch of SR75 from the UK in Q4 2024.

ACP-2021-058 HyImpulse TDA



Temp/Trial ACPs approved in last 6 months

- **ACP-2021-030 – Radnor BVLOS**

ACP approved 10/10/2023

- **ACP-2020-047 Enabling T&E activity of Protector**

ACP approved 01/03/2024

- **ACP-2023-066 – TDA for Unmanned Aircraft Operations in South North Sea**

ACP Approved 06/03/2024

TRA Sandbox Applications

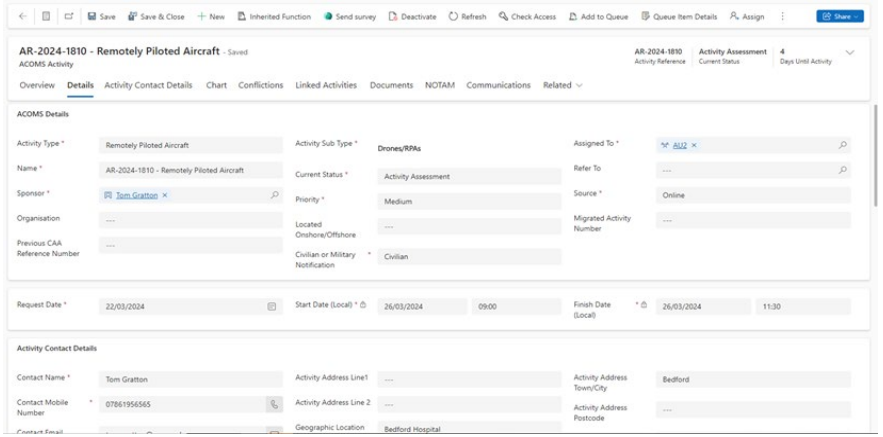
- **ACP-2022-081 Establishment of a TRA at Cranfield Airfield**
  - Current stage: Assessment Meeting yet to be held

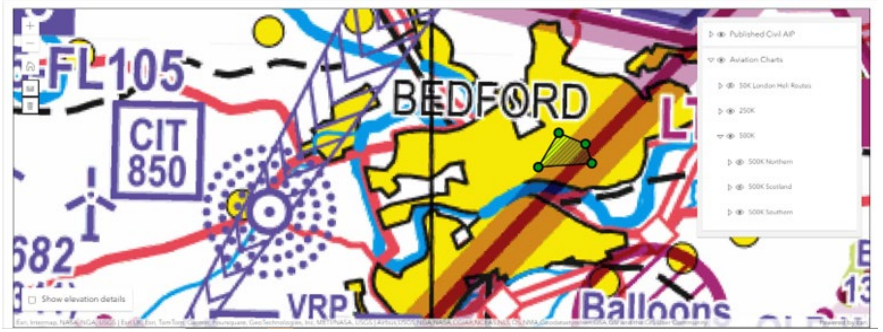
- **ACP-2023-048 Westcott TRA Trial**
  - Current stage: Assessment Meeting held Jan 2024. Timeline TBC.

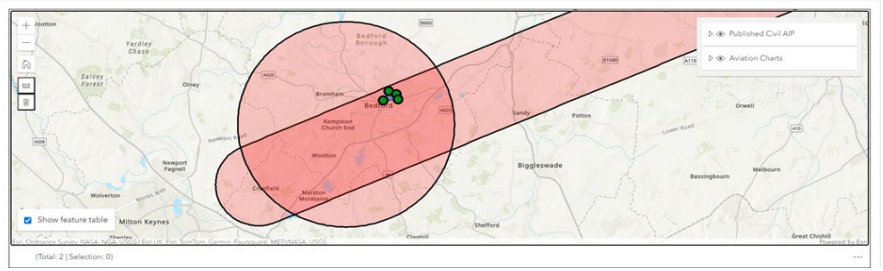
- **ACP-2023-061 London Health Bridge – Guy's and St Thomas' NHS Foundation Trust**
  - Current Stage: CAA Decide (Stage 5). CAA Decision due 12 April 2024.

Airspace Coordination and Obstacle Management Service (ACOMS) ACOMS

- ACOMS went live to the following:
  - Crane and Obstacle Sponsors – 28 Feb 2023
  - All Airspace Regulators – 30 Oct 2023
  - Limited RPAS community - 28 Feb 2024
- Stable system
  - Regulators - 99.9% availability
  - Customer Portal (CAA wide) – 98% availability
- Development continues for the remaining circa 90 activities regulated by the department
- RPAS community ramp up commences post trial following feedback review
- ACN submissions set to be the next developed
- Wider UAA activities developed towards the end, why?
  - Allow gradual portal ramp up
  - Release during a non-peak period







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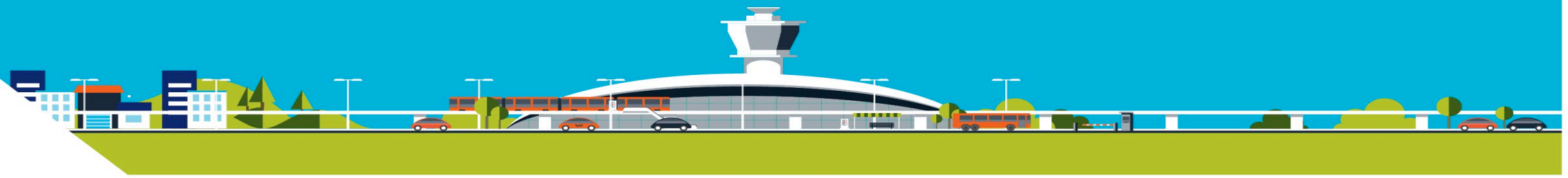
Any Questions?



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Break for Lunch

12:55 – 13:25

ACOG Update

Mark Swan – Head of ACOG

NATMAC Meeting - 95

April 24

ACOG Airspace Change Organising Group

AGENDA

- Masterplan Iteration 3
- Programme coordination
- Communications and Engagement

Masterplan Iteration 3

ACOG Airspace Change Organising Group

Masterplan Iteration 3 Development Update - Q1-2024

Q1-24 UPDATE

- Integration issues with the Scottish TMA ACPs prompted significant revisions to the system-wide design, delaying Public Engagement & the MP It.3.
- ACOG-led ScTMA Lessons Learned Review informed best practice guide.
- The revised ScTMA Programme, agreed with ACP Sponsors, Public Engagement Exercise recently completed: submission of the MP It.3 will be end Apr 24.
- London Airspace South (GAL) carve out in progress – PEX also recently completed; on schedule

LOOK AHEAD

- Manchester TMA system-wide design ATC simulations in Jun 2024, enabling Public Engagement and MP It.3 development; some issues need to be resolved prior to Jun
- ACOG await Industry wide LTMA SDE consultation material from co-sponsors end Apr/beginning May 24
- The LTMA Airport ACP Sponsors continue to refine their low-altitude airspace design options in preparation for the integration phase.
- West cluster - plan re-baselined following Cardiff Airport's withdrawal.

UK Airspace Change Programme Coordination

ACOG Airspace Change Organising Group

Airspace Change Programme Coordination Update - Q1-2024

Q1-24 UPDATE

- Best practice guide issued to sponsors for feedback.
- ACOG's airspace design and visualisation software tool (Volans) developing a single national repository for all FASI airports. Will enable benefits management strategy and public engagement; airports will have access and control rights.
- Meeting with FAA to discuss metroplexes and complex airspace design, integration and communication aspects; share and explore best practice.

LOOK AHEAD

- ACOG positioned to engage in the SDE consultation.
- ACOG to coordinate further CAF reviews and analysis in support of the ScTMA and MTMA system-wide proposals during and Q1/2-24.
- CAF review of LTMA interdependencies at lower altitudes will be supported by the collation of Airport ACP options data in the ACOG version of the Volans tool during Q1/2-24.

Communications & Engagement

ACOG Airspace Change Organising Group

ACOG Communications and Engagement Update - Q1-2024

Q1-24 UPDATE

- ACOG's Public Engagement Exercises for ScTMA and LAS completed. Muted response, as expected. Opportunity to brief MPs. Some media coverage inc. Sunday Times and Scotsman.
- ACOG undertook a series of focus group and polling around people's attitudes towards airspace modernisation, with broadly positive results.
- ACOG conducted its quarterly meeting of the Community Advisory Panel to help shape the approach to engagement with local stakeholders.

LOOK AHEAD

- Parliamentary engagement inc receptions/ drop-in sessions will be stepped up over coming months ahead of a GE.
- ACOG will publish engagement report from PEXs in coming weeks, ahead of Masterplan publication.
- Public Engagement Exercise for MTMA expected later this year (discussions around Liverpool funding key to this)
- ACOG's One Sky One Plan campaign will continue to make national case for change and help improve understanding/ awareness.

UK Civil Aviation Authority

ICAO FIS ALIGNMENT IMPLEMENTATION – Nigel Ibbetson

Airspace Modernisation Strategy Annual Progress Report

NATMAC 95 - 11th April 2024

Adam Godolphin

Risk and Benefit Manager – Airspace Modernisation Oversight

Introduction

In 2017, the Government updated CAA's strategic role for airspace modernisation by issuing new Air Navigation Directions. Consistent with our role as specialist aviation regulator and our statutory responsibilities, we are required to prepare and maintain a co-ordinated strategy and plan for the use of UK airspace for air navigation, including for the modernisation of the use of such airspace.

Our Airspace Modernisation Strategy responds to that requirement, setting out the detailed elements that the industry must deliver, to achieve the objectives envisaged in the current Government policy.

To establish the means of delivering modernised airspace, such as the resources needed, the strategy requires the entities responsible for delivering the elements to draw up delivery plans, with progress overseen by the CAA.

The CAA must report to the Secretary of State annually on the delivery of the strategy and for the 6th time now the Airspace Modernisation Annual Progress Report fulfils that requirement.

The report is produced by the Airspace Modernisation Oversight team. The team is sat within the CAA's Communications, Strategy and Policy Department and is independent from the CAA delivery teams.

Category	AMS delivery elements	2018 AMS initiatives further developed through these elements	
Aircraft-Based Navigation	UK-ABN/1. Trajectory-based operations	2, 7, 8, 11, 14	Overarching principle: implementing government policy on minimising the environmental impacts of aviation within the context of supporting a strong and sustainable aviation sector
	UK-ABN/2. Terminal airspace redesign	4, 5, 14	
	UK-ABN/3. Network management	3, 6	
	UK-ABN/4. Integration	3, 9, 10, 11	
Airspace Management	UK-AM/5. Airspace management		
	UK-AM/6. Data services	13, 15	
	UK-AM/7. Future surveillance and spectrum	11, 12	
	UK-AM/8. Integration of communications, navigation, surveillance & spectrum	12, 13, 14, 15	
	UK-AM/9. Aircraft capabilities	New	

CAP 2600 Airspace Modernisation – 2023 Progress Report covers the delivery monitoring period of 1st January – 31st December 2023

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Content overview

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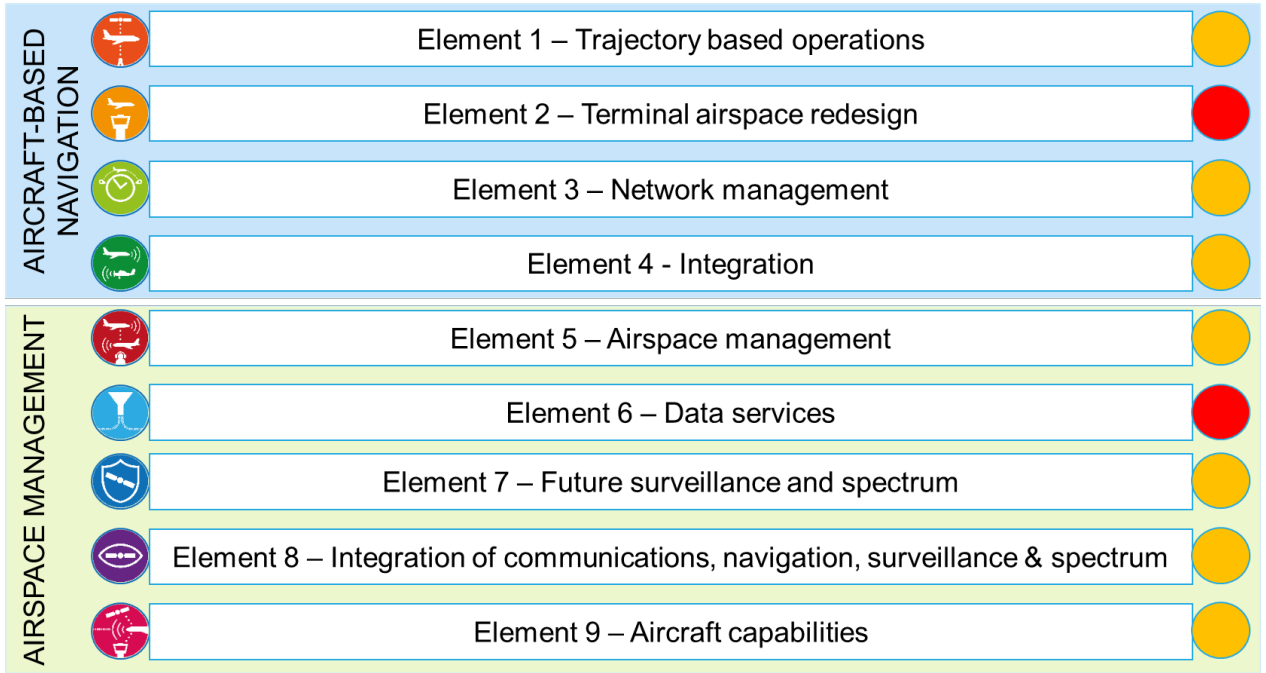
Chapter 1 – Progress Overview



Chapter 2 – AMS Co-sponsor activity

AMS delivery governance
AMS Part 3 development
Single Design Entity
Airspace Modernisation Strategy Support Fund

Chapter 3 – AMS strategic risks and mitigations

AMS scope and delivery model
Delivery of the Masterplan and Airspace Change Proposals of Element 2
CAA resource
Future of Flight Challenge

Feedback on the Annual Progress Report can be submitted to airspace.modernisation@caa.co.uk

UK Civil Aviation Authority

Any Other Business?

Wrap Up & Dates of future NATMAC meetings

- NATMAC 96 - 10th October 2024
- NATMAC 97 - 10th April 2025
- NATMAC 98 – 9th October 2025