

CAA Update

18 April 2024

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Scope

- Future of Flight and wider context
- DiSCO
- Specific Category of operations
- Atypical Air Environment
- Conclusion and Questions



FoF

Future of Flight and wider context



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Future of Flight Vision and Strategic Outcomes

UK Vision and Strategic Outcomes described in the 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.”

The Action Plan is sponsored by the Future of Flight Industry Group. Chaired by the Aviation Minister and Senior Industry Representative

*—
it has the following membership...*

*Published in
March 2024*



Future of Flight Programme

Future of Flight Programme Delivery

The **UK Future of Flight Programme**, as led by the Future of Flight Industry Group, is responsible for UK wide deployment including industry contributions. The FFIG is a government / industry led forum.

The **UK Future of Flight Action Plan** is the highest level document that sets the shared vision, the specific operational outcomes and the high-level delivery plan to achieve those outcomes. The Action Plan is owned by the FFIG. The role and responsibilities of the FFIG in management of the Action Plan along with a description of the roles and responsibilities of key organisational groups is also included.

The **UK Future of Flight Deployment Plan** is the detailed plan of how the outcomes in the Action Plan will be delivered. It is critical to have a single plan, owned and supported by DfT, CAA and Industry to ensure our ensures alignment across all stakeholders in the delivery of the UK shared vision. This is managed as a single plan using a Microsoft Excel Planning Tool.

All stakeholders contribute to the **Deployment Plan** using an agreed taxonomy of 'Milestones' – this is introduced later in this presentation.

There are several organisations contributing to delivery of the Deployment Plan. The primary organisations are **DfT**, **CAA** and **UKRI**. Other organisations will be incorporated into the Programme approach when ownership of specific action is identified.

Each organisation is responsible for managing their own specific programmes but using common taxonomy and reporting processes in the Deployment Plan.



UK Future of Flight Programme

(UK) Future of Flight Action Plan

UK Future of Flight Deployment Plan

CAA Future of Flight

DfT Future of Flight

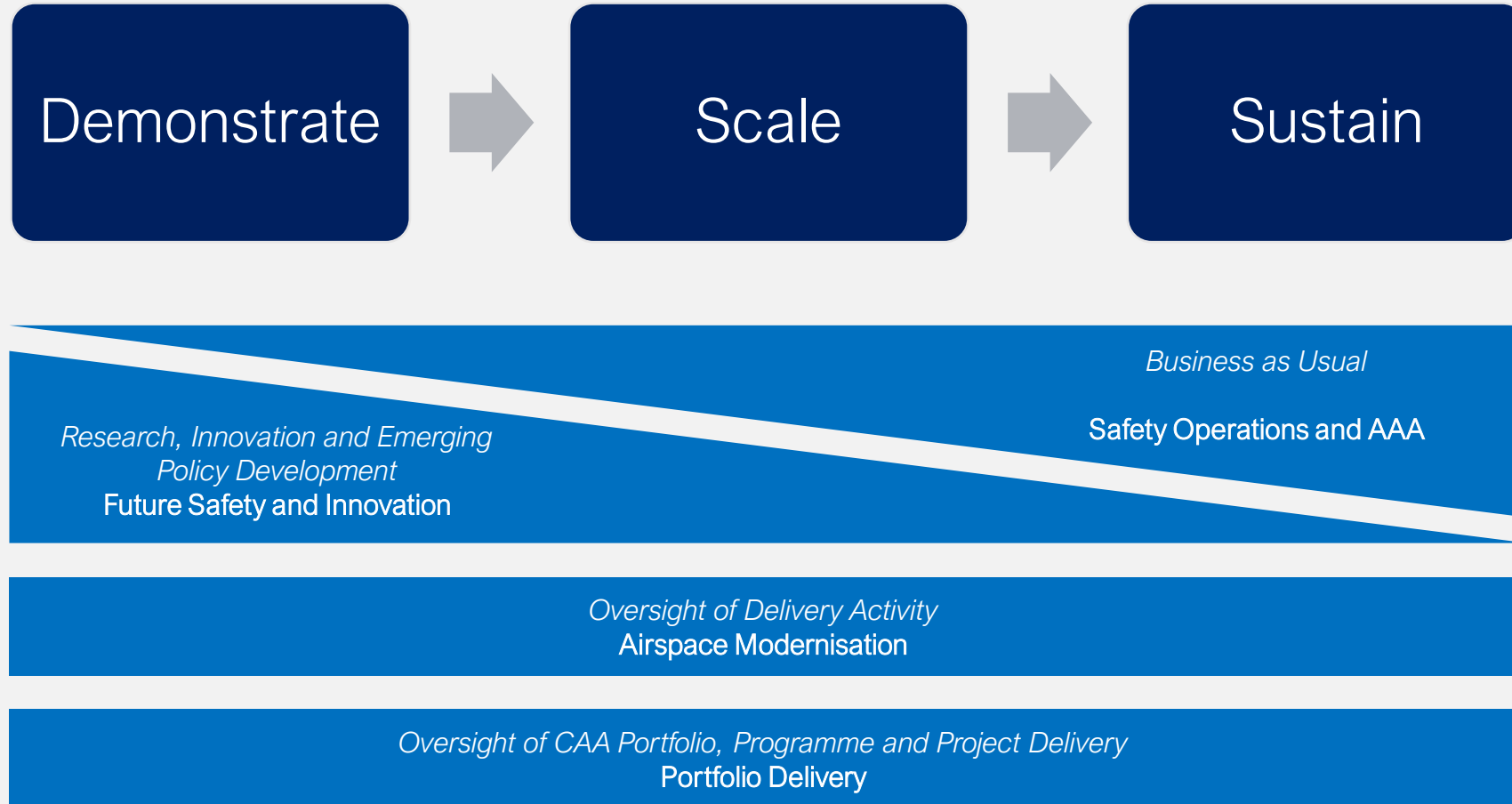
UKRI Future Flight
Challenge

BSI

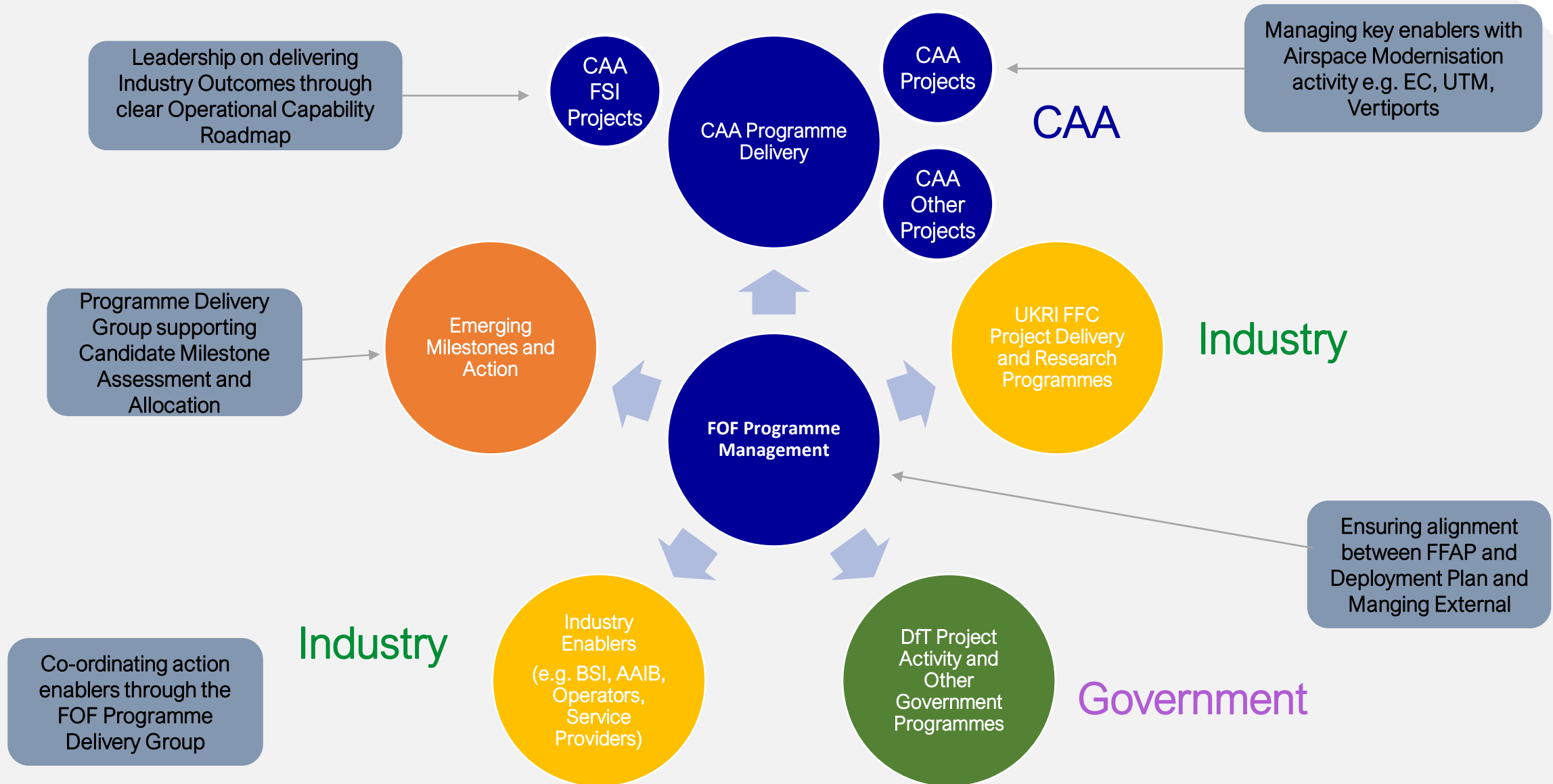
Other Industry
Programmes

High Level Strategy

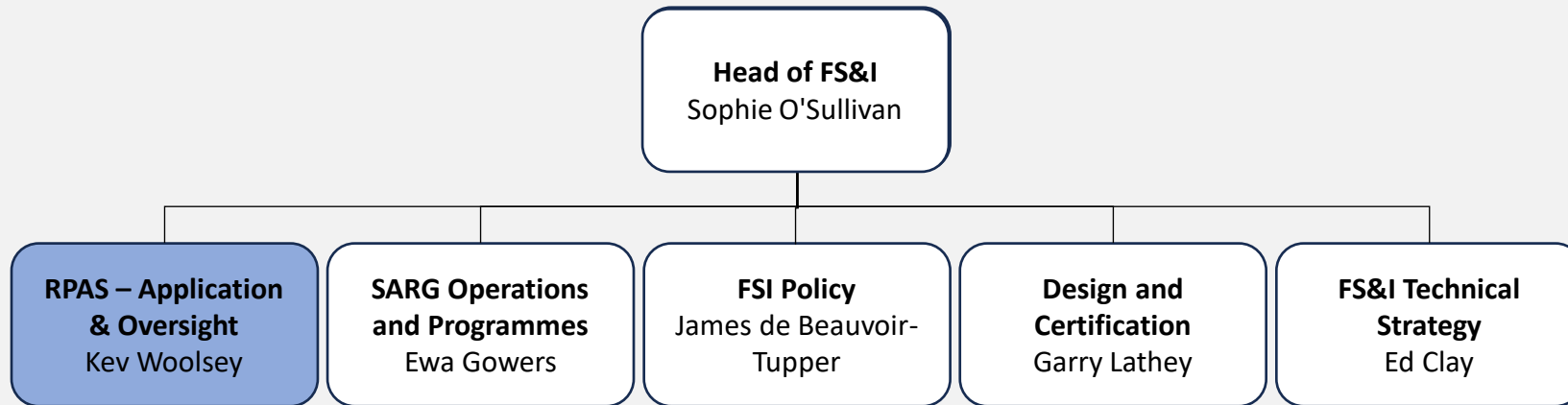
Delivery horizons provide clarity on accountability during the 'Future to BAU transition'



Future of Flight Programme – Context Overview



Future Safety and Innovation



DiSCO

Digitisation of applications in the Specific Category of Operations



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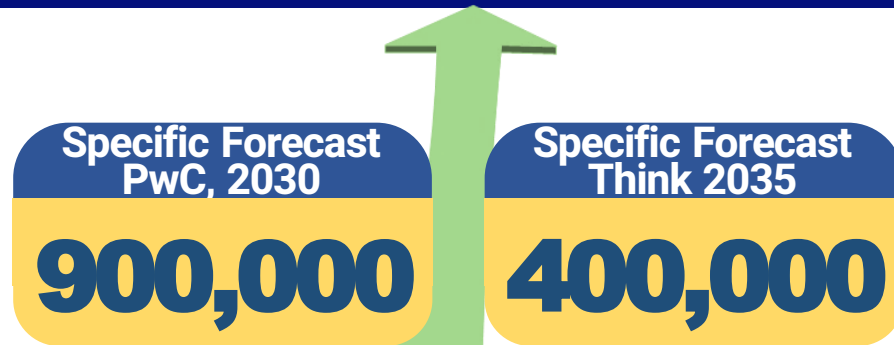
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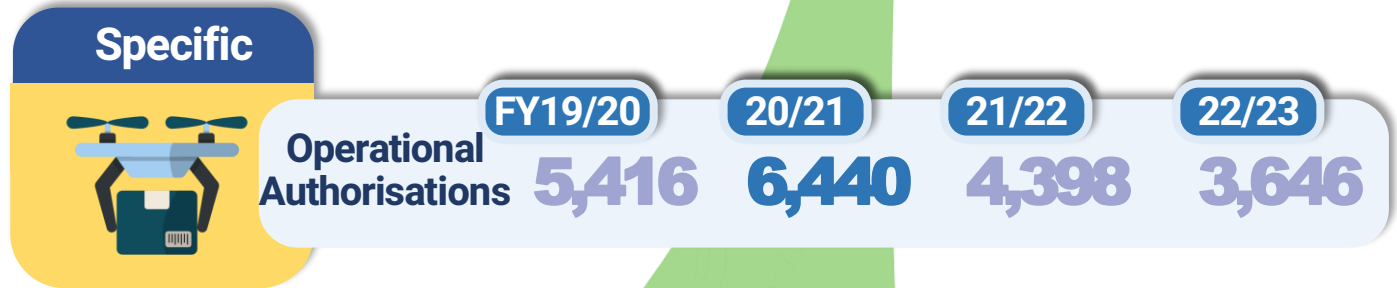
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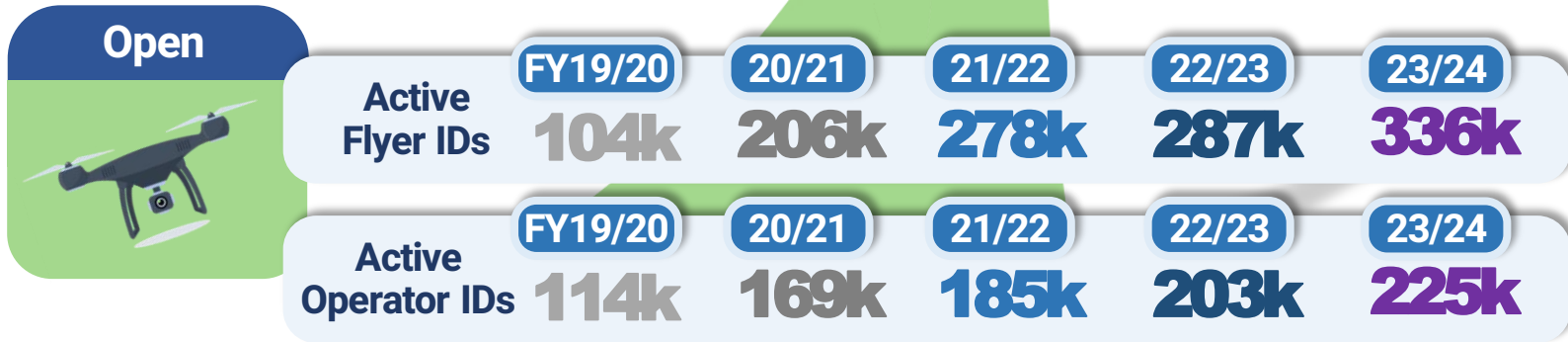
Enabling Routine BVLOS to Meet Latent Demand



While future estimates vary, **all forecast a huge increase** in the number of operational authorisations over the next c.10 years. This will only happen with **improved processes, systems, and people capabilities**.



Specific Category Authorisations have **declined in recent years**, partly due to the introduction of **new UAS Regs** and the current application system being **too complex, time consuming, and restrictive**.



The number of flyers registered on the **Drone & Model Aircraft Registration & Education System (DMARES)** has experienced massive growth.





Benefits of the DiSCO Project



Better Customer Experience

A **simplified, more efficient end-to-end process** that will enable **faster applications**



Proportional

Ensures that **safety measures** employed are **proportional to the risk posed** by the specific UAS operation



Consistency

Provides a **transparent methodology** for UAS risk assessment that **reduces the risk of inconsistencies**



Global Standards

A **global standardised approach** to risk assessment for UAS operations (SORA)



Reduced Workload

Reduces the workload involved in performing a risk assessment and developing an appropriate safety case



Reduced Timescales

Reduces timescales involved in assessing applications and operators receiving authorisations



Compliance

Acts as an **Acceptable Means of Compliance (AMC)** to fulfil the requirements of the UK UAS Regulations



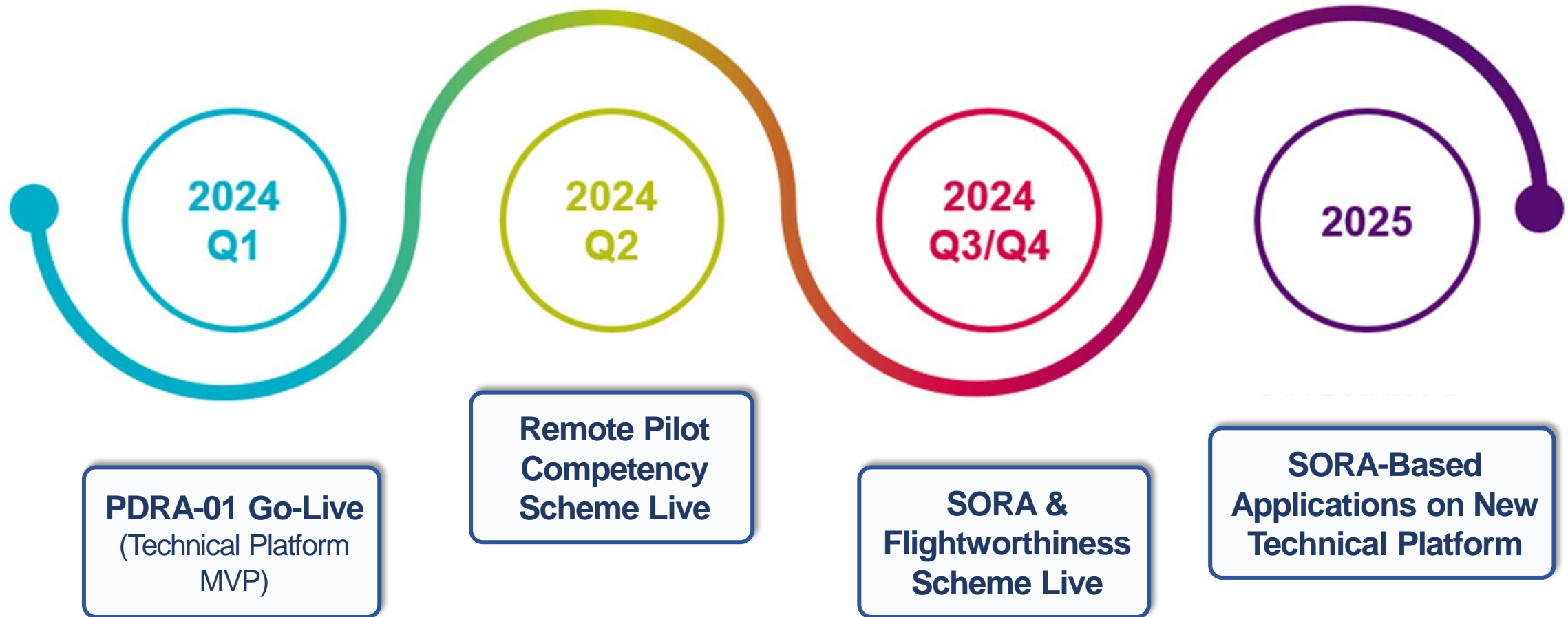
Safety

SORA will ensure **appropriate safety measures** have been employed





Key Milestones in the DiSCO Project



Specific Category



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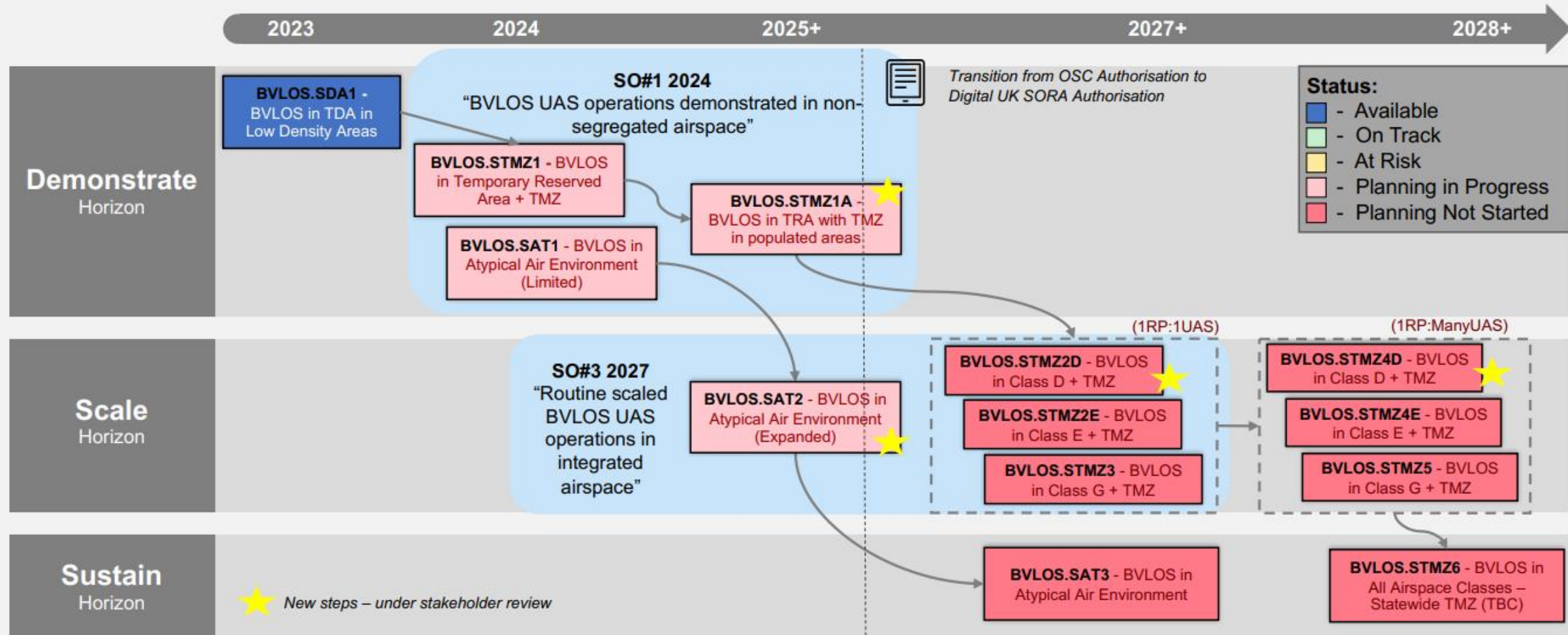


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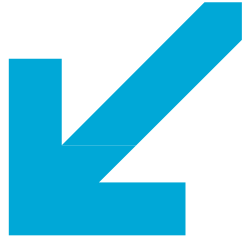
Operational Capability Roadmap – Specific Category



Key Implementation Steps for Specific Category BVLOS



CAA workstreams



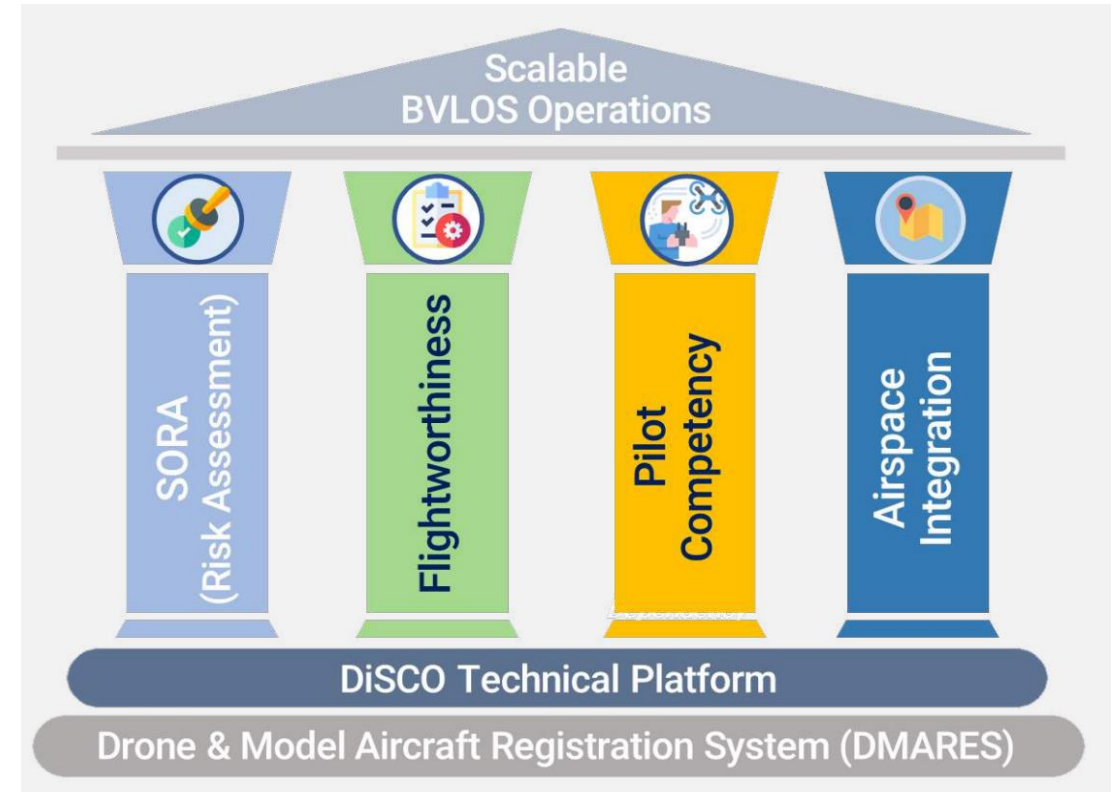
Mandate

A regulatory framework is required to enable the sector to grow and enable the UK to benefit from the new technologies including RPAS. The CAA is being asked to develop that framework to enable the achievement of Specific category BVLOS in non-segregated airspace by 2024

We aim to be an enabler of safe aviation innovation and to govern and guide the journey from good idea to sustainable operations

Programme Workstreams

<p>1. BVLOS Integration Governance Structure</p> <p>Documented governance of BVLOS Ecosystem for both Internal and external stakeholders</p>	<p>6. Scalable Operations</p> <p>Ensuring the CAA processes and standards are such that BVLOS operations are scalable</p>
<p>2. RPAS Road Map and engagement</p> <p>BVLOS Roadmap – A roadmap to routine BVLOS in non segregated airspace in the near medium and short term.</p>	<p>7. Airspace Environment</p> <p>How will airspace environments evolve to include routine BVLOS</p>
<p>3. Flightworthiness of Aircraft</p> <p>Defined standards, industry Guidance and mechanisms to ensure the aircrafts robustness.</p>	<p>8. Airspace Services</p> <p>How will airspace services evolve to include routine BVLOS</p>
<p>4. Pilot Competency</p> <p>Defined standards, industry guidance and mechanism pilot competency</p>	<p>9. Cost and Charges</p> <p>What will the charging model be for BVLOS operations</p>
<p>5. Safe Operations</p> <p>Clear definition for industry of the system wide approach to risk for BVLOS operations</p>	



Organising around **Demonstration** BVLOS RPAS

Critical CAA Work Items

Atypical

1. Publish the [Atypical Air Environment Policy](#)
2. Publish guidance on technical containment and flightworthiness
3. Support industry-led limited operations in an Atypical Air Environment

Temporary Reserved Area (Test & Evaluation)

1. Define the [Integrated Model and Strategy for Specific Category \(including EC, C2, DAA & UTM\)](#)
2. Develop a tailored safety reporting and data collection process to support BVLOS trials
3. Input TRA Trial results to relevant policy updates (e.g. [AMC to SERA](#), [UAS \(SORA\)](#), [UTM](#))

SORA introduction

1. Publish [Airspace Requirements for the Integration of BVLOS Unmanned Aircraft](#)
2. Develop and publish the UK Air-Risk Policy, [with AAA approval](#)
3. [Develop and publish the Detect and Avoid Policy Concept](#)
4. Develop Policy Strategy for Command and Control (C2), including oversight method
5. Publish Policy within UAS Rulemaking (i.e. SORA GM Annex D: Technical Mitigations)
6. Implement Airspace Reqts. for BVLOS RPAS Integration within UK SORA Digital Platform
7. Implement the UK Operational Authorisation Application Platform
8. Implement the Remote Pilot Competence Scheme, with training organisations and courses
9. Implement the Flight Worthiness Scheme, alongside industry setup of enabling RAE-F
10. Develop updates to Commercial Air Transport Policy and Dangerous Good Policy

Delivered by CAA

1. February 2024 – Consultation live on the Atypical Air Environment Policy
2. November 2023 – Remote Pilot Competency Full Consultation live
3. October 2023 – PDRA-01 Operations Manual full draft completed.
4. October 2023 – RAE(F) and SAIL Mark external review conducted.
5. Sept 2023 – onboard assistance for the DSCO Working Group which will be from industry working closely with CAA to ensure goals are met
6. August 2023 we published a new edition of CAP722H 'Specific Category Operations: Pre-defined Risk Assessment Requirements, Guidance & Policy' covering Pre-defined Risk Assessment Requirements in the specific category
7. July 2023 - Guidance for carriage of Dangerous Goods within Spec Cat for TRA Trials (CAP2555) published.
8. July 2023 - public consultation on the future framework of Remote Pilot Competence, as part of the DiSCO project.
9. July 2023 we published CAP 2555 which sets out guidance and requirements for carrying Dangerous Goods by an RPAS in the Specific Category.
10. June 2023 - completed the Discovery phase of the 'Regulatory Review' project which is reviewing the regulatory framework that we inherited from Europe that applies to Remotely Piloted Aircraft Systems (RPAS) operating in the UK.
11. June 2023 – public consultation - review industry's feedback on Innovation Test Sites.
12. April 2023 - Airspace Requirements for Integration of BVLOS UAS (CAP 2533) published.



Organising around BVLOS RPAS at Scale

Critical CAA Work Items

Atypical Expanded

1. Publish guidance on strategic planning / deconfliction mitigation using EC rules
2. Incorporate Atypical Policy within the UK SORA Digital Platform
3. Implement the UK Operational Authorisation Application Platform
4. Implement the Remote Pilot Competence Scheme
5. Implement the Flightworthiness Scheme – *method to be determined*
6. Implement updates to DMARES to enable UK SORA developments
7. Introduce new Safety Reporting and Investigation systems

BVLOS in Class D + TMZ

1. Develop and approve new Airspace Air Risk Model for TMZs in UK SORA Digital Platform
2. Develop new policy and service oversight for low level ATM services
3. Develop EC Standard to enable EC Transition
4. Finalise Electronic Conspicuity CONOPS to enable the development of EC Standard
5. Propose a policy decision on use of 978MHz as part of EC Dual Frequency Strategy
6. Develop policy for certification and funding of new FIS infrastructure for FIS-B / TIS-B in TMZ
7. Support industry deployment of DAA solution based on electronic conspicuity rules
8. Develop the Rules of the Air, including through a review of existing derivations
9. Agree TMZ locations based on appropriate airspace risk studies
10. Implement updated Strategy and Policy for Commercial Air Transport and Dangerous Goods
11. Standardise CAA development processes e.g. for DAA, SORA

UK Future of Flight – **working together** for BVLOS at Scale

Government

- SI capacity for new Specific (and Certified) Category Regulations
- CNS Spectrum allocation and policy with Ofcom
- Legislation implementing Fixed Penalty Notices for UAS
- Procurement strategy for UAS operations
- Policy on community integration e.g. Noise
- Legal and insurance frameworks to support routine BVLOS
- Confirming Standards and their end to end oversight

Industry

- Continued engagement on new technology to help CAA understand risk mitigations (e.g. TRA trials, software development, battery technology)
- Industry-led large-scale Atypical Air Environment Operations
- DAA solution deployment based on electronic conspicuity rules
- New methods to assess community impacts in Atypical air environments

International Engagement

- Working with the FAA at Joint Authorities for Rulemaking on Unmanned Systems
- Working with the FAA at the ICAO RPAS Panel
- Information sharing with the Angela/FAA & CAA/UK Law Commission on Autonomous Flight Legislative Framework Consultation
- Regular liaison with organisations that plan to have operations in the US and the UK



AAE

Atypical Air Environment



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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.



What we have covered

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Conclusion

And questions



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