UK Civil Aviation Authority

Advanced Air Mobility:

eVTOL Delivery Model

Version 1.0

September 2025

Purpose of this document

The emergence of Advanced Air Mobility and ‘electric vertical take-off and landing’ aircraft (widely referred to as eVTOL) has the potential to change how people travel and how goods are delivered, support the decarbonisation of aviation, improve regional connectivity, and create new opportunities for public and commercial services.

Realising this potential requires industry to continue their technological development, supported by a regulatory framework that is clear, agile, and fit for purpose. Our role as the UK CAA is to provide this framework, while ensuring industry operates in an environment that enables aerospace innovation and adheres to the highest standards of safety.

This Delivery Model outlines how the regulatory framework could facilitate eVTOL aircraft operations in the UK. This is the first version of a document we will update as the technology matures, consultations take place and the regulatory requirements crystalise. It identifies principles we are applying, the approach we are taking, and the specific steps to deliver a safe framework that the public can have confidence in. It supports Government’s objective to see eVTOL in the UK from 2028 by setting out **our ambition: to have in place by end-2028 a clear regulatory framework and operational systems that allow initial commercial eVTOL flights in the UK.**

This is just part of our work to ensure the CAA is ready for the future, maintaining the UK’s global reputation for safety and oversight, while supporting innovation and new technologies - such as eVTOL – to ‘demonstrate’, ‘scale’ and ‘sustain’.

Sophie O’Sullivan
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Key Terms

What is Advanced Air Mobility and eVTOL?

The world of Advanced Air Mobility is full of terminology and nomenclature. This Delivery Model uses naming conventions that will be most familiar to our stakeholders. However, they remain subject to change following future consultations and are unlikely to reflect the precise drafting used in eventual legislation. For the purposes of this document, these are the key terms and their intended meaning:

Advanced Air Mobility (AAM) refers to the emerging aviation ecosystem that uses new aviation services and innovative technologies to transport people and goods. This system operates in urban and regional environments. New aircraft designs include electric vertical take-off and landing (eVTOL) aircraft and other novel types.

eVTOL refers to a group of aircraft within the AAM ecosystem. Aircraft within the eVTOL group typically have the following properties: they are capable of vertical take-off and landing, use electric propulsion for their energy (either singularly or as part of a hybrid system), have multiple rotors and are used for passenger and/or cargo transport.

This document does not consider forms of aviation that share characteristics with eVTOL aircraft, but fall outside of the bounds of Advanced Air Mobility, such as conventional helicopters.

A fuller glossary can be found in the annex.

Scope of this Delivery Model

This Delivery Model sets out the CAA's approach to establishing a regulatory framework enabling safe commercial eVTOL operations, with a pilot on board. The scope of the Delivery Model reflects:

CAA focus: Enabling eVTOL operations requires involvement of a range of stakeholders, including industry, local and national government. This Delivery Model focuses only on the aspects within the CAA's remit of recommending regulatory changes to the UK Government.

Commercial focus: The focus of this Delivery Model is on enabling initial commercial eVTOL operations only. However, we are working to ensure that decisions taken do not adversely impact non-commercial operations, while maintaining a high level of safety.

eVTOL focus: The focus is on eVTOL, though the recommendations we make may impact the operation of other aircraft types within the AAM ecosystem, including those with different take-off and landing capability, or with different energy propulsion.

Pilot on board: eVTOL without a pilot onboard are not our focus. Unmanned Aircraft Systems (UAS)/Remotely Piloted Aircraft Systems (RPAS) and autonomous eVTOL for the moment are out of scope of this document.

The proposals included in this document set out CAA's current view on the future regulatory framework for eVTOL, and the activities needed to deliver that framework. However:

We will consult on approaches: Policy positions are subject to formal public consultation, with an initial consultation expected towards the end of this year.

Regulatory changes are determined by Government: Following consultation, CAA will submit its opinion on required regulatory changes to DfT, who will consider how to progress them.

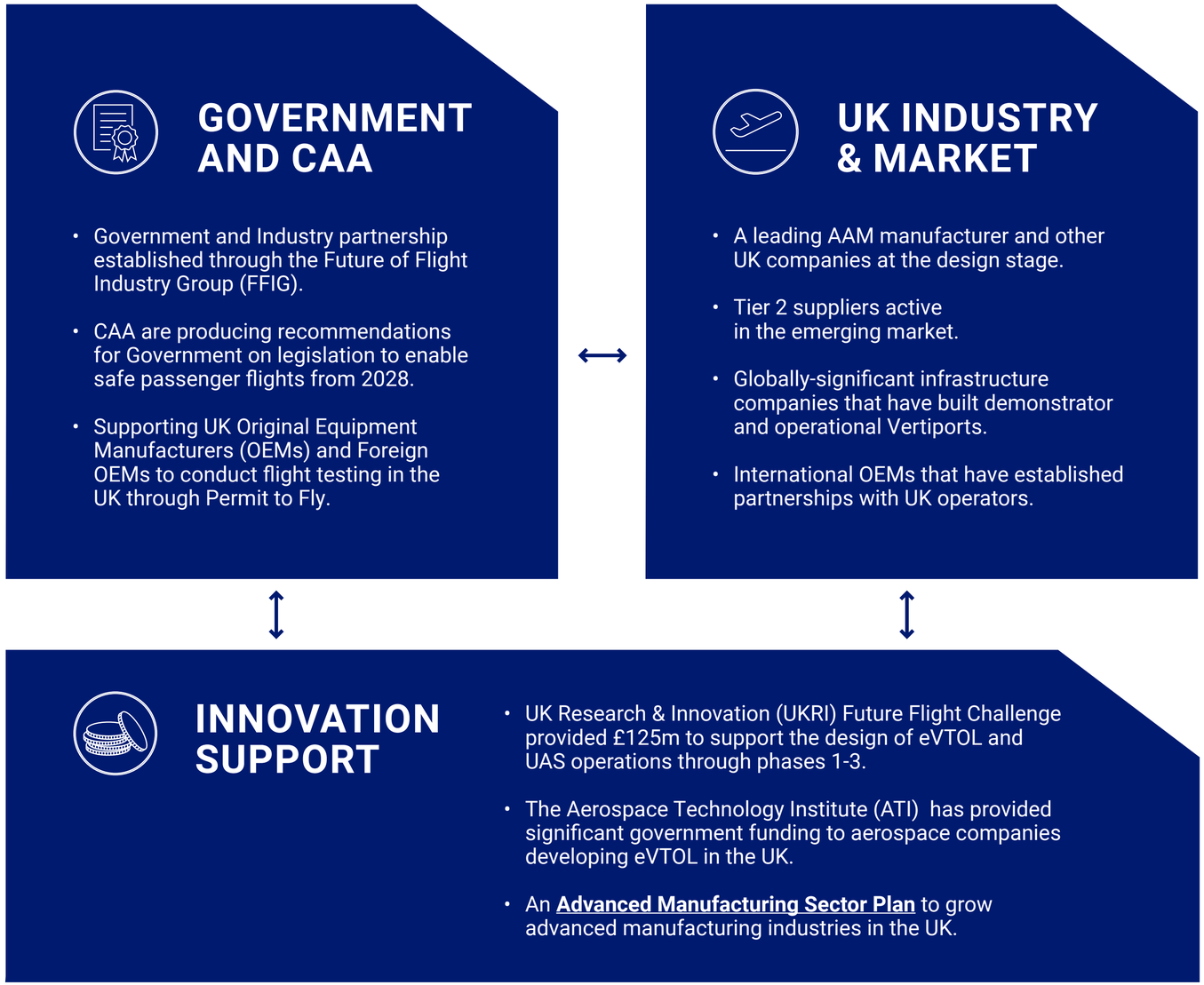
All subject to funding and parliamentary time: Achieving this timeline relies on CAA receiving continued funding for the Future of Flight programme. Legislative changes are subject to parliamentary timetabling.

eVTOL in the UK

The UK has the basis for a rich eVTOL ecosystem:

A skilled industry building on the UK's proud aviation history, an a Research and Development (R&D) environment supporting innovation in aerospace, and a government and regulator committed to putting in place a safe regulatory framework to allow these aircraft to fly.

This collaboration - Industry, Government, Regulator and Innovation support – means the UK is a leading voice in the development of eVTOL operations. UK companies are at the forefront of developing the aircraft and managing the infrastructure, and international operators intend to bring their aircraft to the UK.



Our ambition and delivery principles

Government has a clear objective to see commercial eVTOL flights from 2028. Achieving this requires all parts of the broader AAM ecosystem to deliver, including the CAA. To clarify our role in meeting this objective, we have set a **CAA ambition: by end-2028 to have in place a clear regulatory framework and operational systems that allow initial commercial passenger eVTOL flights in the UK.**

This Delivery Model sets out our plan for delivering this ambition; how the regulatory framework could enable commercial air transport - cargo as well as passengers - subject to industry readiness. It sets out the what we are able to provide to industry now, what we aim to be possible by end-2028 and what will come later. It is the first version of a model that will be updated over time as we learn more about the technology, operational and regulatory requirements.

Our mission is 'protecting people, enabling aerospace', and our commitment to safety is at the heart of our duty as a regulator. Through that safety-focus, we will support delivery of our eVTOL programme by **embedding five key delivery principles.** We will also look for opportunities to embed the CAA's consumer principles in our future policy, to promote choice, value, fairness and accessibility.

DELIVER AS ONE CAA

This is a complex programme which needs to bring multiple areas of expertise together. We will work as one CAA to develop a clear, integrated framework for industry.

HOW THESE APPLY IN OUR DELIVERY:

- CAA activity on eVTOL is coordinated through the CAA's Future of Flight Programme (funded by the DfT), bringing together all the relevant teams across the regulator.
- This includes reporting to a Future of Flight Programme Board and a Technical Design Authority, to ensure proposed approaches align across teams and meet the overall programme objectives.

ITERATE ON EXISTING FRAMEWORK

Existing aviation has a proven and well-understood regulatory framework. We will develop initial positions based on the existing regulatory framework and refine these as technology and knowledge develops.

HOW THESE APPLY IN OUR DELIVERY:

- Our starting point is always the established aviation regulatory framework - looking to apply that and adapt it where necessary.
- Where we can, we will build flexibility into our policies to cater for future developments in technology and operations.
- By 2028, subject to DfT decisions, the first rulemaking changes will be implemented to allow initial commercial operations. We will work with industry to understand the need for any rulemaking beyond 2028, if required.

Our ambition and delivery principles

ENGAGE OPENLY

Early and open engagement with stakeholders and our international partners to test thinking and co-create solutions is the surest way to safe, proportionate, effective outcomes.

HOW THESE APPLY IN OUR DELIVERY:

- We have put together a series of Stakeholder Workgroups covering vertiports, air operations and pilot licensing.
- We continue to support the eVTOL Safety Leadership Group to facilitate safety orientated discussions to manage emerging risks.
- We also participate as an observer at the ADS AAM Special Interest Group and the NATS Enroute Limited AAM Airspace Work Group.
- Learning from the progress of industry is key to aligning our policy proposals to stakeholder needs.

LEARN FROM OTHERS

We will carefully consider solutions proposed by our international partners. If we choose a different path, we will clearly explain our reasons. And over time, we will look to harmonise our approaches.

HOW THESE APPLY IN OUR DELIVERY:

- We work with others on our approach to eVTOL – for example, aligning with EASA on certification.
- The CAA represents the UK on the ICAO AAM Study Group and we work with the National Aviation Authorities (NAA) Network to develop internationally-aligned positions and work towards harmonisation.
- Given the consistency of our regulations and the proximity, we will always look at rules developed by EASA and seek compatible positions where it's in the UK's interests to do so.

SAFE AND PROPORTIONATE SOLUTIONS

Whilst safety is the number one priority, we must achieve it in a way that supports growth, enables the demonstration and scaling of innovation, and accounts for the level of risk involved.

HOW THESE APPLY IN OUR DELIVERY:

- Our intent is for our regulatory framework to take a holistic, risk-based approach that places proportional requirements on OEMs and operators.
- We will take a performance-based approach where possible and equitable – for example, with our certification standard SC-VTOL and on operational issues such as fuel energy policy and recharging.
- Ultimately, consumers must be assured that operations are safe - we will continue to ensure the highest levels of safety.

Our approach

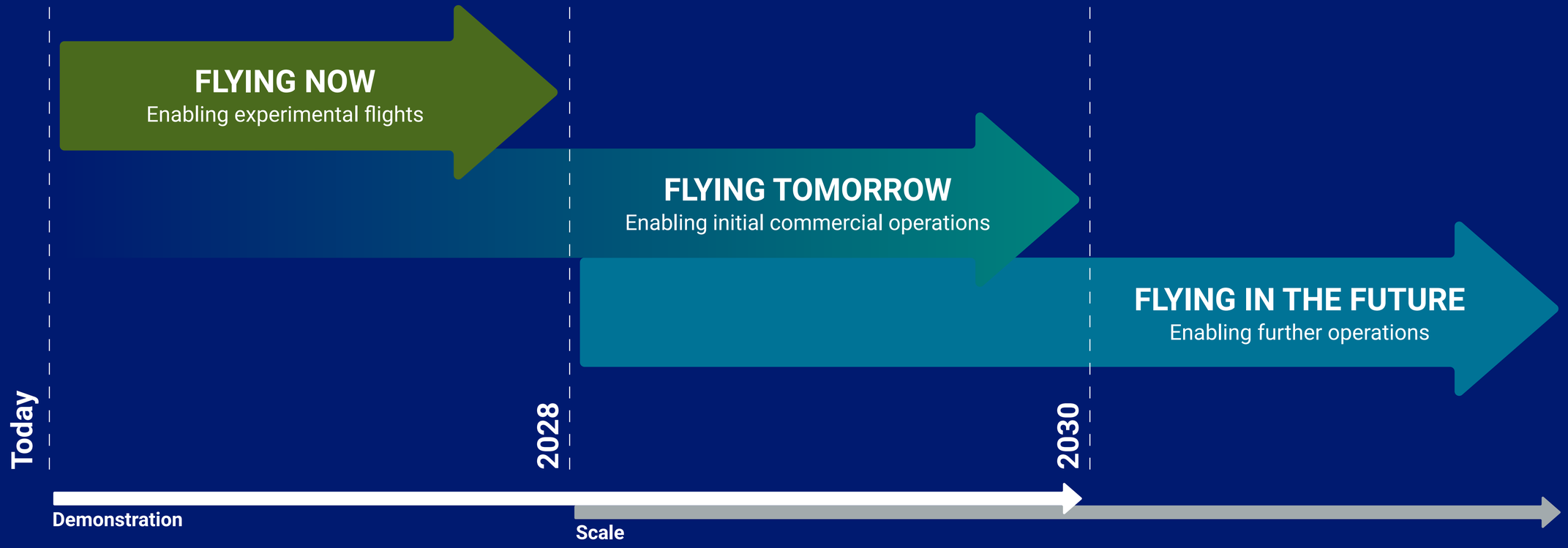
We are delivering our approach across three timelines:

1. FLYING NOW:
What we already have in place to support early, pre-type certification demonstration flights.

2. FLYING TOMORROW:
What we will recommend to DfT for delivery by 2028 to allow initial commercial, passenger operations in the UK.

3. FLYING IN FUTURE:
What we will recommend is in place beyond 2030 to support further types of operation based on learnings.

Our focus is on supporting the demonstration of eVTOL operations pre-certification, followed by initial commercial operations that will demonstrate the viability of eVTOL use-cases. This approach aims to align development of regulation to industry progress. It will ensure rulemaking is based on the priority areas to enable scalable operations beyond 2030.



1. Flying Now

It is possible to fly eVTOL in the UK today for test purposes: the UK's regulatory framework allows pre-certification and demonstrator aircraft to fly – for example, this year Vertical Aerospace received a Permit to Fly (PtF) to conduct flight tests for the first time over the Cotswolds from their base at Kemble Airfield.

We have a robust and proportionate approach to support pre-certification flying which consists of E Conditions for a limited range of low risk experimental flying and a more rigorous and flexible Permit to Fly (PtF) and Flight Conditions (FC) framework for a broader range of aircraft. We recently reviewed the PtF and FC framework in response to industry feedback and are confident it provides the right flexibility and proportionality for test and demonstration programmes. We have updated our internal guidance on the application of PtF to ensure we are effectively utilising its flexibilities, and that our processes remain robust, adaptive and forward-looking, such that the UK is well positioned to enable innovators to take their ideas to the sky. For certain tests without a pilot on board, OEMs may utilise our **UK SORA** methodology for authorisation of remotely piloted activities, subject to CAA agreement.

Whilst pre-certification flying of foreign registered products is expected to be conducted under the oversight of the State of Registry, eVTOL aircraft conducting demonstration activities within or over the UK, are subject to a permission issued by the CAA. CAA takes a supportive approach to facilitating such activities and encourages OEMs to engage early on any such proposals. As an example, in 2025 the CAA issued a permission for Beta to fly their CTOL aircraft across the UK.

Our **Guide for Innovators: Experimental Flying** sets out more detail on our approach. If you would like to discuss the requirements for demonstrating flight operations of novel aircraft, please contact the CAA Innovation Gateway at **innovation@caa.co.uk**

2. Flying Tomorrow

Our ambition is to have the regulatory framework and operational systems that enable initial commercial passenger eVTOL flights in the UK by end-2028. To do this will require four things:

1. **Type Certification to an agreed certification basis:** We have adopted a UK version of SC-VTOL and put in place Environmental Protection requirements.

2. **New and amended legislation to create the ruleset:** Based on CAA recommendations, DfT will lay legislation to update the regulations associated with Flight Operations, Pilot Licensing, Continuing Airworthiness and Aerodromes to allow initial commercial operations.

3. **New and updated Acceptable Means of Compliance and Guidance Material:** Our intent is to develop Acceptable Means of Compliance (AMC) and Guidance Material (GM) that describes how to comply with the regulations.

4. **Updated CAA operational systems,** including business processes and tools, to ensure that when applicants apply for licences or submit safety reports, eVTOL operations are appropriately considered.

As per our principles, the approach is to base rules on the existing framework where possible, and through analysis, recommend to DfT the parts of the regulation that need to be changed to account for the specificities of the aircraft and their performance.

The work requires a 'one CAA' approach across several workstreams and development of recommendations for DfT to amend the rulesets:

- **Design and Certification**, on the certification and validation basis for eVTOL in the UK.
- **Continuing Airworthiness,** on the ensuring safety regime for eVTOL aircraft.
- **Flight Operations**, on the operational rules for flight.
- **Aerodromes**, to cater for safe eVTOL operations.
- **Pilot licensing,** on the applicable licensing regime.
- **Airspace and ATM,** on matters related to airspace requirements for eVTOL.
- **Cyber and Aviation Security,** on security matters.

Key cross-cutting activities from across the CAA support the development of these workstreams, covering rulemaking, technical system change, and process implementation. In addition, the CAA will seek to implement a sustainable cost-recovery model for CAA's ongoing regulatory activities, such as certification, licensing and oversight.

2. Flying Tomorrow

Key positions for 2028:

Below we summarise our key policy positions which build on previously published policy statements. These will evolve as our understanding develops, consultation takes place and DfT takes final decisions. The Annex to this document sets out our latest approach in more detail:

PILOT LICENSING

- **Licensing of Pilots:** Commercial operations will require a pilot to have a Commercial/Airline Transport Pilot licence and a type rating for the specific aircraft they intend to operate.
- **Aircraft Categories:** the UK pilot licensing framework will be based on powered-lift category principles.
- **PPL Pilots:** We intend to enable Private Pilot Licence holders to fly eVTOL aircraft for non-commercial purposes.
- **Training Guidance:** We will issue a FSTD and FCS policy paper on how to train pilots.
- **Novel Training Approaches:** We will consider novel approaches to training such as training on an aircraft with a single set controls and Zero Flight Time Training.

DESIGN AND CERTIFICATION AND CONTINUING AIRWORTHINES

- **We have adopted UK.SC.VTOL Issue 2,** supported by accepted Means of Compliance (MoCs) and will develop appropriate MoCs to support **eVTOL Noise Certification**, in the absence of specific ICAO Annex 16 criteria.
- **We are working to harmonise certification standards over time in partnership with** the NAA Network and publishing a harmonisation Roadmap.
- We are proposing to **treat novel eVTOL aircraft types as Complex Motor-Powered Aircraft (CMPA) as default,** but intend to establish flexibility to allow the CAA to have a discretion over how an aircraft is classified in certain circumstances.
- **We intend to submit** regulations for engineer licensing associated with electrical power plants in a 2026 SI.

AERODROMES

- **Aerodrome Certification:** We will amend the Aerodrome certification requirements to encompass the anticipated types of commercial operations in line with helicopters.
- **Infrastructure Design standards:** We will review the design, marking and lighting requirements for new and existing infrastructure.
- **IFR:** We will ensure IFR infrastructure is in place for Powered Lift to assist with approach and departures.
- **Aerodrome Certification:** Aerodromes will be treated with type agnostic certification requirements.
- **Rescue and Fire Fighting Service (RFFS):** we are working on establishing RFFS policies to ensure quick and effective response in case of emergencies.

2. Flying Tomorrow

FLIGHT OPERATIONS

- **Classification:** VTOL that can both fly on the wing and take-off & land vertically will be classed as ‘Powered Lift’.
- **Energy Policy:** In addition to time-based rules, we will be open to alternative performance-based means to make final reserve fuel requirements tailored to the route being flown, subject to equivalent safety level being maintained.
- **VFR and IFR:** We intend to allow Day and Night VFR and IFR commercial operations from the outset, subject to aircraft capability and pilot ratings.
- **Recharging with passengers:** By default we will not allow recharging with passengers on board but will allow operators to submit a risk assessment and mitigation plan for approval.

AIRSPACE AND ATM

- **Initial Operations:** eVTOLs will be certified to safely operate in accordance with the current airspace and ATM system.
- **The CAA Airspace Modernisation programme** is considering all aspects of future Airspace Policy and Airspace Management in the lower levels of airspace.
- **New ATM tools:** We anticipate that integration of these diverse airspace users will be enabled by new operational concepts, technologies and importantly the digitisation of the ATM system.

SECURITY: PHYSICAL AND CYBER

- **We will continue** to assess eVTOL operations, including any specific use cases that emerge, to consider any change in the assessed risk.
- **We will review** the risk associated with commercial operation of smaller eVTOL aircraft and establish what, if any, additional policy, guidance or regulation is recommended.
- **We will consider** the physical security requirements for vertiports and their operations as part of any new vertiport licensing regime.

2. Flying Tomorrow

Rulemaking Roadmap

The CAA is planning to submit its Opinion and Instruction Document for eVTOL to DfT in 2026, setting out the legislative changes we recommend for DfT to take forward. It is the CAA's ambition that the package recommended to DfT will cover all the legislative change required to enable initial commercial eVTOL operations by end-2028.

The scope and scale of the rulemaking package needs to be managed carefully to ensure it is delivered on an appropriate timescales. The following high-level milestones and key dates represent the current proposed process to deliver the legislative change required in 2027, ahead of implementation in 2027-2028.

3. Flying in Future

By end-2028 our ambition is to have in place the regulatory framework to support initial commercial passenger flights of eVTOL aircraft in the UK. Where possible, we will look to future-proof regulations and requirements in our recommendations to DfT to avoid further changes and cater to the evolution of the technology and its applications.

However, we can't anticipate all future changes – industry Concept of Operations continue to evolve – and in some cases we need to learn more from industry about their future plans, for example, on how they intend to integrate aircraft into more complex and congested airspace.

The CAA will continue to work with industry through the various working groups to understand their needs and to define rulemaking plans for beyond 2028, if required.

If required, a rulemaking roadmap will be developed to be transparent on the key items that will be included and the timelines for their implementation.

Areas of work we expect to take forward and put in place beyond 2030:

- **Air Traffic Management:** We expect existing ATM and ATC approaches can cater for early volumes of eVTOL. But beyond 2030 we expect to rely on system technology developments to enable higher traffic volumes of AAM aircraft, including eVTOL.
- **We will consider the development of an eVTOL Certification Specification** once we have completed type certification or validation on a number of projects, and the technology variations have stabilised.
- **Unlicensed aerodromes:** we will consider enabling operations into unlicensed aerodromes, as we learn more about aircraft being used and types of operations performed.
- **Hybrid and non-electric fuel:** We have seen rapid developments in fuel sources and types of propulsion used by eVTOL. We will work with the industry to enable their deployment as the technology matures.
- **Ab initio training:** Flying an eVTOL aircraft commercially will initially require a pilot to hold a commercial pilot licence (helicopter or aeroplane) and secure a type-rating specific to the aircraft to be flown. Ab Initio routes will require collaboration through ICAO and, if feasible, may be considered beyond 2030.

Conclusion

This Delivery Model sets out how we will achieve our **ambition** to have in place a clear regulatory framework and operational systems that allow initial commercial air transport eVTOL flights in the UK by end-2028.

It presents the **principles** that will underpin it, delivering as one CAA, iterating on our existing framework, engaging openly, learning from others, and achieving safe and proportionate solutions.

It summarises our **approach:**

Fly Now:
It's possible today to fly an eVTOL aircraft pre-certification for testing and experimental purposes.

Fly Tomorrow:
By end-2028 we aim to have the framework in place to enable eVTOL commercial air transport in the UK setting out our current timeline and positions on key issues.

Fly in Future:
Not everything will be possible or in place for those initial commercial flights; some developments will come later, once the technology and operations have matured.

There remains uncertainty and things that are outside of the CAA's control - the pace of technology development, evolution of industry operational plans, parliamentary time to amend legislation – but our hope is that this Delivery Model gives industry our current view which we will adapt over the years to come.

The following Annex provides a deeper-dive into specific workstreams and key topics.

Annex:

Proposed approach across the domains

Legislative definitions and thresholds

- Within relevant legislation, we intend to use existing UK or ICAO definitions, classifications and thresholds unless there is a clear rationale not to do so. This approach aligns with our international commitments to ICAO and helps ensure harmonisation with other NAAs.
- Within Flight Operations and Airworthiness domains, we intend to classify aircraft that can both fly on the wing and take-off and land vertically as 'Powered Lift', using the ICAO definition ('A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight').
- Those aircraft that fit the definition of a helicopter ('helicopter' means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes) as they are only capable of thrust-borne flight and are without a wing but have no autorotation capability will be classed as 'Non-Conventional Helicopters'.
- This approach will ensure that new aircraft types will be treated equitably with other aircraft.
- We intend to classify aircraft that are Powered Lift and Non-Conventional Helicopters as CMPA by default. This will regulate these aircraft and their operations under the higher-standard frameworks intended for complex, safety-critical passenger transport.
- Due to the pace of technology change in this sector, we intend to establish a flexibility provision in the regulation. This would allow the CAA to have a discretion over how an aircraft is classified when it does not fit the published definitions, and whether an aircraft can be excluded from the relevant requirements for complex aircraft, based on pre-determined criteria.

Initial Airworthiness - Design and Certification

SUMMARY

We enable industry to experiment and innovate safely with an agile Permit to Fly (PtF) framework in place since 2020.

We have committed to using a version of EASA's SC-VTOL as the certification-basis for eVTOL in the UK and are working with OEMs to certify their aircraft and validate certifications from other jurisdictions.

PROGRESS TO DATE

- Published policy statement on Type Certification of eVTOL aircraft in 2023.
- We have adopted MOC 1, 2 and 3 in ORS 9 Decision 37. MOC 4 has completed CAA review and has now been published.
- Consulted on and published UK.SC.VTOL Issue 2.
- Reviewed our approach to PtF, with improved guidance to teams.
- Supported applications to enable different stages of eVTOL development flight test campaigns.
- Issued a Design Organisation Approval (DOA) for an eVTOL OEM and started recurring oversight.

REGULATORY SCOPE

- UK.SC.VTOL
- UK Regulation (EU) No. 748/2012 (Part 21)
- Part 21 Sub-part J (DOA)

BEYOND 2030

We will consider the development of an eVTOL Certification Specification once we have completed type certification or validation on a number of projects, and the technology variations have stabilised.

POSITIONS AND UPDATES

- **We have built** significant capacity within our Design and Certification (D&C) team, growing to 67 in June 2025 and planning to further boost the team with the ongoing recruitment campaign.
- **We have published our certification basis for eVTOL - UK.SC.VTOL Issue 2 -** following consultation, which is supported by accepted MOCs. In addition, Operational Suitability Data, including Flight Crew data, Maintenance Certifying Staff data, and a Master Minimum Equipment List are critical Type Certification deliverables. Existing Part 21 regulations and relevant Certification Specifications, such as CS-FCD, CS-MCSD, CS-MMEL will be applied in the normal way. There are no current plans to develop further MOC material by CAA in support of UK.SC.VTOL, but applicants are able under VTOL.2010 to develop their own proposed means of compliance, which may include consensus standards, for acceptance by CAA. Any future work on MOC is expected to be triggered by our harmonisation work with groups such as the NAA Network or initiated to recognise a widely accepted industry standard.

We will consider applications for eVTOL that exceed current UK.SC.VTOL mass and passenger limits; we are open to considering these once an application is received. The existing certification framework can accommodate these kinds of projects.

- **We will develop appropriate Means of Compliance** data to support eVTOL Noise Certification, in the absence of specific ICAO Annex 16 criteria.
- **We are working to harmonise certification standards over time**. We are working with the NAA Network (FAA, CASA, Transport Canada and CAA NZ), which published a Roadmap in June 2025 as a key step on the journey to a globally consistent certification approach. We are working bilaterally with FAA on our approach to validating certifications, including existing differences in product safety probability levels.

Continuing Airworthiness and Initial Airworthiness

SUMMARY

We will utilise the existing regulatory framework as far as possible, making changes only where appropriate for the introduction of new aircraft or technologies. We will treat new aircraft as Complex Motor Powered Aircraft by default, ensuring the higher standard airworthiness frameworks are applied.

PROGRESS TO DATE

- Published Policy Statement (CAP 3004) on continuing airworthiness of eVTOL aircraft.
- Issued a request for feedback on the definition of Complex Motor-Powered Aircraft.
- Legislation to establish Part 66 engineer licence endorsements to support maintenance of electric powerplant has commenced; expected to be included in a Statutory Instrument during 2027.

REGULATORY SCOPE

- UK Regulation (EU) 748/2012 - Part 21
- UK Regulation (EU) 1321/2014 - Part 145, Part CAMO, Part CAO

BEYOND 2030

POSITIONS AND UPDATES

- **We intend to take the position that all eVTOL aircraft are CMPA.** This approach will ensure that airworthiness of these aircraft is maintained to the highest standards given their highly digital nature and the elevated reliance by the pilot on the continuous functioning of the aircraft systems However, we intend to provide a flexibility provision such that an aircraft may be classified as non CMPA subject to meeting predetermined criteria.
- **We intend to submit changes to UK Regulation (EU) 748/2012 and UK Regulation (EU) 1321/2014 for the introduction of VTOL aircraft.** The proposal is to utilise the current organisation approvals and only to make the necessary changes for the introduction of these aircraft.
- **We intend to submit regulations to introduce engineer licensing rating** associated with electrical power plants in a 2027 Statutory Instrument.

Flight Operations

SUMMARY

We will utilise the existing regulatory framework as far as possible, prescribing the rules for helicopters, aeroplanes or a combination thereof, depending on how the aircraft is operating, only amending when required, to ensure a safe, equitable, level playing field for all operators.

PROGRESS TO DATE

- **Published a Policy Statement in 2024 (CAP 3003)** giving our initial views on operational rules.
- **Undertook a Regulatory Gap Analysis on Regulation 965/2012** to establish initial list of changes required to support VTOL operations.
- **Launched the Flight Operations Stakeholder Working Group** in 2025 to collect industry input for our work.

REGULATORY SCOPE

- UK Regulation (EU) 965/2012 and associated AMC / GM
- Air Navigation Order 2016

BEYOND 2030

Continuous development of oversight capability.

POSITIONS AND UPDATES

- **Categorisation of eVTOL aircraft:** We intend to take a different approach to EASA given our preference for utilising the existing regulating framework. eVTOL that can both fly on the wing and take-off land vertically will be classed as 'Powered Lift'; eVTOL without a wing and no autorotation capability will be classed as 'Non-Conventional Helicopters'.
- **Energy Policy:** In addition to prescriptive time-based rules, we will offer performance-based fuel planning and management scheme requirements, tailored to the route being flown, subject to approval.
- **VFR and IFR:** We intend to allow Day and Night VFR and IFR commercial operations from the outset, subject to aircraft capability and pilot ratings, allowing a wide range of operations.
- **Part-SPA and Part-SPO:** Where possible we will enable operations requiring Specific Approvals (Part-SPA) such as low visibility operations (LBO) and HEMS, and specialised Operations (Part-SPO), such as aerial photography and aerial surveying, if appropriate requirements are met, allowing industry to perform a wider range of operations.
- **Recharging with passengers:** Given our current understanding of the risks, by default we will not allow recharging batteries with passengers on board. However, we will allow operators to submit a risk assessment and mitigation plan for CAA's approval to allow the procedure, subject to pre-defined criteria.
- **Part-NCC:** We will enable, subject to the aircraft, non-commercial operations using eVTOL.
- **Performance classes:** performance class rules for helicopters can be adjusted to accommodate powered-lift aircraft: those meeting Category A requirement (Category enhanced) will be able to fly over congested areas as long as in compliance with airspace regulations; those that meet Category B (Category basic) may be able to utilise existing helicopter routes (if they meet the requirements over the proposed operational environment) to fly over congested areas. In both cases, they will be subject to European Rules of the Air (SERA) and Rules of the Air. An eVTOL aircraft operator may request an exemption from the SERA and/or propose additional airspace arrangements. Such requests will be considered by the CAA on a case-by-case basis.

Pilot Licensing

SUMMARY

We are committed to building the pilot licensing framework on the principles of the powered-lift category, which is compatible with other national aviation authorities and compliant with ICAO. Initial commercial operations will require a pilot to hold a commercial pilot licence (CPL) and have gained a type rating for the specific aircraft they intend to pilot.

PROGRESS TO DATE

- **Published our statement on pilot licensing (CAP3005),** explaining our initial approach to pilot licensing.
- **Confirmed that rules in place** to create an initial pool of instructors and assessors.
- **Established Pilot Licensing Working Group** to give industry an opportunity to provide input into our approach for Pilot Licensing, regulatory amendments and means of compliance.

POSITIONS AND UPDATES

- **Licensing of Pilots:** Commercial Air Transport operations will require a pilot to have an aeroplane or helicopter Commercial / Air Transport Pillot licence (CPL/ATPL) and a type rating for the specific aircraft they intend to fly. Amended rules will allow the powered-lift type to be added to their existing airplane/ helicopter licence.
- **Aircraft Categories:** The UK pilot licensing framework is proposed to be based on powered-lift sub-category principles.
- **Private Pilots Licence (PPL):** While commercial operations will require a pilot to hold a CPL or higher, we intend to enable a route for Private Pilot Licence holders (PPL) to fly eVTOL aircraft with a Certificate of Airworthiness for non-commercial purposes.
- **Training Guidance:** A policy paper on Flight Simulation Training Devices (FSTDs) and Flight Crew Licensing (FCL) will be developed in the format of Operational Suitability Data (OSD), as established under retained EU legislation and Part-FCL, to support the development of best practices for eVTOL pilot training.
- **Novel Training Approaches:** We will consider novel approaches to training on a larger scale, such as training on an aircraft with a single set controls, if proven to be safe.

REGULATORY SCOPE

- UK Regulation (EU) No 1178/2011
- Air Navigation Order 2016

BEYOND 2030

To fly an eVTOL aircraft commercially will require a pilot to hold a CPL or higher, and secure a type-rating. Ab Initio routes require collaboration through ICAO and, if feasible, may be considered beyond 2030.

Aerodromes

SUMMARY

We will provide a framework to enable infrastructure supporting new and existing aircraft operating in wider range of environments. Aircraft types will be treated equitably, with a focus on regulating on a performance-based objective system.

PROGRESS TO DATE

- We have reviewed onshore heliport licensing regulations.
- We have drafted concepts for certification of onshore heliports.
- We have launched a Vertiports Stakeholder Working Group.
- We have launched a Heliport Stakeholder Working Group.
- We have progressed future aerodrome regulation concepts, for all aerodrome users including powered lift.

REGULATORY SCOPE

- UK Reg (EU) No 139/2014
- Air Navigation Order 2016
- UK Reg (EU) No 2018/1139 (Basic Regulation)

BEYOND 2030

Review specifications for novel aircraft usages, such as autonomous passenger and cargo transport.

POSITIONS AND UPDATES

- **UK Onshore Heliport Certification Amendments:** we have reviewed Articles 207 and 208 of the Air Navigation Order that govern aerodrome licensing and will make the framework more equitable across all aircraft types. This is likely to encompass all commercial operations with CMPA aircraft, and all scheduled passenger or cargo services. A carve out will remain for Flight Operation Approvals which would be extended to Powered Lift operations.
- **Aerodrome Regulations:** As part of a wider rationalisation of Aerodrome regulations we intend to simplify our regulatory output, this will include subsuming heliports and vertiports into the aerodrome regulatory structure and potential for a guidance material CAP document “Vertical Flight Infrastructure Handbook”.
- **Wingbourne vs Thrustbourne:** By simplifying our regulatory structure we will remove requirements for two regulatory systems to exist for different flight regimes allowing Powered Lift to operate in the most efficient regime available to them at a given aerodrome.
- **Safeguarding and Data:** We are progressing the ability of the aerodrome operator to utilise aviation safety tools at smaller aerodromes (such as heliports) within the Aeronautical Information Publication, new forms of Flight Restriction Zones and future scaled forms of safeguarding.
- **Infrastructure Design standards:** We will continually review applicability of existing infrastructure requirements and ensure they are fit for purpose.
- **Rescue and Fire Fighting Service (RFFS):** in collaboration with industry, we are working on establishing RFFS rules and objectives to ensure quick and effective response in case of emergencies, especially in the context of using Lithium Batteries. This work is being supported by an independent study commissioned by the UK CAA which will be available Q4 2025. We will also look to build on existing standards and international best practices, and to cater for other fuel types (such as hydrogen) and combinations of fuel source (hybrid) through performance based objectives.

Airspace and ATM

SUMMARY

We will integrate eVTOL aircraft into UK airspace and the extant regulatory framework.

The CAA Airspace Modernisation programme is considering all aspects of future Airspace Policy and Airspace Management in the lower levels of airspace where operationally and technologically diverse airspace users are expected to operate including eVTOL and autonomous passenger carrying aircraft.

PROGRESS TO DATE

- AAM anticipated operations included in the Airspace Modernisation programme.
- Internal planning for Stakeholder Working Group to better understand the CONOPS for eVTOL Operations in congested airspace, or from busy Airports/Aerodromes.

REGULATORY SCOPE

- SERA, Rules of the Air 2015, MATS Part 1. FISO Manual

BEYOND 2030

We are open to industry proposals for next generation technical developments, which assist and inform both our AAM specific and general Airspace Modernisation Programme roadmap planning.

POSITIONS AND UPDATES

- **Initial Operations:** eVTOLs will be certified to safely operate in accordance with the current airspace and ATM system and its associated requirements.
- **New ATM services -** We anticipate that integration of these diverse airspace users will be enabled by new operational concepts, technologies and importantly the digitisation of the ATM system. Note that there are no known mature air traffic management systems undergoing testing with a view to approval at this time.
- **Learning from UAS traffic management (UTM)** - We anticipate that eVTOL operations will benefit from ongoing work on UTM. Whilst the focus of this UTM activity is specific to UAS, we expect lessons learned may be applicable to future passenger- or cargo-carrying operations including the certification of organisations in the delivery of new traffic management provision.
- **We are working on UTM** requirements for small UAS (drones) and expect eVTOL to benefit from this in the future.
- **CAA anticipate** that eVTOL aircraft will be able to use existing IFR procedures, dependent upon compliance with existing equipment and performance requirements. Any new IFR procedures based on different performance requirements, or based on designs not compliant with International Procedures Design are unlikely to be available by end 2028. A consolidated update to existing UK Performance Based Navigation (PBN) regulations is expected in 2026. These regulations do not address potential future PBN requirements for eVTOL operations as these requirements are yet to be determined. CAA will continue to consider industry developments to support enabling future IFR operations as the industry develops.

Cyber and Aviation Security

SUMMARY

Cyber Security Type certification requirements are included in UK.SC-VTOL and AMC 20-42 is an accepted means of compliance with VTOL.2500(b) for Airworthiness Security aspects.

Most Aviation Security regulations do not apply to eVTOL-sized aircraft. There are no eVTOL currently seeking certification that exceed existing security thresholds.

PROGRESS TO DATE

- An initial risk assessment in July 2023 and subsequent review in April 2025 did not identify the need for any change to the existing AvSec regulation based on current assumptions.
- In 2025 CAA endorsed EUROCAE ED305 – Information Security Guidance for VTOL as an acceptable Means of Compliance for aircraft certificated to UK.SC.VTOL Issue 2.

POSITIONS AND UPDATES

- **We will continue** to assess eVTOL operations, including any specific use cases that emerge, to consider any change in the assessed risk.
- **We will review** the risk associated with commercial operation of smaller eVTOL aircraft and establish what, if any, additional policy, guidance or regulation is recommended*.
- **We will consider** the physical security requirements for vertiports and their operations as part of any new vertiport licensing regime. The scope of current and future information security regulatory requirements which is dependent on applicability of existing regulatory requirements under the Basic Regulation. (AOC operations etc.)

REGULATORY SCOPE

- UK Regulation (EU) No 748/2012
- UK Regulation (EU) No 1321/2014
- Aviation Security Act 1982
- UK National Aviation Security Programme and Single Consolidated Direction

BEYOND 2030

Review Security Implications periodically, in line with industry predictions of commercial operations, at which time it is expected that detailed operational data will be available.

Glossary

Advanced air mobility (AAM) - The emerging aviation ecosystem that uses new aviation services and innovative technologies to transport people and goods. This system operates in urban and regional environments. New aircraft designs include electric vertical take-off and landing (eVTOL) aircraft and other certified models.

Air traffic management (ATM) - The aggregation of the airborne and ground-based functions (air traffic services, airspace management and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations. (UK Reg (EC) No 549/2004 Article 2(10)) Note. The use of the term 'aircraft' above includes UAS/RPAS; thus, ATM includes the management of these aircraft which has been referred to as 'UAS traffic management (UTM)'.

Complex Motor Powered Aircraft (CMPA) – An aeroplane or helicopter that meets certain weight, passenger, crew, or propulsion criteria, or a tilt rotor aircraft. This classification determines whether an aircraft is subject to certain flight operations, flight crew licensing and airworthiness requirements.

Electric Vertical Take-Off and Landing (eVTOL) - A group of aircraft within the AAM ecosystem. Aircraft within the eVTOL group typically have the following properties: they are capable of vertical take-off and landing, use electric propulsion for their energy (either singularly or as part of a hybrid system), [have multiple rotors] and are used for passenger and/or cargo transport.

Instrument Flight Rules (IFR) – Rules governing the procedures for conducting instrument flight, where visibility is poor.

Permit to Fly (PtF) - A document issued by the UK Civil Aviation Authority (CAA) that allows an aircraft to fly when it doesn't meet the full certification standards but is still considered safe to fly under specific conditions.

Statutory Instrument (SI) – A form of legislation which allow the provisions of an Act of Parliament to be subsequently brought into force or altered without Parliament having to pass a new Act.

UAS Traffic Management (UTM) – Unmanned aircraft system Traffic Management A specific aspect of air traffic management which manages UAS operations safely, economically and efficiently through the provision of facilities and a seamless set of services in collaboration with all parties and involving airborne and ground-based functions. (CAA CAP1430)

Visual Flight Rules (VFR) - Rules that govern the procedures for conducting flight under visual conditions, where visibility is clear.