

The Certification of Advanced Air Mobility (AAM) Aircraft: In Brief

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Advanced Air Mobility (AAM) refers to a novel transportation system for flying a few passengers and small payloads of cargo over relatively short distances—about 10 miles to 150 miles—using new aircraft designs. These new designs mainly consist of electric-powered aircraft with vertical takeoff and landing capabilities that allow them to operate to and from sites with smaller geographic footprints and in closer proximity to city centers, transportation hubs, and major event venues than existing aviation infrastructure. Congress has expressed interest in supporting the development of AAM flight operations and promoting U.S. leadership in technology innovation to support the nascent industry developing AAM aircraft and its supporting infrastructure.¹ A key step toward routine AAM operations involves the certification of aircraft designs and manufacturing processes to ensure safety, quality assurance, and product life cycle support. The Federal Aviation Administration’s (FAA’s) Aircraft Certification Service plays a primary role in certifying aircraft and aircraft manufacturers. It collaborates closely with international civil aviation authorities to adopt industry standards and harmonize certification efforts and with the National Aeronautics and Space Administration (NASA) regarding technological advances in aircraft structures, systems, materials, and propulsion technologies. Historically, Congress has played a key legislative and oversight role regarding the safety and efficiency of the aircraft certification process and the roles and interactions between federal regulators and the aircraft manufacturing industry. This report discusses the framework, approach, and complexities of certifying new aircraft designs to enable future AAM production and operations.

The Advanced Air Mobility Concept

In 2016, the private sector introduced a concept for on-demand urban air transportation using electric-powered aircraft capable of vertical takeoffs and landings.² The concept, referred to as urban air transportation or urban air mobility, envisions discrete local air transport networks. These networks would each consist of one or more large *vertiport* hubs with multiple landing pads and electric charging stations and smaller vertiports or single landing pad *vertistops* dispersed throughout a geographic region. The concept seeks to provide air transportation alternatives in regions where ground transportation infrastructure, especially roads and highways, is highly congested.

As the concept has evolved, civilian use cases for these aircraft have expanded to include regional passenger operations; air cargo deliveries; public service operations (including police, fire, and medical services); agricultural operations (such as crop dusting); sightseeing flight or air tours; and corporate, private, and recreational flights.³ To reflect that these aircraft are not limited to operations in urban areas, some researchers adopted the term *advanced aerial mobility* in 2020.⁴ Thereafter, *Advanced Air Mobility* (AAM) became the common term among aviation researchers, regulators, and policy advisors to describe these aircraft and their uses. In 2022, AAM was formally defined in statute by the Advanced Air Mobility Coordination and Leadership Act (P.L. 117-203) as “a transportation system that transports people and property by air between two

¹ See “Issues of Potential Interest to Congress.”

² Uber Elevate, *Fast-Forwarding to a Future of On-Demand Urban Air Transportation*, October 27, 2016, https://evtol.news/_media/PDFs/UberElevateWhitePaperOct2016.pdf.

³ For example, see Adam Cohen et al., *Planning for Advanced Air Mobility*, American Planning Association, Planning Advisory Service, PAS Report 606, March 2024, <https://www.planning.org/publications/report/9286262/>.

⁴ See National Academies of Sciences, Engineering, and Medicine, *Advancing Aerial Mobility: A National Blueprint*, 2020, <https://www.nationalacademies.org/projects/DEPS-ASEB-18-02/publication/25646>.

points in the United States using aircraft with advanced technologies, including electric aircraft or electric vertical take-off and landing aircraft, in both controlled and uncontrolled airspace.”

Federal Actions to Support Advanced Air Mobility Operations

In July 2023, the Federal Aviation Administration (FAA) released Innovate28, its near-term implementation plan to integrate AAM into the national airspace system. The plan suggests that initial operations for AAM may be realized by 2028.⁵ Innovate28 expects that AAM would operate in low-altitude airspace from the ground surface up to 4,000 feet above the surface located over populated areas and in controlled airspace that has an existing high volume of established flight operations. AAM operations thus are likely to require unique considerations for the management of low-altitude airspace, including the establishment of dedicated flight routes and special air traffic control procedures. The plan envisions that AAM initially would utilize existing airports and heliports until operations mature and grow enough to justify the cost of constructing AAM vertiports and other dedicated infrastructure, which may take time to gain public acceptance and obtain approvals and construction permits. Under the plan, the FAA is to develop interim measures, including waivers, deviations, and exemptions, to tailor regulatory approvals of commercial flight operators to the unique operating characteristics of on-demand air service using AAM vehicles.

In July 2023, the FAA issued a final rule that updates regulations to allow air carrier operations using powered-lift aircraft to carry passengers and cargo. Such aircraft are capable of vertical takeoffs and landings and low-speed flight (see “Powered-Lift Aircraft”). The rule provides a regulatory framework for routine passenger- and cargo-carrying operations using certified AAM aircraft.⁶ A provision in Executive Order 14307, issued in June 2025, directs the Department of Transportation (DOT) and the FAA, in coordination with the White House Office of Science and Technology Policy, to establish an integrated pilot program to explore the use of U.S.-built AAM aircraft and technologies, including potential uses for air transport, medical response, cargo transport, and rural access.⁷ In March 2026, DOT announced that it had selected eight projects examining a broad range of operational concepts for AAM to participate in the integrated pilot program.⁸

In December 2025, DOT released its national strategy and comprehensive plan for AAM, which sets a framework for development over the next decade. According to DOT, the strategy and plan identify needed transformations of the aviation ecosystem—including ground infrastructure, airspace, and approaches to air traffic management—to accommodate AAM operations.⁹

⁵ Federal Aviation Administration (FAA), *Advanced Air Mobility (AAM) Implementation Plan, Near-term (Innovate28) Focus with an Eye on the Future of AAM*, Version 1.0, July 2023, <https://www.faa.gov/sites/faa.gov/files/AAM-I28-Implementation-Plan.pdf> (hereinafter FAA, *AAM Implementation Plan, Innovate 28*).

⁶ FAA, “Update to Air Carrier Definitions,” 88 *Federal Register* 48072-48092, July 26, 2023.

⁷ Executive Order 14307 of June 6, 2025, “Unleashing American Drone Dominance,” 90 *Federal Register* 24727-24731, June 11, 2025.

⁸ Department of Transportation (DOT), “THE FUTURE OF AVIATION IS HERE: Trump’s Transportation Secretary Sean P. Duffy and FAA Unveil Eight Selections for Pilot Program Testing Next-Gen Aircraft in America’s Skies,” March 9, 2026, <https://www.transportation.gov/briefing-room/future-aviation-here-trumps-transportation-secretary-sean-p-duffy-and-faa-unveil>.

⁹ DOT, *The Advanced Air Mobility National Strategy: A Bold Policy Vision for 2026-2036*, December 17, 2025, <https://www.transportation.gov/sites/dot.gov/files/2025-12/AAM%20National%20Strategy%202025.pdf>; and DOT, (continued...)

Collectively, these federal actions have been developed to support the integration of AAM operations into the national airspace system and the development of AAM aircraft, related infrastructure, and air traffic and airspace procedures to enable future AAM operations.

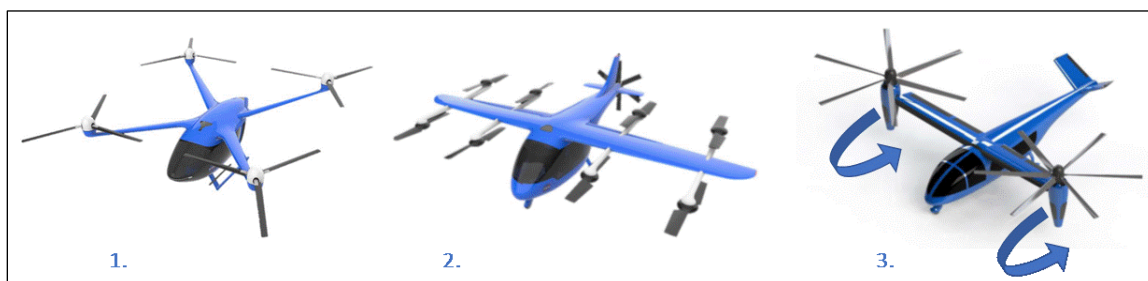
New Aircraft Designs

Companies are engaged in research and development of marketable passenger-carrying AAM vehicles. The unique characteristics of AAM aircraft, including vertical takeoff and landing configurations, electric propulsion, and advanced automation systems, present new challenges for aircraft certification. As a consequence, the FAA is requiring developers to comply with special conditions in order to demonstrate vehicle safety and airworthiness before the FAA issues a final aircraft type certification approval for the design of a specific AAM model (see text box, below, “What Is Aircraft Certification?”).¹⁰

Most AAM concepts envision using electric vertical takeoff and landing (eVTOL) aircraft, which encompass several designs (see **Figure 1**), including

- multirotor or multicopter vehicles, such as quadcopters that look and fly like archetypal small drones but are large enough to carry passengers and larger volumes of cargo;
- winged multirotor aircraft with fixed vertical rotor blades or propellers and wings like airplanes to generate lift in forward flight; and
- vectored-thrust designs (including tilt-rotor, tilt-prop, tilt-duct, and tilt-wing models) that take off vertically like a helicopter and, once airborne, transition either partially or fully to a configuration similar to a propeller-driven airplane.

Figure 1. AAM Aircraft Design Examples



Source: Adapted by CRS from NASA graphics in Michael Radotich, “Conceptual Design of Tiltrotor Aircraft for Urban Air Mobility,” paper presented at the Aeromechanics for Advanced Vertical Flight Technical Meeting, Transformative Vertical Flight, San Jose, CA, January 2022, https://ntrs.nasa.gov/api/citations/20210026219/downloads/1528_Radotich_011222.pdf.

Notes: 1. = Multirotor (Quadcopter), 2. = Winged Multirotor, and 3. = Vectored-Thrust (Tilt-Rotor).

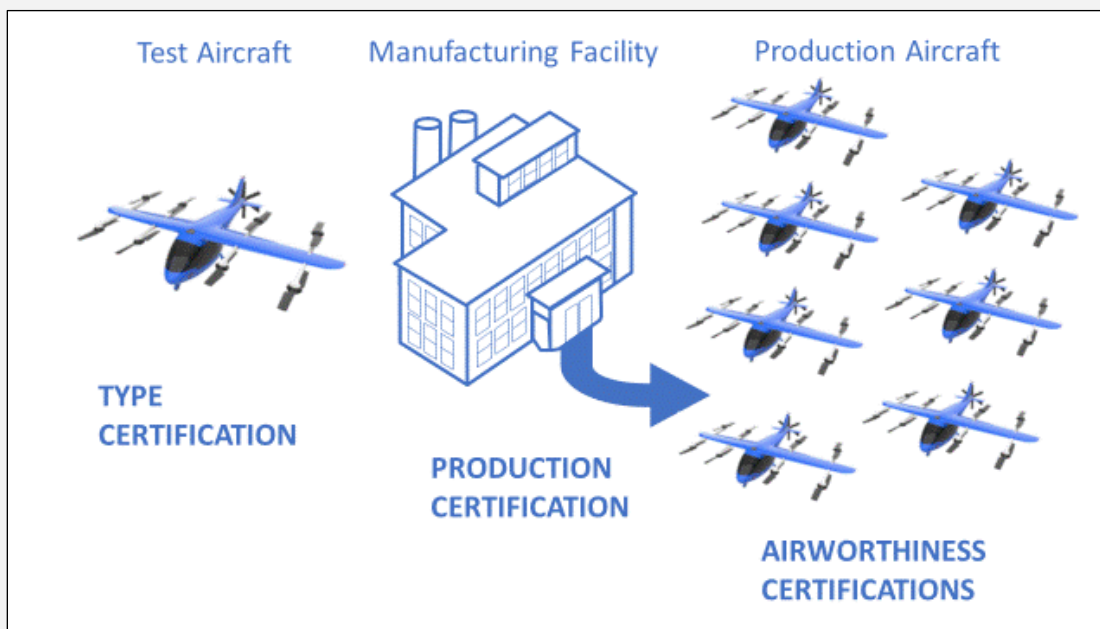
The Advanced Air Mobility Comprehensive Plan, LIFTing AAM to Maturity in the United States, December 17, 2025, <https://www.transportation.gov/sites/dot.gov/files/2025-12/AAM%20Comprehensive%20Plan%202025.pdf>.

¹⁰ FAA, *Type Certification – Powered-lift*, Advisory Circular (AC) 21.17-4, July 18, 2025, https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_21.17-4.pdf.

What Is Aircraft Certification?

The Federal Aviation Administration (FAA) imposes formal regulatory requirements for aircraft and aircraft component designers and manufacturers to assure design safety and manufacturing quality assurance of aircraft and their component parts. The *type certification* of an aircraft refers to the regulatory approval of an aircraft design, including all of its component parts, and the conditions and limitations imposed regarding the use of that aircraft. Once an aircraft design obtains a type certification, a manufacturer must obtain a *production certification* approval to manufacture duplicate aircraft that conform to the type design. The production certification process reviews the personnel, facilities, and quality control systems that provide assurances that the product can be reliably reproduced in conformity with the type design. Each assembled aircraft produced by the certified facility must obtain a unique *airworthiness certification* certifying that it conforms to the design approved under the type certificate and has been found to be in a condition that is safe for operational flight (see **Figure 2**).¹¹

Figure 2. Aircraft Development and Production Stages and FAA Certifications



Sources: Figure created by CRS. Advanced Air Mobility aircraft images from Michael Radotich, “Conceptual Design of Tiltrotor Aircraft for Urban Air Mobility,” paper presented at the Aeromechanics for Advanced Vertical Flight Technical Meeting, Transformative Vertical Flight, San Jose, CA, January 2022.

Powered-Lift Aircraft

The FAA classifies most of these designs as *powered-lift* aircraft, which have characteristics of both rotorcraft (helicopters) and fixed-wing airplanes as well as novel characteristics that are distinct from more traditional aircraft designs (see **Figure 1**).¹² Similarly, the International Civil Aviation Organization (ICAO) defines powered-lift aircraft as being capable of vertical takeoff and landing and low-speed flight by using engine-driven lift devices or engine thrust during these flight regimes.¹³ Both the FAA and ICAO definitions specify that powered-lift aircraft use wings

¹¹ FAA, “Certification,” updated September 12, 2024, https://www.faa.gov/uas/advanced_operations/certification; and CRS In Focus IF11145, *Delegation of Federal Aviation Administration Certification Authorities to Aviation Manufacturers*, by Bart Elias.

¹² See 14 C.F.R. §1.1 for a definition of *powered-lift*.

¹³ International Civil Aviation Organization, *Annex 1 to the Convention on International Convention on Civil Aviation: Personnel Licensing*, 14th ed., July 2022, <https://elibrary.icao.int/product/295126>.

or similar nonrotating components to generate lift during horizontal flight. This excludes pure multicopter or multicopter designs, which would be technically classified as rotorcraft. While the major developers of AAM vehicles in the United States are focused on designs that would be classified as powered-lift aircraft, some designs being developed in other countries, including one of the aircraft fully certified in China, are multicopter designs. Currently, no AAM vehicles have been certified by the FAA, but some are progressing through the required steps to obtain certification.

AAM Compared with Conventional Airplanes and Helicopters

Some missions that could potentially be conducted with powered-lift aircraft in the future are today flown using helicopters and sometimes airplanes. Envisioned examples include flights from busy urban centers to nearby airports, flights carrying workers to oil rigs and other remote job sites, and helicopter emergency medical services and air ambulance flights.

The unique design, flight, and handling characteristics of AAM aircraft present new considerations for aircraft certification. AAM designs also pose several design and operational challenges, including levels of aircraft automation, pilot training and qualifications, consideration of power requirements for electric motors, battery capacity, reserve power requirements, battery charging infrastructure, aircraft handling in turbulence, passenger comfort, passenger ingress and egress, emergency evacuation, and onboard safety measures. Some of these challenges are unique to AAM while some are common across wide-ranging aircraft types and designs.

New Aircraft Type Certification

The type certification process involves design reviews, engineering testing, and extensive ground and flight testing to ensure that an aircraft design meets all relevant regulatory requirements and industry standards regarding performance, safety, emissions, and noise. The FAA describes type certification as a multiphase process consisting of (1) conceptual design; (2) requirements definition; (3) compliance planning; (4) implementation; and (5) post-certification activities.¹⁴

Formal type certification of an original aircraft design begins with a developer's initial application to the FAA, which marks the culmination of the conceptual design phase. The FAA reviews the application in detail and determines the specific set of airworthiness, safety, and environmental regulations and standards the aircraft will be required to meet. This is known as the "certification basis."¹⁵ The formal certification basis serves as the culmination of the requirements definition phase and sets the parameters for the activities and milestones to be completed during the implementation phase of the formal type certification program.

During the type certification program's compliance planning and implementation phases, the developer designs and develops the aircraft to meet those criteria set forth in the certification basis. The FAA reviews design and engineering specifications and requires, monitors, and reviews the results of various engineering tests and evaluations to demonstrate compliance with standards relating to the structural integrity of the aircraft, flight performance, crash survivability, safety elements and characteristics, and environmental impacts of flight operations concerning emissions and noise. The FAA may require design modifications based on the outcomes of these

¹⁴ FAA Order 8110.4C CHG 7, *Type Certification, National Policy*, effective October 20, 2023, https://www.faa.gov/documentLibrary/media/Order/Order_8110.4C_CHG_7.pdf.

¹⁵ FAA Order 8110.4C CHG 7.

tests and evaluations, and the developer may go through several iterations of the design to meet FAA requirements.

As development matures, the type certificate applicant is to fabricate prototypes of the design to use in ground and flight testing. The FAA issues experimental airworthiness certificates for these prototypes. Such certificates permit research and development and flight tests to demonstrate compliance with airworthiness regulations for type certification.¹⁶ Ground tests and flight tests are closely monitored by the FAA to determine conformity to design standards and regulatory requirements set forth in the certification basis. The outcomes of these tests may result in the need for additional modifications to meet regulatory standards or to improve or refine various performance characteristics. The implementation of the type certification program may require a number of iterative redesigns and retesting to meet FAA compliance requirements and to make product improvements before the FAA completes its final reviews and issues a type certificate at the culmination of the implementation phase. Along with the type certificate, the FAA approves and publishes a type certificate data sheet that contains technical and performance specifications for the aircraft showing compliance with the certification basis.¹⁷

Because of the complexity of type certification, the process for a new aircraft design takes several years. A type certification application is good for five years for transport category aircraft and for three years for all other categories (e.g., normal, utility, aerobatic, and commuter categories).¹⁸ However, developers may require one or more extensions to their applications, as the certification of a new aircraft type may take between five and nine years.¹⁹ Under FAA's certification processes, the aircraft's engines and propellers must have type certification apart from the overall aircraft type certification. Once an aircraft type certificate, engine type certificate, or propeller type certificate is issued, it does not expire. Thus, a type certificate could outlast the company or entity that developed the aircraft or aircraft component. A type certificate may be transferred from one entity to another (e.g., through a corporate acquisition or sale).

Powered-Lift Certification

In November 2024, the FAA issued some permanent regulatory changes along with a temporary special federal aviation regulation (SFAR) that is to remain in force until 2035 unless otherwise superseded.²⁰ Collectively, these regulations address the integration of powered-lift aircraft into the regulatory framework for aircraft certification, pilot training and certification, flight simulators, and flight operations. In this rulemaking process, the FAA determined that existing aircraft certification requirements are sufficient to encompass powered-lift designs as a special aircraft class for which specific airworthiness standards have not been established but other existing regulations or airworthiness criteria may be applied.²¹ Elements of the framework pertaining to pilot certification and operations of powered-lift vehicles provide considerations regarding the design of pilot stations, flight controls, and aircraft automation. The FAA separately

¹⁶ FAA, "Special Airworthiness Certificates," updated April 1, 2026, https://www.faa.gov/aircraft/air_cert/aw_cert/special_aw_certificates.

¹⁷ Skybrary, "Type Certificate Data Sheet (TCDS)," accessed May 18, 2026, <https://skybrary.aero/articles/type-certificate-data-sheet-tcds>; and FAA, Dynamic Regulatory System, "Type Certificate Data Sheet," accessed May 18, 2026, <https://drs.faa.gov/browse/TCDSMODEL/doctypeDetails>.

¹⁸ 14 C.F.R. §21.17(c).

¹⁹ FAA, "How Does the FAA Certify Aircraft?," updated July 22, 2025, https://www.faa.gov/aircraft/air_cert/airworthiness_certification.

²⁰ FAA, "Integration of Powered-Lift: Pilot Certification and Operations; Miscellaneous Amendments Related to Rotorcraft and Airplanes," 89 *Federal Register* 92296-92522, November 21, 2024.

²¹ See regulatory consideration of special classes of aircraft under 14 C.F.R. §21.17(b).

noted that although AAM have unique airframe designs and means of propulsion (e.g., numerous independent electric motors and larger numbers of rotors and propellers), the FAA is applying many of the performance-based regulations for normal category airplanes to the certification basis for AAM powered-lift aircraft.²²

Systems, Flight Operations, Training, and Maintenance Considerations

An aircraft design consists of many subsystems, including the aircraft structure, flight controls, propulsion (engines and propellers), hydraulic systems, electrical systems, avionics (navigation, communications, and flight automation), and cabin environmental control systems (pressurization, heating, cooling, and air purification). In the type certification process, the developer must satisfactorily demonstrate that aircraft structures and systems individually perform to specifications and collectively can be operated safely and conform to established standards, including relevant industry consensus standards and applicable regulations set forth in the certification basis. In tandem with the type certification process, FAA flight standards personnel and human factors specialists assess the design to determine the number of pilots needed for safe operations and the training requirements needed to operate the aircraft.²³ More complex aircraft may require formal training for pilots to obtain a *type rating* to demonstrate proficiency in flying the specific aircraft type and operating its various systems. Additionally, a maintenance review board makes determinations regarding required maintenance and repair procedures to maintain the continued airworthiness of delivered aircraft once certified.

Noise and Environmental Considerations

The type certification process also involves design reviews and testing to certify compliance with noise and emissions regulations. These issues may not fully apply to the AAM aircraft certification process, as the most stringent environmental noise and emissions standards apply specifically to jet engines and large transport category aircraft. Emissions standards may not apply to electric-powered aircraft, but AAM aircraft may be required to demonstrate compliance with certain environmental noise standards to validate developer claims that these aircraft are generally quiet.²⁴ Currently, no AAM-specific noise limits exist.

The FAA has posted guidance indicating that its initial approach to noise certification standards for AAM, as well as for unmanned aircraft that require FAA certification, is to set individual standards for each type application.²⁵ In cases where the FAA determines that the noise certification basis for another application is essentially the same, it may apply the same standard to the new application. In this manner, the FAA would not go through a formal regulatory process since each action affects a single developer and a single aircraft model rather than having general applicability. For commercial drone applicants seeking type certification, the FAA generally has established single-event noise levels for each applicant specifying a maximum sound exposure level (SEL) of 78 decibels (dB) measured from a point directly below the aircraft during a level

²² FAA, *AAM Implementation Plan, Innovate 28*; and 14 C.F.R. Part 23, Airworthiness Standards: Normal Category Airplanes.

²³ Human factors specialists have expertise in evaluating human performance and the impact of human error in aviation systems; see FAA, “Human Factors in Aviation Safety (AVS),” updated January 12, 2026, https://www.faa.gov/aircraft/air_cert/design_approvals/human_factors.

²⁴ FAA, “Noise Certification of UAS/AAM Using Rules of Particular Applicability,” updated July 28, 2023, https://www.faa.gov/about/office_org/headquarters_offices/apl/ace/noise/uas_noise_certification.

²⁵ FAA, “Noise Certification of UAS/AAM Using Rules of Particular Applicability.”

flyover at an altitude of 250 feet.²⁶ Noise limits for AAM type applicants have not yet been set. Maximum noise levels and measurement conditions for AAM aircraft designs may differ from those set for specific commercial drones to reflect the larger size and weight of AAM vehicles, as well as more varied operational conditions and procedures that may expose human populations to the noise generated by AAM aircraft.

Generally, the FAA type certification process is not concerned with potential environmental impacts beyond emissions and noise. For example, FAA certification does not address all the potential environmental impacts associated with handling and disposal of batteries or fuel cells used to store energy to power electric motors. Although FAA certification does not address environmental impacts specifically, other laws and regulations enforced by the Environmental Protection Agency and the Occupational Safety and Health Administration regarding hazardous materials and substances and their potential impacts on the environment and human health may apply to the development and eventual production of AAM.²⁷

Aircraft Certification Delegation Authority

While the FAA has the exclusive authority to evaluate the safety of aircraft, aircraft engines, and other aircraft components and issue type certificates, it has specific authorization to delegate certain components of this authority to private individuals and companies, including aircraft developers and manufacturers.²⁸ Since its beginnings in the 1950s, the FAA has allowed aircraft and aircraft component manufacturers to conduct certain certification functions on its behalf, including some type certification activities.

Individuals designated by the FAA as Designated Engineering Representatives (DERs) and Designated Airworthiness Representatives (DARs) can assist developers with the FAA certification process.²⁹ These FAA designees—selected based on their knowledge and experience in aviation engineering and development, aircraft manufacturing, and aircraft maintenance—must be approved by the FAA to exercise their delegated authority, but they can be paid by aircraft developers to carry out certification functions. Typically, these DERs and DARs operate as independent contractors or consultants to the developer.

Another type of delegation is through Organization Designation Authorization (ODA), a program through which the FAA designates specific teams of developer or manufacturer employees to oversee and carry out certain certification functions on its behalf.³⁰ ODA can be issued for various functions, including aircraft production, maintenance, and operations, as well as for type certification. A type certification ODA unit can manage a type certification program, make engineering and manufacturing approvals, and issue airworthiness certificates but may not issue original type certificates. While many well-established aircraft and aircraft engine manufacturers—such as Boeing Commercial Airplanes, Gulfstream business jets, Piper Aircraft,

²⁶ See links to final rules at FAA, “Noise Certification of UAS/AAM Using Rules of Particular Applicability.”

²⁷ For example, see Environmental Protection Agency, “Aerospace Sector Information,” updated April 24, 2026, <https://www.epa.gov/smartsectors/aerospace-sector-information>; Occupational Safety and Health Administration, “Airline Industry,” accessed May 18, 2026, <https://www.osha.gov/airline-industry>.

²⁸ See 49 U.S.C. §44702(d).

²⁹ FAA, “Designees,” updated April 4, 2025, https://www.faa.gov/other_visit/aviation_industry/designees_delegations.

³⁰ FAA, “Delegated Organizations,” updated November 24, 2025, https://www.faa.gov/other_visit/aviation_industry/designees_delegations/delegated_organizations.

Textron (Cessna), Bell Helicopter, GE Aircraft Engines, and Pratt & Whitney—have ODA type certificate units, none of the companies developing AAM aircraft currently have ODA approval.³¹

While ODA delegation is not part of any current AAM development, it could play a future role. Besides ODA for initial type certification, FAA may issue ODA delegation authority to entities for supplemental type certification of design modifications. FAA may also issue ODA delegation authority to entities engaged in production certification for certain activities, including determining product conformity to type certification specifications; issuing airworthiness certificates for completed aircraft; and evaluating and making certain modifications to production limits and quality control measures. FAA also may grant ODA authority for maintenance, repair, and continued airworthiness activities to address major repair and alterations to operational aircraft.

Next Steps After Type Certification

Aircraft Production and Delivery

Once an aircraft design obtains a type certification, companies that intend to mass produce these designs must demonstrate that they can reliably reproduce that aircraft type to receive *production certification* to build deliverable aircraft.³² With FAA approval, AAM designers may scale their operations to produce larger quantities of aircraft, partner with other companies to increase production capacity, or sell or transfer the type certificate to another entity that may take the product into production. Once in production, every aircraft manufactured is required to undergo examinations, inspections, and tests to assess conformity to the certified type design and airworthiness standards in order to be issued an *airworthiness certification* prior to delivery. Every airplane manufactured must be issued an airworthiness certificate in order to be delivered and commence flight operations.³³ As noted above, FAA designees and ODA units may play a significant role in the oversight of production certification and the issuance of airworthiness certificates for manufactured aircraft.

Continued Airworthiness

Once aircraft are operational, designers and manufacturers or their successors (if the company or the design is transferred) are to cooperate with the FAA and provide support to operators in order to address any design, performance, or maintenance issues encountered and keep aircraft in an airworthy condition and in compliance with potentially evolving operational safety and maintenance requirements. The FAA issues special airworthiness bulletins and safety alerts to inform operators of conditions, including conditions reported by the aircraft designer or manufacturer, that could impact operational safety.³⁴ The FAA also issues airworthiness directives that require operators to comply with corrective actions, including repairs to correct defects or

³¹ FAA, “FAA ODA Directory,” updated April 21, 2026, https://www.faa.gov/other_visit/aviation_industry/designees_delegations/find_designees/oda-directory. While Boeing Commercial Airplanes, another subsidiary of the Boeing Company, does have Organization Designation Authorization approval for type certification, this does not currently extend to Wisk Aero, which is also a Boeing subsidiary.

³² FAA, “Production Certificates,” updated April 3, 2025, https://www.faa.gov/aircraft/air_cert/production_approvals/prod_cert.

³³ FAA, “Airworthiness Certification of Aircraft,” updated April 1, 2026, https://www.faa.gov/aircraft/air_cert/aw_cert.

³⁴ FAA, “Special Airworthiness Information Bulletins (SAIB),” updated September 15, 2023, <https://www.faa.gov/aircraft/safety/alerts/saib>; and FAA, “All Safety Alerts for Operators (SAFOs),” updated February 5, 2026, https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safo.

other design flaws, to maintain the airworthiness of aircraft.³⁵ Designers and manufacturers or their successors generally are expected to assist the FAA in making determinations regarding the safety impacts of defects and design flaws and provide guidance on appropriate corrective actions to maintain continued airworthiness.

Design Changes

Aircraft developers may decide to make changes to a type-certified aircraft's design. These changes may be contemplated for a variety of reasons, such as to address advances in technology or to adapt the design to better meet customer needs. For example, AAM designers may seek to make changes to address advances in battery technology or may seek modifications to utilize hydrogen fuel cells or other power sources or other means of propulsion. Also, designers may seek to increase cabin size, payload capacity, and aircraft power to meet consumer demand to carry additional passengers or larger cargo loads. These changes can be addressed either through a supplemental type certificate or an amended type certificate process, depending on the complexity of the changes.³⁶

Current Development Efforts

U.S. companies are researching and developing marketable passenger-carrying powered-lift vehicles capable of carrying from about two to six people or an equivalent payload of cargo. Companies developing powered-lift aircraft designs in the United States and actively seeking FAA certification of those designs primarily include Archer Aviation, Beta Technologies, Joby Aviation, and Wisk Aero (a Boeing subsidiary).³⁷ Products designed by each of these companies are at various stages in the FAA certification process. Archer, Beta Technologies, and Joby are initially seeking type certification of piloted aircraft with advanced automation systems intended to be flown in single-pilot operations. Wisk Aero is pursuing certification of a fully autonomous aircraft capable of transporting four passengers and their baggage or an equivalent payload of cargo with no pilot on board.³⁸

eVTOL developers in foreign countries are seeking certification from other civil aviation regulatory authorities—including key developers in Brazil, China, France, Germany, Japan, and the United Kingdom (UK)—as there is global interest in AAM vehicles and operational concepts.³⁹ Under various bilateral and multilateral international air safety agreements, an aircraft certification issued by civil aviation authorities in other countries would generally be recognized by the FAA, although the FAA may impose additional conditions, such as additional safety requirements and further testing, before granting final approval of these designs for use by U.S. operators.

³⁵ FAA, "Airworthiness Directives," updated November 25, 2024, https://www.faa.gov/regulations_policies/airworthiness_directives.

³⁶ FAA, "Supplemental Type Certificates," updated July 7, 2023, https://www.faa.gov/aircraft/air_cert/design_approvals/stc; and FAA, "Amended Type Certificate," updated June 7, 2024, https://www.faa.gov/aircraft/air_cert/design_approvals/amend_tc.

³⁷ Archer Aviation, accessed May 18, 2026, <https://archer.com/>; Beta Technologies, accessed May 18, 2026, <https://beta.team/>; Joby Aviation, accessed May 18, 2026, <https://www.jobyaviation.com/>; and Wisk Aero, accessed May 18, 2026, <https://wisk.aero/>.

³⁸ Wisk Aero, "Generation 6," accessed May 18, 2026, <https://wisk.aero/generations>.

³⁹ See SMG Consulting, "AAM Reality Index, 2026," accessed May 18, 2026, <https://aamrealityindex.com/aam-reality-index>.

In 2025, the FAA and national aviation authorities from Australia, Canada, New Zealand, and the UK issued a joint roadmap for AAM type certification.⁴⁰ The roadmap lays out a strategic plan for international collaboration among the participating nations regarding appropriate airworthiness requirements, the adoption of industry consensus standards, and collaborative multi-authority validation of type certification programs. The roadmap includes a framework for updating bilateral agreements to address AAM type certification and streamlining approvals among the participating countries. Companies in China are developing eVTOL and AAM aircraft, including two products that have obtained full certification for design, production, and delivery by the Civil Aviation Administration of China.⁴¹

Issues of Potential Interest to Congress

In 2022, the Advanced Air Mobility Coordination and Leadership Act (P.L. 117-203) mandated an interagency working group to address safety, security, and federal investment needs to support AAM development and operations. In December 2025, the working group released a national strategy and a comprehensive plan for AAM.⁴² As part of the strategy and plan, the working group urged the FAA and the Transportation Security Administration to work collaboratively to incorporate current cybersecurity requirements in the AAM aircraft certification process.

The FAA Reauthorization Act of 2024 (P.L. 118-63, Title IX, Subtitle B) included several provisions to foster the development of AAM vehicles and infrastructure. The law required the FAA to publish a special final rule for AAM operations, pilot qualifications, and training requirements, which it has done (see “Powered-Lift Certification,” above). It also directed the FAA to create a powered-lift advisory committee to make recommendations on permanent, performance-based regulations for the certification and operation of future powered-lift aircraft. The recommendations are to inform subsequent FAA rulemaking, including guidance on the certification of new forms of aircraft propulsion, including electric, hybrid, and hydrogen-powered engines.

Congress may consider additional options to further advance AAM aircraft development. For example, Congress may consider whether to designate additional federal funding or to require agency involvement in or funding of research and development of AAM systems, designs, structures, materials (such as composites), and propulsion (such as electric, hybrid, and hydrogen-powered aircraft engines), as well as research into state-of-the-art manufacturing and production technologies and methods. In the 119th Congress, the NASA Transition Authorization Act of 2025 (S. 933) would direct the National Aeronautics and Space Administration (NASA) to continue its research related to AAM, and the Drone Safety Enhancement Act H.R. (H.R. 6647) seeks collaboration between the FAA, NASA, other federal agencies, and appropriate representatives from academia and industry to continue ongoing research on AAM development and related technological capabilities, including autonomous capabilities, to support future AAM operations.

Congress may also consider options to impose more stringent requirements or additional FAA resources to oversee AAM certification or, alternatively, to relax such requirements. FAA

⁴⁰ National Aviation Authorities Network (Australia, Canada, New Zealand, United Kingdom, United States), *Roadmap for Advanced Air Mobility Aircraft Type Certification*, ed. 1.0, April 2025, <https://www.faa.gov/air-taxis/NAA-Network-Roadmap-Advanced-AirMobility-Aircraft-Type-Certification-Edition-April2025.pdf>.

⁴¹ These are a multirotor vehicle produced by EHang and a winged multirotor aircraft produced by AutoFlight. The FAA has not approved any of these designs being produced or developed in China for anything beyond experimental use for testing and limited flight demonstrations in the United States.

⁴² See DOT, *The Advanced Air Mobility National Strategy: A Bold Policy Vision for 2026-2036*; and DOT, *The Advanced Air Mobility Comprehensive Plan, LIFTing AAM to Maturity in the United States*.

oversight of commercial aircraft certification came under intense congressional scrutiny following the crashes of two Boeing 737 Max aircraft in 2018 and 2019 and the subsequent grounding of the worldwide Boeing 737 Max fleet. In response, Congress passed the Aircraft Certification, Safety, and Accountability Act (Division V of P.L. 116-260). The act included comprehensive reforms to the certification process with an emphasis on type certification of large commercial aircraft. Congress may consider whether to apply or expand certain provisions of the act to address type certification processes and oversight for AAM aircraft, given the prospect that future AAM operations could involve transporting large numbers of people through congested airspace in densely populated areas. Conversely, Congress might consider options to relax certification requirements that industry regards as impediments to obtaining FAA certification of these unique aircraft designs, perhaps by considering alternative means of compliance that are anticipated to offer equivalent levels of safety to more traditional or established certification regulations, standards, and practices.

The 119th Congress is also considering legislation (H.R. 7553; S. 3885) that seeks to increase transparency regarding the FAA type certification process and the criteria used to justify FAA's promulgation of issue papers documenting the rationale for adopting equivalent levels of safety memoranda documenting alternative means of compliance to meet regulatory safety requirements. The bills, both titled the Aviation Innovation and Global Competitiveness Act, would direct the FAA administrator to publish a plan creating a policy framework for the FAA to establish special conditions, special airworthiness criteria, or findings of equivalent levels of safety for innovation and novel technologies in aviation. The proposals would also direct FAA to adopt performance-based standards and industry consensus standards to be used as acceptable means or methods of compliance, and FAA would be required to be implemented within a certain time frame. The bills also call for the administrator to establish a requirement that would compel FAA to set standard expected timelines for major milestones in the type certification process, including greater standardization of the time to respond to applicant petitions for exemptions and proposals for alternative means of compliance with applicable performance-based design standards. They would also require FAA to set standard expected timelines for the issuance of issue papers and memoranda related to the certification basis for an aircraft design. In carrying out these requirements, FAA would be required to consult with industry trade associations and AAM stakeholders that represent prior and current type certificate applicants; airports, vertiports, and other prospective AAM infrastructure providers; unions representing FAA aviation safety inspectors and specialists, technicians, and engineers; and other relevant organizations and stakeholders identified by the FAA administrator. The bills would direct FAA to update its guidance regarding applicant eligibility for the delegation of certain type certification functions, the criteria for classifying actions considered routine and those considered safety-critical, factors for considering the use of delegation authority for routine type certification processes applied to new and novel technologies, and the extent to which implementation of delegation authority impacts U.S. global leadership in the development and production of these technologies.

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