

**HEARING BEFORE THE UNITED STATES SENATE
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION
SUBCOMMITTEE ON AVIATION SAFETY, OPERATIONS, AND INNOVATION**

**“FAA Reauthorization:
Integrating New Entrants into the National Airspace System”**

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Chair Sinema, Ranking Member Cruz, and members of the subcommittee,

Thank you for the invitation to join today’s hearing to discuss Honeywell’s perspective on the upcoming FAA Reauthorization Act with respect to integrating new entrants into the National Airspace System.

My name is Stéphane Fymat, I am the Vice President and General Manager of Honeywell’s Urban Air Mobility and Unmanned Aerial Systems business unit. Honeywell Aerospace is proudly based in Arizona, a leader in the aerospace industry and home to 19 of our facilities and nearly 7,000 employees.

Like the aviation industry we thrive on today, Honeywell Aerospace started its aerospace journey over 100 years ago by inventing the autopilot and continues to do so to this day. We are therefore uniquely positioned to help shape the future of Advanced Aerial Mobility.

Honeywell’s Deer Valley facility in Phoenix, Arizona is home to our Urban Aerial Mobility lab— here we are innovating and pioneering many of the critical technologies without which these aircraft are just not possible, such as:

- Automated flight control and actuation systems that enable these vehicles to take off like a helicopter and fly like an airplane,
- Electric, hybrid-electric and hydrogen-powered propulsion systems that enable ultra-quiet and emissions-free vehicles, and

- Detect-and-avoid systems to prevent collisions with aircraft and other objects.

In particular, Honeywell invests a large portion of our R&D into next-generation technology that makes flight more sustainable, such as electric power generation, hydrogen fuel cells, sustainable aviation fuel, and more. Our commitment to sustainability is an integral aspect of our design of products, processes, and services, and of the lifecycle management of our products.

The introduction of Uncrewed Aerial Systems (aka drones or UAS) and Advanced Aerial Mobility vehicles (AAM) is set to be **the most profound change** in the aerospace industry and in people's lives since the invention of the jet engine.

These new aircraft take-off and land vertically, just like a helicopter, and fly on their wings, just like an airplane. During takeoff and landing, they are no louder than a modern dishwasher, enabling them to pick you up and drop you off right in your neighborhood. They can do the same for mid-sized cargo, enabling organizations to skip the airports and ship goods directly from warehouse to warehouse to streamline the supply chain. Small drones can drop off small parcels directly at your home, emergency supplies to disaster areas, and urgent and vital medical packages to paramedics and hospitals.

However, there are **challenges that threaten** to delay the emergence and development of this industry, including the **lack of a clear pathway to the certification of these aircraft** and **an absence of necessary regulations to enable long-distance commercial drone operations**.

Countries that lead in the development of new modes of transportation establish or reaffirm their global leadership. We have seen this before – in the automobile industry, the rocket industry and the jet airliner industry.

Countries that lead in the implementation of new modes of transportation within their borders also establish or reaffirm their global leadership. We have also seen this before – in the U.S. with the interstate highway system, and in Europe with high-speed rail. Advanced Aerial Mobility is the next new mode of transportation, and it is playing out today.

The pace of technology innovation is accelerating, which means that the pace of regulation must also accelerate – or the United States will be left behind.

At Honeywell, our **single-minded mission** is to co-create, together with leading aircraft designers, the advanced aerial mobility industry. We see a world where:

- Urban and regional air travel is safe, accessible and ubiquitous,
- 100-mile trips are made in less than 45 minutes door-to-door,
- Cargo can be delivered autonomously to both rural and urban areas – from the warehouse to your door,
- Same day delivery is possible even in remote locations,

- Challenging but essential missions like border patrol and pipeline inspections can be done at scale, autonomously,
- And all the above can be done without major infrastructure expansion (e.g., roads, airports)

It's time to come together – **as policymakers, regulators, and technology leaders** – to address aerial mobility and remove **regulatory gaps** remaining on the path to success.

Congressional and White House leadership is critical to:

- a. First, prioritize the regulatory urgency required to achieve U.S. global leadership in UAS and UAM, this must become a national priority to succeed; for all regulatory priorities the timeline to achieve them is a critical factor to industry success and U.S. leadership, there must be an ambitious expedited timeline set out by Congress to ensure regulatory urgency and drive integration;
- b. Second, to ensure a whole-of-government coordinated approach across federal agencies and collaboration with industry, state and local governments, and stakeholders;
- c. Last, to ensure the federal government invests the resources necessary to accomplish these goals.

In order for the United States to maintain its global leadership position and to enable industry, we recommend Congress directs the FAA to address the following regulatory gaps:

Aircraft Certification

1. **Mandate the FAA to have certification regulations for piloted VTOL aircraft enacted by 2024.** Without regulation by 2024, U.S. AAM manufacturers will be left behind their global counterparts, the public will not reap the benefits of flying on these aircraft, and the United States will miss a crucial opportunity to lead the future of aviation.
2. **Mandate the FAA to validate AAM aircraft certified by the European Union Aviation Safety Agency (“EASA”), the United Kingdom’s Civil Aviation Authority (“UK CAA”) and other similar authorities using our existing bilateral aviation safety agreements and associated technical implementation procedures.** The United States already has the regulatory frameworks in place to accept foreign aircraft certifications. Reaffirming this fact with a mandate provides a clear pathway for any foreign manufacturer to have their aircraft certified in the United States and ensure that the United States public is at the front of the line to receive the benefits of all these aircraft – wherever they may have originated from.
3. **Mandate the FAA to ensure that its aircraft certification regulations are harmonized with EASA and UK CAA by 2024.** FAA global leadership is needed to harmonize AAM certification

with EASA and other countries to ensure that AAM can grow as a global industry and that American aircraft manufacturers and operators can access vital international markets for AAM.

4. **The FAA should prioritize the development of certification standards for autonomous aircraft, including unpiloted and reduced-crew cargo and passenger-carrying vehicles.** This will enable the United States to lead in autonomous aviation, and to accelerate the introduction of safe autonomy and automation technologies into aircraft.

Operations Regulation

5. **The FAA should complete rulemaking to enable regular Beyond Visual Line of Sight (BVLOS) operations for all UAS vehicles by 2024.** BVLOS regulations are critical to the UAS industry, not just for small drones, but for drones of all sizes. Without them the industry cannot scale, innovation will be stifled and drone-related services in the United States will be severely limited.
6. **The FAA should complete certification rules for the operation of both piloted AAM aircraft and drones in the United States by 2024.** The current set of rules apply to small drones but leave a gap for larger ones that are more practical for missions such as transporting cargo and supplies.

I commend Chair Sinema, Senator Moran, and the Members on this Committee, for supporting the success of this industry through legislation like the recent passage of the bi-partisan Advanced Air Mobility Coordination and Leadership Act.

I also applaud the efforts of the Federal Aviation Administration, particularly over the last several years including the BVLOS Aviation Rulemaking Committee (ARC), to work more closely in partnership with industry and stakeholders to drive regulatory progress.

Next year's FAA Reauthorization Act comes at a critical time and presents an important opportunity for Congress to take decisive action to prioritize U.S. global leadership and address the regulatory gaps that inhibit UAS and UAM industry growth.

If we as a country miss this opportunity, we will likely see another country replace the United States as the new global leader in aviation technology in the coming decade.

Success will require a more coherent whole-of-government coordination and partnership with state and local governments, industry, and stakeholders. Working together, I am confident we can achieve this outcome.

Thank you for the opportunity to be here today and I look forward to your questions.