

Innovation Hub

Future Air Mobility Regulatory Challenge



We are inviting organisations to join our regulatory Sandbox to explore with us the requirements for the approval of Future Air Mobility operations

You are developing a novel solution for Future Air Mobility and are ready to test and prove the feasibility of your solution in a safe and controlled experimental environment. Following this, you want to conduct trials, and progress towards small scale commercial operations. You are unable, however, to get regulatory approval because your solution does not fit within the existing scope of regulations.

The Regulatory Sandbox provides a pathway to seek approval for the trial of your solutions and enables you to inform the regulatory frameworks that will enable commercial operations.

The call is open to individual organisations or consortia working on transportation of passengers, goods or services, from A-B, using new or novel aviation technology, operations, or business models. This could include use of a new aircraft design, novel use of an existing aircraft, supporting infrastructure and systems, or any other solution that will enable Future Air Mobility operations.

The Context

Future air mobility use cases, often under the concept of Urban Air Mobility (UAM), have developed rapidly in recent years. This has been driven by large-scale investments in new aircraft designs, research into future air mobility and integrated transport networks, as well as commercial partnerships between equipment and technology firms in aviation and other sectors. The range of use cases proposed is expanding; from [airport shuttles](#) and [on-demand intra-city services](#) to [regional](#), [inter-city](#) and [rural services](#).

Gaining regulatory approval for Future Air Mobility operations is new territory; aviation regulations and approval mechanisms must adapt. Some changes are required to ensure:

- The Future Air Mobility industry meets the highest safety standards,
- Aviation security risks are managed effectively,
- Consumers have choice, value for money, are protected and treated fairly when they fly,
- Through the efficient use of airspace, the environmental impact on local communities is effectively managed and CO2 emissions are reduced.

We have put together an initial list of *Regulatory Questions* to explore which changes in regulations and approval mechanisms may be required:

Aircraft

- What are the requirements for the design, maintenance and repair of aircraft? How do these requirements apply to novel propulsion systems used in electric, hybrid, and hydrogen aircraft?
- What are the failure modes, redundancies, and contingency procedures?

Ground Infrastructures (Airport, Vertiport, etc.)

- What should the infrastructure requirements be to enable safe ground operations? This includes considerations on bird strikes, dangerous goods, rescue and firefighting services, etc.
- How should aircraft be refuelled/recharged? What are the implications on the safety of both ground and air operations? What are the implications of operating in an urban environment?
- How can the safety and security of landing areas be assured?