Unmanned Aircraft Systems
Fact Sheet

An Unmanned Aircraft System (UAS) is defined by the International Civil Aviation Organization (ICAO) as an aircraft and its associated elements which are operated with no pilot on board. The last few years have seen an ever-growing need and market for the use of UASs to transport goods and people. In the future this market is only going to expand.

With the expanded use of UASs for recreational purposes, sightings of drones in close vicinity of airport and aircraft are also on the rise. This has a huge impact on airport and airline operations. To ensure sustainability for the use of UASs commercially, operational disruptions caused by the irresponsible use of drones must be kept to a minimum. In addition, for UASs to be used on a wide commercial scale, they need to be integrated into the aviation system.

To ensure the safe and efficient integration of UASs into the aviation system, IATA continues its work in the following areas.

Mitigation of Safety & Security Threats:

There is a risk of aircraft accidents and incidents caused by the irresponsible use of an unmanned vehicle, primarily in situations where they are operating near airports and being flown dangerously next to aircraft.

To ensure the safe operation of unmanned vehicles, especially in close proximity to aircraft and airports, there is a need for:

- Awareness and education of operators of unmanned vehicles.
- States to ensure that all unmanned vehicles operate within clearly defined and known limitations.
- Enforceable legal and/or administrative sanctions for using unmanned vehicles in an unsafe or dangerous manner.

There is also a potential security threat posed by unauthorized use of UAS for malicious purposes including using UAS to infringe on restrictive or sensitive airspace. To effectively manage operational disruptions caused by unauthorized use of UASs, there needs to be a harmonized approach that involves airlines, airports, air navigation service providers, and law enforcement. Closing airspace should be the last resort. In addition, the use of anti-UAS measures to safeguard against unauthorized use of UASs needs to undergo appropriate risk assessments before being considered for implementation, as it can also have negative impacts on commercial aviation operations. Read IATA’s technical document about using anti-UAS technology.

Integration into Airspace:

In-line with the ICAO definition that UASs are aircraft, there is requirement to comply with established ATM procedures or meet the communication, navigation and surveillance requirements. However, the framework for Unmanned Traffic Management is moving toward a federated (decentralized) traffic management concept. This will result in an evolution from two systems -- UTM and ATM -- to a convergence of one system managing and enabling traffic (all traffic).
Subsequently, there may be a need to invest in new infrastructure to manage unmanned traffic. Based on ICAO’s principles for investment and cost recovery, any infrastructure or air navigation services specific to UASs should be borne by the UAS operator. However, the criteria of determining how the user fees should be applied and based on what criteria remains to be defined under the auspices of ICAO.

In addition, new technologies that are used to manage unmanned traffic must not create an interference or issue with the aviation spectrum, which is already a very finite resource.

**Regulations and Standards:**

Standards and regulations are moving at a slower pace than technologies and innovation. One of the main concerns is that trials and demonstrations may proceed without having the regulation in place. While data from these trials and demonstrations are critical to help shape future regulations, it also is necessary to ensure that they are safe. Finding the balance between innovation and safety standards/safeguards is key.

Under the auspices of ICAO, the scope of the UAS Advisory Group has been expanding to address this key work area. This includes developing an online UAS toolkit aimed at guiding states in the implementation of provisions related to the safe operation of unmanned aircraft in their airspace. The UAS Toolkit can be found at [www.icao.int/rpas](http://www.icao.int/rpas). Additionally, the UAS Advisory Group is now working on a UTM framework that is also being discussed with other groups. ICAO has most recently established a UAS Humanitarian Aid & Development Task Force to develop guidance material that will facilitate approval by civil aviation authorities for the use of UAS in a disaster response or humanitarian relief operation.

With the deliberate pace in developing standards, IATA sees that a way forward is focusing on industry-led work which can provide input to ICAO. Within that context, the first IATA UAS Think Tank meeting was held in April. The aim of the Think Tank is to serve as an informal group to develop positions and drive the regulatory frame. In addition, to engaging UAS enthusiasts, innovators, and developers, IATA organized its first Drones Innovation Weekend on 30-31 March 2019. [https://www.iata.org/events/Pages/drones-innovation-weekend.aspx](https://www.iata.org/events/Pages/drones-innovation-weekend.aspx).

**The Future**

The aviation industry has always been at the forefront of setting global safety standards and innovation. We have always worked for a more connected world through better, safer and more affordable air transport. Today we are on the cusp of bringing yet more innovation to air transport. From Urban Air Mobility, to last-mile and medium expensive mile delivery of cargo, to space tourism, the scope, outreach, and access to air transport is evolving.

IATA will continue working with our members, industry partners and stakeholders to shape the future growth of air transport and together shape the skies of tomorrow.