

Attachment

1. Maintain and improve today's high safety level :

Conflict management

It is agreed that the management of conflict between unmanned aircraft themselves and between manned and unmanned aircraft is an essential objective of the U-space. In fact, the draft regulation contains a series of requirements that support the management of conflict in the U-space airspace, notably by putting obligations on the relevant actors and requiring the necessary U-space services.

Besides the 2 actions that are referred to in the letter (in 1.1), the proposal includes mechanisms (to be coordinated and agreed between USSP and air traffic service providers) to allow unmanned aircraft to safely operate in the same airspace as manned aircraft. Indeed, to avoid potential conflicts, air traffic service providers, U-space service providers are required to have in place specific coordination procedures and sharing of traffic information and flight authorisation requests, as applicable. More precisely, Article 8 of the draft Regulation specifically obliges U-space service providers to establish arrangements with the air traffic services providers to ensure adequate coordination of activities, as well as exchange of relevant data and information.

The access by unmanned aircraft operators in the U-space airspace is conditioned to the use of mandatory U-space services that will provide such operators with relevant information (e.g. geo-awareness information, traffic information, airspace constraints) that will improve its situational awareness and made them aware of other traffic in their proximity. This will allow UAS operators to avoid airspace infringements and conflict with other traffic. Flight authorisation service will also support in avoiding any conflict prior take-off and therefore on a pre-tactical way. Alerts generated by the traffic information service will provide information on other air traffic which may be in proximity to its unmanned aircraft.

For manned aircraft entering the U-space airspace, the principle is that they remain either controlled by the responsible air traffic service providers, which, at the end, will remain responsible to spatially segregate manned aircraft and unmanned aircraft, in controlled airspace, or cooperative when the U-space airspace in uncontrolled airspace.

Flight authorisation vs control function

The flight authorisation service is a service that is mandatory for UAS Operators prior to enter in the U-space airspace and provides them with the green light to take-off from the specified location, at the given time and follow the specified flight path and land at the given time and in the specified location in the U-space airspace. It is therefore a service that is independent from the control function of the UA flight. At a strategic and pre-tactical levels, the flight authorisation service needs to ensure that authorised unmanned aircraft flight is free of conflict for the specified flight path and time with any other notified flight authorisation requests already given for other UAS operators within the same U-space airspace. The USSPs need also to consider the priorities for the operations as specified in the proposed regulation as well as the traffic information from manned aircraft available to them. Once the unmanned aircraft is in flight, it will be managed by the USSP which will provide it with other services as necessary to ensure that the flight can take place safely and adequately separated from other aircraft during operations as well as respecting the geo-awareness information available.

2. Clarify the responsibilities and liabilities to be borne by different actors

The sharing of responsibilities in the U-space airspace as proposed in EASA's Opinion aims to guarantee the main role of air traffic service providers as designated today on the basis of SES and certified on EASA frameworks. While air traffic service providers and USSP will provide services to manned and unmanned traffic respectively, the responsibility for preventing collision in the area where ATS providers are designated to manage the air traffic lies with them. This does not change. U-space service providers remain responsible for the provision of U-space services to operators of unmanned aircraft in the designated U-space airspace.

Air traffic service providers remain the sole responsible organisation to manage manned traffic when manned aircraft need to enter U-space airspace (and thus segregate manned aircraft and unmanned aircraft as needed through dynamic reconfiguration of the airspace until more advanced services and related procedures are available, validated and mature). It is not expected that USSP will provide services to manned aircraft when entering the U-space airspace, for the time being.

It is agreed that the ANSP will need full situation awareness of all airspace activities taking place in that U-space which is within the airspace for which the ATS is designated to manage manned traffic. This is why the coordination procedure and sharing of data and information (referred to in point 1 above) between USSP and ATS providers is essential to safeguard this objective. Hence, the obligation put on the common information service as single point of truth and to support the coordination procedures between USSP and ATS providers is also key.

Therefore, from EASA's point of view the draft regulation as proposed in the Opinion lays down clear sharing of responsibilities between all the actors of the U-space.

3. Enable common airspace situational awareness through information exchange

It is agreed that the "common information service" should be a single trustworthy source of information and reference, capturing the status of operations in any given U-space airspace at any given point of time in order to create the conditions for manned and unmanned aircraft to operate safely in that airspace. Also, the information exchange must indeed be performed using interoperable connectivity and interfaces, meeting equivalent security requirements that enable interoperability across the EU.

By establishing a common information service per U-space airspace implementation, the approach is to have a provider that collects static and dynamic data and disseminate it with required integrity and quality levels to enable the provision of the services by USSPs for the management of unmanned aircraft traffic. Thus, this service shall encompass all the necessary information that can be shared between USSP and ANSP, and that way, allowing the creation of a common air traffic 'picture' of what is happening in the U-space airspace.

Although it is correct that there are no standards for safe separation or method that has been generally adopted and applied to prevent collisions between drones and manned aircraft, the draft Regulation proposes to mitigate the lack of them by a first set of necessary requirements (based mainly on strategic de-confliction and management of airspace and pre-tactical tools based on flight authorisation services, traffic information and geo-awareness data), to be complemented later with further provisions based on validated set of rules, procedures and services, enabling a more mature state of airspace integration. It intends to provide the means to mitigate the risk of collisions by requiring adapted services and sharing essential traffic information. Until further development of detect and avoid (DAA) systems for all airspace classes and operational concepts, and more advanced tactical separation services are matured and validated, the only way to ensure safe operations in the U-space airspace, in particular when UAS conduct BVLOS operations, is to ensure that U-space participants are cooperative, i.e. they share real-time information regarding their actual position in the U-space airspace. If this is not possible, then the only manner to ensure safe operations is segregation. This is why this proposal focuses on how to mitigate the air and

ground risks by using today's airspace management techniques such as dynamic airspace reconfiguration, segregation and use of geographical zones, as they are necessary for safety.

4. Maximising airspace capacity and value through integration of manned and unmanned operations

We share the objective as indicated in the letter that the safe integration of manned and unmanned aircraft should be the final goal. It is recognised that the coexistence in the U-space airspace of unmanned aircraft with manned aircraft can limit the airspace capacity if the U-space airspace is located in areas which are already quite busy. As indicated in the Agency's Opinion, even though there is not a limitation in height or altitude (e.g. like done in the USA where UTM is limited to the airspace below 400ft), the first implementation of U-space airspaces are foreseen in very low level airspace and airspace over urban environment. The Agency is not claiming that this airspace is not busy but the capacity requirements and the traffic demands are totally different that for the upper airspaces. This very low level airspace is expected to be the airspace for which the majority of the UAS operations foreseen in the near future are likely to take place. Therefore, there is a need to make a difference between the present capacity problems experience by the ATM system prior to COVID19 crises and the first step traffic demand for UAS operations performing very specific operations in very low level airspace in rural areas or in urban airspace.

Moreover, there is a need for Member States to perform a risk assessment prior to designate the U-space airspace and it will be expected that capacity aspects are addressed as part of this risk assessment.

Moreover, all the actors of the U-space need to actively contribute to the safe and efficient flow of traffic in the U-space airspace in order to avoid capacity issues. As already indicated, the draft regulation proposes mechanism to ensure that USSP and air traffic service providers 'talk' to each other and take the necessary measures according to the type of traffic and the airspace constraints.

5. Create a flexible framework to accommodate an evolving industry

Subject for discussion at the EASA Committee of 30 June 2020.

6. Business and financial aspects

Subject for discussion at the EASA Committee of 30 June 2020.