

## WE ARE ALL ONE IN THE SKY

Brussels, 18 May 2020

### **Open letter to the European Commissioner for Transport**

Copy to: EASA Executive Director

Dear Commissioner,

The undersigned aviation organisations, representing airlines, air navigation service providers, airports, business aviation, general aviation, helicopters, aircraft and drone manufacturers and professional staff organisations are writing to you to share our views on the proposed high-level regulatory framework for U-space<sup>1</sup> and to request an extension of time to work together in solving some key issues that we have identified.

We encourage and support the ambition of the European Union to lead global efforts to develop a proportionate regulatory framework for unmanned aviation operations and UAS Traffic Management (UTM / U-Space). From a safety, public security, capacity, as well as economic perspective, it is important to establish a performance-based and risk-based regulatory framework that can provide some certainty to all airspace users and the aviation community. This framework would facilitate the safe integration of drones in Europe's skies while also ensuring commercial drone services can grow.

We believe that the upcoming U-Space Regulation represents an important first opportunity to achieve this goal. The lessons learnt from the implementation of the proposed regulation in Europe should be leveraged to inform ICAO's Global UTM Framework and other regulatory efforts across the world. As such, we think it is crucial that the regulatory framework put in place achieves a number of key principles, as set out in our letter of November 2019<sup>2</sup>, and ensures the buy-in of the whole industry – manned and unmanned.

The EASA Opinion No 01/2020 proposes a framework that aims to be performance-based, technology agnostic, flexible and extensible. The proposed regulation is built on Implementing Regulation (EU) 2019/947 on the rules and procedures for the operation of unmanned aircraft and is considered as a promising first step towards the incremental implementation of U-Space in Europe.

Unfortunately, while some progress has been made since the draft Opinion was first published in October 2019, the draft Regulation still does not fully address the concerns that have been consistently raised by the signatories to this letter. A detailed analysis of our concerns with the proposed Regulation is provided in the Annex to this letter.

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<sup>1</sup> <https://www.easa.europa.eu/document-library/opinions/opinion-012020>

<sup>2</sup> The joint statement set out five key principles for the U-space framework, including: clarifying the roles and responsibilities of all actors; maintaining today's safety levels, as a minimum requirement; creating a flexible framework; enabling common situational awareness; and facilitating integrated use of the airspace, rather than increased segregation. These principles are explained in full in the We are all one in the sky position paper: <https://www.iata.org/contentassets/acfe622861ec4e16a75b5d6a71fd7a67/we-are-all-one-in-the-sky.pdf>



Owing to the profound impact of this regulation not only on the emerging technologies of U-Space and related services but also on manned aviation industry, we are sure you will understand the importance of taking into due consideration all key aspects from the outset. Therefore, the signatories support and would invite the Commission to consider the following approach:

- 1. We offer our support to the Commission and EASA to further improve the latest available version of the regulation**

The draft regulation text and provisions need to be further worked out and matured in order to secure the support of the aviation industry. We do not believe this would be best achieved through the normal EU Comitology process at this stage. It is essential to pause activities (at least 4 months) to provide the opportunity for all manned and unmanned aviation stakeholders to work together and address the key areas of concern.

We also offer our support to develop the AMC/GM underlying this regulation as it is essential that they are carefully and timely matured with appropriate industry participation, so as to provide a solid foundation for the development of compliant U-space services.

- 2. A new consultation is needed**

Launching a new and more comprehensive consultation (i.e. with greater time for inputs and more extensive stakeholder engagement) on the revised text would be extremely valuable and welcome. Whilst we understand the time pressure to establish a regulatory framework in this area, we are disappointed by the limited opportunities aviation stakeholders, particularly manned aviation stakeholders, have had to feed into the regulatory development process. We would like the Agency to organise thematic meetings with key representatives from manned and unmanned aviation organisations, preferably alongside one another, to discuss and find solutions for all the identified issues (described in the Annex).

- 3. Transparency is a ‘must’**

It is essential to ensure the transparency and efficiency of the regulatory processes and related decision-making processes, especially during the Covid-19 crisis time where resources will be scarce (e.g. less travel and more frequent remote meetings, and many stakeholders affected by overall budget cuts, etc). We make a strong plea for the European Commission and EASA to follow their well-established procedures and take ownership of the documents in the drafting process, while providing full transparency.

We urge you to take our concerns and suggestions into account when considering how best to proceed with this very important piece of regulation. We are at your disposal for any questions you may have as a result of the points we raise.

We are looking forward to your feedback.



## Signatories: Members of the We are ALL ONE in the Sky initiative:

Contact email: [wearealloneinthesky@gmail.com](mailto:wearealloneinthesky@gmail.com)

- Airlines for Europe (A4E)
- Airports Council International Europe (ACI EUROPE)
- Airlines International Representation in Europe (AIRE)
- Air Traffic Controllers European Unions Coordination (ATCEUC)
- Civil Air Navigation Services Organisation (CANSO)
- Europe Air Sports (EAS)
- European Business Aviation Association (EBAA)
- European Cockpit Association (ECA)
- European Helicopter Association (EHA)
- European Regions Airline Association (ERA)
- European Transport Workers' Federation (ETF)
- General Aviation Manufacturers Association (GAMA)
- International Council of Aircraft Owner and Pilot Associations (IAOPA)
- International Air Transport Association (IATA)
- International Federation of Air Line Pilots' Associations (IFALPA)
- International Federation of Air Traffic Controllers' Associations (IFATCA)
- International Federation of Air Traffic Safety Electronics Associations (IFATSEA)





## WE ARE ALL ONE IN THE SKY

### Annex: Comments on EASA Opinion 01/2020 – High-level regulatory framework for the U-space

The We are all one in the sky position paper of November 2019 set out five key principles which we believe are critical to a successful and sustainable European regulatory framework for the safe integration of drones. We have grouped our concerns with the existing draft Implementing Regulation against each of those five principles.

#### 1 Maintain & improve today's high safety level

In defining the U-Space airspace<sup>3</sup> and the obligations of the U-Space Service Provider (USSP)<sup>4</sup>, the Regulation refers to “U-Space services required to support safe movement of aircraft”, however, it does not clearly identify which specific services are necessary for achieving this particular objective.

The notion of “safe and efficient movement of aircraft” introduces further ambiguity. By reference to “movement of aircraft”, rather than “flow of air traffic”<sup>5</sup>, the Regulation sets nearly limitless responsibility on USSP – movement of aircraft involves risks associated with the operation of an individual vehicle, as well as risks arising from that vehicle being part of the air traffic. By doing this, the Regulation also blurs the delineation of responsibilities between the UAS operator and USSP.

It is essential to clearly define the responsibilities and legal obligations for the prevention of collision in U-Space.

##### 1.1 Conflict Management – Key Missing Link

The Regulation does prescribe certain actions that can be placed in the context of the conflict management, and notably:

- The obligation of USSP to observe the priority criteria for the purpose of strategic de-confliction;
- The obligation of ANSP to dynamically reconfigure the airspace for the purpose of segregating manned from unmanned aircraft.

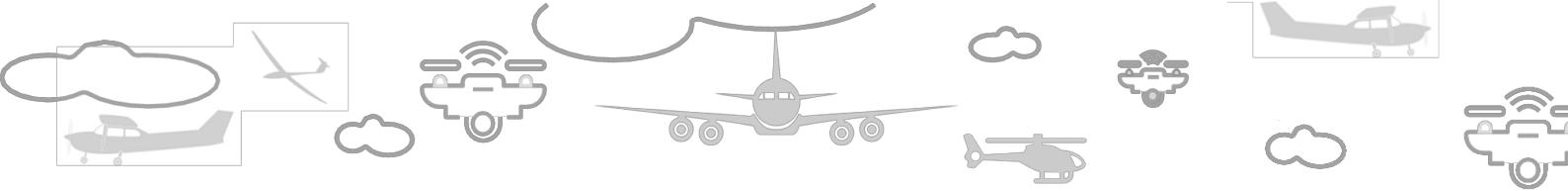
These, however, are not sufficient and complete to be considered as an elaborate conflict management function of the U-Space.

Questions of temporal and spatial segregation are far from simple and straightforward. The Regulation assumes that the USSP will, in issuance of authorisation, ensure temporal segregation of UAS operations.

<sup>3</sup> Ibid. Article 4 (5)(b)

<sup>4</sup> Ibid. Article 8 (1)

<sup>5</sup> Compare with ICAO Annex 11, Air Traffic Services, Applicability, “Annex 11 pertains to the establishment of airspace, units and services necessary to promote a safe, orderly and expeditious flow of air traffic”



Similarly, the Regulation assumes that the ANSP will, by dynamically reconfiguring the airspace, ensure spatial segregation between the manned and unmanned aircraft operations. However, these assumptions are never defined as a clear and legally binding objective of the USSP, respectively the ANSP.

The Regulation assumes that the conflict management “will happen”, in as much as conflicting objects will not operate “in the same space” and “at the same time”, but fails to establish the authority and obligation of any entity to define and implement the criteria for “same space”, “same time” and sufficient displacement.

In addition, we believe the regulation should only cover those services necessary for strategic and pre-tactical conflict management – namely e-identification, geo-awareness and flight authorisation – at this point in time. By also incorporating additional services, we believe the framework unnecessarily and prematurely specifies requirements and approaches to specific tactical services (for example, tracking, conformance monitoring, weather) where we cannot yet be confident these are appropriate or that the necessary technology exists and has been sufficiently validated to ensure acceptable levels of safety.

## **1.2 Broken Link between the Authorisation Service and Control Function**

We believe Flight Authorisation must be seen as a control function since authorisation without a control function is nothing more than an administrative process.

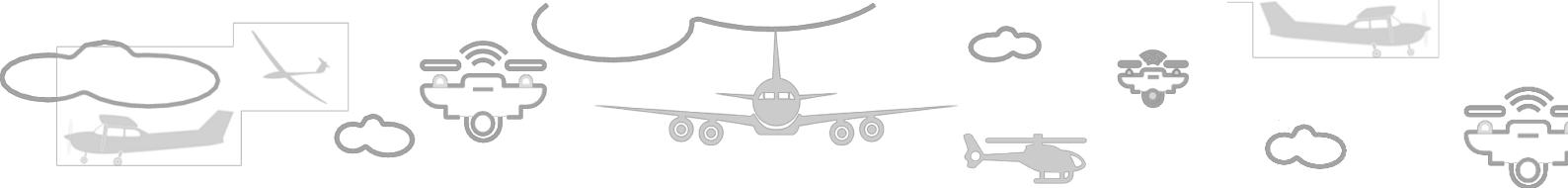
The control function may be exercised without tracking and conformance monitoring. However, it is difficult to imagine how the processes and working methods that, when they exist, form part of an overarching function, can be separate functions in their own right.

However, the Regulation establishes exactly that – not only are the Tracking and Conformance Monitoring Functions defined as optional services, but as services in their own right which, even when established, have no influence on the objective and performance of the “Flight Authorisation Service”.

In doing so, the Regulation has broken the link between Authorisation and Control and reduced the former to an administrative process. Even if one would agree with such a setup, it is, then, difficult to relate the Authorisation function to the proclaimed objective of the regulation – safety.

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

In creating an environment in which there is more than one airspace manager in a given piece of airspace, the Regulation creates a framework in which it is unclear with whom the ultimate responsibility for safe separation lies and, therefore, with whom liabilities lie. It is unclear whether the responsibility for preventing collision lies with the certified ATSP, that is not providing services to drones, or the USSP, that is not expected to provide services to manned aviation.



Envisaging the designation of U-Space in controlled airspace while mandating that unmanned operators in that controlled airspace take a service from any one of several U-space service providers operating therein, creates a situation of more than one airspace manager in control of airspace users in one volume of airspace. At this stage of market evolution this is not necessary and is not sufficiently developed, tested or validated to ensure the safety of all aviation, particularly manned aviation.

Article 4.4a states that "*air navigation service providers shall remain responsible for the provision of air navigation services to operators of manned aircraft*". If the Air Navigation Service Provider (ANSP) is to retain responsibility for air navigation services to operators of manned aircraft, as it must, then the ANSP will also need full situational awareness of all airspace activities taking place in that U-space. The provisions of the draft Regulation and the architecture envisaged for U-space operations do not seem to make that requirement clear.

### **3 Enable common airspace situational awareness through information exchange**

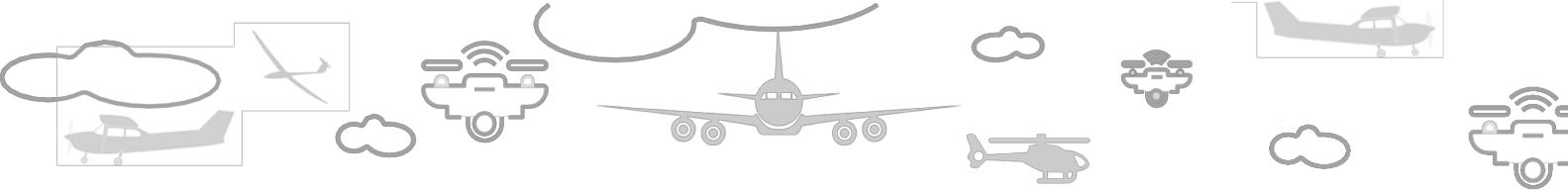
The Opinion talks of the Regulation's objectives being to "ensure that unmanned aircraft operations operate in a safe, secure, manageable, connected environment while keeping all aircraft safe in the U-space airspace". To achieve this and "create the conditions for manned and unmanned aircraft to operate safely in the airspace (controlled and uncontrolled airspace) where U-space services are provided", there is a recognition that a "common information service" is required to ensure all actors share the necessary information to ensure safe operations. It is also argued in the Opinion that there should only be one common information service per designated U-space, with a supporting rationale that "this is the single point of truth".

The "common information service" should be clearly required to provide that "single point of truth", capturing the status of operations in any given piece of airspace at any given point of time in order to create the conditions for manned and unmanned aircraft to operate safely in the airspace (controlled and uncontrolled) where U-space services are provided. This includes a central registration, geo data and tracks data base.

Information exchange must be performed on a common basis, meeting equivalent security requirements that enable interoperability.

It is not clear how safety can be achieved without a detect and avoid system. There is no safe separation standard or method that had been generally adopted and applied to prevent collisions between drones and manned aircraft. According to the Opinion, the only possibility rests with the segregation that, in order to become effective also in terms of flexible use of the airspace, should be based on agreed and sustainable procedures.

What to do with the information regarding drones' positions is not clear. Separation minima and methods of application use in conventional ATC do not apply.



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

Manned and unmanned aircraft must be able to coexist in the same airspace, even at low altitudes where General Aviation (GA), search & rescue, air sports, rotorcraft and the armed forces conducts a lot of manned aircraft operations, in controlled as well as in uncontrolled airspace.

It is important to recognise that in addition to providing flight information services, ANSP coordinate flights of state aviation operators in controlled airspace and uncontrolled airspace.

There are numerous HEMS flights conducted in the lower airspace. Creation of the U-space in the way presented in the regulation would be problematic by potentially limiting the ability for HEMS flights to enter the airspace rapidly.

Creating new separated structures in the class G airspace is in contrary to the concept of flexible use of airspace architecture. This will seriously limit the airspace availability, to users other than drones, especially GA, and could further have negative consequences creating additional workload for crew, introducing additional pinch points in the airspace and increasing the Mid-Air Collision (MAC) risks.

We believe that the future of aviation involves the full integration of manned and unmanned operations. A consensus-based solution on the best way to reach this objective in the safest and most efficient way has to be found among all stakeholders.

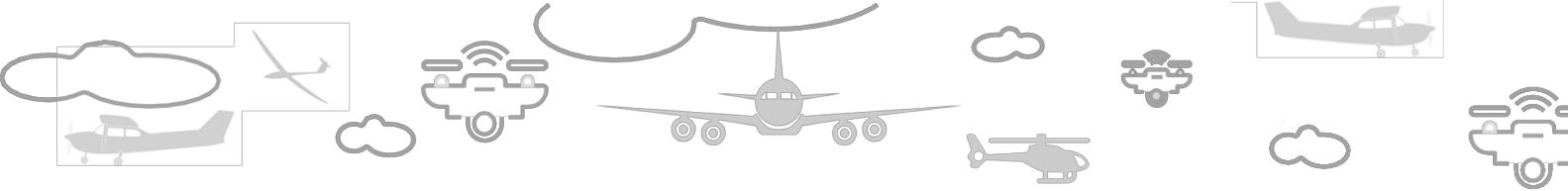
The opinion introduces a new concept: the dynamic reconfiguration of airspace (Art 4.4). This concept is not mature and thus induces risk from a safety and financial point of view.

There is a significant question mark over how the ANSP would enact such a ‘deactivation’ of the U-space, and how certainty could be provided back to the ANSP that all unmanned operations in that airspace had ceased in very short notice, such that manned activities could then be undertaken. This is particularly true in a situation where the U-space might need to be ‘deactivated’ rapidly (for example when an emergency occurs and a manned aircraft needs to enter the airspace”).

#### **5 Create a flexible framework to accommodate an evolving industry**

Article 5(6) states that “the organisation in charge of the common information function shall not be related or connected in any manner or form to any U-space service provider and shall not provide any U-space services itself”. The specific “Common Information Service provider (CIS)” architecture proposed is justified by no documented knowledge derived from appropriate experience or R&D.

The prohibition of any relationship between the CIS and U-space service providers is not consistent with existing U-space implementations using Common Information like services, including many EU-funded activities which have taken place through the SESAR programme. It prevents at the same time ANSPs to contribute to the common information and be an USSP and it prevents USSP that are also U-space platform solutions sellers to act as (or be



significantly connected to) an USSP. The requirement is not justified as the European Union already has rules to prevent anti-competitive practices.

We concur with – and support – the desire to prevent anti-competitive behaviour that inhibits innovation and we agree with the notion expressed in the Opinion that “ATM cannot be seen as the *only* appropriate means to safely and efficiently manage the upcoming UAS traffic”. However, we disagree with the Opinion in prohibiting any relationship between the CIS provider and the U-space service provider as being an appropriate mechanism to achieve that. Doing so has the potential to hinder innovation and slow down the evolution of the U-space industry.

States may consider the infrastructure and services to unmanned aviation as a vital part of the future infrastructure for transport, safety and security. In times of unrest, crisis or worst case – war – States will need to be able to control this part of the infrastructure and to ensure continuous service to police, emergency services and armed forces – and not be solely in the hands of commercial providers.

As of this, many States may see the ANSP operating in their airspace as best placed to provide common information to support safe flights in their airspace or to provide services where not economically beneficial to U-space Service providers.

It also risks limiting the extent and speed with which manned and unmanned airspace users can evolve to operate in an integrated manner, as well as the potential benefits that ATM might gain from working in close partnership with U-space service providers who can bring new ways of working and new tools to the ATM environment.

Instead of prohibiting any relationship between the CIS provider in a designated U-space and a U-space service provider, we believe that the regulatory framework should require Member States to ensure that any potentially anti-competitive behaviour, by any of the involved entities, is monitored and prevented through standard market regulatory measures. This would involve the use of existing competition authority structures to carry out market monitoring and enforcement activities of commercial providers.

## 6 Business and financial aspects

### 6.1 CIS pricing & Equipment obligation

The proposal outlines that pricing of common information service (CIS) will be set at national level, which entails that traditional aviation could be burdened with financial implications of drones' integration. Conventional Airspace Users have managed for decades without such U-space services, and while drone operators will be the beneficiaries of the creation of the U-Space, it looks like they should be the ones to bear the costs of all services created within.

Although it is not specifically presented in the draft proposal as to what exact technologies the aviation actors will be obliged to be equipped with, the document mentions that EASA will aim to explore how the aggregation of multiple technologies and initiatives can serve to improve the current safety levels for conventional airspace users and to allow for unmanned



operations to take place. However, the introduction of an obligation for conventional airspace users to be equipped with specific equipment to become U-space cooperative cannot be accepted. The traditional conventional airspace users had to follow European regulations and introduce costly mandatory equipage to be able to operate in airspace with the airlines, and now the same is expected from drones and drone operators seeking to share airspace with other airspace users.

Glider, helicopter, and airplane pilots or their passengers cannot be asked to pay for the business model of drone operators.

## 6.2 ANS data in U-Space purposes

The Regulation takes a number of today's ATM functions, services and data for granted, as if they "simply exist", for example, ATS surveillance data or aeronautical information, and are therefore to be put into service of the U-Space for free.

The information exchange required by U-space, including implementation of the dynamic configuration concept, will necessitate that existing aviation and ANSPs create, store and maintain specific data and interfaces and/or equipment to provide the CIS and/or the USSP with information. To a certain extent, this will have to meet safety and security requirements applicable to manned aviation and critical infrastructures, with all the costs that it involves.

Hence, the existing aviation industry will have to implement and maintain new interfaces and systems. Worse, the "CIS" architecture may lead to multiple interface requirements across Europe or even within a given country. Regarding ANS, this interface should be built on acceptable mechanisms for ANSPs (ex. SOA such as SWIM) in order to avoid multiplication of additional costs to airlines and ANSP. However, ANSPs will have no control over technical and economic choices that will prevail, as it would be mainly a CIS and/or an EASA responsibility.

Such costs cannot be known or assessed at that stage. The maturity level of the prescribed architecture that involves the CIS and the dynamic configuration, which are fledgling concepts, is extremely low. The costs cannot be either safeguarded or controlled by ANSPs. They cannot be even funded as no mechanism is identified to allow ANSP to fund the exchange of information with USSP and/or the CIS (as per Recital 36 of the opinion). This introduces an additional burden for ANSPs and airlines with no appropriate economic and cost regulatory framework.

Moreover, all functions, services and data that exist today in the ATM world exist there due to States' commitment in the provision of Air Navigation Services; they are defined, designed and maintained in the view of the provision of ANS.

This fact has two important implications:

- Remuneration of costs for ANS; and
- Future evolution of ANS functions, services and data standards and methods.

Principles for charges levied on manned aviation go as high as the Chicago Convention.



At the same time, the users of ANS may rightfully question why the data that they pay for would be used for free by another (and sometimes competing) airspace user.

Such a setup creates an entirely different regulatory and economic landscape if any future evolution of ANS will have to pay due regard on how it is to be reflected on U-Space.