

Drone Alliance Europe position paper - EGNSS standardisation for drone applications

Executive summary

- In the context of the standardisation for Uncrewed Aircraft Systems (UAS) in relation to the introduction of U-space airspace, the DG-DEFIS¹ has launched a survey to inquire about the need to introduce standardisation around European add-value services for global navigation satellite systems (GNSS).
- DAE is concerned over the content as well as the approach taken by DG-DEFIS and its partners, because DAE believes it is not in accord with the fundamental principles previously supported by the European Commission like technological neutrality and risk-based approaches.

Context

- The European regulatory framework for UAS operations made significant progress over the last couple of years thanks to the work and support of the European Commission and EASA.
- And although the standardisation work for the Open and Specific categories of operations² is going slower than desired for an effective harmonisation of the implementation, the global professional drone industry has established a track record of millions of safe flights in 2022 alone.
- More recently, the U-space regulation has come into effect. This framework will eventually help scaling UAS operations and their safe integration into the existing aviation ecosystem.
- In the context of U-space, the DG DEFIS and its partners³ have launched a survey investigating the need for standardisation actions for additional GNSS services in the U-space, particularly around so-called value-add services⁴ by the European Galileo constellation.

DAE position

1. Assessing the need for more standardisation.
 - a. The approach taken by the DG-DEFIS and its partners, particularly with the survey, is not outcome agnostic. Rather than focusing on the question whether more standards are required for safe UAS operations in U-Space, the questions start with the assumption that more standards are required, and they further

¹ Directorate-General for Defence Industry and Space

² 2019/945 and 2019/947

³ The survey was executed by VVA Valdani Vicari & Associati, launched in November 2022. The questionnaire is attached to this document.

⁴ [EGNOS SoL Service Definition Document](#), [Galileo HAS Info Note](#), and [Galileo OSNMA Info Note](#).

assume that specific technology components must be included. Quoting the very first paragraph of the survey introduction illustrates this point:

i. *“The Directorate-General for Defence Industry and Space (DG DEFIS) looks to include EGNSS (EGNOS and Galileo) services to efficiently and safely deploy U-space in the drone industry. The benefits provided by the European Navigation Service should be explored and will serve as an unequivocal motive to become part of industrial standards and regulations, which would enable a wide implementation of EGNSS-based solutions in the U-Space.”*

b. DAE position

- i. DAE welcomes standards. Standards can foster international harmonisation, which can establish clear guidelines for manufacturers and operators, ultimately driving fair competition and better service for end customers.
- ii. But standards should not impose minimum performance requirements for all stakeholders, independently of their use case. For example, the risk profiles - and thus the required mitigation measures to achieve the appropriate target level of safety - of two drone delivery flights might differ quite substantially depending on where and when they are taking place.
- iii. The need for more standards should be carefully assessed and justified. In 2022 alone, there have been 1.4M safe commercial drone deliveries⁵ worldwide with the current global navigation satellite systems (including EGNOS, Galileo), which means that current performances are good enough for many UAS manufacturers and operators.

2. Practise a technology-neutral and risk-based approach for standardisation.

- a. The UAS industry, including UAS service providers like those offering communications, navigation, and surveillance information, have developed an array of technological approaches solving ground- and air-risks for safe integration. For some UAS concepts of operation, the importance of global navigation satellite systems will rate higher while it is lower for others. For some, reliance upon global navigation satellite systems may never be necessary.

b. DAE Position

- i. In Europe, and in all global markets, standards should be developed with a focus on meeting safety standards appropriate to the risk of an operation, rather than being driven by a specific technology or vendor.
- ii. Because technological solutions and best practices will iterate in the UAS industry, this approach leads to the creation of standards that are relevant and useful in the long term.
- iii. This context serves only to further highlight the problematic nature of DG-DEFIS’ suggestion of regionally-developed technologies: both EGNOS and Galileo are European projects, while the UAS industry is clearly global.

⁵ The moving world report, Up Partners, <https://up.partners/movingworld/>, page 50.