



**EASA**  
European Aviation Safety Agency

# Safe operation of drones in Europe

## Update on EASA's activities



EASA has recently published the first formal Opinion on safe operations for small drones in Europe. This first ever EU-wide rules for civil drones will allow remotely piloted aircraft to fly safely in European airspace and bring legal certainty for this rapidly expanding industry.

The EASA Opinion, which has taken into account the expertise of many international players in the drone domain, will serve as a basis for the European Commission to adopt concrete regulatory proposals later in 2018.

---

**“This regulation will enable the free circulation of drones and a level playing field within the European Union, while also respecting the privacy and security of EU citizens, and allowing the drone industry to remain agile, to innovate and continue to grow”.**

*Patrick Ky, EASA Executive Director*

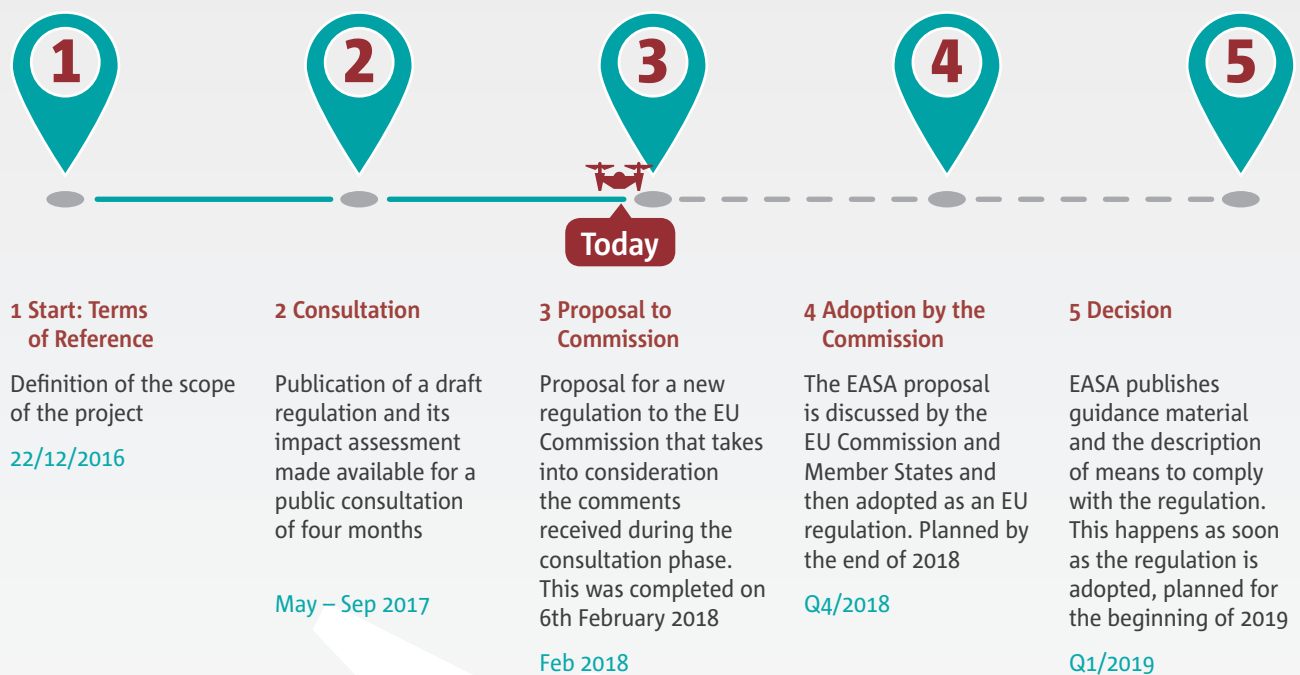
---

The EASA Opinion comes up with an innovative way of regulating, where the rules are kept as simple as possible with a strong focus on the particular risk of the operations: flying the same drone over a city centre or over the sea entails a completely different risk.

# What is EASA doing for drones?

Up to now, there was not much that EASA could do, since EU law gave competence to Member States for all drones lighter than 150 kg (the market segment that is blooming!). But things are changing. The revised EASA Basic Regulation – the future European aviation safety regulatory system – expected to be approved in summer this year will extend EU competence to all drones. In order to gain time, EASA issued the proposal for a new regulation – EASA Opinion No 01/2018<sup>1</sup> – to the European Commission in February 2018.

EASA has been working on this for the last two years, considering both the expertise gained by Member States and all the developments in the international arena, e.g. work done in the International Civil Aviation organisation (ICAO); in the Joint Authorities for the Rulemaking of Unmanned Systems (JARUS); and, of course, in the USA (Federal Aviation Administration – FAA). At the same time, EASA has taken into account thousands of comments received from private citizens, industry and operators during the four-month public consultation period.



The new draft regulation will allow everyone to buy and operate a drone ensuring:

- Safety, by keeping drones away from manned aircraft, people and critical and sensitive infrastructure;
- Security, by keeping drones at an appropriate distance from nuclear reactors, military bases or oil pipelines;
- Privacy, by means of a proper separation from residential areas, as no one wants a drone peering into their bathroom window; and
- Environmental protection, by reducing the noise level.

In addition, this new draft regulation will harmonise operations regulations in Europe and create a common EU market for drones.

<sup>1</sup> EASA Opinion No 01/2018 “Unmanned aircraft system (UAS) operations in the ‘open’ and ‘specific’ categories”

# How will you operate a drone?



Check the label on your drone if it has this mark

## Flying a Drone

Have fun | Be responsible for safety

The EASA Opinion breaks new ground by combining product and aviation legislations. In particular, design requirements for small drones (up to 25kg) will be implemented by using the well-known CE marking (“Conformité Européenne”) for products brought on the market in Europe.



Example of CE mark for class C1 drone

In this way, when the proposed UAS regulation is adopted by the European Commission, all drones available on the market will have CE marking, a number between 0 and 4 that will specify the class of the drone (C0, C1, C2, C3 and C4). The operator will then find in each drone package a digital consumer information with the “do’s and don’ts” on how to fly a drone safely.

### Proposed consumer information by EASA

Find more information on <http://www.easa.europa.eu/easa-and-you/civil-drones-rpas> (downloads)

- You need to be registered and to pass an online test
- Display your registration number on the drone and upload it onto the e-identification system

#### DO



Make sure you are adequately insured



Check your drone before each flight



Make sure the electronic identification and geo-awareness system of your drone is up-to-date



Before each flight, check the limitations of the area where you want to operate, defined by the National Authority of that country, and respect them



Familiarise yourself with the area where you want to operate your drone



Check the weather conditions



Keep the drone in sight at all times



Maintain a safe distance between the drone and people, animals and other aircraft



Operate your drone within the performance limitations defined in the instructions provided by the manufacturer



Inform your national aviation authority immediately if your drone is involved in an accident that results in a serious or fatal injury to a person, or that affects a manned aircraft

#### DO NOT



Do not make changes to the drone, unless approved by the manufacturer



Do not fly higher than 120 m from the ground<sup>1</sup>



Do not fly near manned aircraft



Do not fly in the proximity of airports, helipads, areas affecting public safety or where an emergency response effort is ongoing



Do not fly over sensitive or protected sites (prisons, military bases, power plants, etc.)



Do not use the drone to carry dangerous goods



Do not fly over large groups of people



When flying over other people’s property, do not fly less than 20 m above the property without their permission



Do not take photographs, videos or sound recordings of people without their permission. Respect people’s privacy

**Disclaimer:** This document is a working document and is provided for information only. It is therefore subject to change and does not commit or represent EASA’s decision. The final version of this awareness leaflet will be published as soon as the corresponding ED Decision is published and in force.



## What are drones?

In technical terms, we call them unmanned aircraft systems (UAS), as they are aircraft operated with no pilot on board. Nevertheless, everybody just calls them drones. They can vary from very small aircraft as big as a fly on your finger (nano-drones weighing just 10-20 grams) to very large ones such as the Global Hawk with its 15 tons, used by NASA for scientific purposes. Major aviation companies already have projects for cargo aircraft the size of an A320, and their next step will be to propose projects for passenger flights.

Applications for small drones are limited only by our imagination. As the technology is constantly improving and prices are dropping (they range anywhere from tens to thousands of euros), everybody can buy a drone and start their own activity or new hobby.

As you can expect, the market potential of drones is huge and this creates new job opportunities from which we will all benefit. In addition, drones can also save lives and improve efficiency. They can be rapidly deployed in disaster response and relief operations or used for power line inspections, minimising thus the human involvement under risk. Another very positive impact might be a reduction of carbon emissions, as we will replace some big and heavy helicopters by small electrically-powered drones.



## What is U-space?

U-Space is the term adopted by the EU Commission for a set of services supporting low level drone operations (below 120 m). A fully automated infrastructure will provide the drone pilots with all the information needed to conduct a safe operation, including air traffic management, and will ensure that drones do not enter any restricted zones.

In particular, U-Space will provide support to Beyond Visual Line of Sight (BVLOS) operations and will be the fundamental basis for dense operations in urban areas. The latest technology will be used to enforce the regulation and protect citizen's rights.

U-Space will be gradually deployed, starting in 2019, when, thanks to the EASA Opinion, the foundation elements will be set up: drone registration, electronic identification and geo-awareness. Additional functionalities will be progressively deployed until U-Space is operational in 2025, allowing fully autonomous operations.



# Drones and General Aviation

Drones will operate in the same airspace as general aviation, so GA community concerns in terms of air risk or airspace occupation can be understood. Nevertheless, the Opinion prepared by EASA addresses this issue accordingly and includes several provisions to reduce the risk both on ground and in the air.



The development of the drone industry will also benefit the GA community, making new technologies, such as envelope protection or traffic awareness, much more affordable. In addition, we cannot deny that drone enthusiasts share the same interests as GA pilots: flying, technology and adventure. An opportunity for cooperation pops up here and we should definitely take advantage of it.

## Model aircraft

The impact of the new regulation on model aircraft operations is very limited and the hobby pilots will still be able to perform the same operations as they do today. EASA recognises the pro-safety environment created by model clubs and associations, documented in the positive safety records. In this way, several options for recreational activities are defined:

- operating as members of a model club or association that has received an authorisation from the competent authority which allows to deviate from the provisions of the regulation;
- operating in a special zone defined by Member States where certain requirements do not apply and/or where the operational limitations are extended, e.g. increased height limitation;
- and, in case you are not a member of a model club or association and there are no special zones in your vicinity, you can still operate your model aircraft respecting the operational limitations defined for C4 class.

Find more information in our proposed consumer information: <http://www.easa.europa.eu/easa-and-you/civil-drones-rpas> (downloads)

For more information about what EASA does for drones please visit

<http://www.easa.europa.eu/easa-and-you/civil-drones-rpas>

#easadrones



European Aviation Agency  
P.O Box 101253  
D-50452 Cologne, Germany  
<http://www.easa.europa.eu>