

A BIRD'S EYE VIEW OF THE LAW: THE COMMERCIAL USE OF UNMANNED AIRCRAFT

INTRODUCTION

The development and commercialisation of drones is making relentless progress. Due to the wide range of applications and the rapid technical advances, unmanned aircraft – or "UAS" (*=Unmanned Aircraft System*) for short – are predicted to be a promising future. The European Commission estimates that the overall economic significance of the drone sector will be more than 10 billion Euros a year and more than 100,000 jobs will be created by 2035.

Particularly due to the rapid technological progress and the numerous (new) uses of drones, the legal framework conditions for the development and use of drones in many areas are not clear and need to be constantly adapted. This newsletter is intended to provide an overview of the state of the law, both national and international, and current legal developments.

AUSTRIA

The EASA Basic Regulation (EASA-BR) and the implementation and delegation law files based thereon established uniform regulations for the operation of UAS in the EU for the first time, whereby different national provisions were largely displaced.

These union law requirements are implemented in Austria in the § 24j LFG (*Luftfahrtgesetz* [Aviation Act]) recently amended in 2021. However, the previous (national) regulations on UAS continue to apply and are partly in a tension relationship with the provisions of Union law.

However, European harmonised legislation proves to be rigid and impractical for commercial drone users in practice: For example, a UAS operation outside of the visibility of the pilot (so-called "BVLOS mode") is practically only very limited and possible under strict conditions — with the specially issued operating permit of the Austro Control.

The new legal framework for the U-Space is intended to soften these rigid legal provisions and, in particular, to allow commercial drone users to perform more complex operations over longer distances. The new legal framework is part of the sustainable and smart mobility strategy designed to implement digital transformation in the EU transport system and make it more resilient to future crises.

For this purpose, the Member States are granted the opportunity by regulation to define a geographical area (including cross-border) in which the UAS operation may be carried out with the support of so-called "U-Space services", which ensure automated control of traffic movements. The U-Space is therefore a traffic management concept that facilitates orderly integration of UAS into the existing air transport system and thus the safe use of a number of aircraft even over densely populated areas.

Although the development of the U-Space (and its legal implementation in Austria) is only at the beginning, a milestone for commercial UAS use was achieved with the new legal framework for the "U-Space". It remains to be seen whether this opportunity will be used in Austria.

CHINA

The "Measures for the Administration of Operational Flight Activities of Civil Unmanned Aerial Vehicles in China (Provisional)" contain regulations for the use of drones for commercial flight activities. However, this policy does not include the use of drones for operational flight activities in passenger and cargo categories. According to the aforementioned regulations, drones must be registered, an operating permit must be obtained, and liability insurance must be taken out in order to be able to use drones for operational activities.

The use of drones for operational flight activities with higher security risks in passenger and cargo categories is currently primarily governed by the (provisional) drone trial regulations in these categories, and few (government-supported) enterprises have received specific approval for trial operation. This trial operation is currently only possible in special air zones and under strict conditions.

Provisions to integrate drones into joint airspace management have not yet been started in China. At this time, it is also not clear when this process will be started.

CZECH REPUBLIC

In the Czech Republic, no separate laws were adopted, and the new EU regulations were implemented by adapting the laws already in place. Perhaps the biggest change from the previous legal situation is the obligation to register. The registration requirement applies to all operators of unmanned aircraft systems whose operation poses risks to the privacy, health, protection of personal data, protection against unlawful acts, or the environment. The operator must obtain a permit from the competent national authority – civil aviation authority (Úřad pro civilní letectví). Commercially used aircraft may be operated in an "open", "special", or to a limited extent also in an operating category "requiring registration", as long as all requirements for the specific operating category are met. The operating permit is granted if:

 the road safety objectives take into account the operational risks;

- the combination of mitigation measures are met in relation to the operating conditions for carrying out the operation,
- the competence of the personnel involved and the technical characteristics of the unmanned aircraft are suitable, and
- the operation complies with valid EU and national regulations.

With the introduction of U-Space in the Czech Republic, it will now be possible to safely operate flights that were not possible under previous regulations, for example, flights out of the pilot's vision or autonomous flights of unmanned systems. This will be an important turning point, especially for professional drone operators.

U-Space in the Czech Republic will be able to ensure the smooth operation of drones of all kinds across all categories (depending on weight and equipment) in all operating environments (e.g., also flights in the city and suburbs), regardless of the type of airspace (controlled and uncontrolled), without any restrictions to the operation. However, aviation restrictions in certain areas such as airports and residential, industrial, and recreational areas will still be observed; the maximum flight height is then 120 meters. The Czech Republic generally relies on a high level of digitalisation and automation. However, a complete system overhaul can only be expected in 2030.

GERMANY

In Germany, the regulations for private and commercial use of drones can be found in Section 5a "Operation of unmanned aircraft" of the Air Transport Regulations, more precisely in Sections 21 a et seq. of the LuftVO (*Luftverkehrs-Ordnung* [Air Traffic Regulations]). Due to the priority of application of EU regulations, the LuftVO was adapted to EU law in the relevant areas from July 2021. In addition, the EU Drone Regulation 2019/947 applies in all other points.

In some areas, the EU Drone Regulation gives leeway to Member States. The Member States can issue their own regulations here. The Federal Government has made use of the authorisation in Art. 15 DVO (*Drohnenverordnung* Drone Regulation]), which is relevant for the commercial use of drones. Accordingly, the

Member States are free to prohibit the operation of unmanned aviation systems in certain areas or to make them dependent on further time or technical requirements for reasons of safety and security, protection of privacy or the environment. German legislature has implemented this in §§ 21 h to 21 k of the LuftVO. § 21 h LuftVO specifies regulations for the operation of drones in certain geographical areas, such as residential areas or nature reserves or near airports. Regulations on intervals, usage times, etc. must be observed here. Furthermore, a large number of drones are already being used commercially in Germany. The trend for this is increasing (2019 to 2021 increase of approx. 138%).

Droniq GmbH and parent company, DFS Deutsche Flugsicherung GmbH, first implemented the idea of the U-Space 2021 in Germany. For this purpose, a U-Space living laboratory was set up in the port of Hamburg. The project was sponsored by the Federal Ministry of Transport and Digital Infrastructure (BMVI, Bundesministerium für Verkehr und Digitale Infrastruktur). This perspective created the basis for the implementation of further U-spaces in Germany. The living laboratory tested in practice how drones and from this perspective even flight taxis can be safely and intelligently integrated into airspace, also in combination with manned aviation.

In early 2023, the European U-Space Regulation will be implemented under national law, and the first U-Spaces in Germany will be created in 2023. The living laboratory experience gained should form the basis for the national implementation of U-Space air spaces.

HUNGARY

In Hungary, legislature fulfilled its harmonisation obligation in 2021 and adopted a substantial part of the Drone Regulation into the Aviation Act of 1995, but several other laws were also affected by related adaptations.

Hungarian legislation also introduces a new category for unmanned aircraft, namely unmanned recreational aircraft, i.e., devices that do not exceed a maximum starting mass of 120 g, are not equipped with a data recording device, and cannot move more than 100 m away from a remote pilot. Such "toy drones" are freer to use and do not impose obligations on their owners.

Commercial drone users are required to register their drones without weight restriction. Drones are also increasingly being used commercially in Hungary, especially in the construction and media industries.

According to the EU concept, drones should be integrated into the U-Space system, which is still in development in Hungary. With a view to the development of drone use, the Hungarian Drone Coalition was established in spring 2021. One of the coalition's main tasks is to contribute to the development of a legal system that is designed to ensure safety and produce benefits for the industry.

POLAND

The provision of commercial services using unmanned aircraft initially requires that the corresponding approvals are obtained. Pursuant to the provisions of the Aviation Law of 03.07.2002, the certificate of competence is a document certifying the possession of certain qualifications and authorising the exercise of certain aviation activities. Certificates of competence are issued to certain categories of aviation personnel, including the operator of an unmanned aircraft not used for recreational or sporting purposes. Another requirement for commercial operation is that the unmanned aerial vehicle (UAV) must be adequately equipped with the same flight, navigation, and communication equipment as a manned aerial vehicle operating under visual flight rules (VFR) or instrument flight rules (IFR) in a particular airspace class. Deviations from this rule are possible in accordance with the applicable regulations. On the other hand, if unmanned aircraft do not have the above-mentioned equipment, they may only be flown in zones that are separate from the publicly accessible airspace of aviation. Commercial drone flights are subject to a variety of regulations, and every time a drone is used, these regulations should be analysed thoroughly in advance. Commercial drone use is already common practice in the Polish market, e. g., in the film and photo industry as well as in surveying.

Although there are currently no regulations in Poland that directly implement the (new) "U-Space concept", Poland has a finished instrument (PansaUTM) for managing applications and permits for flying in airspace, whereby the

U-Space concept of safe and efficient integration of manned and unmanned aircraft is integrated. It appears that in order to standardise the regulations at national level with the European standards, the provisions of the Aviation Act and/or any regulations must first be properly amended to regulate the remaining assumptions.

ROMANIA

In connection with drones, EU legal regulations, particularly the Commission Implementing Regulation (EU) 2019/947 of 24 May 2019 on the regulations and procedures for the operation of unmanned aircraft, were adapted and applied in Romania in order to ensure the free movement and safe use of drones.

"Pilots" holding a drone with a mass of more than 250 g, which is used for industrial/commercial purposes or is equipped with a video camera and microphone must register with the Romanian Civil Aviation Authority RO-MATSA and take a theory test. Commercial drone use is therefore possible in compliance with the statutory applicable regulations.

With regard to joint airspace management ("U Space"), the geographical UAS zones in Romania are published by the Civil Aviation Authority and are therefore public information. Drones were explicitly taken into account or integrated here (see https://flightplan.romatsa.ro/init/drones).

In general, the following flight ban zones must be observed (also) for drones:

- Distances less than 5 km in the area of airports;
- Restricted airspace;
- Some nature reserves;
- Areas with sensor restrictions (photo/video);
- Prisons;
- Embassies;
- Military areas and Marine Ships.

Furthermore, the consent of property owners may also be required in certain cases.

SLOVAKIA

In Slovakia, the European regulation has been in force since 2021 but has not been implemented to date. The current legal requirements in Slovakia in this area are therefore not identical to current EU legislation. Some parts of the EU regulation cannot be met in Slovakia. The Transport Authority (Dopravný úrad) is the competent authority for the granting of permits in Slovakia. Drones that weigh more than 250 g or are equipped with a sensor that can record personal data (e.g., a camera) must be registered.

Currently, the Transportation Authority requires registration only for commercial drone users. You also need a commercial license for air work. Slovakia has not implemented a registration system to date, this will most likely happen in 2022/2023. Since the integration of the European regulations into Slovak law has not yet taken place, some questions remain open for Slovak citizens, such as the (im)possibility of using a drone for commercial purposes in other EU countries.

The introduction of the full U-Space in Slovakia is planned, but there is no specific information in terms of the timeline for implementation. All flights can currently be operated in uncontrolled airspace at a height of no more than 120 m above the ground. The operation of drones is carried out according to the so-called Subcategories A1, A2, and A3:

- A1: Drones with a maximum departure weight of less than 0.5 kg. These offer the opportunity of flying in the urban area (without a minimum distance from buildings), but not over a crowd.
- A2: Drones with a take-off weight between 0.5 2.00 kg. A flight ban applies at a distance of less than 30 m from persons;
- A3: Drones with a maximum take-off weight of up to 25 kg and an airspeed of up to 19 m/s. Flights must be operated at such a distance that uninvolved persons are not endangered by the flight but are at least 150 m from inhabited areas.

SPAIN

Until the new EU regulation was issued in early 2021, which adapted the regulations for the operation of UAS (drones) across Europe, the Royal Legislative Decree 1036/2017 applied in Spain. However, this is largely no longer applicable since its regulations do not comply with

EU law. During the year, a new law is to be enacted that implements the provisions of the EU regulation.

The permissible use of a drone, i.e., including commercial use, depends on the respective operational risk.

There are three operating categories: "open", "special", and "subject to approval". The greater the risk of operating the UAS, the more demanding the requirements. Classification into categories depends in particular on the starting mass of the drone, to what extent other aircraft or humans are endangered by the operation or whether goods or humans are to be transported. Depending on the operating category, an operating permit or remote pilot license may be required.

A drone of the "special" category can also be used across borders. An operating permit must be in place and an application for approval must be filed with the competent authority of the Member State in which the operation is to be carried out. It is then checked whether the risk mitigation measures already taken are sufficient to use the drone in the respective Member State.

UAS should be integrated into the "U-Space System". Until now, inclusion in the aviation system is still under construction, but the requirements for the implementation of the three pillars of the system have already been defined at EU level: registration, geo-sensitisation (system that detects potential violations of airspace boundaries and alerts the remote pilot), and remote identification.

Inclusion in the U-Space system allows for better integration of drone use into existing airspace management. Registration, remote identification, and geo-sensitisation can help prevent hazards to other aircraft.

In addition to the restrictions depending on the operating category, so-called geographical UAS regions are defined by Member States (in Spain in the Real Decreto 1180/2018). These allow, restrict, or exclude operations for reasons of public security, protection of infrastructure and other airspace users as well as protection of privacy and the environment. National air traffic rules, air traffic regulations, and data protection regulations apply.

Areas where operations may be restricted or prohibited include but are not limited to land, critical infrastructure facilities, bathing beaches, nature reserves, accident sites, or places of installations, airports, or airfields. All airspace restrictions can be found at: https://drones.enaire.es/.

TURKEY

The legislation relating to drones in Turkey is the Civil Aviation Act and the Unmanned Aviation Communique. Commercial drone use is permitted within Turkey; however, since 01.08.2016, commercial drones may only be flown by specially trained remote pilots. Commercial drone flights are: Drone flights,

- which take aerial recordings and video clips, films, promotional films, commercials, weddings, and similar shots that take aerial recordings
- for mapping purposes,
- for checking solar energy systems and similar industrial purposes
- and flights that carry promotional materials and other cargo.

With regard to the integration of drones into joint airspace management, there is no legal regulation in Turkey so far.

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