

# Drones: 2018-2021 strategy plan, civil liability and insurance

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## 1. 2018-2021 strategy plan for developing the civil segment for drones in Spain

On 19 March 2018 a presentation was made at the Ministry of Public Works of the **2018-2021 Strategy Plan for developing the civil segment for drones in Spain**. At the event, the Minister for Public Works highlighted that in the past few years technology development and the reduction in the costs of UAVs have facilitated the emergence of widespread use of drones lately.

In both Spain and the rest of the European Union there has been a substantial growth of activity in this sector.

In Spain, on one hand the approval of **Law 18/2014 of 15 October endorsing urgent measures aimed at growth, competitiveness and efficiency** has been particularly significant.

This law served to establish the conditions for operating aerial vehicles of this type to perform technical or scientific work or, under

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the terms of EU regulations, specialist tasks such as for test flights for production and maintenance purposes, demonstration work, for research programmes into the feasibility of performing certain activities using civil aerial vehicles piloted by remote control, developing new products or to demonstrate the safety of specific operations in technical or scientific work so that these could immediately be applied.

And on the other hand, the implementing regulations thereof have also been significant, which were put into effect via the publication of **Royal Decree 1036/2017 of 15 December governing the civil use of remotely piloted aircraft**. This Royal Decree aims to lay down the legal scheme that applies to **RPA (remotely piloted aircraft)** for which applicability does not exist of Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency.

The 2018-2021 Strategy Plan is structured into two parts: a first, analytical part, and then a second part that defines the plan's strategic central themes, as well as the initiatives that will be taken forward to achieve the goals set in it.

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With respect to the economic sectors which stand to be the most impacted by the professional use of remotely piloted aircraft, these should include **agriculture**, in relation to the following work:

- Measuring and recording data on crops for supervising and tracking plant growth and fruit size.
- Carrying and spraying products intended to look after crops.

Within the **energy sector** with regard to work involving:

- Ongoing inspection of production and power sites (foreseeably in 2035, each power generating facility will have a drone monitoring its functioning on a permanent basis and continuously taking data).
- Inspecting power distribution grids via flights beyond the visual range of the pilot.

Within the **sphere of safety and rescue**, the key activities where drones will be a particularly important role will be:

- Carrying out preventive activities, especially via general surveillance work.
- First response when there are incidents (rapid action to deal with incidents).

Within the **e-commerce and parcel delivery** sector, in the future drones could directly carry material sent from the logistical platform to its point of destination, thereby reducing delivery times and with a clearly oriented focus on Premium deliveries in urban environments.

In the **construction and mining sector**, developing this technology will allow substantial advances in topography work, following progress in executing work and supervision of mining operations, thereby enabling swift and accurate recording of any necessary measurements and calculations.

In the field of **telecommunications**, inspection of antennae and telecoms towers using drones will enable greater efficiency for telecom companies and improve the safety of the workers currently working on tasks of this kind.

Within the **insurance industry** aircraft of this type are expected to be used to perform work on appraisal reports for fires, natural disasters and damage caused by weather phenomena.

In the **real estate sector**, the impact of using unmanned aerial vehicles is predicted to be proportional to the number of existing estate agents, and involve working with them on tasks of inspecting and valuing properties.

In the realm of **passenger mobility and transportation**, it is worth mentioning that in the long-term drones will co-exist with aircraft with crews in passenger air transport. This will in any event represent one of the big challenges for this technology that will have to overcome major technological and regulatory barriers.

## 2. Royal decree 1036/2017 of 15 december regulating the civil use of remotely piloted aircraft

As we were saying earlier, this regulatory standard is intended to establish the legal framework applying to **remotely piloted civil aircraft (RPA)** for which there is no applicability of Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency.

This royal decree applies to remotely piloted civil aircraft (RPA) **the maximum mass of which on take-off is under 150 kg** or, whatever their maximum mass might be, when they are excluded from application of Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 and when any of the circumstances are present that are outlined in annex II thereof (including historical aircraft, aircraft that are specifically designed or modified for the purposes of research and experimentation, aircraft that have been at least 51% built by amateurs, those which have been in the service of the armed forces, autogiros, gliders, etc.), and which perform specialist airborne operations or experimental flights.

**This will also apply to** remotely piloted civil aircraft (RPA), **whatever their maximum mass might be on take-off**, which are engaged in activities for **customs, the police, search and rescue, firefighting, coastguard work or suchlike**.

**It does not, however, apply to**, among others, unmanned free-flying and tethered balloons; remotely piloted military aircraft and aircraft systems, nor remotely piloted aircraft used exclusively for air shows, or sporting, recreational or competitive activities, including leisure activities typical of toy aircraft.

One very significant aspect that it is important to point out relates to identifying drones (RPA). Indeed, article 8 requires that all remotely piloted aircraft (RPA), **will have to bear a fireproof identification plate attached to their structure**, which must show the aircraft's identification via its specific designation and including the manufacturer's name, type, model and, where appropriate, serial number, as well as the name of the operator and the information needed to get in touch with them.

Even so, remotely piloted aircraft (RPA) having a maximum mass upon take-off that does not exceed 25 kg are exempted from the requirements for entry on the Civil Aircraft Register of Licence Numbers and from obtaining the certificate of airworthiness pursuant (respectively) to articles 29 and 36 of Law 48/1960 of 21 July on Air Navigation.

The new norm broadens the range of options available to professional drone users by authorising new operating environments in line with the patterns that have been implemented in other countries around us. It reinforces mechanisms to guarantee the safety of people and property, and establishes certain restrictions in the realm of recreational and sporting activities.

From a European standpoint it is worth noting that progress is being made in implementing integrated management of drone traffic, via the development of a low flying air traffic management system known as **U-Space** (the name of the

European UTM system), allowing efficient and orderly management of the high volume of civil unmanned aerial vehicles that it is thought might be using airspace in the medium to long term.

This system focuses on managing flights at very low levels of below 120 or 150 metres above ground-level, according to each country and in both urban and rural environments, and it works on the basis of centralised management of flight plans.

Prior to carrying out the flight, the authorised operator will have to send the flight plan they intend to follow to the drone traffic management system (UTM), where it will be analysed and checked against other flight plans that have already been registered and, if appropriate, it will be compared with the information provided by the manned traffic management systems (ATMs) to be coordinated with it.

### 3. Requirements for operators of remotely piloted aircraft systems (RPASSs)

Article 26 of Royal Decree 1036/2017 establishes the requirements that must be met by operators of **remotely piloted aircraft systems (RPASSs)**, which are as follows:

- a) Having **documentation on the description of the aircraft** that are going to be used, including definition of their configuration, characteristics and performance features, as well as the procedures for piloting them when the aircraft do not have the appropriate RPA airworthiness certificate or special certificate for experimental flights.
- b) Having carried out an **aeronautical study of the operation or operations**, which verifies that they can be safely executed, as well as, where appropriate, of the suitability of the safety zone for conducting experimental flights pursuant to article 23.2. This study, which can be generic or specific to a particular geographical area or type of operation should take into account the basic characteristics of the aircraft to be used and their equipment and systems.
- c) Having an **insurance policy or some other financial guarantee** to cover third party civil liability for damage or loss that might arise during and as a result of performing the specialist airborne operations or experimental flights in keeping with the coverage limits that we will go on to set out.
- d) Taking adequate measures to **protect the aircraft from unlawful acts of interference in the course of operations**, including deliberate jamming of the radio link, and establishing the necessary procedures to avoid access by unauthorised personnel to the remote piloting station and the storage location for the aircraft.
- e) Ensuring that the remotely piloted aircraft (RPA) and the on-board telecoms equipment **complies with standards regulating telecommunications** and in particular and when necessary, with the requirements laid down for selling, commissioning and using of radio-electric equipment.
- f) Taking the necessary steps to guarantee compliance with provisions as regards **personal data protection and the safeguarding of privacy** under Organic Law 15/1999 of 13 December on the Protection of Personal Data and in Organic Law 1/1982 of 5 May on civil protection of the right to honour, personal and family privacy and the safeguarding of one's own image, as well as implementing rules thereof and consistent legislation.
- g) Advising the Investigative Commission for Civil Aviation Accidents and Incidents and the System for Notifying Events of the State Agency for Aviation Safety (as appropriate) about **serious accidents and incidents** as defined in Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the

investigation and prevention of accidents and incidents in civil aviation, as well as those events referred to in article 4 of Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation.

- h) Ensuring that the **operation and the personnel performing it comply with the requirements laid down in this Royal Decree**, that the pilot is carrying the documentation required when the operation is being carried out and that they are in a fit state to perform the operations in accordance with the terms and limitations envisaged in the RPA airworthiness certificate or the special certificate for experimental flights, where appropriate, and in the application for authorisation, or, as may be the case, in the prior notification, as well as to take any other step required to guarantee the safety of the operation and for the sake of protecting the underlying people and property.

In the following articles obligations of a specific nature are established for performing specialist airborne operations; additional requirements regarding the operator's own organisation; limitations on piloting; establishing a protection area for take-off and landing and recovery zones; a prohibition on taking hazardous objects and substances on board aircraft; and detailed regulations for flying over facilities associated with national defence, state security, and nuclear plants, as well as over critical premises and infrastructure to do with strategic sectors.

## 4. Drones: civil liability and insurance

We can summarise the specific notes that describe civil liability for drones thus:

- a) The **definition of the coverage of the civil liability policy** referred to in the regulations which we are examining is intended to **cover the civil liability of the operator of remotely piloted aircraft systems (RPASs)** in relation to specialist air operations and to the experimental flights they carry out.
- b) **The specialist air operations** (also known as technical, scientific or aerial tasks) are defined as any operation, whether commercial or non-commercial, **other than an air transportation operation** where a remotely piloted aircraft is used (RPA) to carry out **specialist activities** such as:
- Research and development activities.
  - Agro-forestry activities.
  - Aerial surveying, photography, surveillance, observation and patrol work.
  - Filming, aerial advertising, and radio and television broadcasting.
  - Fire-fighting and combating pollution.
  - Emergency measures and control, and search and rescue.
  - Training and practical instruction of remote pilots.
- c) **Experimental flights** are defined as:
- Production testing and maintenance flights.
  - Demonstration flights not open to the public.
  - Flights for research programmes.
  - Development flights to fine-tune techniques and procedures to perform a certain activity using RPA.
  - R&D flights carried out by manufacturers, other bodies and organisations or technological centres to develop new RPA or elements that RPASs comprise.
  - Test flights needed so that an operator can prove that the planned operation using the RPA can be performed safely.

d) In any event we must not forget that using remotely piloted aircraft (RPA) will in all cases require that its design and features **permit the pilot to intervene in controlling the flight at all times**. The remote pilot shall at all times be responsible for detecting and avoiding potential collisions and other dangers. Consequently, **so-called autonomous aircraft are excluded from this regulation**.

As we have said earlier, by way of a general obligation on the operator of remotely piloted aircraft, section c) of article 26 establishes that they should take out an **insurance policy** or obtain some other financial guarantee **that covers any civil liability which they may incur** for damage or loss caused to third parties harmed as a result of performing airborne operations in accordance with the following coverage limits:

1. **For aircraft having a maximum mass on take-off of under 20 kg**: Those included in Royal Decree 37/2001 of 19 January updating the amount of compensation pay-outs for loss or damage envisaged in Law 48/1960 on Air Navigation.

Specifically, and in accordance with article 4 of the regulation cited, **loss or damage may be compensated which is caused to people or items that are on the surface of the earth by action on the part of the aircraft**, whether this be flying or on the ground, **or by anything that becomes detached or cast off by it**, up to a coverage limit of **220,000 special drawing rights (SDRs)**, as per the International Monetary Fund's definition<sup>1</sup>.

2. **For aircraft with a maximum mass on take-off that is greater than or equal to 20 kg**: Those limits laid down in Regulation (EC) No 785/2004 of the European Parliament and of the Council of 21 April 2004 on insurance requirements for air carriers and aircraft operators.

With respect to **third party civil liability insurance**, article 7 of the Regulation establishes that the minimum coverage of accident insurance for each aircraft should be **750,000 special drawing rights (SDRs)** for aircraft with a maximum mass on take-off of **under 500 kg** and **1,500,000 special drawing rights (SDRs)** for a maximum mass on take-off of **under 1,000 kg**.

In concluding these notes, all that is left to add is that the ongoing technological development and likely increasing establishment of remotely piloted aircraft in the various different economic sectors alluded to in the 2018-2021 Strategy Plan will come to represent a new field of activity for the insurance industry, both from the point of view of new business opportunities and from the standpoint of users, with respect to the possibility of using drones for adjustment and assessment work for certain types of loss events and also for the purposes of the actual management and prevention of certain risks, including those that concern atmospheric phenomena and are environmental by nature.

(1) <http://www.imf.org/es/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR>