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DRONES IN EUROPE: RULES IN THE MAKING

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(I) PREMISE

The large-scale introduction of drones into civilian airspace is likely to prove one of the most significant event in the field of aviation in recent years.

The aircraft systems commonly known as “drones”, originally developed for military purposes, are today widely employed in the fields of agriculture, civil protection, search and rescue, disaster relief, environmental protection, and infrastructure monitoring, as well as for sport and leisure¹. Moreover, in December 2016 Amazon announced that it had successfully completed the trial phase of a drone delivery service².

The introduction of drones in a wide array of businesses and industries and the growing public interest for these aircraft (which exceeded all

¹ European Parliament, Directorate-General for Internal Policies, Privacy and Data Protection Implications of the civil use of drones, 2015, available at: [http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/519221/IPOL_IDA\(2015\)519221_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/519221/IPOL_IDA(2015)519221_EN.pdf).

² HERN A., “Amazon claims first successful Prime Air drone delivery”, *The Guardian*, 14 December 2016.

expectations³) have created new employment opportunities and have had a positive impact on economic growth. According to the European Commission, over the next 20 years the EU drone industry should grow to directly employ more than 100,000 people, with a total turnover of around 10 billion EUR per year⁴.

However, lawmakers and regulators (on both sides of the Atlantic) seem to have been unable to keep pace with the large-scale introduction of unmanned aircraft into civilian airspace and with the development of a market for drones.

By all accounts, existing regulation in the EU and the US is incapable of addressing effectively some of the most serious concerns raised by the introduction of unmanned aircraft into civilian airspace (especially with regard to privacy protection, safety, third-party liability⁵ and insurance requirements⁶).

In this contribution we will refer to Italy as a case study to outline the state of the art as regards the regulation of unmanned aerial vehicles.

(II) THE REGULATORY FRAMEWORK

According to the definition put forward by the International Civil Aviation Organization, an unmanned aerial vehicle is a *"pilotless aircraft, in the sense of Article 8 of the Convention on International Civil Aviation, which is flown without a pilot-in-command on-board and is either remotely and*

³ "In 2010 America's Federal Aviation Authority (FAA) estimated that there would, by 2020, be perhaps 15,000 [...] drones in the country. More than that number are now sold there every month", The Economist, "Welcome to the Drone Age", 26 September 2015.

⁴ European Commission, *Unmanned aircraft*, available at: http://ec.europa.eu/growth/sectors/aeronautics/rpas_it.

⁵ RULE. T.A., "Airspace in the age of drones", *Boston University Law Review*, Vol. 95, 2015, pp. 155 - 208.

⁶ Steer Davies Gleave, *Study on the Third-Party Liability and Insurance Requirements of Remotely Piloted Aircraft Systems*, final report for the European Commission, November 2014, available at: [file: http://ec.europa.eu/DocsRoom/documents/7661](http://ec.europa.eu/DocsRoom/documents/7661).

*fully controlled from another place (ground, another aircraft, space) or programmed and fully autonomous*⁷.

While EU regulators and lawmakers largely adhered to the definition proposed by the ICAO, there is as yet no agreement as to the terminology which should be employed. Indeed, while the European Commission generally uses the term "remotely piloted aircraft systems" (RPAS)⁸, the European Aviation Safety Agency (EASA) seems to prefer the terms "unmanned aircraft"⁹ or "drones" (the latter is most commonly used in documents addressed at the general public).

EU legislation currently applies only to unmanned aircraft weighing more than 150 kg. While aircraft with an operating mass above this threshold fall within the scope of application of Regulation (EC) 261/2008 (which sets out the common rules on civil aviation)¹⁰, the regulation of lighter drones is largely left to the Member States¹¹.

⁷ See ICAO, Circular 328 AN/190, "Unmanned Aircraft Systems", 2011, available at: http://www.icao.int/Meetings/UAS/Documents/Circular%20328_en.pdf. This is the definition endorsed in 2004 by the 35th Session of the ICAO Assembly.

⁸ European RPAS Steering Group, *Roadmap for the integration of civil Remotely-Piloted Aircraft Systems into the European Aviation System*, June 2013, available at: http://ec.europa.eu/growth/sectors/aeronautics/rpas_it.

⁹ "Unmanned aircraft means any aircraft operated or designed to be operated without a pilot on board", European Aviation Safety Agency, Technical Opinion, "Introduction of a regulatory framework for the operation of unmanned aircraft", RMT.0230, 18 December 2015, available at: <https://www.easa.europa.eu/system/files/dfu/Introduction%20of%20a%20regulatory%20framework%20for%20the%20operation%20of%20unmanned%20aircraft.pdf>.

¹⁰ "Article 4(1), (2) and (3) do not apply to aircraft falling in one or more of the categories set out below: [...] (i) unmanned aircraft with an operating mass of no more than 150 kg", Annex II, 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, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC, OJ L 79, 19.3.2008, p. 1.

¹¹ European Commission, Press Release, MEMO/16/4123, "The EU Drone Policy", 29 November 2016, available at: http://europa.eu/rapid/press-release_MEMO-16-4123_en.htm.

This distinction between lighter and heavier unmanned aircraft has led to the creation of significant regulatory obstacles and remains very controversial. Indeed, a 2015 report commissioned by the European Parliament emphasized the need to “*modify EC Regulation 216/2008 [...] which currently limits the scope of EU action to RPAS weighing more than 150 kg*” and to shift the regulatory regime of drones towards a “*new ‘proportionate to the risk’ approach*”¹².

The last five years have witnessed a flurry of initiatives from the EU institutions (some of which saw the active participation of stakeholders and industry representatives) aimed at reforming the current regulatory regime.

In June 2013 the European Commission published a roadmap for the integration of remotely-piloted aircraft systems into the European aviation system, which urged the development of the technological and regulatory tools necessary to ensure safety and outlined the societal impact of the use of drones¹³.

The EASA has provided valuable input to the process of reform by publishing a draft text for the revision of Regulation No. 216/2008¹⁴. The main goal of this “prototype” regulation (which draws largely on a technical opinion issued by EASA in 2015¹⁵) is to harmonize safety

¹² European Parliament, Directorate-General for Internal Policies, Privacy and Data Protection Implications of the civil use of drones, 2015, available at: [http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/519221/IPOL_IDA\(2015\)519221_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/519221/IPOL_IDA(2015)519221_EN.pdf).

¹³ European RPAS Steering Group, *Roadmap for the integration of civil Remotely-Piloted Aircraft Systems into the European Aviation System*, June 2013, available at: http://ec.europa.eu/growth/sectors/aeronautics/rpas_it.

¹⁴ European Aviation Safety Agency, *Prototype Commission Regulation on Unmanned Aircraft Operations*, 22 August 2016, available at: <https://www.easa.europa.eu/system/files/dfu/UAS%20Prototype%20Regulation%20final.pdf>.

¹⁵ European Aviation Safety Agency, Technical Opinion, “Introduction of a regulatory framework for the operation of unmanned aircraft”, RMT.0230, 18 December 2015.

regulation and certification requirements for drones of all sizes across the EU.

While the European Commission has tabled a proposal for a regulation repealing and replacing Regulation No. 216/2008¹⁶, the reform process is unlikely to be concluded before the end of 2017.

It is a testament to the economic importance of drones that the reform process has seen the active participation of numerous stakeholders. In 2015 representatives of the European aviation community gathered in Riga issued a declaration which set out the fundamental principles of the new regulatory framework¹⁷.

According to the Riga Declaration, drones should be treated as *“new types of aircraft, with proportionate rules based on the risk of each operation”*. Moreover, the parties gathered in Riga emphasized the urgency of a radical reform of the regulatory regime and encouraged the development of effective standards and technological tools to ensure the integration of drones in the European airspace. The drafters of the Riga Declaration laid considerable emphasis on the promotion of public acceptance of unmanned aircraft and on the need to monitor the societal impact of drones.

Finally, according to the European aviation community, the operator of a drone should be ultimately responsible for its use¹⁸, while -lacking

¹⁶ Proposal for a Regulation of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and repealing Regulation (EC) No 216/2008 of the European Parliament and of the Council, 7.12.2015, SWD [2015] 262 final, available at: http://eur-lex.europa.eu/resource.html?uri=cellar:da8dfec1-9ce9-11e5-8781-01aa75ed71a1.0001.02/DOC_1&format=PDF.

¹⁷ Riga Declaration on Remotely Piloted Aircraft (Drones), “Framing the future of aviation”, Riga, 6 March 2015, available at: <http://ec.europa.eu/transport/sites/transport/files/modes/air/news/doc/2015-03-06-drones/2015-03-06-riga-declaration-drones.pdf>.

¹⁸ *“When a drone service is delivered in prohibited airspace, in an unsafe manner, or for illegal purposes, the authorities should be able to act and hold*

harmonization at the EU level- Member States should clarify the applicable insurance and third-party liability rules.

Even before the publication of the Riga Declaration, several Member States had taken steps to regulate effectively the use of drones within their airspace.

In 2007, Germany amended its own Air Traffic Law (*Luftverkehrsgesetz*) to include within its scope of application unmanned aerial vehicles (as well as their control stations) not intended for leisure purposes¹⁹.

Similarly, the United Kingdom²⁰, Spain²¹, Belgium²² and France²³ have taken steps to regulate in greater detail the use of drones and the aircraft certification requirements.

In 2006, the Italian government amended Article 743 of the Navigation Code²⁴ to include remotely piloted aerial vehicles in the statutory

the operator accountable", Riga Declaration on Remotely Piloted Aircraft, Riga, 6 March 2015.

¹⁹ "Ebenfalls als Luftfahrzeuge gelten unbemannte Fluggeräte einschließlich ihrer Kontrollstation, die nicht zu Zwecken des Sports oder der Freizeitgestaltung betrieben werden (unbemannte Luftfahrtsysteme)", Luftverkehrsgesetz, May 10, 2007, Bundesgesetzblatt [BGBl.] I at 698, § 1, para. 1, sentence 3, as amended, available at: <http://www.gesetze-im-internet.de/bundesrecht/luftvg/gesamt.pdf>.

²⁰ Civil Aviation Authority, Unmanned Aircraft System Operations in UK Airspace – Guidance CAP722 (First Edition, May 2002), available at: <https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=415>.

²¹ Sección 6 "Aeronaves civiles pilotadas por control remoto", Ley 18/2014 de aprobación de medidas urgentes para el crecimiento, la competitividad y la eficiencia (BOE n. 252, 17.10.2014).

²² Arrêté royal relatif à l'utilisation des aéronefs télépilotes dans l'espace aérien belge, 10 Avril 2016, available at: http://www.ejustice.just.fgov.be/cgi_loi/change_lg.pl?language=fr&la=F&cn=2016041002&table_name=loi.

²³ Arrêté du 17 décembre 2015 relatif à l'utilisation de l'espace aérien par les aéronefs qui circulent sans personne à bord, available at: <https://www.legifrance.gouv.fr/eli/arrete/2015/12/17/DEVA1528469A/jo/texte>; Arrêté du 17 décembre 2015 relatif à la conception des aéronefs civils qui circulent sans personne à bord, aux conditions de leur emploi et aux capacités requises des personnes qui les utilisent, available at: <https://www.legifrance.gouv.fr/eli/arrete/2015/12/17/DEVA1528542A/jo/texte>

definition of "aircraft". The provision in question deferred to the Italian Civil Aviation Authority (ENAC) the task of providing a technical definition of remotely piloted aircraft, thus distinguishing them from model aircraft. To this end, on 16 December 2013 ENAC issued a regulation on technical and certification requirements for the use of remotely piloted aerial vehicles with an operating mass which does not exceed 150 kg, as well as for remotely piloted aircraft employed for experimental or scientific purposes²⁵.

One of the most significant features of this regulation is the adoption of a broad definition of drone, described as a system made up of an *"unmanned aerial vehicle (a remotely piloted aircraft) which is not employed for sport or leisure purposes"* and by the *"necessary command and control components (the control station)"*²⁶.

The certification and authorization requirements set out by the 2013 ENAC regulation (as well as the relevant liability, insurance and data protection rules) consequently apply not only to the aerial vehicle, but also to the control station. For example, pursuant to Article 8 of said

²⁴ Article 8, Legislative Decree n. 151 of 15 March 2006.

²⁵ Article 2, Ente Nazionale per l'Aviazione Civile (ENAC), Regolamento – Mezzi aerei a pilotaggio remoto ("ENAC regulation"), published on 16 December 2013, available at: http://www.enac.gov.it/repository/ContentManagement/information/N122671_512/Regolamento_APR_ed2_em2.pdf. Pursuant to Article 5 of the ENAC Regulation, a model aircraft is an *"unmanned, remotely piloted aerial device employed exclusively for sport and leisure purposes, without the equipment necessary for autonomous flight, which flies under the direct and continuous visual control of the operator, without any visual aid"*.

²⁶ Article 5 ENAC regulation of 16 December 2013. The definition was forged by the UAV Task Force established under the aegis of the Joint Aviation Authorities and of Eurocontrol. In its final report, the Task Force stated that *"a UAV System comprises individual UAV System elements consisting of the flight vehicle (UAV), the 'Control Station' and any other UAV System Elements necessary to enable flight, such as a 'Communication link' and a 'Launch and Recovery Element'"*, UAV Task Force, Final Report, A concept for European regulations for civil unmanned aerial vehicles, 11 May 2004, available at: https://www.easa.europa.eu/system/files/dfu/NPA_16_2005_Appendix.pdf.

regulation both the aircraft and the control station should bear a plate identifying both the system and the operator.

The 2013 ENAC regulation requires remotely piloted aircraft with a takeoff weight equal to or in excess of 25 kg to be registered in a specific registry, and introduces strict rules as regards the issuance of airworthiness certificates. Moreover, in order to carry out "specialized operations" (a very broad category which includes video recording, surveillance, environmental monitoring, training, advertising and agricultural uses), the operator needs the prior authorization of ENAC²⁷.

With regard to RPAS with a takeoff weight under 25 kg²⁸, the 2013 regulation sets out less stringent notification requirements. In particular, the operator needs to seek prior authorization from ENAC only when he or she intends to carry out "critical" specialized operations²⁹.

Moreover, pursuant to the ENAC regulation, while operators of lighter unmanned aircraft only need a pilot certificate, operators of aircraft weighing more than 25 kg must hold a pilot license³⁰.

(III) PRIVACY AND DATA PROTECTION ISSUES

Stakeholders and regulators were quick to realize the very tangible threat which civilian drones represent for privacy rights. A report published by the European Parliament aptly pointed out that "*RPAS capabilities, when*

²⁷ Article 17 ENAC regulation of 16 December 2013.

²⁸ The 25 kg threshold was introduced in the United States to limit the scope of application of the "small unmanned aircraft rules". See Federal Aviation Administration, Summary of small unmanned aircraft rule (Part 107), 21 June 2016, available at: https://www.faa.gov/uas/media/Part_107_Summary.pdf.

²⁹ "Critical" specialized operations are operations carried out beyond visual line of sight which entail flying over crowds, urban areas or sensitive infrastructure, see Articles 9 and 10 of ENAC regulation of 16 December 2013.

³⁰ Articles 21 and 22 ENAC regulation of 16 December 2013.

*combined with technologies and applications, change and transform the nature of surveillance, magnifying it*³¹.

Moreover, unlike other – less nimble – surveillance tools, drones may be difficult to detect. This feature of drone operations has been a matter of significant concern for data protection authorities and professionals, since pursuant to Directive 95/46/EC data subjects should be aware of the collection and processing of their personal data.

In order to minimize the threat to the privacy rights of the individuals, the Article 29 Data Protection Working Party³² has recommended both drone manufacturers and aircraft operators to *“embed privacy friendly design choices and privacy friendly defaults as part of a privacy by design approach and to involve a Data Protection Officer [...] in the design and implementation of policies related to the use of drones and to promote the adoption of Codes of conduct”*³³.

The same emphasis on data protection by design and by default and on the need to adopt appropriate technical and organizational measures to limit the collection of data to the minimum necessary for the specific purposes of the processing can also be found in the 2016 General Data Protection Regulation³⁴.

³¹ European Parliament, Directorate-General for Internal Policies, Privacy and Data Protection Implications of the civil use of drones, 2015.

³² It is a Working Party established under Article 29 of Directive 95/46/EC and composed of *“a representative of the supervisory authority or authorities designated by each Member State and of a representative of the authority or authorities established for the Community institutions and bodies, and of a representative of the Commission”*.

³³ Article 29 Data Protection Working Party, Opinion 1/2015 on Privacy and Data Protection Issues relating to the utilization of drones, adopted on 16 June 2015, available at: http://ec.europa.eu/justice/data-protection/article-29/documentation/opinion-recommendation/files/2015/wp231_en.pdf.

³⁴ Article 25, Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and

Pursuant to the Italian regulation³⁵, whenever a RPAS operation entails the processing of personal data, this should be mentioned in the initial application as part of the authorization process. Moreover, as a general rule, all processing of personal data should be carried out in compliance with the Italian Data Protection Code (Legislative Decree n. 196 of 30 June 2003)³⁶.

However, it remains to be seen whether the regulation put in place both at the national and at the EU level will be capable of tackling the personal data protection issues posed by the massive employment of drones for civilian use.

(IV) CIVIL LIABILITY AND INSURANCE

The third-party liability regime as regards RPAS operations has not been harmonized at the EU level, and is therefore almost entirely governed by national legislation. While most Member States have opted for a strict liability regime, identifying the aircraft operator as the liable party, some jurisdictions have opted for fault-based liability.

This lack of regulatory consistency within the Single Market³⁷ and the ambiguity of the rules on liability in some jurisdictions represent significant hindrances to the development of the European drone industry.

It is generally assumed that by including RPAS within the statutory definition of aircraft, the Italian legislator has consequently extended to

repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4.5.2016, p. 1-88.

³⁵ ENAC regulation of 16 December 2013, available at: http://www.enac.gov.it/repository/ContentManagement/information/N122671_512/Regolamento_APR_ed2_em2.pdf.

³⁶ Article 34 ENAC regulation of 16 December 2013.

³⁷ Steer Davies Gleave, *Study on the Third-Party Liability and Insurance Requirements of Remotely Piloted Aircraft Systems*, final report for the European Commission, November 2014.

these aircraft systems the rules on civil and third party liability for damage caused by aircraft.

In particular, Article 965 of the Navigation Code³⁸ provides that the liability of the aircraft operator for damage caused to persons or things on the ground is disciplined by the applicable international rules (and in particular by the Rome Convention of 1952³⁹), even when the damage occurred in Italy and was caused by aircraft registered in Italy.

With regard to damage caused to third parties on the ground, the Rome Convention introduced a strict liability system, which does not require fault on the part of the liable party but only the proof of a causal link between the aircraft operation and the damage⁴⁰.

The reference to the applicable international rules also entails that the limitations set out by the Rome Convention should apply to third-party liability for damage caused by RPAS operations. In particular, Article 11 of the Convention caps the compensation owed to the victim of the damage, by imposing maximum amounts which vary on the basis of the take-off weight of the aircraft.

Article 971 of the Italian Navigation Code states that the compensation owed by the aircraft operator for damage caused to third parties shall not

³⁸ Article 965, Legislative Decree n. 151 of 15 March 2006.

³⁹ Convention on damage caused by foreign aircraft to third parties on the surface, Rome, 7 October 1952 ("Rome Convention").

⁴⁰ "Any person who suffers damage on the surface shall, upon proof only that the damage was caused by an aircraft in flight or by any person or thing falling therefrom, be entitled to compensation as provided by this Convention. Nevertheless there shall be no right to compensation if the damage is not a direct consequence of the incident giving rise thereto, or if the damage results from the mere fact of passage of the aircraft through the airspace in conformity with existing air traffic regulations", Article 1, Rome Convention.

exceed the minimum insurance cover per accident required by Regulation No 785/2004⁴¹.

The Italian Civil Aviation Authority has not failed to recognize the importance of an effective liability insurance framework for the promotion of the drone industry. A mandatory third-party liability insurance policy is required for all RPAS operating on the Italian territory⁴². The insurance coverage should be at least equal to the minimum coverage provided under EU legislation.

While rules on mandatory third-party insurance vary between different jurisdictions, recent studies have shown that in most EU Member States it is possible to find liability insurance for damage caused by RPAS operations⁴³.

The information provided in this briefing should not be construed as legal advice. For questions or legal advice on related matters please contact Gennaro d'Andria (gdandria@dandria.com) and Francesco Alongi (falongi@dandria.com).

⁴¹ See 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, 30 April 2004, OJ L138/1.

⁴² Article 32 ENAC regulation of 16 December 2013 ("*Mezzi aerei a pilotaggio remoto*").

⁴³ Steer Davies Gleave, *Study on the Third-Party Liability and Insurance Requirements of Remotely Piloted Aircraft Systems*, final report for the European Commission, November 2014.