

HANDOUT

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European Drone Investment - Advisory Platform

EC Policy Development

In its “[Aviation Strategy for Europe](#)” of 2015, the European Commission (EC) stressed that one of the milestone initiatives to boost Europe's economy, strengthen its industrial base and reinforce its global leadership position was to build a strong drone services market. Urban Air Mobility (UAM) is one of the areas where the EC sees new drone cargo or passenger services emerging, but not only. Drones can bring many new facilities for citizens, companies, cities or remote local communities, through a wide array of applications in various fields, such as medical and emergency assistance, inspection and monitoring of plants or solar parks, medical supplies and home deliveries, mapping, precision agriculture, civil engineering, etc. Moreover, drones can bring a major contribution to the digitalisation and decarbonisation of transport.

Drones Global Trend

The steady uptake of drones services in commercial activities observed in the past few years should continue in the coming years. By 2022, the global number of mass-market drones is projected to reach 35 million units – of which some 25% are in Europe. The number of specialised drones is expected to rise spectacularly, to more than 9 million. Some 75% of these 35 million mass-market drones are to be used for commercial activities as well. For a longer perspective, Airbus forecasts for 2035 that about an equivalent number to daily commercial piloted flights in the air at any given moment of the day over Europe are to happen over one single major city. This number would include commercial manned aircraft, air taxi, delivery drones, inspection drones, hobby drones, etc.

Drones Amsterdam Declaration

In its final [declaration](#), the Drones Amsterdam Conference held on 28 November 2018 supported the EC's assessment regarding the societal need and imperative to move towards smarter, safer and greener mobility on the ground and in the air to improve the quality of life. Drones allow for a cleaner and more sustainable mobility and should contribute to reduce congestion and accidents.

The Conference called upon urban transport actors, policy makers and associations to pioneer cases demonstrating which systems, solutions and services seamlessly integrate ground and air mobility. Cities and regions, also within the [European Innovation Partnership on Smart Cities and Communities \(EIP-SCC\)](#), were invited to co-create with the citizens the public conditions and the infrastructure for integrated air and ground smart mobility solutions to flourish, where new and clean technologies, big data, real-time information and corresponding business models converge towards the enablement and realisation of “mobility as a service”.

The EU U-space demonstrators' network

The launching in October 2018 of the [European Network of U-space Demonstrators](#) by the European Commission, with the support of EUROCONTROL, EASA and SESAR has attracted over 100 interested parties. The network has been a key step to bundle European expertise in the area of Unmanned Traffic Management. The network is able to reach out far beyond the traditional aviation partners. It covers all links of the value chain – national regulators and local authorities (cities, port authorities etc.); small and big IT companies & drone operators; traditional ANSPs and aircraft manufacturers; academics; telcos; and, last but not least, end customers, like railways, infrastructure managers, security companies. More than 50 projects, including projects led under the EIP-SCC initiative, have already joined and have agreed to work together, with the support of the regulatory and safety competence of [EASA](#), the R&D management expertise of the [SESAR Joint Undertaking](#) and the technical and operational air traffic management expertise of [EUROCONTROL](#).

U-space demonstration projects under the SESAR Joint Undertaking

19 research and development projects, including 10 very large scale [demonstration projects](#) are ongoing at urban and rural locations across Europe, thanks to funding from the SESAR Joint Undertaking within the framework of the EU's Connecting Europe Facility programme. With a co-financing of EUR 9.5 million, the demos aim to illustrate that Europe is on course with its implementation of U-space services to safely manage a broad and scalable range of drone operations and related services, and their interaction with manned aviation.

Research and Innovation support via Horizon 2020

The Horizon 2020 transport work programme 2018-2020 has included several topics to advance research and innovation on drone technologies and applications as well as pre-market tests and demonstrations. 3 specific topics supported with EUR 33 million address airworthiness of drones, innovative applications for drones and their related safety challenges as well as sustainable urban air mobility operations.

Furthermore drones are addressed as potential solutions in 3 additional research topics worth EUR 49 million on “on-demand logistics solutions”, “innovative solutions for smart and clean cities” and “automated transport infrastructure upgrade and maintenance”.

European Drone Investment - Advisory Platform

The EC and EIB have jointly created a Platform to support innovation for unmanned aircraft. The Platform intends to facilitate the access to EU support in the field by offering access to the full range of existing EIB and EC advisory services and financial products for eligible projects. Funding solutions exist, for instance through the EC's regional funds and the Connecting Europe Facility (CEF).

Awareness of advisory services, available funding and financing instruments is generally low, a situation that is exacerbated by the complexity of the grant environment. The Platform seeks

to address this by creating a single entry for project sponsors, resulting in better visibility, focus and cooperation between stakeholders.

The European Drone Investment - Advisory Platform is supported by the Advisory Hub¹. The Advisory Hub, available to all project sponsors independently of their sources of funding and financing, is offering support which includes a market study to assess the market potential and investment needs across the EU Member States. Its results will inform possible future mechanisms of support, which may then be part of the upcoming MFF programmes.

EIB Investment Activity

A key role of the EIB is to help close infrastructure investment gaps in the EU. The Bank sees potential in drones as an enabler of different new mobility, transport and public services. Depending on the maturity of the market, the Bank offers a variety of advisory and financial products that can potentially be used to support investments in drones.

	ADVISORY			
Drones/Urban aircraft OEMs* (vehicles)	H2020 Grants / Investment Loans	[Dotted pattern]		
Other associated technology and enablers				
Maintenance Repair and Overhaul (MRO)	[Dotted pattern]	[Dotted pattern]	EFSI (Venture Debt)	EFSI (Senior & Sub-Debt)
Ground equipment / Air Traffic Management (ATM) Infrastructure	H2020 Grants / Investment Loans	CEF FM (Venture Debt)		
Drones/Urban Air Mobility operators	H2020 Grants			
	RDI**	Early Commercialisation (small scale deployment)	Growth Phase	Mature market (large scale deployment)

¹ The European Investment Advisory Hub is designed to act as a single access point to various types of advisory and technical assistance services. It supports the identification, preparation and development of investment projects across the European Union, regardless of how they are ultimately financed. The Advisory Hub is a partnership between the European Investment Bank Group and the European Commission as part of the Investment Plan for Europe. See more information [here](#).

EFSI = European Fund for Strategic Investment

CEF FM = Connecting Europe Facility - Future Mobility (eligibility subject to EC confirmation)

* Original Equipment Manufacturers

** Research, Development and Innovation (investment loans subject to sufficient size of programme)

For investment-grade borrowers, EIB can provide senior and subordinated corporate debt for all sectors and all stages of technology development

Integrating drones safely and efficiently into national air traffic control systems remains one of the biggest challenges for future drone operations. The Bank finances Air Traffic Management (ATM) projects and is standing by to help with the financing of SESAR, thus potentially being able to play an important role in financing the future integration of drones into the urban and commercial airspace and including related infrastructure for landing and take-off operations.

Background

Following the entry into force in September 2018 of the new European Union Aviation Safety (EASA) [Basic Regulation](#), the setting of essential requirements for unmanned aircraft, irrespective of their weight, is an EU competence. The updated Regulation also empowers the Commission to adopt delegated acts laying down detailed rules with regard to the necessary features and functionalities for unmanned aircraft.

The recently adopted EU rules on technical requirements for [drones](#) and [drone operation](#) constitute the foundation of one of the largest drone markets in the world. Further legislative works are underway including so-called "European standard scenarios" for drone operations that will facilitate commercial drone operations, without prior authorisations. The EC is also jointly developing with EASA a framework for the provision of U-space services, which aims to enable complex drone operations with a high degree of automation. Finally, a systematic review of all existing EU aviation rules has been launched by EASA to identify the necessary changes to improve applicability to drone operations in the 'certified' category, similar to what exists in manned aviation. These regulatory initiatives are key for the development of UAM in the coming years.

The UAM initiative is part of the Sustainable Urban Mobility (SUM) cluster of the European Innovation Partnership on Smart Cities and Communities (EIP-SCC). The cluster brings together cities and regions with companies to display innovative mobility solutions and support their replication at scale in key market segments.

The European Investment Bank (EIB) is the long-term lending institution of the European Union owned by its Member States. It makes long-term finance available for sound investment in order to contribute towards EU policy goals. In 2018 alone, the EIB invested over EUR 8 billion (signed operations) on transport projects in the EU. The EIB also supports investments outside the EU.

Within the Investment Plan for Europe, the European Commission (EC) partners with the EIB on removing obstacles to investment including in transport, providing visibility and technical assistance to investment projects and making smarter use of new and existing financial



resources. The EC [Directorate-General for Mobility and Transport](#) (DG MOVE), works with the EU Member States, European industry, citizens and experts to promote efficient, safe, and environmentally friendly mobility to generate growth and jobs.

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