

FROM THREE EU-FUNDED R&I PROJECTS  
ON URBAN AIR MOBILITY: FF2020,  
AIRMOUR AND AURORA

# JOINT RECOMMENDATIONS

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**FLYING FORWARD 2020, AIRMOUR AND AURORA** are Research and Innovation Action projects on Urban Air Mobility (UAM) funded by the European Commission. Their three-year journey will come to an end soon. Collectively, they represent 34 organisations from Belgium, Czech Republic, Estonia, Finland, France, Germany, Italy, Luxembourg, the Netherlands, Norway, Spain and Sweden.

Three years of work and many relevant results, tools and lessons have now been condensed into ten joint recommendations. Of course, these do not claim nor aim to be complete: they serve to start discussions and as a call to action for the entire UAM community – regulators, industry and authorities alike. They also aim to support future endeavours in the drone and UAM field. For a deeper understanding of the basis for these recommendations, we recommend you watch the videos, use the tools and read the reports on [ff2020.eu](https://ff2020.eu), [airmour.eu](https://airmour.eu), and [aurora-uam.eu](https://aurora-uam.eu).

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## RECOMMENDATIONS FOR LOCAL AND REGIONAL AUTHORITIES

- 1 ENGAGE IN EARLY AND BROAD COOPERATION** on UAM issues in urban areas: already during the spatial planning stages and before the construction phase. Take UAM needs into account in the spatial planning process, including the needs of emergency medical services. Start a dialogue with UAM operators and medical sector stakeholders about their needs.
- 2 THE IMPACT OF URBAN AIR MOBILITY** is still unclear and highly dependent on regulations and operational design. Sustainable Mobility Indicators (SMI's) are a tool to monitor the impact of UAM. City planners should use these SMI's to investigate which parameters of the UAM system most heavily influence the performance and perception in their municipality or region.
- 3 CITY PLANNERS AND USE CASE DEVELOPERS** should increase awareness, knowledge and preparedness for UAM. A balance is needed between operational and societal perspectives. Real-life tests and demonstrations of UAM concepts are highly effective to help people – citizens and city officials alike – to understand and engage with UAM services.
- 4 CREATE AND MAINTAIN A PRE-DEFINED UAM** landing site network as part of the openly accessible digital twin or city's 3D models.

**5 DEVELOP STANDARDISED** drone service level agreements, including clear roles and responsibilities, to aid cities and regions to arrange high-quality public procurements for UAM services. Service level agreements help stimulate innovation and an open market.



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## RECOMMENDATIONS FOR EASA

**6 EXPAND THE CURRENT REGULATORY** frameworks and enlist the support of standardisation entities to support autonomous flight. Move past the current complex step-by-step approach requiring remote pilots. Autonomous flight is a key enabler for Innovative Air Services.

**7 TAKE LESSONS FROM PROJECTS** and initiatives into account when defining a regulatory framework for an experimental category of unmanned aircraft. Stimulate innovation by allowing testing of autonomous flight-capable unmanned aircraft in realistic, urban environments during the development phase, without requiring the safety levels of commercial aviation.

**8 ACCELERATE THE IMPLEMENTATION** of digital connectivity to aircraft. Require all aircraft operating below 150m above ground level to be electronically conspicuous (visible) with the only possible exceptions being security classed operations and operations at pre-designated locations (such as RC model airfields or parachute fields). Up-to-date information on manned and unmanned aircraft position and flight intent is essential to scaling up UAM services.

## RECOMMENDATIONS FOR UAM SERVICE PROVIDERS AND MANUFACTURERS

**9 MOBILITY SERVICE PROVIDERS** in the air and ground should facilitate the integration of vertical components (such as landing sites and their availability, aspects related to drone routing, mission management systems, etc.) into existing conventional, surface-based smart mobility, first responders, and urgent logistics services by building system-agnostic interfaces based on open standards. Together with existing information management standards for ground and air, it will stimulate automation and thus integrate current and future surface and air services.

**OBTAIN PROOF OF** airworthiness to reassure customers, stimulate sales and develop real business in cities. High-volume UAM services in urban environments are likely to scale up only with SAIL IV or higher. Engage with EASA for the design verification or type certification of the complete unmanned aircraft system to remove the lack of sufficient airworthiness of UAS as an obstacle for UAM growth.

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