

Urban Air Mobility Vassilis AGOURIDAS

Contro SOO

Ging HA

Airbus



11 11

111.3

- Enabling efficient and effective mobility in urban areas is a key challenge.
- Transportation needs and expectations of European citizens are increasing with regard to sustainability, reliability, affordability and efficiency.
 - ✓ This trend is to accelerate with the intensifying urbanisation and the formation of so called "mega cities".
 - ✓ At the same time, technological innovations and new business models offer great potential for new approaches to urban mobility with Urban Air Mobility (UAM) being one of them.
- The reason behind the EIP-SUM-AC UAM Initiative is to contribute to bringing urban mobility into the third dimension – the airspace (flying vehicles).
- It needs to be acknowledged that focusing on urban areas alone will not solve all mobility issues. Thus, a more **systemic approach to urban mobility** requires considering not only mobility *within* cities (intra-city) but also *between* cities (inter-city) at shorter ranges or less popular routes not covered by typical commercial airliners.







Background



Airbus is currently working on a wide spectrum of **UAM-enabling** technology and business initiatives:

- Altiscope Simulation environment to support and accelerate **UAM** regulatory framework
- Voom **UAM** flight services successfully launched in early 2017 in São Paulo, Brazil
- CityAirbus eVTOL demonstrator (multi-passenger; Q4 2018)
- Vahana eVTOL demonstrator (single-passenger/cargo; Q1 2018)
- **Skyways** Autonomous package delivery through a 'systems-of-systems' demonstrator in Singapore (Q1 2018)

Urban **Air Mobility**

Airbus believes that adding the third dimension to multimodal urban transport networks will improve the way we live and offer an alternative to congested megacity transport systems. To that end, the company is working with a diverse ecosystem to develop partnerships and a portfolio of projects to make urban air mobility a reality.

Altiscope

Airbus is actively helping shape regulations and future air traffic control requirements to safely integrate electric vertical take-off and landing vehicles in urban skies. The Altiscope project is a simulator for evaluating policy options and operational models for air traffic management systems that can service all forms of airborne traffic in a wide range of geographies and jurisdictions.

CitvAirbus

A multi-passenger, self-piloted electric vertical take-off and landing (VTOL) demonstrator designed for urban air mobility with cost efficiency, high-volume production and a low environmental footprint in mind.

Voom

on a shared basis via a mobile app.



Vahana

A single-passenger, self-piloted electric vertical take-off and landing (VTOL) aircraft being developed to open up urban airways.



Collaboration with Airbus and the National University of Singapore to test the seamless delivery of small parcels on its campus using unmanned aircraft systems.

AIRBUS

Objectives



- The UAM Initiative offers a forum for diverse stakeholders already involved, or to be involved, in *urban-*, and *urban air-*, mobility at intra-city and inter-city level.
 - ✓ Example stakeholders may include, but are not limited to, cities, citizens, manufacturers, operators, infrastructure providers, insurance companies, real estate, etc.
- The expectation from this multi-stakeholder approach is the bringing together of the relevant communities to jointly work on:
 - \checkmark sharing innovative ideas.
 - \checkmark increasing public acceptance, and
 - ✓ accelerating UAM market uptake



SMART MOBILITY in SMART CITIES: WALK. RIDE. DRIVE. FLY. 'How do you want to commute today?'



- The UAM Initiative will steer its activities on smart mobility initiatives interfacing, or enabling UAM by addressing topics around the following four (initially, and not limited to) parallel thematic pillars:
 - **1. UAM interfaces with public transport** (incl. existing and future setups)

2. Mobility as a Service (e.g. mobility platforms, seamless mobility, cybersecurity, insurance, legal, transport operations)

3. Ground infrastructure for UAM (e.g. real estate stakes and initiatives to support UAM such as dedicated UAM landing pads and integration to multimodal networks hubs, advanced communications-IoT)

4. ATM/UTM concepts for UAM and its integration in view of single sky operations

It is envisaged that the above activity pillars will involve and mobilise the relevant European innovation stakeholders including the pertinent start-ups and SMEs ecosystems.





- The UAM Initiative is led by **Airbus** as a global leader in aeronautics, defence, space and related services with revenues of €67 billion and a workforce of around 134,000 (2016).
- Airbus is working on different concepts for urban air mobility and is **actively engaging** with cities and other stakeholders.

Type of stakeholders sought to engage:

- ✓ Smart cities across Europe as principal partners for developing city-centric pilot demonstration projects
- ✓ from technology, industrial and service sectors such as aerospace, aviation, telecommunications, insurance, banking and investments, real estate, public transportation authorities/associations/operators, mobility research and academic institutes/universities, environmental agencies, urban planning, etc.
- ✓ Established and new members of existing initiatives across EIP Action Clusters (e.g. New Mobility Services (SUM), Small Giants, Urban Platforms, Business Models, Finance & Procurement, etc.) and other related work at EC level (e.g. exploratory and applied research projects, pilot projects etc.)





First Phase (Q4, 2017 – Q2, 2018)	Inform about & Engage on demonstration projects Create and involve a multi-stakeholder community around each committed city to define a demonstration project for smart mobility featuring UAM.
Second Phase (Q2, 2018 – Q1, 2019)	Define & Prepare demonstration projects Develop, qualify and articulate UAM business and service concepts towards integrated urban mobility solutions as part of a detailed demonstration project proposal. Decide on GO – NoGO based on partners' commitment, project attractiveness and financing raised and secured.
Third Phase (Q1-Q4, 2019)	Run & Conclude demonstration projects Organise execution of the actual demonstration projects across cities/regions. Derive lessons learnt from each demonstration project and make recommendations for a UAM deployment strategy and roadmap.
UAM Initiative Dissemination Events (<i>in Q1, 2020</i>)	Achievements & Way Forward

Benefits of joining



• benefits of joining the UAM initiative:

- ✓ Access to European forum on UAM (networking, partnerships, etc.)
- Participate in cutting-edge projects mix of technology+business+usability that will have a real impact in shaping the future of urban mobility
- Framing of future project proposals and visibility towards EC and possible funding / support mechanisms
- ✓ Potential quicker market uptake of business models of respective stakeholders





Want to join?

