

# MOONSHOT CITIES - UAM IN HAMBURG



Foto: HHLA Sky GmbH

Ministry of Economics and Innovation  
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# OVERVIEW

## ➤ Potential of drones for the city:

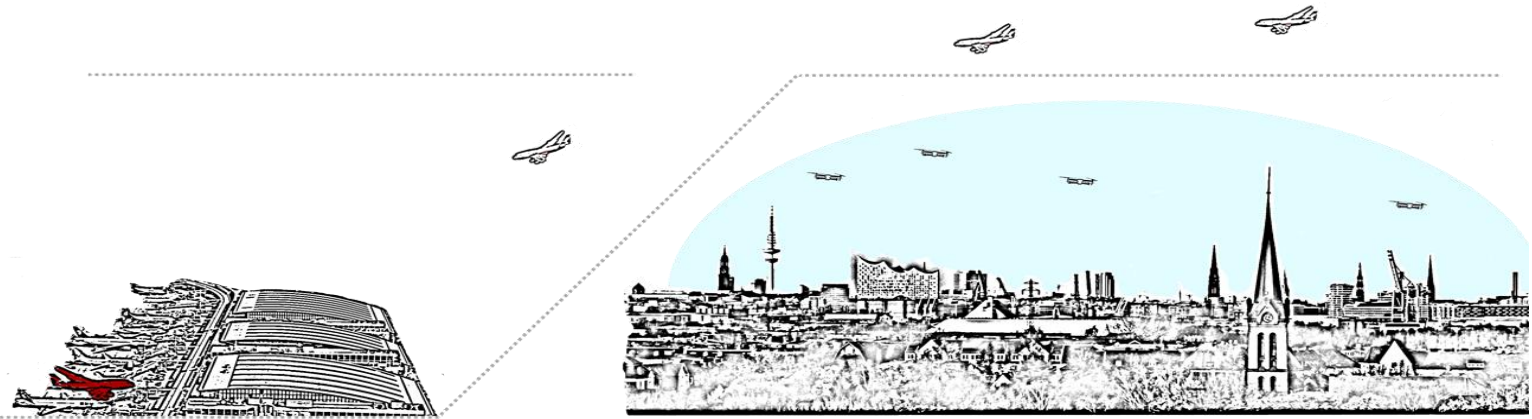
- Drone traffic in the city: e.g. for traffic/site/flood monitoring, medical transport
- Drone industry: Expanding the aviation site of Hamburg

## ➤ Hamburg's activities:

- Legal expertise, exchange with the federal government (BMDV, BMI), EU (EASA, COM) and ICAO; active involvement in shaping legislation
- Project collaboration in Medify, UDVeo, LUV, BLU-Space
- Development of industrial and application policy networks (Windrove, UIC2...)

# POTENTIAL OF DRONES

- New economic perspectives, new industrial perspectives, new mobility perspectives
- High-potential applications and high-tech developments
- Implementation triad: law, technology, acceptance



# SELECTED POTENTIAL APPLICATIONS



Port of Hamburg, used by HPA and HHLA, among others (crane inspection, site inspection, intralogistics, etc.)



Maintenance management, inspection, maintenance and monitoring flights



Transportation of medical goods, organ transportation



Investigating the damage situation in the event of accidents, fires, etc.



Craft sector: roof inspection, real estate agent

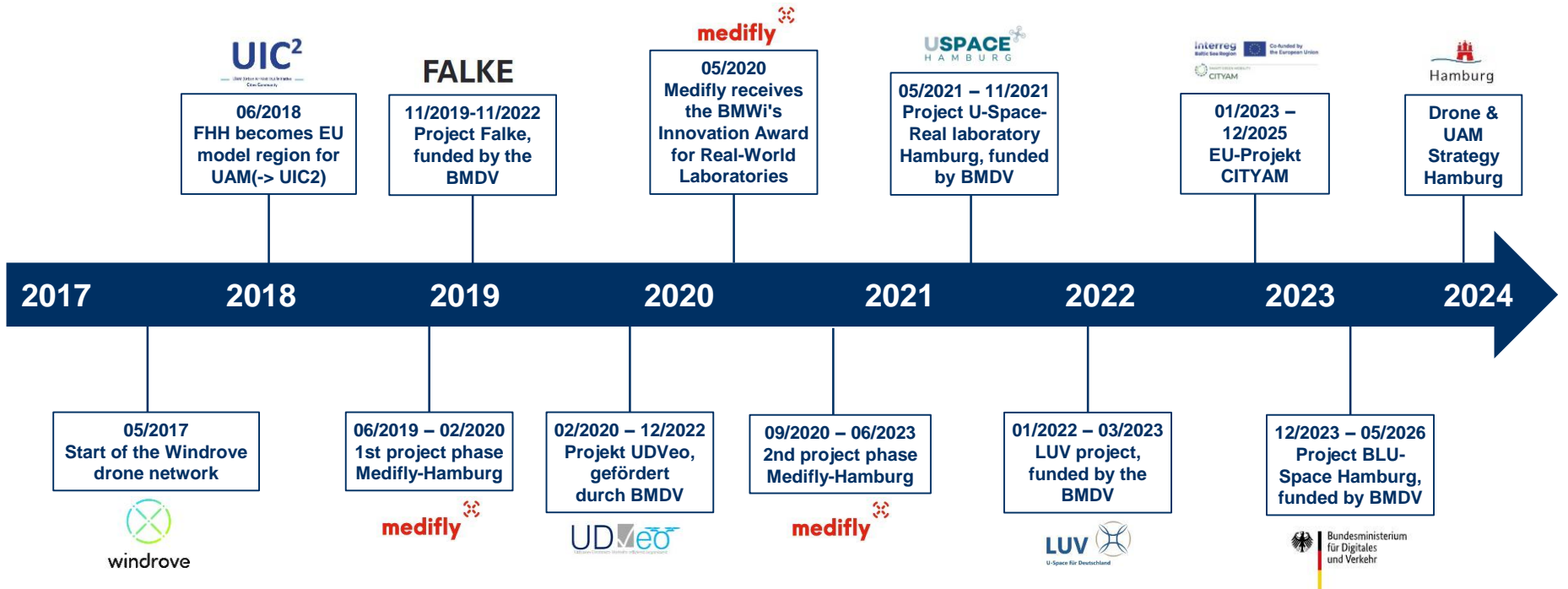


Search for people, disaster management



Islands: General supply?

# HISTORY & SELECTED PROJECTS



# HAMBURG'S UAM ECOSYSTEM

- Public authorities, Industry, research institutions
- Triple helix model of innovation
- Interdisciplinary projects

**UAM Network Windrove:  
Linking all Stakeholders  
in and to Hamburg.**



# HAMBURG'S UAM ECOSYSTEM

## 50+ Organisations

- Users and manufacturers of products and services
- Industrial and state-owned companies
- Educational institutions, universities and research institutions
- Public authorities and organizations with security tasks

## 20+ Activities

- Funding and innovation projects
- Initiatives, events, networks, competitions



# THE URBAN PERSPECTIVE

- Without a legal framework, there is no economic area, no mobility perspective and no industrial perspective.
- The capacity above the cities is not infinite.
- Capacity is limited by the legal framework, technology, infrastructure (costs) and social acceptance.
- Acceptance is achieved by balancing competing interests. Cities need the right instruments for this. The balance must be achieved in a court-proof way.
- Hamburg and all other European UAM model cities are therefore initially focusing on applications in the special public interest.



# MANIFESTO OF THE UIC2-CITIES

## A deciding role...

1. for allowing the operation of UAM services of public interest in alignment with the needs and preferences of their citizens.
2. in establishing to what extent UAM/U-Space operations can be conducted in their territories.
3. where UAM/U-Space flight operations are permitted within their territories.
4. where take-off and landing sites are to be built.
5. for prosecution of infringements of the public use of their urban airspace (i.e. a local task).



## MANIFESTO ON THE MULTILEVEL GOVERNANCE OF THE URBAN SKY



[www.amsterdamdroneweek.com/manifesto](http://www.amsterdamdroneweek.com/manifesto)

# THE ROLE OF THE CITY

- UAS are flown locally, including over the cities
- Legislation has been passed at EU level since 2018
- Member States implement and shape UAM legislation, e.g. U-Space regulation 664/2021
  - Art. 18 lit (f)

“The designated competent authorities shall:

(f) establish a mechanism to coordinate with other authorities and entities, *including at local level*, the designation of U-space airspace, the establishment of airspace restrictions for UAS within that U-space airspace and the determination of the U-space services to be provided in the U-space airspace”

# OBJECTIVES AND STRATEGIC GUIDELINES FOR HAMBURG

- Understanding drones as an opportunity
- Drone traffic suitable for Hamburg (design legal framework accordingly, ensure co-determination of cities)
- Strengthening Hamburg as a development hub for industrial production and drone services
- Supporting further necessary research
- Meeting new administrative tasks competently, agilely and iteratively

# BENEFITS & CHALLENGES FOR A CITY

## ➤ Benefits

- Supporting, enhancing, or replacing human activities
- Especially suitable for public tasks, e.g. fire department, disaster protection, medical transport
- Benefits with respect to time and/or availability

## ➤ Challenges

- How to control drone traffic (capacity, purpose...)?
- How to ensure safe and secure drone traffic (air & ground risk)?
- How to create public acceptance?

THANK YOU.



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