

Case Study:

Amsterdam Drone Lab

The Inner-City
Testing Lab



PUBLIC-PRIVATE PARTNERSHIP: Municipality of Amsterdam, AirHub and KPN

LOCATION: Amsterdam, The Netherlands

TEAM SIZE: 5

SET-UP: Urban, Suburban, Port

SYSTEM READINESS LEVEL (SRL): 6

FOUNDING YEAR: 2021

amsterdamdronelab.nl

At a Glance

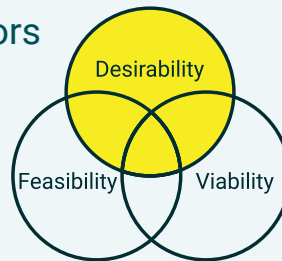
Amsterdam Drone Lab was established in 2021 as a public-private partnership involving several parties, such as the Municipality of Amsterdam, AirHub (a drone software company), and KPN (a telecommunications company). The lab is located at Marineterrein, an experimental real-life urban setting in the heart of Amsterdam, and is the only inner-city drone field in the Netherlands.

The lab's main goal is to develop new drone technologies to improve the city's infrastructure and enhance the quality of life for its residents. It collaborates with various public and private partners to develop drone infrastructure, test use cases, and address the regulatory requirements for urban drone operations. Key areas of focus include parcel and food delivery, infrastructure maintenance, and emergency response.



Use Case: Testing Air Corridors and U-Space Infrastructure

Amsterdam Drone Lab tests and demonstrates U-Space corridors for BVLOS operations, facilitating logistics over natural barriers like the IJ river. Through the Urban Sky Lab project, the lab collaborates with companies and architects to design drone infrastructure, such as landing stations and charging hubs. In partnership with Takeaway.com, they tested drone food deliveries to optimize urban logistics. The lab also explores use cases such as quay and bridge inspections and enhancing safety in recreational areas. In 2023, the lab monitored 40,000 drone flights using a detection system to manage traffic in Amsterdam's airspace.



Regulatory:

- **Special corridors approval:** Working with the **Dutch Civil Aviation Authority** and Dutch Drone Delta to test and implement **Beyond Visual Line of Sight (BVLOS)** corridors for the selected use cases.
- **Operator:** Each flight is managed by a certified operational team. They prepare the flight plan, provide the drones and necessary radio technology, and a certified drone pilot carries out the flight.



“Using drones for society is very feasible, for example, by employing them for inspections of bridges and quays, studying traffic flows and facilitating special transports. Within the Amsterdam Drone Lab, we investigate the opportunities for the city together with companies and institutions.”

Joshua Serrão,
Strategic innovation Air Mobility (UAM), City of Amsterdam

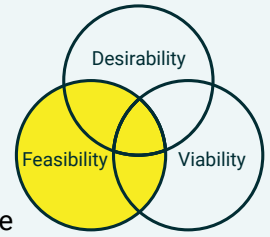
Technology

Unmanned Traffic Management system (UTM):

- **Safety Systems:** The lab employs **AI-driven UTM** by AirHub technology to ensure safe and efficient coordination of drone flights in congested urban spaces, enabling real-time conflict resolution and traffic management.
- **The Drone Alert System** informs the public about upcoming test flights, outlining the purpose, approach, and schedule. This allows residents to provide feedback and share any concerns, ensuring transparency and fostering public involvement in drone operations.

Drones:

- **Partnering with drone companies** such as DJI and AVY, Amsterdam Drone Lab tailors its technology and services to specific use cases.
- **Infrastructure:** 5G is available on and around the site. It allows devices to communicate faster with each other, which is necessary for new developments such as autonomous flying.



Business Model

Consultancy

Consultancy services for the city and customers on developing and implementing business cases for drone deliveries.

Drone as a Service

Offers drone-related services to businesses within the operating area.



Impact

Amsterdam Drone Lab advances urban drone integration by testing U-Space corridors, reducing traffic congestion and emissions, and improving logistics and emergency services. Collaborating with planners and architects, it designs key infrastructure such as landing stations and charging hubs. The lab also investigates the social and environmental impact of drones. Public engagement through Drone Alert fosters transparency and trust.

“When we talk about drones, we don’t focus enough about what we want them to do. Amsterdam is one of the first cities in the world to discuss and think about what drones actually mean for the city. We do this by among others collaborating with urban planners and architects, creating visuals that allow us to engage in this conversation with the city.”

Vries Strookman, Co-founder Amsterdam Drone Lab

Conclusion

Amsterdam Drone Lab, the city’s first inner-city drone tech hub, drives innovation in urban planning, logistics, and safety. By bringing together drone manufacturers, planners, and logistics companies, the lab accelerates advancements through live demos and public engagement, supporting future urban U-Space development.