PROJECT OBJECTIVES

1 Set a **data-driven and citizen-inclusive framework** for the impact and capacity assessment of UAM.

2 Provide decision-makers with **methods that can quantify** the environmental, safety, societal and economic impact of UAM.

3 **Map current practices, performance areas and related indicators** used in aviation impact and capacity assessment.

4 Designate **innovative KPIs** and prepare the impact and capacity assessment framework with a set of algorithms.

5 Provide **insights on the main barriers of UAM acceptance** through the data collection from citizens with immersive experiences.

6 Address **social perception** of safety and visual pollution through a virtual reality environment.

7 Measure the cost efficiency of **UAM city applications** in conjunction with the societal, environmental impacts and trade offs.

8 Identification of the **importance of criteria** to be used in trajectory multiobjective optimization.

9 Provide insights and tools for **UAM infrastructure development**.

10 Validate the ImAFUSA framework and tools in a **simulation environment** that will virtualise future U- space use scenarios.

"We did it **wrong** with cars, we did it **wrong** with planes, let's do it **right** with drones"

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## Impact & Capacity Assessment Framework for U-space Societal Acceptance

ENVIRONMENT

Engage citizens through three immersive UAM experiences.

Collect data on noise perception, views on loudness, visual pollution, safety perceptions, and overall UAM acceptance.

- **Noise assessment tool**
- **Visual pollution tool**
- **Air quality tool**
- **Simulation tool for impact and capacity**
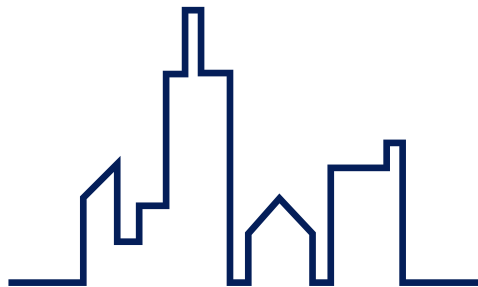
SAFETY

Data will be collected from citizens' reactions with an eye tracking tool and a physical trigger to accurately record the telemetry of the **moment a flight is perceived unsafe**.

Results from the questionnaire and from the virtual reality test will be correlated.
The objective is to validate whether the general public will be able to **accept densely populated flight zones** and **flight in ground proximity**.
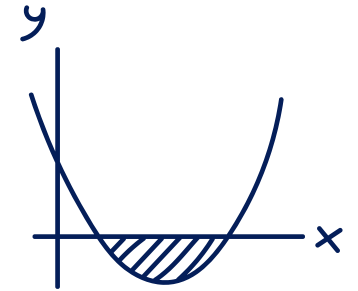
ECONOMY & SOCIETY

An **interview script** will be structured to collect in free text information on the citizens′ views on freight and passenger applications.

- **Focus groups with citizens**
- **UAM social acceptance survey**
- Through the recorded citizen data, the dimensions of a **citizen-oriented survey for social acceptance** will be extracted by using **Python and R programming** languages for text mining.