MUSE

Measuring U-space social and environmental impact

Performance Framework

To define a set of U-space social and environmental KPIs with the highest possible level of geographical, temporal, demographic, socioeconomic, and behavioural resolution, able to capture the full range of UAM impacts on citizens' quality of life.

Noise | **Visual pollution** | **Privacy concerns**

Impact Assessment Toolset

- Generation of drone trajectories in urban areas
- Modelling of noise and visual pollution maps
- Dynamic population mapping using anonymised mobile location data and Earth Observation (EO) data
- Modelling of population exposure to noise, visual pollution and privacy concerns
- Calculation of KPIs and visualisation in an interactive dashboard

Case studies focused on drone delivery services in the city of Madrid (Spain)

MUSE intends to establish the basis for a future U-space service that supports other U-space services in the minimisation of UAM's negative social and environmental externalities

Future end users

Drone operators
Social and environmental impact assessment of individual UAM operations

U-space traffic manager
Management of UAM flight plan approval based on social and environmental impact on citizens

Policy makers
Identification of new policies and regulations on social and environmental UAM

In partnership with:

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