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Enabling Sustainable AiR Mobility in Urban contexts via use cases in Emergency and Medical Services

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This project has received funding from the European Union's Horizon. 2020 research and innovation programme under grant agreement No. 101006601

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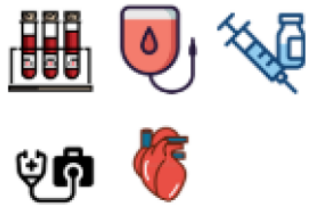
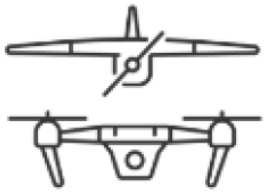
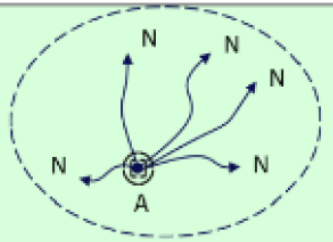
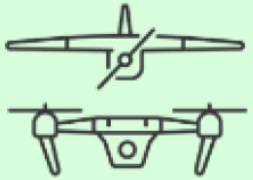
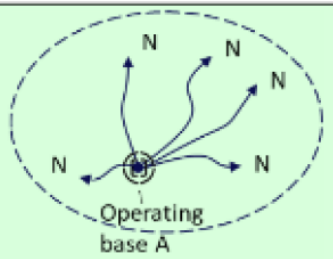
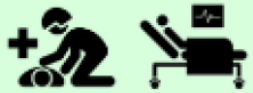
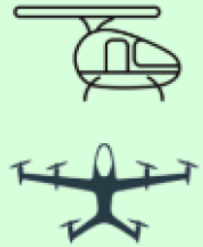
Use Cases

Use case	Type of flight (interfacility vs. ad-hoc)	Possible payloads	What aircraft? (sUA vs. passenger carrying eVTOL)
I: sUAs for interfacility transport of medical products			
II: sUAs to bring medical products to an ad-hoc location			
III: Passenger carrying eVTOLs for interfacility transfer of medical passengers			
IV: Passenger carrying eVTOLs to transfer medical staff to an ad-hoc location + transferring a patient to a hospital			

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AiRMOUR Validation Activities

- Testing of a small unmanned aircraft & passenger eVTOL
- Demonstrations in Stavanger, Helsinki and Kassel
- Simulations in Luxembourg and Stockholm
- Engagement with stakeholders and citizens
- Validation of key performance indicators and success criteria
- 9 project objectives to validate

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AiRMOUR Stavanger Demonstration

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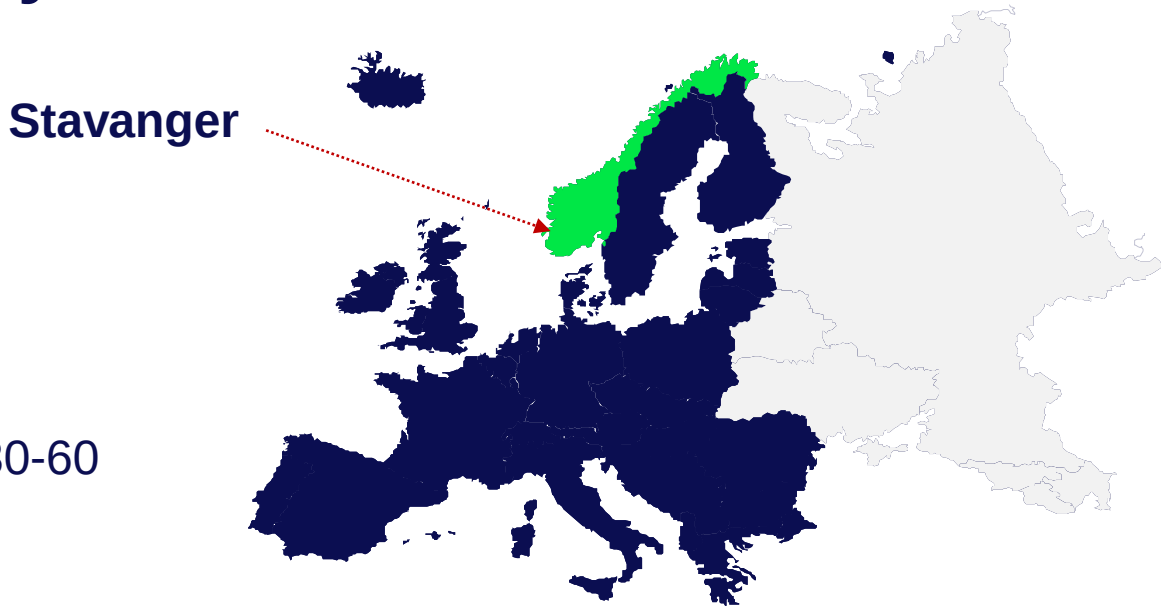
Stavanger Demonstration - Survey Results

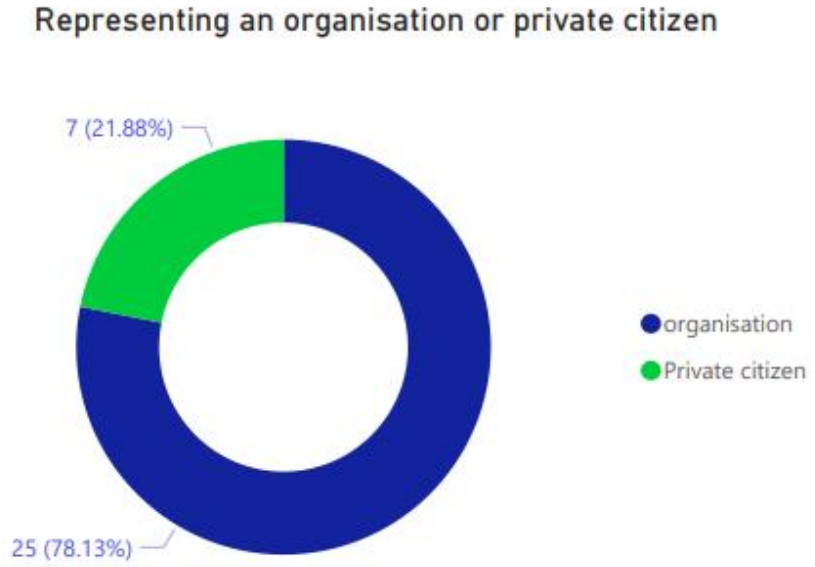
Demographics: gender, location

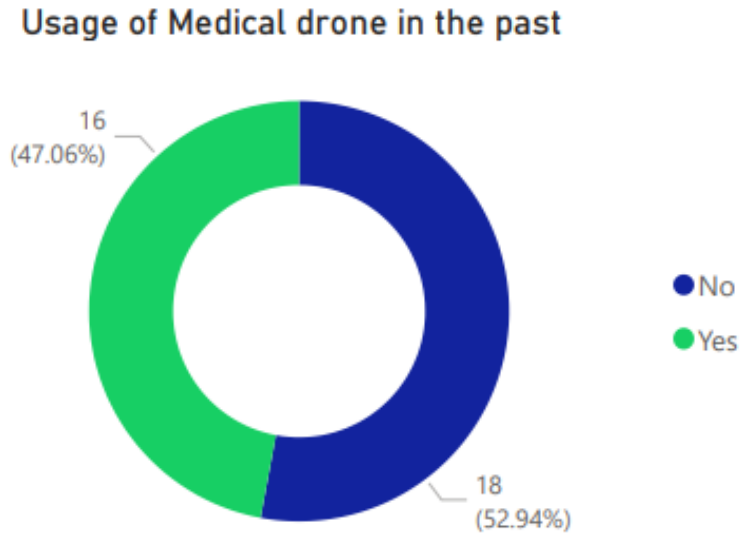
Female
33%

Male
66%

Avg. age Group: 30-60







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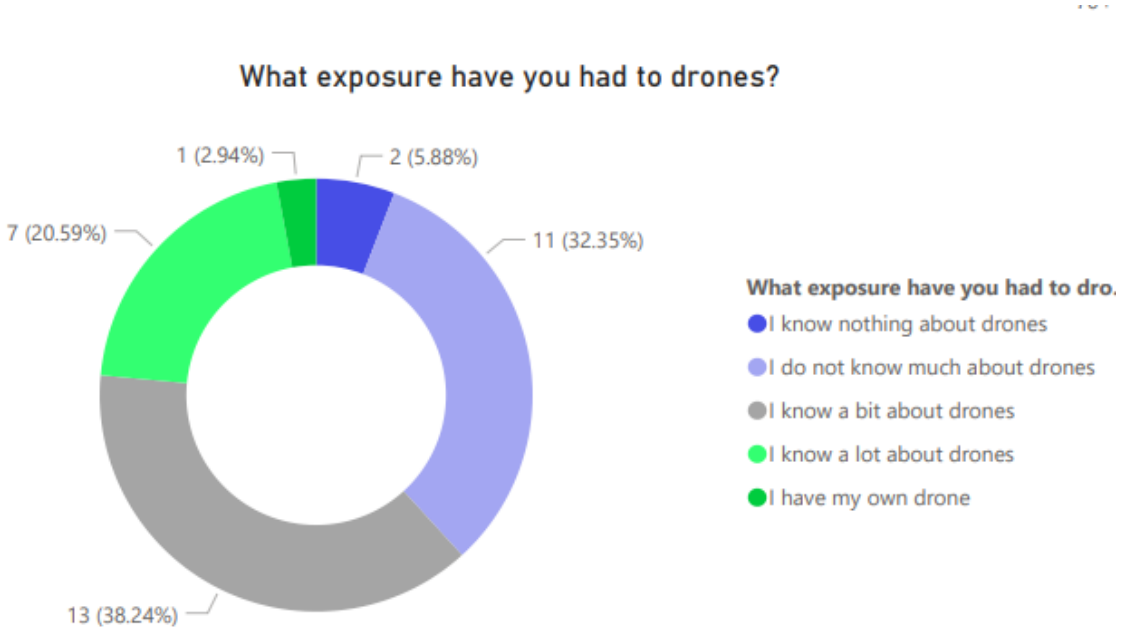
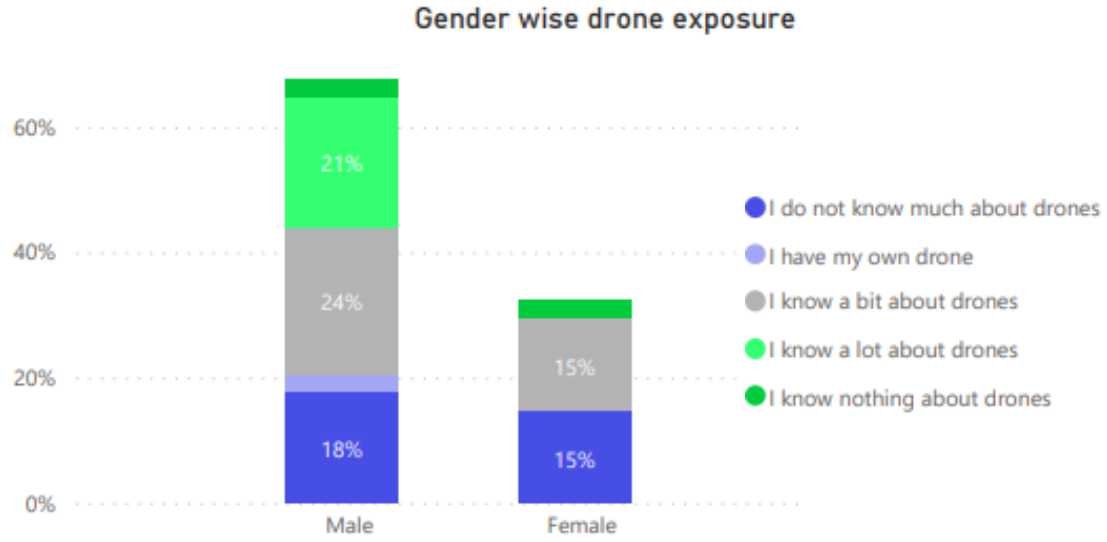
Exposure to drones:

Approx 1/3 knew a lot, 1/3 knew a bit & 1/3 knew not much about drones.

Males reported greater level of exposure than females. Females (18-30) and Males (31-50) were most exposed age groups.





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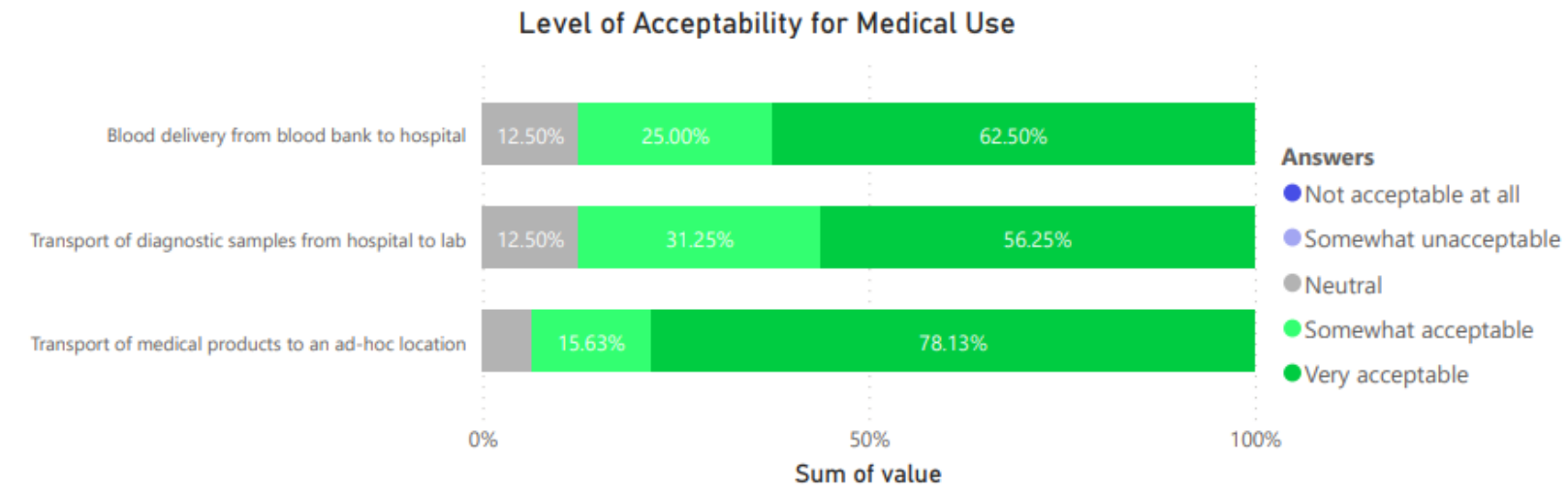
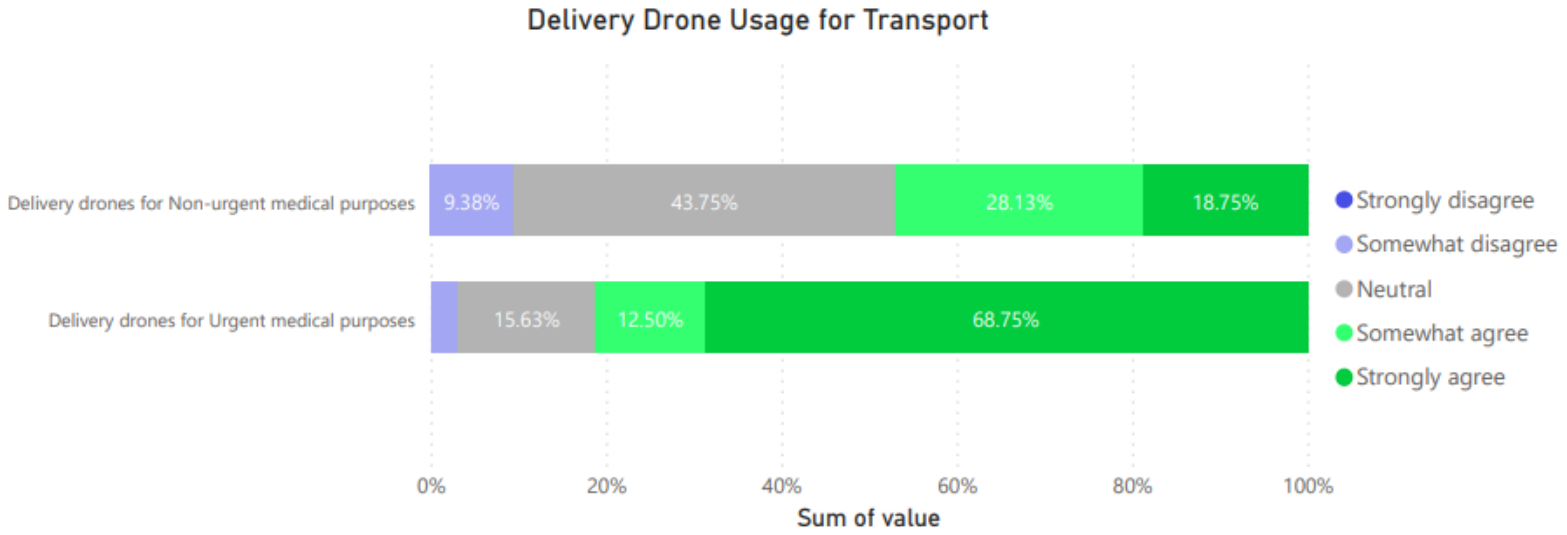
Level of acceptability for medical use case: Overall respondents are very positive towards the usage of delivery drones for medical emergency purposes, less so for non-urgent





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Key findings from surveys

- Top concerns were Safety, Noise and Privacy
- 45% of respondents were more positive about drones after seeing them first-hand. The rest were unchanged in their views.
- Over 60% of participants rated the noise and visual pollution of the drone as having a ‘mild’ impact

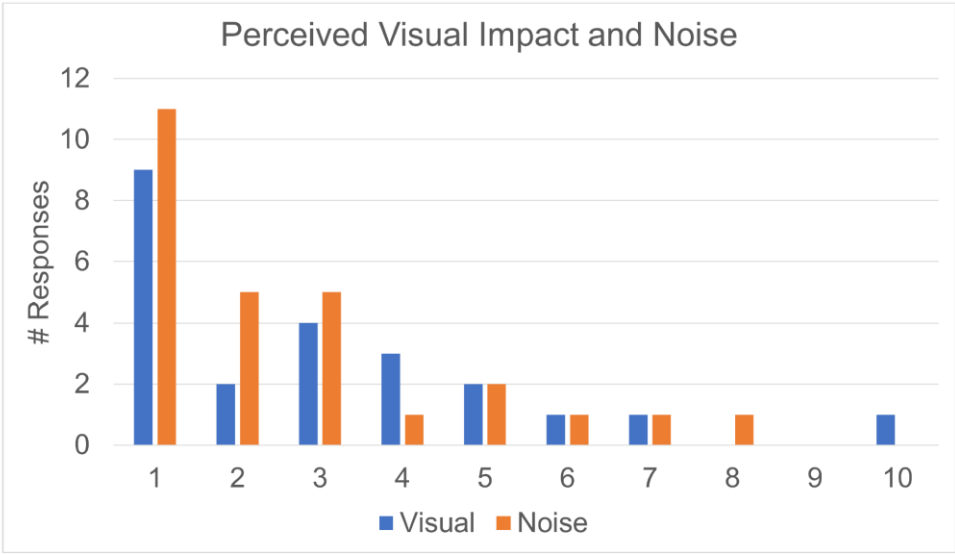

Figure 5: Perception of UAV noise and visual impact (1: no impact, 10: extreme impact).

Source: Students from Norwegian University of Science & Technology

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Key findings from focus groups

- Less noise & visual impact than they were expecting
- Non-urgent deliveries acceptable by some for transport to more rural locations or to the elderly, but not as acceptable as urgent use case
- Strict regulations need to be in place
- Increased information about usage of sUAs to increase acceptability for widespread use
- Distinguish EMS aircraft
- Equal access of services

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Thank You!

Lucy Mascarenhas

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