

The Role of a Human Host Onboard of Urban Autonomous Ferries

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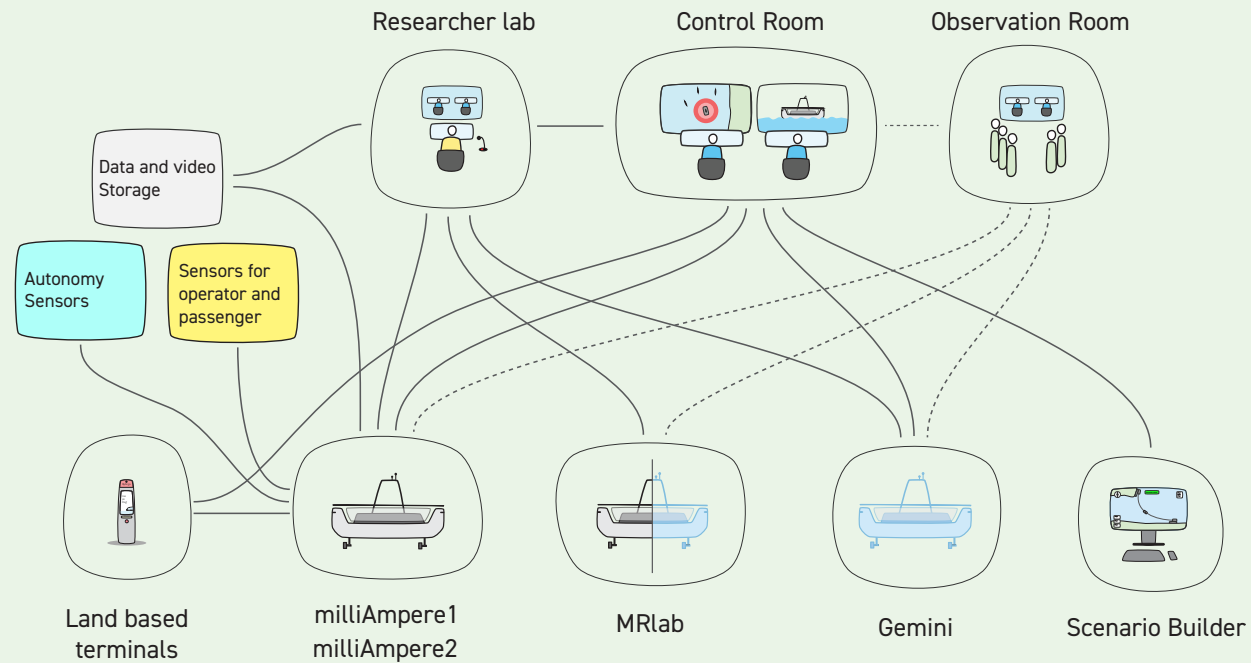
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Leander Pantelatos holds an Integrated MSc in Industrial Design Engineering (NTNU, 2021) and a BSc in Mechanical Engineering (NTNU, 2019). He worked as a research assistant at the Shore Control Lab (NTNU) in the academic year 2021-2022 where he was involved in the research projects TRUSST and LASHFIRE. Currently, he is a PhD candidate at the department of Design (NTNU) in the research group for sustainable design. His research interests are amongst others: user perspectives, human-machine interaction and human-centred design.





shore
control
lab



milliAmpere 2



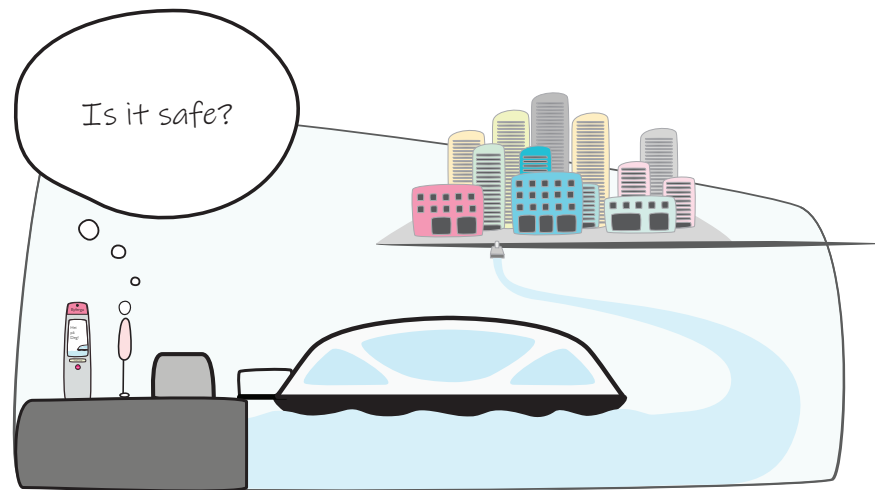
TRUSST

Assuring Trustworthy, Safe and Sustainable Transport for All

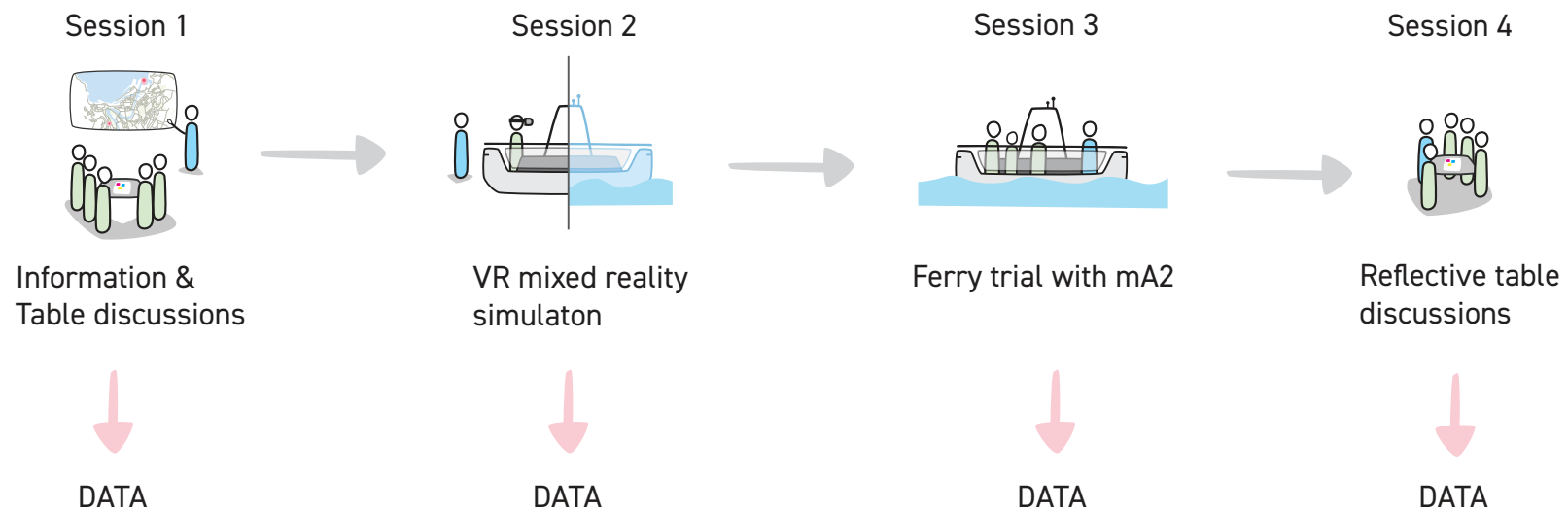


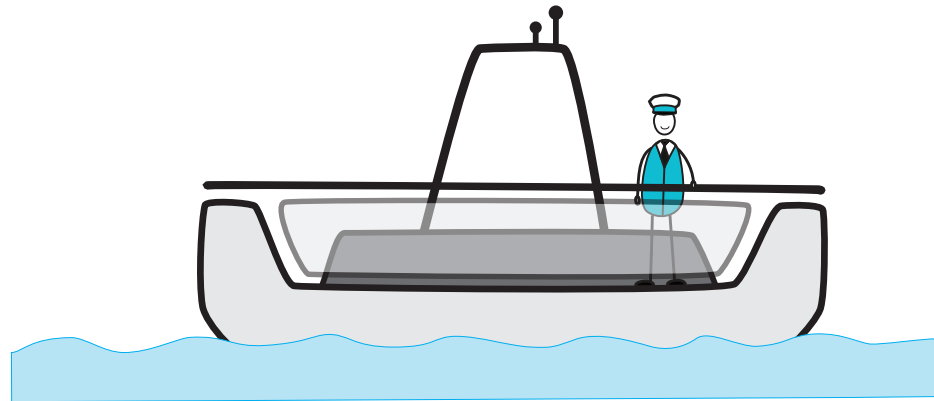
TRUSST

WP6 - Citizen Engagement



Method



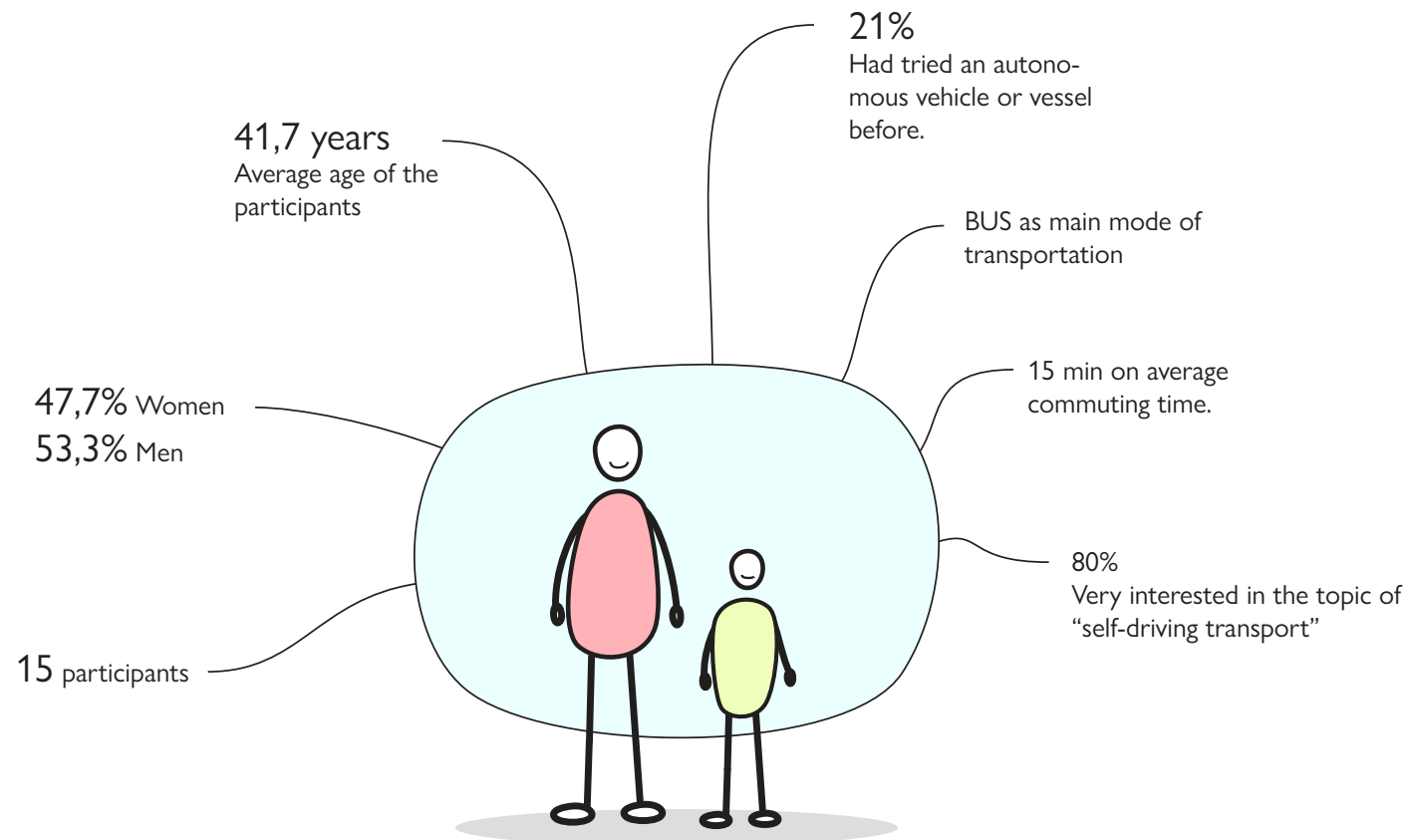


The aim of this paper was to understand the consequences or implications of a human host on an UAF, and in what way a human host would shape the passengers' perceived safety, trust, and convenience of UAFs.

The Case



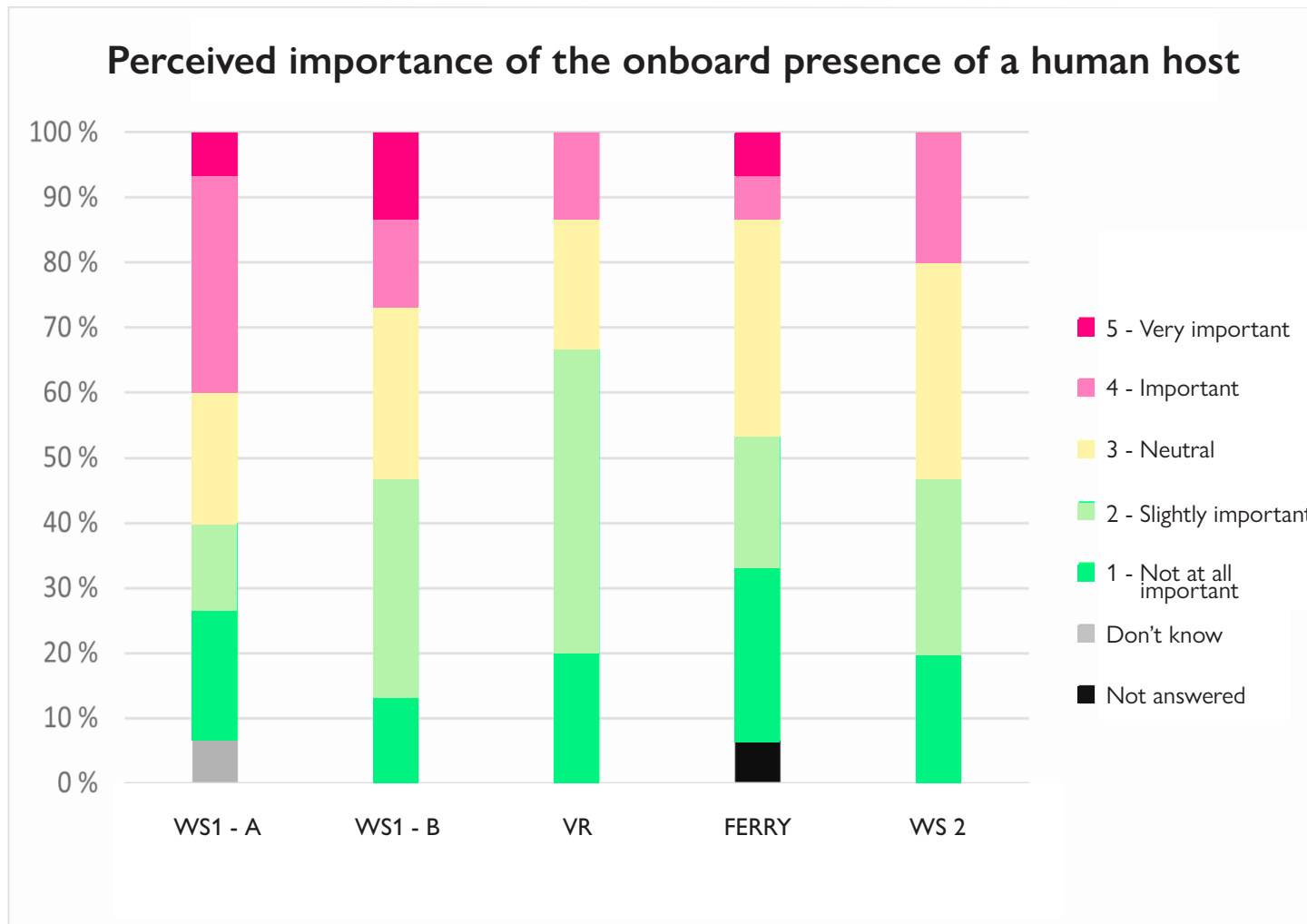
The Participants





Results

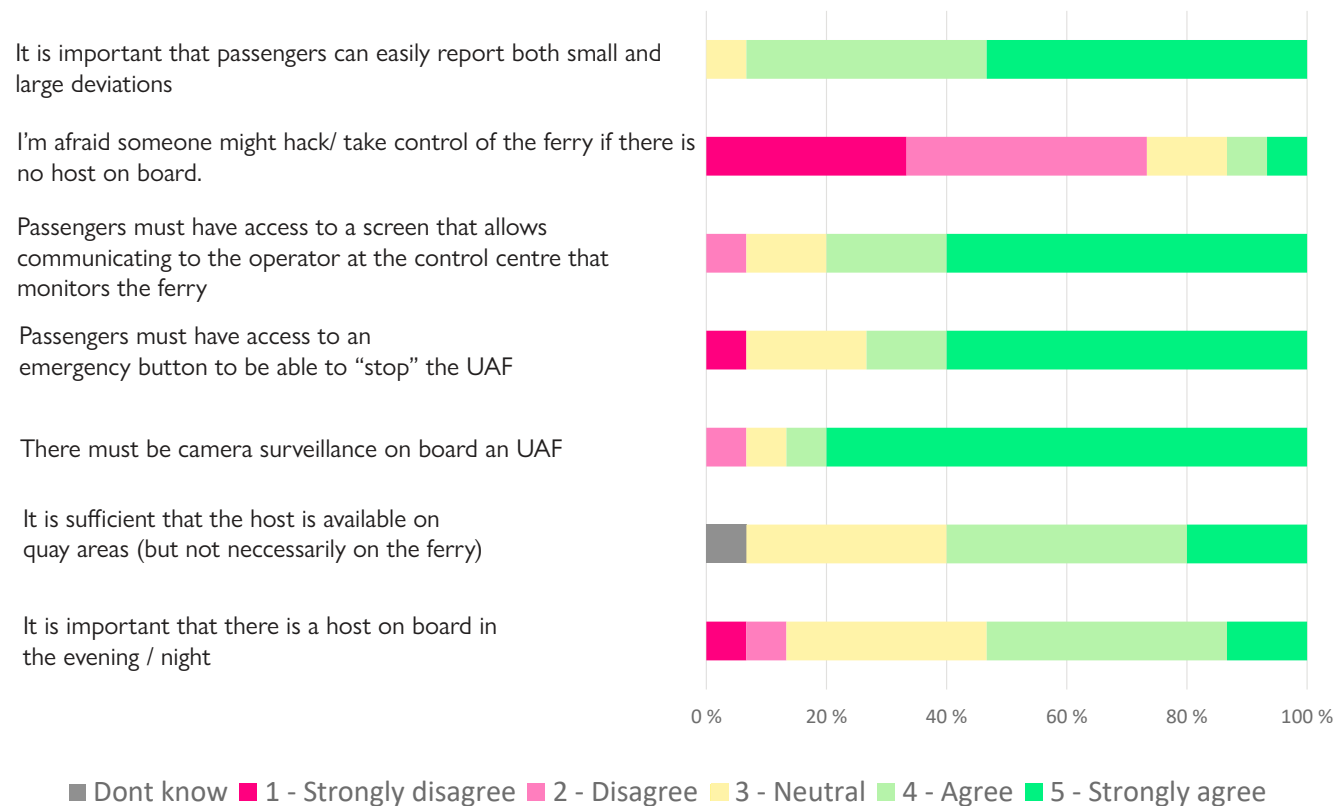
Quantitative



Results

Quantitative

To what extent do you agree with the following statements?



Results

Qualitative

1) Contextual and the environmental factors onboard and around the ferry and the need for resilience.

“safety for all”

“safe because of the short distance, and it is possible to see both the start and the end”

3) The role of human host in emergency situations, rescue, and evacuation.

“a very good system would be needed onboard of the autonomous ferries to put out fire”.

2) The importance of human host onboard to create social order in certain time windows.

“social safety is important to prevent unsafe behaviour and it is situation-based, for example after a football match”

“one should be able to get help immediately and even with the possibility of pushing a button to get help, it is not clear how fast and how well you will be helped”.

“regarding strangers, it is possible to choose not to board the ferry if there are passengers acting out. The distance is also short”.

Results

Qualitative

4) The importance of technical and ad-hoc services offered by human host.

“the human aspect must be in balance with the technical aspect”

6) The importance of information and transparency in transition towards unmanned ferries.

“having sufficient information from people who have designed and made the system is very reassuring to know what is going on”.

5) The need for gradual transition towards unmanned ferries.

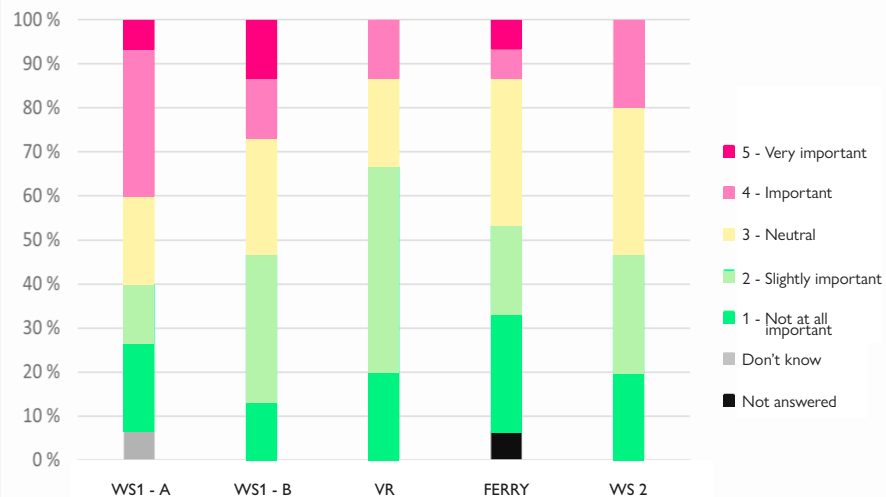
“the ferry should have the possibility to be steered manually by a human host”

“the learning process for autonomous ferry is a long process for dangerous situations, and in the meantime, one wants to feel safe with a host onboard”.

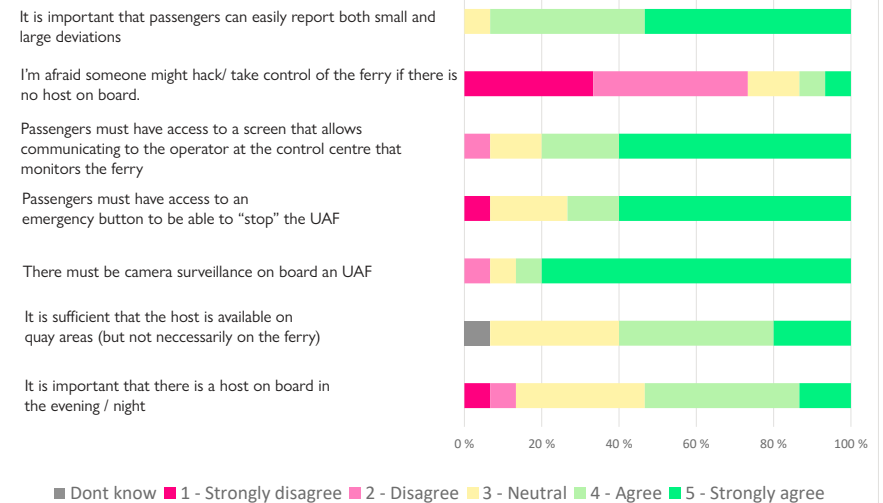
Discussion and Conclusions

Quantitative

Perceived importance of the onboard presence of a human host



To what extent do you agree with the following statements?



Discussion and Conclusions

Quantitative



Thank you!

