

2nd Stakeholder Forum for the research project VERTIFIED: Evaluation of the requirements for the planned vertiport demonstrators

Andreas Schaller¹, Samiksha Nagrare², Oguzhan Nohutcu¹, Kristin Wendt¹

¹DLR Cochstedt, National Experimental Test Center for Unmanned Aircraft Systems,
andreas.schaller@dlr.de; oguzhan.nohutcu@dlr.de; kristin.wendt@dlr.de

²DLR Braunschweig, Institute of Flight Guidance, samiksha.nagrare@dlr.de;

The German Aerospace Centre (DLR) has already demonstrated first concepts of flight guidance of air taxis at vertiports in a scaled manner in the DLR internal research project HorizonUAM [1], which ended in 2023. Based on these results, the internal follow-up research project VERTIFIED (Vertiport Research Infrastructure for Innovation Exploration and Demonstration) was initiated to develop a concept for two vertiport demonstrators and build them up at DLR's National Experimental Test Center for Unmanned Aircraft Systems in Cochstedt. While one of these demonstrators will be developed as an "urban vertiport" to enable flight tests with Unmanned Aircraft Systems (UAS) to simulate a vertiport in urban environment, the second one will be realized as "vertiport at an airport" to facilitate UAS flight trials at a vertiport in airport environment.

After the end of the ongoing project in 2028, the vertiport demonstrators will be available to use for interested external users such as industrial partners of the test center or other research organizations. Thus, project VERTIFIED aims to extend the testing possibilities in Cochstedt for internal as well as external users of the testing facility. Therefore, the involvement of both kinds of stakeholders, internal as well as external from research, industry and authorities, in the early planning phase is of particular importance due to the necessity of the identifications of requirements for the demonstrators in an early stage.

By offering vertiport demonstrators as testing infrastructure to interested user groups as e.g. manufacturers of air taxis, service providers or providers of necessary hardware, the project makes a significant contribution to the commercialisation of Innovative Air Mobility (IAM). The validation and further steps in the requirements management process should lead to the realisation of the two demonstrators, which are closely oriented to the needs of the future.

While first requirements on the demonstrators were collected in the kick-off stakeholder forum in 2024, the second stakeholder forum in November 2025 will focus on the evaluation of the requirements for the demonstrators developed based on the outcome of first stakeholder event. By collecting direct feedback from later potential users of the vertiport demonstrators, the catalogue of requirements in its current version will be evaluated and completed to reach the next milestone of the project: a finalized design concept for the demonstrators.

Agenda for the 2nd stakeholder forum:

Topic

Opening and introduction (first part)

Welcome and overview about current status of the project VERTIFIED

Workshop and time for discussion (second part)

Four parallel expert sessions to proof the catalogue of requirements in its current status in the fields of “software”, “hardware”, “communication” and “other facilities at vertiports”. Each field will be discussed from the three different user perspectives: “vertiport user”, “vertiport operator” and “unmanned aircraft”.

Recap

References:

[1] Schuchardt, B.I., Becker, D., Becker, R.G., End, A., Gerz, T., Meller, F., Metz, I.C., Niklaß, M., Pak, H., Schier-Morgenthal, S. and Schweiger, K., 2021. Urban air mobility research at the DLR German aerospace center—getting the HorizonUAM project started. In *AIAA Aviation 2021 Forum* (p. 3197).

Biography

Andreas Schaller



Andreas Schaller is a research assistant at the DLR internal VERTIFIED project and is one of the moderators of the stakeholder forum. He works with DLR in Cochstedt and manages supervision of the stakeholder forum. Before he started his work at DLR, he worked on headlight development projects at Capgemini Engineering for six years.