



# DLR Design Challenge 2023

## Securing communication channels in crisis scenarios



### Background

Communication via the Internet has become an essential part of modern life communication. Local as well as large-scale failures of this critical infrastructure would have serious consequences. Continuously functioning communication channels are of great importance, especially in crisis and disaster situations, as they facilitate the implementation of relief and rescue missions. One possible solution is to provide internet coverage via satellite networks in low Earth orbit. However, the construction of such a network is associated with immense costs and dependence on private-sector companies or other states. In contrast, a system of aircraft could represent an independent and efficient alternative.

Therefore, this year's Design Challenge will involve the design of aircraft for the recovery and provision of Internet for communications and situation monitoring in a disaster scenario for an extended period. In addition to securing this communication path, the aircraft should also be able to carry out Earth observation of the affected area, while offering the possibility of providing targeted network coverage, even in remote areas, for everyday life. For this reason, the aircraft concept must fulfil the requirement for high efficiency in continuous operation as well as a fast operational readiness in an emergency scenario.



### Organisation

Are you and your fellow students interested? The German Aerospace Center (DLR) invites you to represent your university at the DLR Design Challenge 2023. For team registration, please contact with the responsible supervisors at your university, who will forward the registration to [DesignChallenge@dlr.de](mailto:DesignChallenge@dlr.de).

- A maximum of six team members. Each team must be represented by at least one team member at each event
- Kick-off event and release of the detailed design task
- Preparation of a technical report to document the results
- Closing event and presentation of the results by all teams
- Evaluation of the reports by a jury of experts from DLR
- Presentation of the winning designs at an aviation congress

Specific dates and conditions of participation will be announced soon.

