



# DLR DESIGN CHALLENGE 2024

## Future mobility on regional routes!



### Background

The ongoing climate crisis requires innovative solutions in all areas of life, including aviation. This year, the DLR Design Challenge is calling for the development of concepts for new, climate-efficient aircraft to serve a network of regional routes. By integrating novel concepts and sustainable technologies, the aircraft should help to reduce climate impact while also enabling cost-efficient operating models for regional flight routes.

In this year's challenge, the teams will be given a network of routes to be served by their aircraft concept. They will have the freedom to choose some of the aircraft requirements to most efficiently accomplish the overall task. The students will have to accept the challenge of balancing the choice of technologies and operational concept to find an optimal point in the open solution space. This requires not only consideration of technological feasibility, but also analysis of operational aspects, economic viability and environmental impact. By integrating these different aspects, the teams should develop holistic concepts that combine the goals of sustainability and efficiency in aviation.

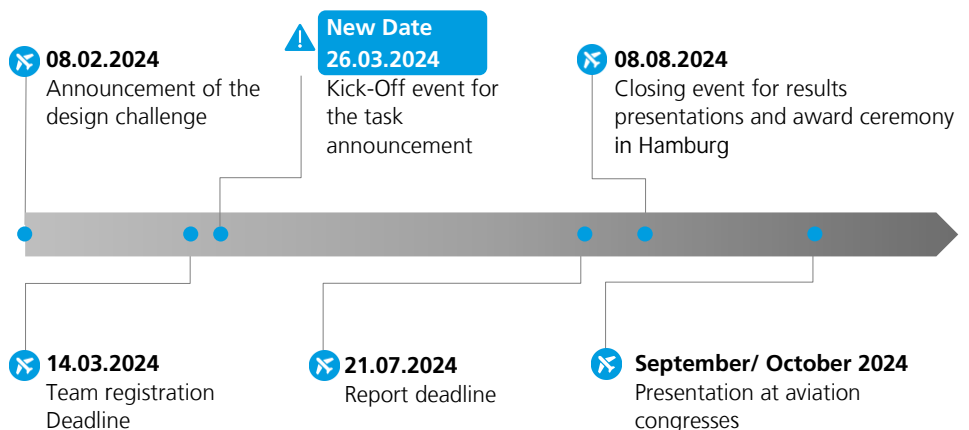


### Organization

You and your fellow students are interested? The German Aerospace Center (DLR) is inviting you to represent your university at the DLR Design Challenge 2024. For team registration, please get in touch with the responsible supervisors at your university, who will forward the registration to [DesignChallenge@dlr.de](mailto:DesignChallenge@dlr.de).

- Each team may consist of a maximum of six members, However, at least one team member must represent the team at each event.
- Kick-Off event and release of the detailed design task.
- Preparation of a technical report for the documentation of the results.
- Closing event and presentation of the results by all teams.
- Evaluation of the reports by a jury of experts from the DLR.

The following dates are planned for this year's Design Challenge:





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### Task Overview

- The teams are asked to design an environmentally sustainable and economically efficient aircraft for the year 2050.
- The teams will design an aircraft to serve a network of regional routes, comparable to domestic flights within Germany. The network will be predefined.
- The teams are free to choose the range of their concept themselves so that they can best fulfill the task. The same applies to the number of passengers, with the constraints set such that it is in the range of 60-120 PAX.
- The competition report must be written in English, must not exceed 25 pages and may contain content from your own dissertations and theses.

### Kick-Off Event

The kick-off event will take place on Tuesday, March 26th, 2024, at the DLR (German Aerospace Center) site in **Braunschweig**. The travel expenses of the teams will be reimbursed according to the Federal Travel Expenses Act. The provisional agenda includes:

- Welcome address by Prof. Dr. Anke Kaysser-Pyzalla, Chair of the DLR Executive Board.
- Introduction by Dr. Markus Fischer, DLR Aviation Board Member and Chair of the Jury.
- Presentation of the Institute of System Architectures in Aeronautics and the Institute of Aerodynamics and Flow Technology.
- Keynotes from subject matter experts on the theme of this year's Design Challenge.
- Announcement of the task.
- Guided tour of the DLR site in Braunschweig, including the wind tunnels and the flight test fleet.



### Recognition

- The top three teams will be invited to present their results at the German Aerospace Congress (DLRK) 2024 from September 30th to October 2nd, 2024, in Hamburg.
- Additionally, the winning team will have the opportunity to present their design at an international professional conference.

