

## Project Study: High-Level Economic Feasibility of Hyperloop Corridors and Connectivity – Munich–Frankfurt

Type: Project Study  
Possible start: as soon as possible  
Location: Ottobrunn, Munich

### TUM Hyperloop

Our group is researching Hyperloop technology for passenger transport. We focus on electromagnetic levitation, suspension, and propulsion, as well as the simulation of high-speed aerodynamic phenomena, cooling systems, and topics related to vehicle structure and infrastructure. Depending on the topic, we develop new test benches and implement various experiments, computationally intensive simulations, or design new types of components. Our chair aims to motivate you and other students to develop modern technology for tomorrow, together as a strong team with the power of everyone.

### Job Description

The Project study examines the high-level economic feasibility of alternative Hyperloop corridor and connectivity concepts between Munich and Frankfurt. Students analyze how demand potential, intercity connectivity, and simplified cost assumptions influence the economic plausibility of a Hyperloop system in an early planning phase, without conducting a full cost-benefit analysis or detailed engineering route alignment. The work focuses on identifying relevant cities, airports, and economic zones, comparing alternative corridor connectivity concepts, and assessing how the inclusion of additional cities or nodes affects overall feasibility. Based on the preferred corridor concept, the project study additionally evaluates potential regional economic impacts (e.g. changes in GDP or economic activity) for connected cities using established approaches from transport and regional economics. The results provide a structured input for subsequent detailed corridor alignment, civil engineering design, and cost estimation.

### Your Tasks

- Identifying and evaluating relevant cities, airports, and economic zones
- Estimating intercity demand using high-level models
- Developing and comparing alternative corridor and connectivity concepts
- Conducting sensitivity analyses for additional cities or nodes
- Estimating potential regional economic impacts (e.g. GDP effects) for the preferred concept

### Methods

- Literature and document analysis
- High-level demand and economic modeling
- Scenario and sensitivity analysis
- Regional economic impact estimation (high-level, literature-based)

### **Our Offer**

- Working with students and researchers in a highly motivated young research team.
- Experience in a new field of research that is gaining importance.

If you are interested in working in our team, please send your application together with a motivation and supporting documentation to ([elias.zorgati@tum.de](mailto:elias.zorgati@tum.de)). If you have any questions, do not hesitate to contact us.