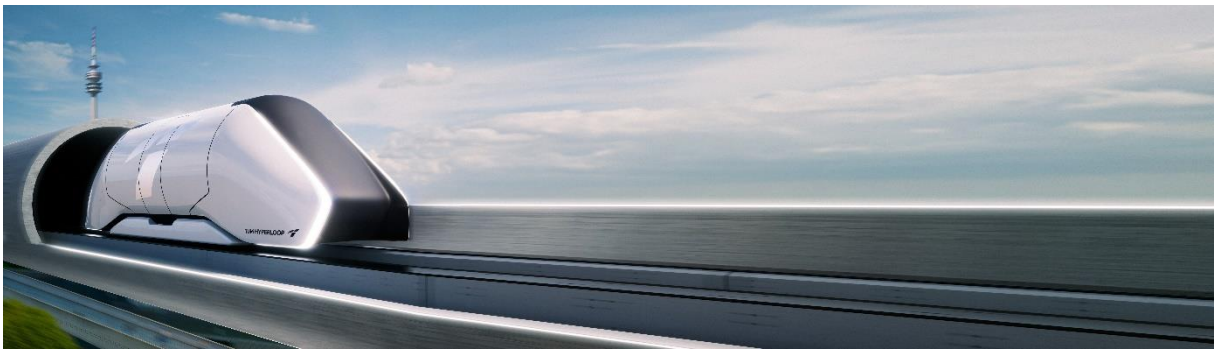
TUM Hyperloop Program
TUM School of Engineering and Design
Technical University of Munich

TUM HYPERLOOP

TUM Hyperloop: Demand analysis of European intracontinental passenger transportation and investigation of impact of a novel ultra-high-speed system on modal splits

Type: Master's Thesis
Content: theoretical
Possible start: 01.05.2024

The TUM Hyperloop Program is envisioning a future where travel is faster, more efficient, and environmentally sustainable. Having successfully completed the development and construction of Europe's first passenger-size hyperloop demonstrator, we are now transitioning to the next critical phases: extending our test track for more comprehensive evaluations, advancing the maturation of our technology, and scaling our operations to meet future deployment objectives.



Thesis Description

You will be responsible for researching and analyzing demand data of passenger transportation systems within continental Europe. This includes air, railway, car, and bus travel. The objective of the thesis is to identify high-demand transportation corridors in Europe and analyze the impact of hyperloop routes on their modal splits.

Your Tasks

- Acquire and analyze relevant datasets regarding passenger volume, travel preferences, and economic factors across air, railway, car, and bus travel.
- Derive high-demand passenger transportation corridors in continental Europe.
- Utilize Geographic Information Systems (GIS) data to structure and visualize passenger activities.
- Evaluate future trends based on current scenarios and perform statistical analysis to determine the factors influencing current and future modal choices and demand patterns.
- Assess the impact of hyperloop routes along transportation corridors on passenger modal splits.

Our Requirements

- Readiness to learn and understand a new complex research topic in short time.
- High motivation and willingness to make an impact.
- [Preferable] Experience with Geographic Information Systems (GIS).

Our Offer

- Working with students in a highly motivated young research team.
- Getting experience in state-of-the-art passenger transportation systems.
- Helping to shape the next–generation passenger transport system.

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