

# Graduation Plan



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Luuk Peters
Student number	4596730

Studio	Complex Projects	
Name / Theme	Buildings & Bodies	
Main mentor	O. Caso	Architecture
Second mentor	TBC	TBC
Third mentor	J.M. van Zalingen	Architecture
Delegate	D.M. Hall	Design & Construction Management
Argumentation of choice of the studio	For my MSc 1 I followed the Complex Projects (CP) studio. During that studio I was amazed with how much I had learned because of the design by research method. Therefore, I already had my eyes on the graduation studio of CP. This, combined with the topic of a one-of-a-kind building and conservations with ex-students led me to the choice for the CP graduation studio.	

Graduation project	
Title of the graduation project	Eurasia by train Europe Central Station as a gateway to Asia
Goal	
Location:	Berlin
The posed problem,	Currently, traveling to other continents is mostly done by airplane. Although long-haul flights are only prognosed for 8% of all passenger flights in 2050, they are prognosed to cause 53% of the CO2 emissions in the passenger aviation market.  At this moment, there aren't good alternatives to travel long distances in a sustainable way with the same speed. Traveling by a High-Speed Railway Network (HSR-Network) could be a

	solution, but such corridors and suitable stations don't exist right now.
research questions and	How will the station be influenced if intercontinental traveling by train becomes the standard?  Sub questions: <ul style="list-style-type: none"> <li>- How will the station program be influenced by intercontinental train traveling?</li> <li>- What is the best location for an intercontinental station?</li> </ul>
design assignment in which these result.	An intercontinental train station in Berlin as a gateway to Asia

**Process**

**Method description**

The main method to study the program of the train station is done by carefully analyzing eight case studies. The data is used to make a calculated guess of the new program needed. Additional (online) research is done to make a better calculated guess and define potential future programs needed. With this calculated guess, the optimal orientation of the program mutually is studied to come up with the optimal relation scheme.

To come up with the best location for this type of train station, Berlin is extensively studied by gathering lots of data and mapping that data. The collection of data is done by defining nine smart requirements that make a good location for a train station. Additionally, the site is closely analyzed by mapping and making models to define entrances, placement of volumes and orientations.

At last, the clients, stakeholders and potential users are defined and studied to provide the project with ambitions for the design. This study is done by online research and reports by architectural industry firms focused on the future.

## **Literature and general practical preference**

To get a better understanding of the typology of a train station, books & reports were read from the library, online research was conducted for data & architecture firms were contacted that designed train stations. This provided the data and knowledge needed to research an intercontinental train station.

## **Reflection**

1. The research and design of an intercontinental train station is highly related to the studio topic of 'Bodies & Buildings in Berlin' as it proposes a new way of traveling within a train station located in Berlin. It researches a new way of traveling with a Digital ID in a High-Speed Intercontinental Railway Network. As the design will be a train station positioned within the urban surroundings of Berlin, this graduation project is also related to the 'architecture' master track within the MSc Architecture, Urbanism and Building Sciences.
2. As the world is searching for new ways to fight climate change and live more sustainable lives, rethinking the way we travel is undeniably important. The current aviation market has one of the largest CO2 emissions per passenger compared to other modes of transport and this is not changing anytime soon. In the meantime, new technologies provide us with more sustainable modes of transport that are catching up with the speed of airplanes. Since these new technologies are relatively new, further scientific research must be conducted to make these innovations feasible. Looking at the railway sector, technological advancements make it possible to travel sustainable at a speed close to airplanes. Though, the way we will travel with these high-speed trains and how the stations will look like are not yet defined. This graduation project explores a new train station as a gateway to a speculated high-speed intercontinental railway network. Proposing new kinds of programs and ways of traveling (digital ID).