Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (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	Yasmine Ouibrahim
Student number	4691512

Studio		
Name / Theme	Complex Projects	
Main mentor	Benjamin Groothuijse	Architecture and the Built Environment, Berlage
Second mentor	Jan van de Voort	Architecture and the Built Environment, Building Technology
Third mentor	Maruli Heijman	Architecture and the Built Environment
Argumentation of choice of the studio	As an architect, you can have a facilitating role if you listen to a community and their needs. Therefore, I wanted to do a project for my graduation where I can research a city and society with a rich history where one can try to contribute through architecture. Berlin having an anarchistic character today, is the perfect city for this. I was keen to explore the typology train station because it is the building type with the widest range of users where the user requirements could supersede any other existing requirements for this typology. The design must ensure that anyone should be able to use a station.	

Graduation project	
Title of the graduation project	ON TRACK – Train station for everyBODY
Goal	
Location:	Frankfurter Allee, Berlin, Germany
The posed problem,	With the development of the I2030 expansion plan of Berlin and Brandenburg, the city wanting to become free or almost free of cars and to prioritize sustainable transportation through trains (Frearson &

	Frearson, 2022), The S-Bahn-ring will experience increased activity and demand. Within the polycentric node system, stations of varying sizes hold significant importance. They serve not only as areas of increased density but also as entry points to a more sustainable, car-free urban core. These stations present opportunities to function as efficient hubs that facilitate shifts in transportation methods while also providing valuable spaces for both people and community within the transit zone. With a growing and diverse population, critical questions emerge. How to get a balance between the goal of creating attractive public spaces for all, striving for seamless transitions and at the same time maintaining cleanliness, safety, and comfort? Is there a prototype station that can provide all of this while addressing program gaps, accommodating diverse flows of people, ensuring safety compliance, fostering placemaking, preserving local identity, and integrating systemic thinking throughout without focusing on the commercial authority?
research questions and	How to design a prototype station for the S-Bahn ring in Berlin combining all flows with local identities? Sub-questions: 01 I What program could be added to the small stations along the S-Bahn ring? What is the missing link? 02 I What contrasting different user group flows with their own requirements (passengers/commuters/locals) could be identified and taken into account? 03 I How can a train station meet the diverse needs of the Berlin community, its

	commuters, and passengers and remain clean, safe and comfortable? 04	How could local identity and community be represented through design?
design assignment in which these result.	This design assignment aims to radically reimagine S-Bahn stations along the Berlin ring, departing from profit-driven models to embrace a user-centric and inclusive architectural approach. Inspired by Berlin's anarchistic character, the objective is to create prototype stations that foster a harmonious balance between the diverse needs of the local population and the objectives of the transportation network. The prototype S-Bahn station should not only aligns with Berlin's dynamic spirit but also sets a new standard for user-centric, inclusive, and progressive transportation hubs in an car-free urban environments.

Process

Method description

The Complex Projects graduation studio has a methodological and structured approach to the design process. Confronted with the complex and demanding design assignment, we learn how to process, organise and use a large amount of data.

In the first phase the city of Berlin is explored and researched. A direction for the graduation project is chosen rather quickly. The first task was to select a typology and form functional group set ups in which individual projects should fit into. Next, it was encouraged to take preliminary choices regarding client, basic program, and possible locations for site. In parallel the urban context is closely examined and a thesis topic emerged which became the foundation for the research.

Program

Developing further the understanding of the building typology, the program phase requires to develop a functional program and understand how separate components relate to one another. It is also a defining point at the end of which I select a research question and submit the research plan. After building an understanding of the critical components which define the typology , I should be able to select an aspect of the building which should guide the research and support the investigation of the studio theme.

Literature review helps establish the functional requirements and spatial considerations for the project. This involves examining official documentation such as government documents, urban development plans, and transportation department reports. Understanding the

building program for the Berlin train station includes reviewing case studies and benchmarking to gain a comprehensive understanding of the train station's functional requirements and formulate some new program requirements.

Site

With a better understanding of the program and typological requirement, I narrow down and ultimately select a suitable site. This is to respond to my defined typology requirements as well as group oriented thematic requirements. The site phase focuses on the questions revolving around urban implementation and this is a key factor for the connection to the group urban vision. Once sites are defined, I elaborate on both the potentials, the constraints and feasibility of the site.

Client

As the project brief nears completion and the potentials, limitations and feasibility of the building become clearer, I will have to decide upon client and users in order to define the ambitions of the project. This is to formulate what the agenda of the building should be and also in what way it should be developed. The aim is to set up user requirements through a thorough examination of the client's perspective and broader city guidelines.

All this research will be included into the design brief. That will form the initial design assignment that should be answered throughout the design phase. The methodology for the design approach will be structured as follows:

Concept

In this first phase after the P2 presentation, I should develop a concept for the design proposal. Concept should entail both spatial, but also programmatic concepts as well as a preliminary choice of look and feel of the project.

Design

Based on the developed concept, I should then develop further functional and programmatic layout, integrate structural solutions and develop materialisation. Preliminary ideas for safety, climate and comfort should be initiated.

Material

Materialisation and detailing of the building should be developed in this phase. Full development and integration of the structural solution is the main focus, together with architectural development of the façade. The goal of this phase is to complete the design and present it for the P4 go/no-go presentation.

Final

The final phase is focusing on postproduction, and only small design changes are possible. Next to the presentation, physical scale model and visuals should be done.

Literature and general practical references

Architectural Precedents:

1. Rotterdam Central Station
2. Berlin Hauptbahnhof
3. Zurich Hauptbahnhof
4. Antwerp Central Station
5. Atocha Station, Madrid
6. Orientkaj, Copenhagen
7. Coburg, Australia

Literature:

Balfour, A. (1990). Berlin: The Politics of Order, 1737-1989. Rizzoli International Publications.

Boer, R. (2023). Smooth city: Against Urban Perfection, Towards Collective Alternatives.

Deutinger, T. (2018). Handbook of Tyranny. https://dialnet.unirioja.es/servlet/articulo?codigo=6558585

Edwards, B. (2013). The Modern Station: New Approaches to Railway Architecture. Taylor & Francis.

Elkins, D., Elkins, T. H., & Hofmeister, B. (2005). Berlin: The Spatial Structure of a Divided City. Routledge.

Missmann, M., Gottschalk, W., & Hauschild, P. (1994). Bahnhöfe in Berlin: Photographien von Max Missmann, 1903-1930.

Neufert, E., & Neufert, P. (2000). Architects' data. Wiley-Blackwell.

Ross, J. (2000). Railway stations: Planning, Design and Management. Architectual Press.

Van Der Bijl, R., & Hendriks, M. (2010). Station Centraal: over het samenbinden van station en stad. 010 Publishers.

Other research data:

Berliner Bezirkslexikon: Friedrichshain- Kreuzberg. Von O bis Z / Kathrin Chod . . . (2002).

Berliner Verkehrsbetriebe: BVG – Weil wir dich lieben | BVG. (z.d.). https://www.bvg. de/de

Demographic data about Berlin's population. (z.d.). https://www.businesslocationcenter. de/en/business-location/berlin-at-a-glance/ demographic-data

Deutsche Bahn. (z.d.). https://www. deutschebahn.com/en

Explore Berlin's neighborhoods. (z.d.). HousingAnywhere. https://housinganywhere. com/Berlin--Germany/neighborhood-guide- Berlin

Frearson, A., & Frearson, A. (2022, 9 februari). Berlin Citizens propose law to ban cars from city centre. Dezeen. https://www.dezeen.com/2022/01/28/car-free-berlin-autofrei/#

Start - i2030. (2023, 24 oktober). i2030. https://www.i2030.de/

Übersicht. (z.d.). Übersicht. https:// www.bagw.de/de/themen/zahl-der-wohnungslosen/uebersicht

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The studio topic is Bodies & Building Berlin. The Building as entity with its own space, light and shelter, will be the foundation on which to formulate the places for people to work and live in. The Building is rendered by a specific time and context, and is the result of bodies' requirements related to measurements, movements, comfort, experience, safety, security, etc. Bodies and Building, the specific and the generic, humans and objects. The city becomes a means of application of the research.

In this graduation project I question myself how to design a prototype station for the S-Bahn ring in Berlin combining all flow with local identities. This relates to the studio topic because it focuses on a prototype station building in which a programme is added for all the different bodies that will use it. It focuses on the different ways the user will move through the building.

The S-Bahn is a typical Berlin concept, making the project very local and relevant to that city.

The graduation project is part of the master track Architecture and the master programme MSc AUBS. Design research has been done and a design will be proposed for the prototype station hence the project relates to the master track and programme.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

The research holds significance for Berlin, as the thesis topic is tailored to the specific context of the city. However, it also extends its relevance beyond Berlin, encompassing a global scale and contributing to the broader objectives of the studio.

The research delves into crucial aspects of universal accessibility and safety in train stations, advocating for a delicate equilibrium between seamless transitions, cleanliness, safety, and comfort. It extends its focus to ensure inclusivity for international visitors, considering barriers, as well as addressing the needs of individuals with varying abilities and homelessness.

Recognizing the significance of aligning train stations with Berlin's evolving demographic and cultural landscape, the study questions current strategies and explores potential new elements to guide the design towards sustainability and efficient public transportation. Essentially, this research contributes to the dynamic role of train stations in shaping urban environments and fostering inclusive, safe, and welcoming public spaces and at the same time helping to make Berlin "car-free".

With urban growth impacting cities globally, the need for adaptable train station designs is emphasized, reflecting the research's broader relevance beyond Berlin. The studio's

thematic focus on “Body Building Berlin” complements this, accentuating the importance of designing for human needs and experiences to enhance community health and well-being.

Europe's commitment to sustainability is evident in initiatives such as the low-car city movement. The thesis aligns with these goals, offering design solutions that promote environmental sustainability and align with the broader European vision for green urban futures. The thesis aligns with the evolving priorities of Europe, which is increasingly recognizing that a well-connected train system will be a central element of its future transport ecosystem.