

# REFLECTION PAPER

**Warschauer Straße Multi-modal Transfer Station**



complex projects

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**Complex projects Berlin**

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### Aspect 1

#### *Relationship between Research and Design*

The research and design processes are interspersed and always contribute to each other. The research consists of many different levels of theoretical approaches that can be analyzed and utilized by architects to explore and evaluate design topics. The design, in turn, is concrete construction and implementation as an outcome entity based on the research findings. At the same time, research and design together respond and contribute to the themes and questions of the complex project studio.

The graduation project is based on general awareness and in-depth research conclusions of public building types and the context of the city of Berlin. More specifically, Berlin's urban context was analyzed from four perspectives: culture, mobility, future, and environment. In terms of the building itself, flow, area, and space are three layers to reviewing a complex project. The processes and findings of these researches prompted me to focus on the passengers' way-finding and transfer experience in a multi-modal station. This choice also shaped my approach and criteria for design and project evaluation, for example, the barrier-free connection and independent and indicative circulation area provide seamless transfer experiences for passengers. By drawing up these goals, my research was further refined to the relationship between spatial quality and light, material, and structure. As a result, this is how design influences research.

### Aspect 2

#### *Relationship between the graduation topic and studio topic*

Body, building, and Berlin Studio discussed the relationship between people and their surroundings from different scales. As an intermediate medium between people and

the city, buildings also need to have multiple attributes for people and the city. Train stations are scattered nodes in Berlin's complex public transport network and high-density centers for specific areas of the city. For the city, a train station is a catalyst for the development or renewal of the area, but on the other hand, due to the complexity of its functions, it may also hinder the flow of bodies in the building or even in the city. Warsaw Street Station was designed not as a machine for the movement of trains and people, but as a building that prioritizes the passenger transfer experience and also provides a high-quality public space within the city. In this way, the building is able to respond to the needs of the body and also integrate into the development of the city.

### Aspect 3

#### *Research methods and approach in relation to the graduation studio*

The complex projects studio has a clear and well-structured research method that includes both group and individual parts. First of all, the urban fabric of Berlin was thoroughly analyzed and reviewed by four various layers. Different conclusions were drawn through data collection, literature study, and mapping. These findings provide a unique perspective to look at the (re)development of the city of Berlin and to select possible site options according to related themes. Group strategy was thus formed and it would have an impact on the further design phase. In addition, the typology study of specific building types was also done in parallel. The research on the historical development, functional distribution, flow distribution, and human behavior of the train station provides the basis for the scale, development, and self-positioning of the individual project.

Individual research is mainly oriented to design briefs as the main output. All the guidelines set by the complex projects studio have been followed. Compared to group research, the design brief is a guideline for a specific spot and project. It consists of

three main sections which are program, site, and clients. Each one represents a necessary element for the building. For example, the client's demands and ambitions have a huge impact on the building's expression and concepts. Thus, the requirements of clients were summarized into three main points and three corresponding collage drawings were added to the design brief as envisioned scenarios. Besides, the program bar was a result of the spatial requirements of people and various transportation modes. It was also integrated with the topic of wayfinding and urban plans for future (re)development.

For the design phase, the concepts come from the envisioned future scenarios and constraints imposed by the design brief. In this case, the evaluation rules were first proposed, and then studies on physical models are based on these ideas. In the further design phase, the design brief is often held up as a standard against which to reassess the design.

#### **Aspect 4**

*Relationship between the graduation project and the wider social, professional, and scientific relevance*

Multimodal stations are appearing as an increasingly popular type of railway station building in major cities around the world. In Berlin, an extreme example of a city with numerous modes of public transportation, it is meaningful to explore how stations can promote mobility in the city rather than hinder it. Meanwhile, the flow and perception of people in the station building is also crucial element in the architectural design. In addition, reducing carbon emissions and promoting electric transportation are also much-needed measures for metropolitans to make the green energy transition. In this case, the train station design itself is also supposed to be a template and demonstration of a net zero-carbon building. For instance, the project physically provided tangible spaces and services for electrical transportation

and integrated them into other conventional transportation modes to make them work high-efficiently and properly.

#### **Aspect 5**

*Ethical issues and dilemmas*

Berlin is a big city for automobiles. From 2013 to 2023, the number of passenger cars in Berlin increased by about 100,000. It reached 1.2 million units in 2018 and is still gradually increasing. In the context of the project's strong promotion of public transportation and sacrificing part of the city's parking space, will this in turn lead to more congestion on the city's motorways. In this case, mobility in the city will remain impeded and the relationship between pedestrians and cars will even deteriorate. Of course, a station with convenient facilities and high-quality spaces can encourage more active use of public transportation, but on the other hand, reducing the use of fuel transport also requires the cooperation and more conscious participation of the public.

In addition, the station is also a place where violence or crime often occurs in the city. In order to achieve a seamless, smooth transfer experience, station security was partially sacrificed. The design concept of accessibility and security may contradict each other. Consequently, there is no solid boundary between the interior and exterior and it will be slightly less secure for both passengers and employees in the building. Besides, the project is primarily a visual approach to designing architectural elements so as to guide passengers, so visually impaired passengers may require enhanced audio message prompts.