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Interwoven realities

as a catalyst for integration

Reflection

AR3AP100

MSc3 | MSc4
Public Building Graduation Studio

THE VERTICAL CAMPUS
A public hub of the future in the Hague

Tutors :
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REFLECTION

1. The relation between the graduation project topic, the master track and the master programme.

Public building studio 2023-24 chose the dense Central Station area in The Hague as the site area. According to the city's long term strategy, a significant rise in urban center density is anticipated in the next 30 years, especially within the area of interest. The Central station area, because of its character as a diverse multimodal transportation network, will be at the epicenter of research and future development. The studio topic focuses on this change and endeavors to investigate how to blend vertically configured educational buildings and facilities into The Hague's fast-growing center of the Dutch national government and international institutions around The Hague Central Station.

My graduation project is exploring the transformation of this dense station area through developing connections between existing infrastructures and the new campus building. The project strategy was shaped by the findings stemming from the contextual investigation, which brought forward the potential the site area has to offer. Through the method of research-by-design, the project explores an approach to densification by engaging with porosity, permeability, and connectivity. At the same time, the development of a hybrid timber high-rise and the research on such structures lie at the core of the project. The emergence of timber high-rise buildings constitutes a promising avenue in sustainable urban development, offering benefits such as reduced carbon emissions, enhanced structural performance, and fostering a more environmentally-conscious built environment.

The TU Delft community, and the MSc Architecture, Urbanism and Building Sciences program in particular, are at the forefront of developing solutions for current global issues such as urban densification, sustainability in construction materials and inclusive urban environments. My project aligns with the objectives and context of my master track in Architecture, by developing a strategy for a sustainable, self-sufficient, and responsive architecture.

2. The influence of the research on the design and vice versa.

The development of the initial project topic, as well as the final design approach, were a direct result of the interactive relationship between research and design. In architecture, the symbiotic relationship between research and design forms the cornerstone of innovative and experimental built environments. Research serves as the foundation upon which design decisions are based, offering insights into historical precedents, cultural contexts, technological advancements, and environmental considerations. This informed perspective guides the design process, fostering creativity and critical thinking to address complex issues. Conversely, design acts as a vehicle for translating research findings into tangible solutions, manifesting concepts into physical forms that shape the built environment. The iterative nature of this relationship allows for continuous refinement and adaptation of the design project, while the developed strategy and findings of the design process contribute to the general research and pass the torch on to future projects.

At the beginning of the thesis project, research was a key component in formulating the problem statement and the conceptual framework of the project. Qualitative and quantitative data processing, case study analysis and literature review enriched the problem statement and the project's directions by providing comprehensive insights, contextual understanding, and evidence-based analysis, establishing a solid groundwork for addressing these challenges effectively. During the two semesters, research and designing efforts led to certain design loops and constant questioning of the ambitions and the means to achieve the final design and evaluate its potential impact.

Research-by-design was at the very core of the Public Building studio. The project's design outcome derives from a series of conceptual investigations through various means like collages, mapping, written essays, and further on through drawings and models. Within this journey from concept to design and back again, a creative process intertwines design and research into an inseparable unity.

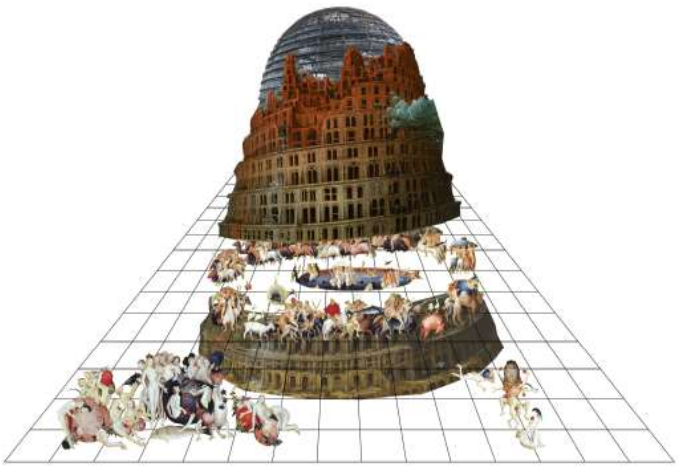

Figure 1: Photomontage created as part of the Research-by-design
Student's own work

3. The value of the personal way of working (approach, methods, how the feedback from tutors was translated into my work).

Based on the organization of the studio and my personal approach to the graduation project process, the work was divided into three design phases, some occasionally overlapping during certain periods of time. The first design phase revolved around the formation of a personal manifesto, a strategy that would become the core of the design. Throughout this phase, I indulged myself in research about the site area. This context-led approach significantly influenced the formation of my intentions and strategy for both the building and urban scale of the project. At the same time, a thorough literature review is crucial during

the design process, as it provides valuable insights into relevant precedents, contemporary global and local issues, and innovative methodologies, enriching the design exploration and fostering informed decision-making.
The second design phase focused on converting the outcomes of the research into an actual design. Experimentation with the form and shapes of the building, as well as further investigation on the existing buildings and conditions of the site, in order to integrate them into the design, were the main focus of this phase. Furthermore, case studies play a pivotal role during this stage of the design process by offering practical examples, insights, and lessons learned from real-world projects. During the third design phase, the focus shifted towards the technical aspects of the project and a more detailed documentation of its spaces and interventions. Throughout these three phases, trial and error was integral to the design process, as it allowed for experimentation with various ideas, refinement of concepts, and discovery of unforeseen opportunities or challenges, ultimately leading to the development of the final result.
Because of the complicated and multilayered nature of the project, it was inevitable on occasion to reach 'designing deadends'. Collaborating with the tutors and receiving their feedback were vital for overcoming these difficulties and acquiring a new perspective for the design.

Figure 2: Collage/Investigating the notion of weaving
Student's own work

4. Context led design approach

The context-driven design approach emphasizes a methodical examination and integration of site-specific parameters encompassing cultural, historical, environmental, and socio-economic factors. During the first design phase, investigating the contextual milieu, informed all aspects of the design process, ranging from comprehensive site analysis and programmatic articulation to spatial configuration. This approach aimed to facilitate the decision on how the new building will be embedded in its immediate context, enhancing the inherent qualities of the site, while addressing its challenges.
The initial research conducted during the first studio sessions focused on exploring the Central Innovation District of The Hague. This exploration directed my interest towards a more detailed documentation of several aspects: the extent of public space, existing patterns of space division, how private spaces are defined within existing buildings, and the influence of this relationship on the urban fabric of the city. The main research output supported the notion that the buildings on the site are functioning as distinct entities, yet they possess significant potential to be interconnected and utilized by various stakeholders due to their program and structure. Thus, the first step of the proposal was to assess existing infrastructures, buildings, and public spaces, and determine possible reuse of spaces and potential relations and connections that have not been established yet. This led to the concept of 'weaving' as a method to integrate existing spaces with the new campus building, positioning it at the center of this novel urban entity.

5. The academic and societal relevance, scope and implication of the graduation project, including ethical aspects.

My graduation project addresses a series of issues that are relevant to the larger architecture community such as urban densification and its implications, the social value of reinventing the public space of these dense environments and the integration of hybrid and sustainable solutions to the design. These topics of investigation integrate social, economical and environmental perspectives, and thus, the project offers the potential for further research and elaboration from various academic viewpoints. The project, also, addresses the notion of integration into a given (urban) context, refusing the existing approach of inserting yet another " closed envelope" into the city fabric, while providing functional spaces for gathering, learning, and recreation, promoting social interaction and connectivity. Furthermore, the proposed strategy of "weaving" existing and new elements on the site brings forward the issue of neglecting what already exists, because of the urge to build entirely new infrastructures and completely demolish the obsolete ones. The project could provide a possible answer on how to build future-proof environments, well integrated into their environment that act as catalysts for urban regeneration.

6. Ethical issues

While densification can promote efficient land use, reduce sprawl, and enhance public transportation, it may also exacerbate issues such as gentrification, displacement of marginalized communities, and unequal access to affordable housing and amenities. Additionally, increased density can strain infrastructure, heighten pollution levels, and diminish green spaces, impacting the quality of life for residents of the area. Throughout the design process, I tried to consider all possible implications that the design of a high-rise could evoke for the public. Inevitably, in every project the architect is forced to make tough decisions, in an attempt to balance, for instance, the demands and aspirations of the client (the city of The Hague), their impact on the community, and the actual needs of the people of the area.

7. Multiplicity and Prosperous Densification

To enhance the long-term sustainability of our cities, a shift away from the practice of demolishing and reconstructing buildings, based solely on changing needs, is imperative. Repurposing existing structures for new functions, instead of demolishing them, promotes sustainable development and brings forward urban dynamics that might not have been evident before. Adaptive reuse and repurpose projects can breathe new life into underutilized buildings while reducing construction waste and energy consumption. Furthermore, embracing more resource-conscious strategies entails designing environments that are inherently productive, versatile, and adaptable, thereby maximizing utilization of the available resources.

Multiplicity in design enables architects to maximize the efficiency of space, by accommodating multiple functions within a compact footprint. Designing buildings and neighborhoods that integrate a mix of residential, commercial, and recreational spaces fosters a vibrant urban environment where people can live, work, and socialize within proximity.

The graduation project relies on the re-evaluation of existing conditions and incorporates spaces from the adjacent buildings into the new design for the area. The common denominator, for shaping this new urban ensemble, is the idea of the public campus. Design interventions that are flexible and desmantable activate parts of buildings (terraces, ground floors, upper floors) and thus, create a web of educational and public spaces. The new high-rise building, being at the core of the site redevelopment, attempts to address the need for densification, by employing an alternative way of stacking. The main purpose was to manipulate the volumes in a manner that allowed connections between the different levels and to provide open public spaces, arranged vertically rather than being found exclusively on the ground floor of the building.

8. The value of the transferability of the project results.

The project is developed as a strategy that can be applied to different contexts and places that deal with the need for densification and urban revitalization. The building acts as an urban system of connected public spaces on different levels of different buildings. Between these spaces and the connecting interventions the programme can be arranged, changed over time and achieve diverse combinations of mixed use. The methodology of weaving new building volumes with the layers of existing context could act as a learning tool and a research subject. It could serve as a case study, offering insights into ways a new high-rise building can be embedded to its context and create symbiotic relations, while being able to adapt to future changes and needs.

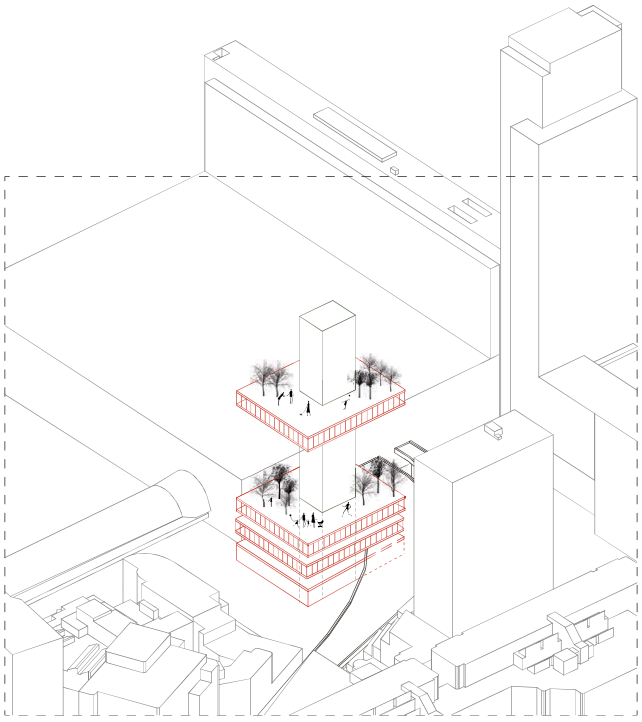

Figure 3: Axonometric diagram of the public platforms

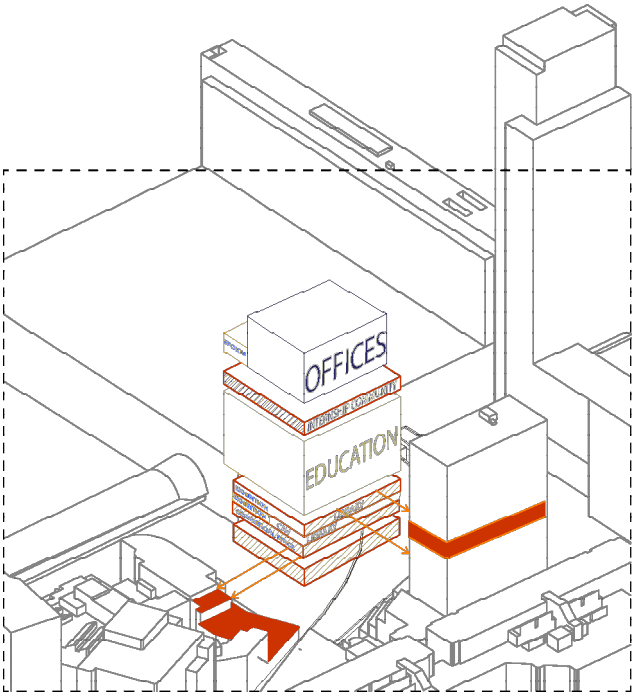

Figure 3: Axonometric diagram of the programmatic clusters