



BEYOND THE CLASSROOM

Reflection Paper - P4

TU Delft

COMPLEX PROJECTS

Bodies and Building Milan

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The project 'Beyond the Classroom' has been developed within the graduation studio of Complex Projects. This studio focuses on the theme of Bodies & Buildings in the context of Milan. The lens assigned to the project was 'Civic'.

The project proposes a new building design for Bocconi University in Milan. Exploring how universities' physical spaces can adapt to the digital transformation of education, while sustaining their civic responsibility of fostering social engagement.

To reflect on the design and process of the project, this reflection addresses important themes.

Research Question

How can university spaces adapt to the digital transformation of education while sustaining their civic role in fostering social engagement?

Aspect 1: Preliminary Results

Towards P4 the graduation project explored an architectural solution to the challenge posed by the transformation of education on physical university spaces.

In history, universities have always been perceived as knowledge centres. places for academic learning, for teaching and research. However, universities have a second role, their civic role of social engagement. Today, this civic role is increasingly under pressure. What happens if attending a university is no longer necessary for learning? If the exchange of knowledge can happen anywhere at any time, what role do university spaces still play? This led to the central research question of the project: 'How can university spaces adapt to the digital transformation of educational methods while sustaining their civic role in social engagement?'

In response, a concept for the project was developed. Proposing a new innovative building for the Bocconi University in Milan. Representing the possibilities for university buildings of the future.

The concept is defined by the focus on university spaces evolving beyond their focus on traditional learning. Instead, they should prioritize social engagement and innovation, creating environments that connect students to one another and to the city.

The new building therefore has to support and reflect innovation, create spaces for the creative economy, serve as the social hub on campus, and offer continuity between exterior and interior spaces. By doing so, the building will not only enhance Bocconi's civic and social connection to Milan but also support the ongoing transformation of education through innovation.

Aspect 2: Relationship Research & Design

How did your research influence your design/recommendations and how did the design/recommendations influence your research?

The research set clear requirements for the new building design. It revealed that future university spaces should not copy traditional educational architecture, but rather be designed to support social engagement. This refocused the design to collaboration, student initiative, visibility and circulation spaces as social connectors. Further study emphasized that future universities must be more open and connected to society. Architecturally this can be translated into a building that blurs the boundaries, creating continuity between exterior and interior, spatial openness and transparency.

Research on Bocconi university revealed its ambition to strengthen its global recognition, and their plan to introduce innovation and entrepreneurship more extensively to their students. Better connecting the university to Milan's creative economy through the new building presented a strong opportunity to achieve this ambition. Furthermore, Fieldwork and student interviews at Bocconi University exposed a lack of social and collaborative spaces on the Bocconi campus, as well as student study spaces. This directly shaped the buildings program as social hub and student centred environment.

Not only did research influence design, the design process also informed and redirected additional research. During the design process there were multiple moments of stagnation, relevant design questions could not be answered with earlier done research. For example regarding spatial flow and programmatic organization. At these moments, exploring case studies contributed towards the design. The Architecture Faculty of the TUDelft, with its open floor concept and social gathering places, provided information on spatial continuity and social dynamics. But also Haus der Digitalisierung in Tulln formed an example in how to approach innovation and digitalization in architecture.

Materialization and Façade design became aspects of this project that caused constant interaction between research and design. Topics as climate performance, construction, context and creative ambition often collided, creating uncertainty about the perfect choice for the project. By designing, testing, and additional research the base for following decisions was created.

The ongoing cycle of design through research and research through design formed the foundation of the development of this project.

Aspect 3: Relationship graduation topic, master track and master program

What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master program (MSc AUBS)?

The project topic of the evolving role of universities directly connects to the Architecture track and the program through the focus on the evolution of architecture design in response to changing human behaviour. Societal development and technological change influence the way human's interact with spaces around them. As a result, design choices should not relate to the present but anticipate human behaviour in the future. The architecture track and its program share this focus on the future of design, with humans at the centre.

Not only is the project topic relevant to the master track and program, it also relates to the graduation studio's theme, Bodies and Buildings. The project examines the reciprocal relationship between the human body and the designed environment. For example, how spatial conditions such as openness, transparency, and flow influence whether and where students meet, collaborate, and engage. And how architectural design choices as continuity and floorplan organization support the connection between users and the city.

Aspect 4: Assessment of the chosen work method for the project

How do you assess the value of your way of working (your approach, your used methods, used methodology)?

The base method for this project formed the approach of design by research and research by design. This technique of designing is something that was always present in my approach to designing new architecture. However, in this project the tutors highlighted this approach as centre of our process. This consciousness of a design method revealed

that to design you always need to ask questions as why? And is this really the best solution? Pushing me to do more experimentation and consciously making decisions. In my process I found this to be one of my difficulties. This project gave me more consciousness about my own process in designing and how sometimes I need to trust the research and experimentation I have done and form conclusions in order to make design choices.

The method of design by research and research by design translated in this project through literature studies, case studies, field work, sketches, physical models, digital models and iterative drawings. All contributing to a iterative design process where design decisions got critically tested with research. An evolving dialogue between my design intuition and proven information or my own testing results. This method resulted into a project that translates the research question directly to an architectural design.

Aspect 5: Assessment of the Academic and Societal value of the project

How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?

The project presents a relevant subject for both the academics as society. It explores the shift from a physical to a more digital society, and the consequences on university architecture. In this way it creates academic value as it presents an example of new architectural approaches in response to societal changes. However, not only does it form an example on how to apply future needs to current design processes, it also contributes academically with the new content and perspectives on future university architecture. In addition, by reformulating the university typology as a civic space instead of just a knowledge centre, the project presents a new architectural interpretation that can be applied to different contexts.

The project offers society a fresh perspective on the relevant theme of the decrease of social cohesion within universities as a result of digitalization. Not only is this topic important for the university typology but can be projected on other typologies as well, for example the library typology. Within the context of Milan and Bocconi University the project casts light on the opportunities of better connecting the campus to the city and the student to society. For example the creative economy, with a central position in the project, contributing to positioning students more secure in society before entering. Connecting them as business and economic students to the wider context of the city and its economic agenda. Creating more understanding of the work field, relevant research and innovation opportunities.

Within the architectural design the connection between student and society was translated to connecting the campus more clearly to the city. The element of continuity with transparency and openness forming an important requirement for the design. This requirement created an ethical tension between openness and privacy. To what extent can a building be completely transparent and revealing? The project explored topics as accessibility, control and visibility. Resulting in a architectural design where a balance is created between openness and control. Placing the building directly on the border of the campus and the city the design creates layers within the continuity, consciously controlling sightlines and flows.

Aspect 6: Transferability of project results

How do you assess the value of the transferability of your project results?

The project results in the form of an architectural design cannot directly be translated to every context, as it was developed specifically for Bocconi University and shaped by the spatial, cultural and societal conditions of Milan. However, the concept of the project can be placed within different contexts and work. Core principles as social engagement, innovation and continuity can be re-applied to other contexts facing the same challenges of digitalisation. A requirement as the connection between Milan's creative economy and the university is specifically related to this project, this can be replaced by similar opportunities in other locations. In this sense, the concept of the project provides a framework that can be adapted to different situations and forms a flexible base for similar projects.

This project works as an example of how to approach the future of architecture within the university typology. However, reflecting on the building design specific requirements are translated into extreme design choices. For example the continuity with an all glass façade, or creating a social hub with a completely open floorplan. With our current use of university buildings the design choices made for this building might be to extreme. It could be that our society is still too dependent on traditional use of university architecture to make the big steps the design is suggesting. However, while this building should not be used for traditional education and also doesn't support this use as it is designed now. There is the possibility to create more traditional educational spaces due to the flexibility of the building. Every level in the building has the open floor concept where spaces that seem set in the floorplans can be removed or changed into different functions. In saying this, this is not the goal for the project. However if a more slow transition to the future use of university architecture is needed, the building is able to support this.

In addition to the topic of transferability, the methods that were used for this project can be reapplied to new complex design projects. Especially projects where evolving human behaviour and architecture intersect.

Aspect 7: Balance between conceptual ambition and practical constraints

How can you balance conceptual ambition with practical constraints in design?

Throughout the graduation process the tension between conceptual ambition and practical constraints became increasingly noticeable. The project began with a strong concept regarding openness and transparency, social engagement and innovation. However, when translating this concept into architectural design decisions, I discovered the need for ongoing negotiation between the concept and reality. Climate, technical, construction, and programmatic requirements all imposed practical constraints on the project. Design elements such as circulation, facades, and structural logic all challenged the project's ambitions. This forced me to refine the concept, continuity became layered, social connection required clear flow and transparency demanded an extra layer for comfort, privacy and climate. Negotiation between idea and feasibility is an iterative process in which you should not give up ambition while also not compromising on the reality of the project.

As a product of this iterative process, the building includes several design choices that I believe in and that are supported by research, yet I cannot be entirely certain they will succeed in practice. For example, achieving transparency with a facade entirely made of glass and aerogel panels might not be realistic in use. The cost of the façade itself will be high, maintenance could be costly and overheating is a concern. However, this has been considered in additional design choices as overhanging floors and roofs, as well as slats to protect the facade. Reference projects and research shows that these strategies can work, whether they will be successful in the specific context of this project can only really be determined by trying them.

Aspect 8: Shaping my future architectural process

How will aspects of this project fundamentally shape my future architectural practice?

In this project I found that I was striving for simplicity within complexity. Creating a architectural design that is perceived to be logic and as the obvious answer. This insight is something that I already applied in my past design processes, however was never really aware of. This project gave me more awareness and presented tools to design a complex project. The tool I will definitely reapply in the future is the testing framework based on the projects concept and narrative. This framework forms the base of all design decisions and helps to align the architecture to the concept.

Communicating this simplicity of complexity is something I am still developing further. However what I found already is the importance of always explaining the connection of an architectural decision to the concept and overarching theme of the project. Don't wander too far when explaining the design but stick to the most important elements of the design and elaborate on these topics. This way the project is translated to the audience as a clear and coherent project.

This design process started with imagining the university of the future. How does university architecture need to develop for the future? This gave a new perspective for the requirements of the project. In my future projects I want to always ask this question of what is needed for the future for a specific typology? What does this building need to provide that we are maybe not aware of yet. How can we reshape what we know now to what we need in the future? This will contribute to designing architecture relevant to its future context. This prediction of what is needed will be a challenge that will consume time. Nevertheless, in the current society where big changes happen fast this time should be invested into every project I design.