THESIS REFLECTION

Studio
Cross Domain

Topic
City of the Future

Main themes
Circularity, hybridity, mobility

Title
House of Circularity - Activating synergy

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The House of Circularity is located in Rotterdam, Pompenburg at the triangular plot that overlaps three different neighborhoods and where the train tunnel from Blaak ends and rises above ground. It is a building complex with two mixed use towers (70% residential, 30% hotel and office) and a public plinth that provides space for the rising number of circular initiatives in the city. The main purpose of the ‘House’ is aimed towards a short-term and long-term goal focused on three different target groups.

The short-term goal is oriented at raising awareness and altering people’s perspective on our consumer behavior, and teaching them about the possibilities that circularity entail. The long-term goal is to influence behavior and create a new pattern of habits that contributes to the welfare of our planet. The three target groups are; people who are already involved in circular developments, people who are interested in learning more about circularity, and children who are the generation of the future who should be educated as a primary responsibility.

The project, oriented towards future cities, investigates a hybrid (mixed-use) building as an urban type that can play a vital role as a breeding ground for synergy that could foster circular awareness and behavior.
1 | The relationship between research and design.
Considerable attention was given to the preliminary research within the City of the Future graduation studio. After the Venice Biennale workshops, we were free to explore a wide range of topics that, in your own experience, will be valuable and critical for the ‘city of the future’. A position paper was announced in order to define and formulate your personal position within this field.

While I had a vague yet imaginable interest from the beginning, it took me an unexpectedly long period of investigation and search before I could finally steer the research towards an understandable topic. The literature study and the study of precedents made me realize that I was dealing with an untouched topic – namely, architecture that serves circularity (instead of circular architecture).

The focus of the project on hybrid buildings with a program that promotes circularity was conditioned by the climate goals that we are failing to achieve. The research therefore dealt with the urgent climatological issues and introduced hybrid buildings (and hybridity, the mix of various functions) as a solution to optimize flexibility and adaptability within the existing urban fabric of future cities.

The exploratory research and the urban conditions of the site led to conclusions that determined the program, the character of the building and how it interacts with its surrounding.
The relationship between the graduation topic, the studio topic and the master architecture track?

Circularity is currently measured as an individual performance, such as the amount of recycled or reused materials in a building or product, or whether the building/product is designed in such a way that it is demountable for future reuse. This makes circular progression very much dependent on and enclosed within the manufacturing and creative industry. While Rotterdam and many other municipalities start to announce ambitious statements as becoming fully-circular cities by 2050, it remains a beautiful dream if a large proportion of the city does not understand or share the vision. As the studio is dealing with the City of the Future, the topic of circularity is crucial. Throughout the research process, as I spoke to people outside the faculty about my thesis topic, I realized that many people do not know or have not heard anything about the Circular economy or circularity. This was critical for me to redefine the focus of my building. As a result, I concluded that the public should become the main focus in order to develop circular progress.

Hard and Soft characteristics

**Hard** → Short-term
Measurable
Performance
Recyclable
Reusable
Demountable

**Soft** → Long-term
Spreading awareness
Education
Interaction
(House) rules
Job opportunities
Flexibility

Educate → Raise awareness → Influence behavior

properties of circularity and the long-term goal of it
3 | Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

The Cross Domain studio encourages interdisciplinary approach and does not have a predefined methodology that serves as a guideline for the graduation year. As the studio is a Cross Domain setting that contains different disciplines, every student had the freedom to adopt their own preferred research method. However, many intermediary presentations, pitches, group discussions, brainstorming and weekly tutoring were planned throughout the semesters, which were inspiring and valuable alternations.

Throughout the process I identified my approach as an exploratory research that sometimes interacted with a more experimental approach. The method was primarily based on learning by doing and research by design. This approach in conjunction with the studio topic often required exploring across different scales in order to understand the societal and contextual issues, urban conditions of the city and the site, and the perspective of the end-user(s).

1. Activate circularity
2. Activate the area (public life)
3. Change the identity (diversity) (from only work to mixed-use)
4. The link between two districts
5. The area as the center of two districts
6. Pompenburg as a meeting point
7. Improve accessibility to facilitate interaction
8. Use the qualities of the surrounding
9. Respect and revive the historical value of the area

the design criteria for the project
Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

The graduation project deals with the noted phenomenon of circularity, and how specific architectural interventions could change (consumer) behavior and lead to new habits or standards in the future. A recent study showed that the world is currently 9% circular and that it has not risen since January 2018. The circularity gap threatens to get bigger which makes it harder to reach the climate goal agreement that was set in 2015. Transforming the linear economy into a circular one is a collective responsibility that also rests on the shoulders of the citizens. But how can you contribute to something you do not know anything about? Circular economy is called circular because our current economy is linear. This transition, however, frightens many because it affects our comfort-zone, even if we morally know that things should be different. But what if we achieve a future wherein the system is circular by default? Would we still call it circular then?

The project is based on the notion of facilitating circularity, spreading awareness, and influencing behavior. How can a hybrid building, with a variety of functions, bring people from different backgrounds together in order to transfer circular knowledge? And could such a building as a ‘house of circularity’ foster circular behavior that contributes to the goal of the municipality of 2050? This project is regarded as an experiment resulted from the urban conditions of its specific site. But the ambition however, is to consider the principles as a guideline that could be applied to other regions or neighborhoods in order to instigate the same effect.
Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii) elaborating the design and (iii) potential applications of the results in practice.

The topic of combining the characteristics of public space, hybrid building and circularity is a quite unique approach that has not been explored extensively before. The project is therefore primarily based on hypothetical investigations, plausible speculations and assumptions. Some exemplary projects, e.g. BlueCity in particular, served as an evidence for the plausibility of the vision. The climate crisis, the ever-increasing population that has to be absorbed within existing cities, and the circular economy which is still unfamiliar to the everyday people creates an urgency for a building that attempts to provide a combined solution to these matters.

A conscious decision had to be made whether separate attention should be paid to the elaboration of the design from a circular perspective. Since the complex stands for promoting circularity, it should become an example itself. However, this in particular could become a graduation topic on its own. Therefore, the main structure and materials of the building will be designed demountable while the rest remains (to a certain extent) undefined.
STAKEHOLDER 1
+ education area
+ deposit area
+ travel/mobility (efficient and easy)
+ pleasant and attractive space

STAKEHOLDER 2
+ collection point (efficient and easy)
+ visibility (to promote)

individual interest

combined interest

intersection

promoting circularity and interacting with the public through the plinths and the plateau