P4 Reflection

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**Intro**

This paper is a reflection of the Graduation project that I followed in the academic year 2020-2021. The goal is to describe the processes that took place during the last year in relation to the wider context. The themes included in this reflection refer to the relevance of the project to the different aspects of my study, ranging from the studio to the society. A brief description is followed by more in depth presentations of the different relations.

**The progress**

The studio of Heritage & Architecture started with an excursion to two heritage projects within the Netherlands. After a short preparation where knowledge was gathered collectively within the studio, a site visit took place allowing us to experience the three different projects, learn about them in a more close manner and verify the theoretical knowledge gathered. The projects would serve as references for the later phases of the studio and the assignment was a first contact with the research requirements of heritage buildings (Studio Manual).

The next phase started with a short investigation of the contextual information regarding the projects of the studio that would result in choosing the project that each student would focus on. The manual of the studio offered a clear way of approach, addressing three main themes within the research: architecture, building technology, cultural value. The methodology of the research was also defined according to scientific literature and the general practices within the field of heritage and architecture. Even though this can seem restricting for an architecture student, it was the complete opposite. Providing a concrete basis through a structured investigation would allow for further exploration according to the specific project as well as according to personal interests or fascinations.

As described in the book ‘Designing from Heritage’, the approach of the research aims to frame the possibilities and dilemmas that heritage buildings pose across multiple levels. The process begins with the ‘chrono-mapping’ of the different layers of the building, followed by ‘value mapping’. The building is analysed in order to discover the heritage values it embodies and the possibilities it offers in its current state. The next step in this method is the mapping of the levels of significance, ascribing different amounts of value to the different aspects of the building. The three first steps have all the characteristics of mapping because usually their result is a drawing of the building where the values are easy to relate to the building elements. The last step is about defining dilemmas, scenarios, possibilities and problems that are related to the heritage object and its future transformation. Similar methods are used in practice as well and that makes this approach both interesting and educative, because it simulates the process of value ascribing.
During this research we also got introduced to professionals that deal with heritage projects in the practice and their approach, which has been very inspirational. We managed to test one of the proposed approaches in our research with success and expand on the given process.

The result of the research was presented in the form of a report that was not only a documentation of the project through time but also an investigation of the values that define such buildings. The three themes were interrelated and were meant to address the multifaceted character of a heritage object. The conclusions of this research were to serve as a basis for the design but also as testing criteria for the design choices in the later phases. (Studio Manual)

Along the group research, I would also develop a personal research that was much more focused and according to my own architectural interests and fascinations about the building. The space of the building in its current state was completely divided, intriguing my interest in restoring its openness and rhythm in bigger parts. Approaching the building from a holistic perspective meant for me to address the site as a whole and address its position towards the city and the neighbourhood in the design. This is an ongoing research until the P5 and was an integral part of the graduation work. While the first semester was mainly focused on research, the relevance to the design as well as the implications were evident.

Small steps towards design were made at the end with the definition of a transformation framework and a brief. Formulating clear research questions and goals was vital because dealing with heritage can prove to be even broader than a new building architecture project. In the final parts of the first semester, the first design proposals would help me clarify the range of my project and form the ambitions and questions for the following phases. The questions concerning the graduation project as a whole and the design quest as presented during P2 are:

Research Question: **What is the capacity of Fenix II to transform into a cultural, culinary and creative hotspot among the harbour warehouse buildings of Rotterdam?**
Design Question: *What is the significance of an open, multifunctional space for the adaptive reuse of Fenix II as a cultural, culinary and creative urban hotspot?*

The following semester started with a couple of assignments that aimed to highlight aspects of the projects that are important in every architectural project, like materialisation, sustainability and detailing. The assignments worked for me not only as food for thought around these issues, but also as a way to take my first decisions about the project. During the second half of the studio I would focus more on research through design, but in many cases that also included theoretical research, research on references or technical solutions as well as deeper inquiries around the specific heritage object. Decision making was vital in this stage as well as the dialogue developed with the mentors to crystalize the design aspects. My personal interests became even more obvious during this phase with many arbitrary researches yielding important findings and enriching my view on the project.

During this time, I did research concerning a holistic approach to design and architecture and its possible application in my design process. Understanding that the sum can be more valuable than the individual aspect and incorporating that in the design. Alongside, a much more technical research was also done concerning the elements of the design like the floors, the installations, the introduced internal facades. Extreme scenarios were studied in order to specify the requirements and the possibilities. The final step was the crystallization of the decisions and the technical argumentation of the design while using the knowledge acquired in the first semester to test the application of the solutions in regards to the values of the building.

**The Studio, the Chair and the Faculty**

In my eyes, architecture can be considered a technical or an artistic endeavour, but in most cases it can also be seen as a social experiment. The ‘engineer’ and the ‘artist’ have to come together in order to fashion a solution about the built environment, but the user is always an integral player in the equation. This is in accordance with the principles of a holistic approach, where the user and his experience are important parts of the design. And although while dealing with heritage projects the focus is mainly on the built object, the cultural and social implications are even larger. A building without any cultural value is not considered a heritage object and the value is defined by the societal context of the object. The combination of knowledge, appreciation and value are what results in care for these projects.

The TU Delft University and the Faculty of Architecture have a strong technical orientation and that can be vital when dealing with heritage objects. The faculty is interested in both architectural research and design and aims to provide the students with the space to develop their creativity and explore their interests around the many aspects of architecture. The innovative attitude that characterises this technical approach, offers in many cases acute solutions for the complex heritage projects. When up-to-date solutions are applied in these buildings, the result can be both adequate for our modern requirements for construction, but
also respectful of the values that they hold. The architecture faculty building itself is a tangible example for heritage students where one can draw inspiration but also understand the implications regarding reuse, in first hand.

The track of Heritage & Architecture is offering the possibility to engage with these projects under the academic scope. Heritage objects are usually sensitive, but these projects offer to the student a safe playground of experimentation and knowledge that in practice is hard to acquire. The distinctive chairs also indicate the multifaceted character of the projects making it possible to deepen your knowledge in your specific field of interest, while the general knowledge remains still available. In my experience during the graduation, I could focus on the cultural implications of these projects and the strong social and cultural relevance without compromises in the architectural or the building technology aspects of the building.

The Fenix II building is a great example of the complexity that a heritage project can have and how intertwined possibilities and problems can be. While struggling to remain an active part of the urban network, the building needs interventions that can assist it in facilitating modern functions, while maintaining its monumental values. Insulating and dividing the large areas of the building could easily render it appropriate for modern use and exploitation, but that would strongly compromise its inherited longitudinal form and the experience of the space. Other possibilities had to be researched in order to achieve an efficient reuse while maintaining and showcasing its valuable aspects like the repetitive structure and the rhythm of the facades.

The methods provided within the studio, as well as the approach by the mentors is indicative of the intricate relationship between these different viewpoints. The initial research was performed according to modern scientific literature and we were able to engage and contribute to tools being developed for the evaluation of heritage objects. There was the required freedom to follow our own endeavours and approach, as well as examples from practicing professionals of the field that served as inspiration. Strict academic requirements were followed to validate our scientific approach, making the process very realistic.

We followed during our research an example from practice that would analyse, document and value different historical timelines of the building. This was applied in our study of Fenix II, with the historical timelines being very distinct and providing us with a lot of information about the originality and the story of the building. Clear decisions could be made in this sense about how to intervene in the different parts (floors, facades) with understanding of their importance for the whole building story.

The brief was formed in the next phase of the project as a response to the conclusions of our research and the studio requirements. Heritage buildings do not always possess the capacity to transform according to our modern expectations. A brief that supports a new life, yet at the same time considers the existing building had to be formed. Even though in practice this is usually the role of the owner or the user of the building, we had the responsibility to generate a
viable proposal not only from the architectural viewpoint, but also from the side of the client. Aspects that usually are the dialogue between the architect and the client, had to be defined in a way that the building would be the winner, and that would correspond to facts instead of requirements. The social importance of the building together with its history would immediately connect its reuse to a cultural function.

My approach in this stage was to create a multifunctional space that incorporates the museum for migration (cultural function) and develop different scenarios about the building's future. This way it became clear which timeframe is my design addressing and how the new added timeline relates to the historic timelines of the building. These scenarios helped me define more accurately these time frames keeping the process very realistic. The goal was not to predict the future of the building, but to assure that the proposed intervention does not hinder its future.

During the graduation, I was able to approach the complex heritage case from my own perspective and fascination. While transformation, preservation, re-use and restoration remain central aspects in the process, I was allowed to engage with the project in a social, experiential, holistic manner, as fitted in my own interests. The questions that formed for me after the initial research - about the ability to experience the spatial qualities of the building as a whole, the public domain in a heritage building and the embedded memories in architecture, became the focus in my design process. While testing the boundaries of the building to accommodate change I was able to find answers to these questions and make conscious design choices accordingly. The balance between the existing, the lost and the upcoming was researched with the technical solutions being integrated in this process.

**The Architectural practice**

One of the most interesting aspects of the project is the strong relation it has to the practice of architecture in many ways. This became very obvious to me when we performed the site visit and we came in contact with the owner of the building. The building was not a 'dead architectural monument', but an extremely alive building site. The owner would inform us of his intentions and the plans about the building indicating how important an immediate intervention was so that the building does not stay vacant for a long time. This shows clearly that heritage objects can be important parts of the urban networks and economy whilst their transformation is very essential for the future of the city they are in.

The practical relevance of the project becomes even more obvious when one understands that it is not a stand-alone case of a heritage object, but belongs to a typology very familiar for the city. There are many former warehouse buildings that have been recently transformed and start a new life with a completely different function. These buildings in such close proximity have not only served as an example for my design, but generate a local architectural tradition with implications for the whole city.
Furthermore, this tradition is part of a global phenomenon in port cities. The technological advancements concerning logistics have changed the requirements of the port areas, leaving them very often vacant. In combination with the trend for urbanization, these spaces, very often in the core of the cities become extremely valuable for urban developments. From industrial spaces they change to residential - commercial - recreational and become part of the city in a new way. Dealing respectfully with the buildings and the urban structures in these places is vital for preserving the historic layers of the whole city.

The fact that usually these buildings were part of a port, where the industrial function is gone today, raises questions about the surroundings as well. The strong relation to the water and its changing character is very crucial. Together with the design of the Fenix II building, I also looked into the possibilities to transform the quay side and ascribe a new character to it, uniting the two buildings that used to be one. During the design I researched examples on how the harbour can take on a new function following the changes happening in the buildings, in order to become a public space for recreation. Returning that space to the city and the public is very important considering its proximity to the city center and its position between the commercial and the residential areas.

On a more technical level, the integration of modern techniques and systems in order to provide the building with a sustainable solution is very important. These buildings were not constructed with consideration of such aspects, but without efficient use of energy (passive - active) any proposal for the future becomes unsustainable and unrealistic. Again research had to be done through the design to discover the opportunities the building offers for such systems and how they can support the use of the building. The climate design was a quest towards comfort and efficiency while considering the limitations present in the building.

**Societal Heritage & Architecture**

It is very often that architects are concerned with the re-use or transformation of spaces, but the complexity of an intervention raises exponentially when a heritage object is at hand. One
matter that an architect is unable to design due to its social character is memories. The built environment has a huge impact on the people, not only because it can accommodate their needs, but also because it becomes, almost unconsciously, part of their memories. And every time a building is constructed, a new set of knowledge is created for the architect, a new example. This brings the two, architect and society, in very close contact, with the built environment being a source of knowledge for the first and a reference point for the latter. Heritage objects are the most outstanding examples of this relation and are usually the parts of our built environment that both architects and people find important to preserve.

Of course the value of such buildings or complexes or spaces is not only based on the memories connected to them, but is usually a combination of architectural, technical and cultural qualities. With an ever growing population the need for space is of utmost importance, and vacancy, even of heritage objects is undesired. The way we approach them is also extremely crucial for the future of our society and of architecture. When we simply alter a heritage object to adjust it to current or future needs we can very easily lose the memories and the knowledge all at once. Every building has the potential to teach us something but to also make us feel or experience something new.

The people that interact with a building are the ones that form the culture, and according to that culture, values can be defined, and only according to those values can we assess the importance of the heritage buildings. A vicious cycle where we should be very careful of what we can lose, since the effects can be tremendous. Almost all architecture can be seen as a social experiment so, as in social sciences, experiments should be done with a lot of caution, and with all the scenarios mapped. In the cases of heritage the effects of an experiment, not only affect the society and the culture, but architecture as a whole.

**The design**

The Fenix II is an industrial typology in the city of Rotterdam, with connections to national memories, architectural tradition and urban developments. My approach for the design incorporates these aspects and carefully proposes a phased plan for the future use of the
building. Adaptability plays a key role for the proposed scenarios and guarantees that future use can be accommodated with minimal interference with its values. At the same time it provides a solution by considering the different social levels (site, neighbourhood, city). By incorporating technical solutions to support comfort for the proposed multifunctional use, the building’s energy requirements can be brought closer to modern standards.

While considering the contradictions between the old and the new, the interior design of the building manages to allow the building’s repetitive structure to prevail in the space, while separating the different functions. Spaces where the lengthy sightlines of the whole building are opened up, are organized across the facades connecting inside and outside. The floor is renewed and equipped with heating that in combination with the ventilation, creates a transitional climate, considering that higher requirements would also require insulating the exterior facades.

The added elevated floors were designed considering multiple factors like the adaptability of the design in the future, the needed space for installations, its weight and the modern examples from practise. They house the multifunctional program in an efficient way and they form the interior landscape, where new perspectives are introduced. The spaces were designed to have different outlooks, with each function generating its own atmosphere, while remaining connected to each other through the articulation of the internal divisions. The internal facades follow the rhythm of the old part and introduce as well a different materiality and scale between the concrete structure.

By making use of an existing gap on the first floor and by opening up part of the roof, a space that connects the public realm on the ground level with the roof is created. By applying the same material as for the redesign of the square and by introducing plants inside the building and on the roof, the atrium connects the two levels and expands the urban landscape on the 5th facade of the building. The roof provides with its huge surface the opportunity to harvest sun energy and rain water for the building while enough space remains available for the installations.

The design aims to discover the tolerance for change for this cultural historically important building and its context by applying modern concepts of space use while utilizing the existing height and structure. It tries to bring a balance between a lively open public space created for the city and the neighbourhood and a viable user, by opening up the space for both. The goal is not to just preserve the values but to reintroduce them to the experience of the building, as an ongoing process of appreciation for the inherited building environment.

Reference Literature

Studio Manual (Rotterdam Harbour Heritage)


