REFLECTION PAPER

FENIX ll, a bridge between past, present and future

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Project description

The project aims to restore and organize each historical layer to connect the heritage's history with the present context, and to find a balance with new interventions. The project is part of the Heritage and Architecture studio, which focuses on Rotterdam's Harbor Heritage. The Fenix2 building, chosen for this project from three options, is located in Katendrecht, and the area and buildings have a dynamic history. As Rotterdam became a industrial port, the San Francisco warehouse, the predecessor of Fenix2, was established. Since then, it has been transformed into a place for immigrants, Chinatown, Red Light District, and a place for hipsters, and the building has also been destroyed and rebuilt, and is now divided into two buildings, Fenix1 and Fenix2. Currently, it is going to be turned into a museum. This proposal is an adaptive reuse project that respects the history of Fenix2 and adds an indoor market and a co-working office beyond a simple museum.

Historical layers and heritage architecture

This project raises the question of how to deal with a historical heritage with a splendid history of the past. Due to the oversaturation of abandoned buildings, recycling of buildings is becoming more and more important in the modern world, and among them, the way to deal with heritages of numerous values is more serious and requires much care. The port in central Rotterdam once flourished, but gradually lost its glory as the center of industry moved to the outskirts. Witnesses of the history of the Rotterdam Harbor Industry, the Industrial Heritages have been left out of their history or have been subject to re-use with little attention. These industrial heritages have been narrowed down to three options: Fenix 2, Katoenveem, and Maassilo, and due to the personal fascination of Fenix 2, which has a unique history as the name Phoenix, the Fenix 2 project was conducted. Following the heritage and architecture studio's fundamental approach, the project has been extensively investigated, from a wide range of encompassing the city to the details of the building. The investigation was conducted from various angles in an in-depth manner that takes into account the history and changes of the building as well as its factors. The analysis consisted of several site visits and analysis of old photos, original drawings, and reconstructed drawings through archives. From photography to field measurements, sketches and drawings, documents, newspapers, flyers, and videos, various materials were widely used. This heritage analysis is categorized into architectural design, technology and culture value, providing the basis for understanding the heritage and the context surrounding it.

The selected project, Fenix 2, has undergone various changes, starting from the largest warehouse in the world in the past, to Europe's largest Chinatown, the red light district, and a food factory. This has resulted in several vivid historical layers in Fenix 2, which are made up of elements ranging

from context and structure to small elements. Through this, I believe that the architecture enables people to reach the past and, based on this, provides opportunities for the development and future of the region. At the same time, the various historical layers and elements require special attention. Because they are widely distributed, down to the building and its context, they are intricately intertwined with each other. At the same time, it is necessary to clarify an architectural position in order to deal with relatively ambiguous cultural values that cannot be represented by numbers. This is because it establishes the capacity for intervention of the heritage and creates a link between the new and the future. Heritage and Architecture helps to establish architectural position among ambiguous values by providing structural guidelines at the beginning of your historical heritage research. This sets the standard for value judgment in the future design process, and allows to establish a clear story and statement based on this. The project focuses on analyzing the historical layers of the Heritage and building a storyline based on it. It is believed that this can be tested as a basis or guideline in other historical heritage sites as well.

Spatialization of historical layers

In Heritage and Architecture, research has a significant weight, and through this, it is possible to derive an appropriate design for the situation. However, this is not a process that is completed at once and can be reached through the process of repeated design and research by design. The initial research of the project consisted of extensive information gathering through group work. In this process, it was necessary to introduce some kind of framework for unified investigation. To this end, the concept of shearing layers devised by Stewart Brand was used. This method of dividing the building into layers was created by Frank Duffy, but later elaborated by Brand in How Buildings Learn: What Happens After They're Built (Brand, 1994). Based on the layers consisting of six (Site, Structure, Skin, Service, Space plan, Stuff), a wide range of investigations from a wide context to encompassing the elements of the building was conducted. However, in order to create new architectural interventions in the heritage, it was necessary to conduct an additional valuation based on this information. There have been many discussions about this and it has continued to evolve. In Heritage and Architecture, a Culture Value Matrix elaborated by Clarke, Kuipers, and Zijlstra (2017) is provided based on the brand's layer. Although this assessment is subjective, it provides a starting point for the discussion, and thereby helps to position the Heritage. So, similar to other architectural approaches, this method does not have an absolute answer. Continuous discussions were conducted with groups and mentors to achieve the best results. Through this process, various historical and cultural values of the building and its context were identified and evaluated.

The investigation to link the historic layers of the Heritage with the present and the future has created a need to classify information obtained in the early stages. This wasn't an easy task and

there is a need to set up a timeline for that. This timeline was set based on the time when the biggest changes took place in Fenix (1920, 1950, 2013). Through this, it was possible to form a storyline with historical layers of Fenix, and based on this, a spatial approach was found. And Fenix's massive size and logical structure gave it great flexibility.

After that, programmatic research was needed to connect this project with the present. Information from the municipalities has been referenced, including existing urban planning and surveys and statistics. The current Fenix2 renovation plan planned by Droom en daad is also referenced. Based on this, a framework for large programs in museums, markets, offices, and squares was created, and various case studies were conducted to achieve this. In order to understand the relationship between the operating principle of the indoor market and the connection of space, precedents of various markets such as Watershed, Ostermalam market, and Markthal have been studied. The precedents of Van nelle fabriek et al. For the metaphorical reconstruction of the heritage, the precedents of MVRDV and Zaha Hadid were also helpful.

In addition to architecture and building technology, Heritage's design process requires constant consideration of the encounter between the new and the old. New interventions inevitably create tangible and intangible impacts, which affect various values such as aesthetic and cultural values. So, from the broad urban perspective to the small elements such as facade, there is a need to keep thinking about this impact and the capacity of the building. In the project, several ways of preserving existing values and creating new interventions for the future were tested as part of considering these impact.

Looking back at this project, a lot of the initial research was important to it, and a lot of time was invested in research. However, this allowed to set a heritage position, which was the basis for future decisions. It is difficult and time consuming to make decisions in field where there is no clear answer, but it is possible to make unified decision due to maintain a guide lines.

Relationship between old and new

Analysis through the Value Matrix determines the historical layers of the building and the extent of their conservation and intervention. The direction of the project is to link these historical values with new interventions, current and future programs. There are several design strategies for this through preservation and reconstruction.

-Rebuild and preserve the iconic historical layers, including each elevation of the building.

-Preserving the structure of the building (Hennebique System) and the grid, and the rhythm created by it.

-Rebuild the lost layer between Fenix 1 and 2 and on the quay side.

-Create a space that can change to cope with the future.

-Architecture, a legacy of the past, is incorporated into the present context.

This project is largely composed of four program spaces (museum, indoor market, office, and exterior square), and the main strategies are implemented in each space, and there is also a strategy that encompasses the entire building. However, in order to balance the massive scale of the building and the details of the project, the museum part was not considered in the detailed design.

Entire Fenix: The element that encompasses the entire Fenix is the strategy for the facade. In this project, the façade symbolizing each time zone has an important meaning. To complete a more clear timeline, the southern facade has been restored to its original, more open appearance. Also, there is almost no service layer in this building, which has been neglected for quite some time. In order to insert new programs, it was necessary to improve the poor performance of these buildings, and this work had to be done concurrently with preserving the skins of the buildings of major historical value. For this, a second glass facade was applied throughout the building. Through this, it was possible to increase the insulation and other performance while maintaining the value of the building skin. In addition, the slab between GF and 1F has been removed in the space between the southern elevation, giving a more complete skin feel and aiding the climate control of the building through abundant solar energy.

Indoor Market: In the interior space of Fenix, flexibility was a major factor. This is because buildings should continue to change and lead to the future. To maximize this, the interior of the building is divided into a space for the function of the building and a space that users can customize. Through minimal intervention, an approximate space plan inside the building was established, and a space was created in which users can freely customize. In addition, the intact structure and logical grid provide great flexibility. The program has been selected as an indoor market in consideration of the connection with the current surrounding context, and each stall can be easily installed and removed based on a wooden column and beam structure, and is transformed in various ways. There was also a need for intervention in the dark atmosphere and connectivity. Part of the 1F slab is demolished to attract light entering the ceiling, and at the same time, visual connection between each floor is possible. The marketplace naturally connects with the museum through a blurred border. The eastern facade facing the outer square expands and protrudes while maintaining its historical value, resulting in a stronger connection to the square.

Office: The space for offices and workshops located at the top of the market is also made of easy-to-install wood. This space is more likely to change more often than the lower market and is for more general purpose space that does not use water like a market. Thus, a raised floor was introduced. This allows the building's equipment to exist more independently. In addition, another roof window that had disappeared once in order to increase the amount of light while restoring the previous layer. This allows more sunlight to enter the building, and it is supplied throughout the building through voids. Therefore, the environment of the entire building would be improved equally. This soon leads to flexibility and compatibility.

Outside Square: By rebuilding the lost volume between Fenix 1 and 2, a complete single Fenix will be restored again, while also restoring the lost historical layer. Light steel columns and roof structures are installed along the existing grid. This volume and material emphasize the connection between the old and the new, creating a contrast with the old Fenix. Here, an iconic plaza of only light columns and roofs is created, which connects to the context of the city and its surroundings. By providing a new plaza for the city, Deliplein, which previously existed vaguely between Fenix and the residential area, could become a greener plaza for neighbor. A temporary market opens in the square, which extends to Deliplein and the indoor market inside Fenix, creating a huge integrated cultural space. On other days, it is used as a space for various events for the city and residents. This allows Fenix to become more closely connected with the city and its surroundings, and to integrate its history into present and future history in a wide range.

Relationship between project and social, professional and scientific framework

Oversaturation buildings and deterioration of the environment around the world have sparked much discussion about the direction of architecture. Recycling existing buildings as part of this is a topic that is actively discussed and practiced. However, in some cases, such recycling is being implemented as a trend without proper research and discussion. In addition, the ambiguity of the heritage value assessment can lead to ambiguity in the design. In South Korea, for example, there are often cases in which only some fragments of a building is remained and all others are destroyed without a proper value assessment process. Heritage and Architecture studio's research and design courses, working with existing large and small contexts, provide a practical and basic methodology in this area.

In many cases, preserving historical value leads to preserving the elements that contain it. And this

collides with the new intervention. In addition, there are cases where the history is fragmented because of focusing only on preserving the history. History does not exist as a dot at a certain point in the past, but exists as a line from the past to the present and the future. In other words, It is important to preserve the continuing flow and create a story, not to separate and preserve only part of the history. Throughout this project, studies on the preservation of historical layers and the balance of new interventions were conducted. The results of these studies can also be applied to other heritage projects. Each heritage has its own characteristics, but the approaches and frameworks are equally applicable and can be tested in a variety of ways. In this way, architecture can help connect society with history. Also It can help people to learn from history as well.

Of course, most designs are based on speculation, and according to Brand, speculation is always wrong. Moreover, architects cannot force the way the space is used. However, every new intervention produces new results and has a near-permanent effect. So, in this project, there have been attempts to examine different elements in various ways. It is also important to try to make the space as flexible as possible so that future users can freely change and learn from the building. As part of that, an attempt was made to separate the service layer in this project. As the design progressed, it was a bit far from the early extreme concepts, but the principles still apply. This allows buildings to continue to learn, change and lead to the future.

Ethical issue and dillema

Restoring historical layers of the past in a building that has changed its program several times since the past raises several ethical issues and dilemmas. This is because the restoration of the past entails destruction or transformation of what exists today.

Big picture and value of little element.

The southern façade was created with the birth of Fenix and is still continuing. Since the facade has existed for a long time, several changes have been applied along with the change of the Fenix. In this situation, if the southern façade is restored to its original shape, the changes applied so far will disappear. In order to organize the historical layers of the building and establish a clear storyline, it was necessary to restore the façade, but the changed elements were also historical elements that contained historical characteristics. There is a need for a compromise for the whole. Considering the historical value of the building, the space inside, and the performance, it was decided to restore the southern façade. And an attempt was made to respect the historicity of the changed elements. After restoring the façade's structure, detailed materials and colors have preserved or reflected

elements of the past. This was an attempt to achieve restoration and preservation at the same time. Through this attempt, the southern façade of Fenix 2 was similar to the restored Fenix 1's facade, but had a different historical elevation.

Relationship between heritage position and practicality – Fenix square

It was necessary to rebuild and connect the broken part between Fenix 1 and 2 depending on the heritage position established through the initial stages. To this end, a light steel structure was introduced, which represents the lost volume and at the same time emphasizes the existing structure in contrast to the existing Fenix. It also creates a wide open space and gives Katendrecht a new public space. This is a major construction and the attempt that may seem extreme depending on the point of view. This space was needed for the completion of the heritage position, but as an architect, doubts about the practicality of this massive intervention were raised. There were several discussions with colleagues and tutors, and I took a step back and looked at the project on a larger scale. An investigation into the urban perspective and public space of the surrounding context was conducted. Through this, the square, which was vaguely empty, became a bit more specific and different. Various programs such as temporary market, events and speeches have been added to the square. It also formed a connection with the city of Rotterdam by strengthening its connectivity with Rijnhavenbrug. Through this, the square became a public space for the city and at the same time played the role of an anchor point connecting the area and the city. This also changes the character of Deliplein, who was left in a vague connection between the Fenix and the residential area. Deliplein has been transformed into a softer, more greenish neighborhood square. Deliplein will be more actively used by the residents and this flow continues to Fenix Square. This was an attempt to predict the future space and its use and avoid neglect when designing a public space with a relatively large scope and ambiguous use. People can't predict everything in the future, but It was worthwhile to explore a methodology to increase the possibilities.

Conclusion

Through the studio, I have learned various tools to investigate the heritage building, and used it to analyze the project building, Fenix 2. And based on that, I discovered several historical layers that were melted into this building. This project was an attempt to connect this historical layer that existed in the past with the present and the future. For functional connection with the present, the programs that meet the current needs and enhance the surrounding environment have been inserted on top of the existing layers. And in order to continue this into the future, I have designed all the layers according to the speed of change in order to create a building that can adapt to the

situation of the future. Unfortunately, when designing a building for the future, I didn't think about the energy of the future enough. Looking at the direction in which architecture is going now, the most important design in the future will surely be sustainability and energy. While working on the Fenix 2 project, I had a rough idea of sustainability, but I couldn't actually draw it and test it out, so it turned out to be a bit uncertain. Overall, I was able to learn many different approaches through this Heritage Studio, and they were all solid and had their own characteristic. In addition, I was able to learn various tools to make tests and express ideas. And I was able to learn how to effectively communicate design concepts using it. Lastly, I would like to express my sincere gratitude to all the tutors who gave me helpful feedback and advice throughout my graduation studio, Nickolas, Frank, and even Lidy. It has been one of the most rewarding years of studying architecture, and it will remain a memory to keep for a long time.