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Heritage and Architecture
Adapting 20th Century Heritage:
Vacant Heritage

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Green Recycled Retail
Project Introduction

This graduation project takes place in a vacant heritage building that was a former V&D department store building in the center of Leiden. The studio begins with collective research on the Spatial Building Typology research of the former V&D department stores buildings. The main individual research and design strategy are based on Petzet and Heilmeyer(2011)’s strategy of Reduce Reuse Recycle (3R) in approaching heritage building. For the programme, the study is based on the Reduce Reuse Recycle Redesign Reimage by (Esty&Winston, 2006).

Keeping the retail identity of the building were chosen to reuse the central circulation system and open floorplan character of the department store building. However, to reuse the building as a whole, a sustainable programme that adjusts to today’s needs were adapted to the building which is redefining retail as an offline showroom that directly connects to the office and a library were added to cater Leiden’s citizen needs which are mostly students. The previously vacant heritage building, transformed into a reimagined retail building.

The redesign of this mixed use building itself are connected with green intervention as the spatial language that embodies the principle of Reduce Reuse Recycle strategy. The inner courtyard was enlarged creating a green space for the employee. A rooftop garden acts as an attraction for the retail.

In this reflection I want to elaborate and reflect on how the strategy Reduce Reuse Recycle forms the research and redesign process. The strategy determines the types of analysis and methods used to bridge the results of analysis and forms the redesign approach.
1. Relationship Between Graduation Project with Studio Topic, Master Track, and Master Programme

To support the graduation studio, in the beginning there is a Research Plan course. Personally, the course helped to create a clear and structured research plan that focuses on the direction of the research and redesign process in the graduation studio. It becomes a guide book to go back to each time I think the research and redesign is going off-track. The theories and methodologies made in the research plan forms the research and redesign process in the graduation studio.

The studio Vacant Heritage explores the vacant buildings of former V&D heritage buildings built in the 20th century. These buildings are large, located in the city center, and have monumental characters. Therefore, when the buildings become vacant, it creates a disconnection between the buildings’ values and the city along with the people.

To study the buildings, the studio as a collective did a Spatial Building Typology research of eight former V&D buildings based on the Haussmann’s methods (Jallon&Napolitano, 2017) to simplify the drawings and data for comparison in finding the typology. The results of the SBT research are profound spatial knowledge of the department stores building. To support this base knowledge of the buildings, individually each student needs to research other aspects that relates more to history, society, culture, and values based on Designing from Heritage(Kuipers&De Jonge, 2017).

The individual research begins by doing a personal approach on the results of the Spatial Building Typology. In the collective research, each student was assigned to draw specific drawings, I was given the task to redraw all of the floorplans. This task defined the way I study and see the building and the approach of research I chose such as acknowledging the complex nature of the building because of its historical development and the lack of sustainable approach.

In relation to the architecture master track and programme, I learned the strategy of Reduce Reuse Recycle (Petzet& Heilmeyer, 2011) from a previous task in the MSc2 Heritage and Architecture design studio. I also chose this topic to continue my study of sustainability in Heritage Buildings from Heritage and Values elective class called Mastermind CRASH where I learned to assess sustainability impact on a transformation project. Sustainability is a word that I was unfamiliar with before I studied in TU Delft, and it is a word that I always heard at TU Delft in every project and lecture I have participated in as it is one of the leading topic in the master Programme. To conclude, the decisions I made on why I chose this graduation project and the strategy are based on my past experiences and knowledge I gained in the architecture masters track.
2. Relation between Research and Redesign Approach

By redrawing the floorplans of eight V&D department store in the collective Spatial Building Typology Research. I notice how complicated the Leiden building is compared to the others. The building is composed of several other buildings that creates small rooms that are hard to access. Based on this finding from the research, it determines the spatial goal of the redesign which is to connect parts of the building more creating a building that is easier to comprehend and navigate for future use.

The personal research begins with an ambition to research a possible sustainable strategy for the complex vacant heritage building. Focusing on Reduce Reuse Recycle based on Petzet and Heilmeyer(2011)’s strategy on dealing with the built environment. This strategy becomes the main bridge between the research and redesign process. It determines what to research and the results defines how to design. This specific step by step strategy was chosen because of the complex configuration of the existing heritage building.

The nature of Reduce Reuse Recycle as a strategy is the hierarchy of it. First, reduce the work, the demolition, eliminate the work that is not needed. Second, Reuse what is already there. Lastly, recycle which is reusing something and turning it into something else. In the design process, these explanation of each strategy proves to be too broad and standardized, it needs to be more specific and significant to the design project. Therefore, the use and definition for each strategy that is applied to the building needs to be reconsidered by continually asking ‘What is Reduce Reuse Recycle in this heritage building and project?’

Other than the definition of each term, the hierarchy of it was also challenging during the redesign process. At first, the specificity of the hierarchy was the main reason this strategy was chosen, to bring order for the redesign part of this complex building. However, during the research and redesign project, even though this strategy was still the main reason for every design decision, the hierarchy are not as amplified and challenging to always follow the order. For example, in the expansion of the inner courtyard, it begins with the idea of Reusing the existing courtyard. And then, reducing demolition of the Breestraat 84 was the next consideration for the size and form of the expansion. By reusing and reducing, the courtyard is then recycled, by reusing the existing courtyard which the previously dry and brick saturated courtyard and turning them into a green oasis for the employees.

From that example, it shows that in the redesign process, the order of the strategy at times are changed according to the necessity of the design process. It becomes a negotiation tool between the new program and the existing building’s values and the need of the design’s program.
Illustration for Relation between Research and Redesign Approach

Figure 2. Reduce Reuse Recycle as a Redesign Tool

reuse based on building's potential
reduce based on values
recycled and turned green
3. Design Methodology

From the design process, it was clear that for each step of Reduce Reuse Recycle, a form of supporting research is needed to determine the design decision.

To reduce, it is mostly based on the value assessment of the building. Historical research of the building’s time layers and purpose were done to determine the value of each part of the building. The result of the research were used to decide the extent of demolition that can be done to negotiate with the green intervention. Using and redrawing the existing building’s sections and floorplans help to determine in detail the parts to demolish or to keep.

In reusing the building, an extensive parallel research between the building’s configuration and the program’s spatial and technical intervention demands were needed to regulate how to reuse the building in accordance to the program’s needs. For the research, the digital 3D model were highly useful to study the building’s dimension and the sun path to determine the location of green interventions. However, making the 3D model was challenging and takes a lot of time because of the complexity of the building.

For the programme’s needs, case studies were used to determine programmes that fit the building’s configuration to reuse the building. Literature and case studies research were done to study the green intervention. Literature on this topic is still limited. This research results in the position of the program and specific intervention such as the position of the greeneries reusing the existing courtyards.

To recycle, contextual research were needed to determine what kind of building it will be after the redesign in relation with the surrounding area by mapping and sketching of the green experience. To decide what type of green intervention in the building, research on the spatial sequence of the green areas surrounding the building were done. Based on the research, a green rooftop and higher courtyards are not present in the other green areas neighboring the building. The green rooftop intervention accommodates the retail’s demand to have a point B, for the visitors to go through the retail to go to the upper floors which is a common practice based on case study research. The building were mainly reused, some parts were removed to create the green interventions in the ground floor, courtyard, and the rooftop. Therefore, the previously close, static, and vacant department store are reused and recycled into a green and vibrant building.
Illustration of Design Methodology

Figure 3. A Stacked Floorplans of The Existing Building’s Floorplan

Figure 4. Building Phase Research to Determine Demolition Plan

Figure 5. Historical Research of The Building’s Use for Potential Reuse

Figure 6. Sketch and 3D Models for Recycling Concept
4. Relation Between The Graduation Project to Wider Context

The main relation to wider context in this project are the results of the Spatial Building Typology research, analysing the ever changing model of retail in relation with vacant and monumental department store building, and the green intervention in heritage architecture.

In The Concept of Type in Architecture by Agudin, L.M (1995, p. 227), he defines type as something that is not temporal. Therefore by collectively writing and making a book based on the Spatial Building Typology research of department stores, the research can be learned by anyone and can greatly benefit future studies and design regarding department stores. Moreover, by using the scales and drawing styles based on Haussmann’s Methods (Jallon & Napolitano, 2017), the content of the research can be easily understood by other people from different professions.

Karrholm (2012, p.2) has stated that retail is the most non-permanent type of building. Especially now because the need of offline retail are decreasing. However, retail is still one of the main function that actually has a high profit for the building. Therefore, researching a possible future of retail is important in this project.

Since the main strategy of this project is Reduce Reuse Recycle (Petzet & Heilmeyer, 2011) adding a change of function that requires drastic change to the building would not be fitting. Therefore exploring a different kind of retail were the main aim for the programme in this building. Based on the research, the chosen programme was retail as offline showrooms reusing the large part of the building that connects with its own office space in the smaller buildings in Breestraat. This system of having the office and store combined such as the one used by Made.com hopes to reduce staff and logistics considerations (Li, 2012). One of the main challenge of this programme was the struggle to get architectural data of such programme, the companies that were used as an example did not reply to any inquiry. By doing this, it has resulted in a study that bridge the vacant heritage building and a kind of new retail that can possibly function inside of it other than department stores. A new kind of relation between the configurations of this building and a programme that actually fits in that configuration. This has also started design considerations of connecting parts of the building horizontally and vertically to better accommodate the new functions.

Lastly, in designing the green intervention, learning about technical requirements and needs of interior gardens were necessary. The main theory for this part are based on Interior Gardens by Falkenberg (2010) detailed explanations and applications of interior gardens in various conditions and spaces. However, it does not really explain any projects regarding heritage building. Therefore this research brings a new application of interior gardens by exploring the connection and potential of green interventions in heritage building also in relation with the office, retail, and library functions. The challenge was that this topic was hard to research because it relates more to landscape designers and botanists. Most of the data on greeneries are not related to architecture yet. Therefore, in searching for data, it took a while to finally found the right sources and the correct terms to use.
Illustration of Research on Wider Context and The Application

Figure 7. Case Studies for Programme

Figure 8. Literature Research For Green Intervention

Figure 9. Programme and Design Overview

Type of plants
Create a suitable climate without high humidity
Waterproofing can ruin the foundation
Sunlight
Artificial Light
Type of Glass

Illustration of Research on Wider Context and The Application

Online
Offline

Office
Physical Showroom

Figure 7 by Astidira Apti. Photograph from: Made.com Office Photos. From, “MADE.COM Office Photos”, n.d. (https://www.glassdoor.co.in/Photos/MADE-COM-Office-Photos-IMG1600547.htm)
5. The Dilemmas of The Project

The dilemma of keeping the building as retail was there at the beginning of the project. The reason is that the repeated failure of department stores in the building in this online shopping era. However, in lectures and discussion, retail is still the main function that makes the most money and keeping the retail identity of a building is important. Therefore the dilemma of keeping the retail function in the building was apparent in choosing the function of the programme.

To negotiate with that dilemma, I tried to research retail functions that does not focus on retail only in the building but with other functions such as the office of the retail itself. Therefore by doing this, the retail identity in the building can still be reused. Moreover, since most of the people living in Leiden are students, a library in front of the building utilizing the view is added into the programme to attract people to stay longer in the building.

Other than the function, the main issue in this building and project is the fact that the building is made up of several buildings that are ‘connected’ but also isolated from each other because of height differences and protected facades that are listed in the gut of the building. The main challenging are is the Rijksmonumenten listed building of Vergulden Turk (Breestraat 84) that is placed right in the middle of the building facing Breestraat. This complexity resulted in a lot of inaccessible rooms, façades right in the middle of the building being covered by gypsum partitions, and parts of the building that ended up as storage as the space is not suitable for retail display.

The dilemma from that issue is how to make a connection between the buildings creating spaces that are actually usable and function without demolishing all of the highly valued parts mostly in Breestraat 84. A thorough historical research of the building was conducted to be able to weigh in on this dilemma and determine which parts has higher values than others. This resulted in which part of the building that were valuable in the past but needed to be carefully replaced or removed for the future of the building.

As for the sustainable strategy itself, the dilemma was on how to translate Reduce Reuse Recycle into spatial form. There was questions on whether the strategy should focus on energy use or material use, or is there any other way? Based on the progress, the Reduce Reuse Recycle are more emphasized on spatial configurations. Such as reducing based on values, reusing the building’s existing spatial potential, and recycling based on the mixed use programmed. Because this building has always been and will be used by the public, the green intervention was to chosen to embody and symbolize the sustainable strategy to the public. As for the technical impact of this green choice, it also benefits the building in a sustainable way such as reducing urban heat island, providing humidity and O2 for the building users, and help decrease air pollution.
References


