

Factories (Re)public

when industrial heritages are reopened for human activities

AR3MET105 A Matter of Scale
Graduation Studio Research Plan



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Background

After Soviet occupation for nearly 50 years, Estonia regained its sovereignty and became independent in 1991. From a Soviet state to an independent country, not only has Estonia experienced a huge shift in its political ideology, but also it opened up its opportunities from a communist economy to a neo-liberalist market economy. Such context has given Estonia, especially Tallinn a potential for progressive economic and social transformation.

Tallinn, as the capital of Estonia, has best captured the change in Estonia's economic and social systems. Taking the Rotermann Quarter as an example, due to the decline in industrial production in post-Soviet Tallinn, the factories in Rotermann could not sustain their economic competence and were abandoned. In the noughties, these factories were renovated for commercial premises, with new office buildings next to them, or even on top of them. Office space not only represents the modern way of working but also incubates the information technology industry of Estonia, which attracts worldwide investments and workforce and contributes to the rapid economic growth of Estonia in the 21st century. The urban formation of Tallinn is a palimpsest that reveals the multi-layered underlying planning ideologies and histories. The huge contrast in the cityscape of Tallinn has reflected its drastic transformation in 33 years of independence by spatial means.

The contrast is not only perceivable from a building scale but also from an urban scale. The rapid economic development and the abundant unused land in Tallinn have contributed to a favorable ground for investors to carry out urban redevelopment. Another example to be brought out is Noblessner Quarter, a former shipyard that has been redeveloped into a residential area. The consistent language of the facade of residential blocks as well as the urban furniture in public spaces has delivered a different appearance and condition compared to the vicinity, in which are the unused Patari prison and the current navy base of Estonia. The visual distinction between the Noblessner Quarter and its surrounding districts has also drawn an invisible boundary in-between, even as a foreigner, you can soon sense the contrast when you are crossing the street between the two areas.

From the perspective of a tourist, we might find these contrasts between the new and old intriguing, as they offer a wide range of spatial experiences in a compressed journey. However, the clear cut between the newly developed regions and their neighbors underlies a potential risk of spatial segregation in Tallinn. To illustrate the problem in a clearer image, an explanation is needed for the unique context of Tallinn.



Fig 1. Rotermann Quarter - New office expansion on industrial heritage by KOKO Architects

Problem Statement

Post-socialist ownership restitution

Right after the independence in 1991, Estonia carried out a land reform scheme, in which restitutions of historical buildings to their pre-socialist owners or their families were allowed. Privatisations of individual residential units by their tenants are also allowed if the former owners cannot be identified (Lux et al. 2012). According to Sykora (2005), the restitution of the building ownership to a single person implies a higher chance of the buildings for gentrification or displacement compared to regular privatisation. Together with the the reputational improvement of the inner Tallinn area and increasing interest in private investment from the early 2000s, the restituted ownerships paved the way for the post-socialist gentrification of the Estonian capital (Kovács et al. 2013; Jakóbczyk-Gryszkiewicz et al. 2017).

Private urban (re)development

The urban development projects in Tallinn are mostly carried out by private property groups, and the major aim for these projects is of course to attract property investments. These urban redevelopments often attempt to create a homogenous lifestyle and reality that are favourable for property investments but are somehow contradicting the current heterogenic condition of the neighborhood. In addition, the Tallinn government lacked a long-term and comprehensive vision for future urban development, not until August 2024 a new city architect was appointed to take the vacant position. A gap in terms of the residents' socioeconomic status could be identified between the redeveloped site and the rest without government's intervention.

Gentrification and Spatial segregation

Tallin's current lack of diversity in urban development is also identified by its city architect Andro Mänd in a newspaper interview (Pärli, 2024). As a result of many homogenous urban redevelopments and gentrifying trends, spatial segregation has already become one of the main issues of Tallinn's future urban development. The problem of segregation is not only limited to the physical realm, it will translate into social fragmentation, which often leads to social problems like lower civil engagement and high crime rates.

The below figures could also help in understanding the gentrifying process and spatial segregation in Tallinn. Kalamaja is a large local neighborhood that sits next to the old city district of Tallinn, in which are the traditional wooden dwellings, accommodating the local working class. Four districts that are currently developed or under urban development can be identified, and next to them are the newly renovated dwellings in the Kalamaja neighbourhood. It can be seen in the figure the distinctive building style between different neighbourhoods, and how the traditional neighbourhood is being contested by the influence of gentrification.

Problem Statement

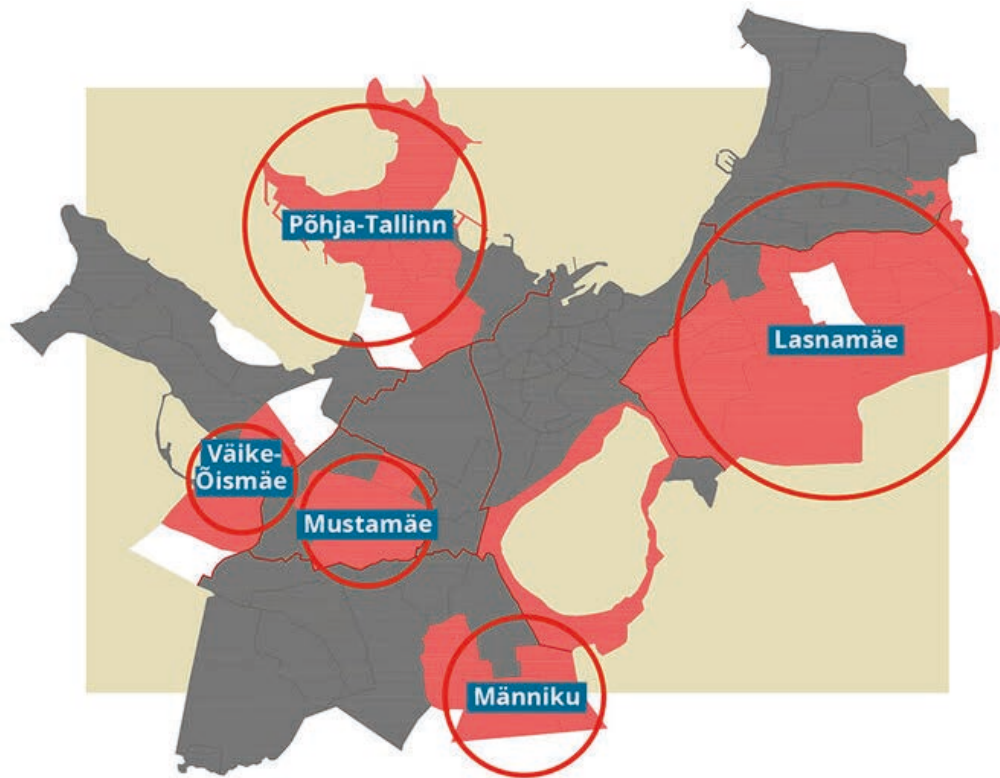


Fig 2. District in Tallinn having average gross monthly income below the city average



Fig 3. Kalamaja neighbourhood enclosed by four new redevelopment sites

Problem Statement

Industrial heritage in urban redevelopment

As mentioned in the introduction, one of the uniqueness of Tallinn is the proximity between abandoned industrial buildings and residential areas. When it is involved in the discussion of urban redevelopment, due to the Estonian protection policies of the heritage buildings, they have often been included in recent urban redevelopments in Tallinn.

In most cases, the factories have been reprogrammed and serve the public. For instance, they are converted into retail shops, restaurants, or exhibition spaces. However, most of the activities offered to the public are consumption-related, and often in the redeveloped areas these activities target users with a certain affordability. Which in turn sets up a high financial barrier for the low-income people living in the surrounding neighborhoods. In these cases, the industrial buildings could be perceived as a hub of gentrification.

From an architectural aspect, when the production in the factories comes to an end and the machines are removed, when the space designed for machinery operation is then operating for human activities, a strange spatial scale and non-user-friendly environment could soon be observed. This scalar contradiction in spatial experience is a unique attribute of factory buildings and could provide many more possibilities than conventional spaces for human consumption. Currently, industrial heritages are mainly renovated to share a consistent spatial experience and identity with their surrounding new dwelling or office buildings, which narrowed the variety of spatial experiences and projected a relatively monotonous appearance in the city.

Under the circumstances of mandatory restoration of industrial heritage buildings in the current urban redevelopment of Tallinn. This research will focus on exploring how the architectural potential of the industrial heritage could be exploited to create an inclusive public space and to bridge the interaction between the redevelopments and the surrounding neighbourhoods.

Research Question

The architectural research will have the following as the main research question:

How can industrial heritage be reconfigured to enhance the public inclusiveness of new urban redevelopments, with regard to its unique provision of spatial and visual experience?

The above question will be derived into the following set of sub-questions that construct a structured framework for the research:

- What are the industrial buildings' architectural uniqueness compared to other architecture in terms of spatial and visual experience?
- What architectural qualities or design methods are needed to create a public inclusive space? How can these qualities be achieved by reconfiguring the physical attributes of industrial buildings?
- How should the industrial buildings be preserved and reconfigured to prevent the monotonisation of the space from the conventional urban redevelopment approaches?
- How should the process of renovation be designed to enhance the public inclusiveness of the outcome to all potential users?
- What is the suitable site for the design? How can the possible solution to the above questions be brought to other similar urban redevelopment cases and address spatial segregation on an urban scale?

Theoretical Framework

To address the research questions, a theoretical framework is needed to establish a structured connection between the research method and the problem statement.

When the term “*Gentrification*” is involved in a discussion, we soon claim that it has a negative impact on the city, to society. We tend to have a vague perception that in the process the high-income residents gradually invade a neighbourhood by setting up a space that the low-income cannot afford and have to be displaced (Moskowitz, 2017). But there is also the fact we cannot deny that if we focus on a neighborhood scale, the gentrifying process has drawn investment in the improvement of the living quality of the neighbourhood. So what is the actual problem of gentrification in terms of city development?

Jane Jacobs (1969) claimed that the economic development of a city is actually favoured by its inefficiency, chaos, and confusion. Conversely, she claimed that the bureaucratised and simplified city planning are hindering the process of city growth and economic development. To facilitate the development in creative and innovative industry, Florida (2002) has the same stance as Jacobs, he regarded cultural heterogeneity as one of the essential factors of creativity.

In *The Human Condition*, Hannah Arendt (1958) emphasises the importance of “*plurality*” in the public realm, for which she stresses the difference of every individual human being. Besides, she also puts emphasis on the “*space of appearance*” that the power of community could be generated when they are commonly visible to each other in the public realm (Arendt, 1958). On the other hand, Low (2000) stood for the importance of public space as it reflects the cultural order through varied cultural representations by all walks of lives within everchanging context. Therefore, public space could be a powerful medium to foster cultural and social heterogeneity.

Teerds (2022) further interpreted Arendt’s concepts into an architectural explanation that, he identifies the public space under Arendt’s idea requires “*bearing with strangers*” and “*resistance to the regime of fear*”. Teerds’ notion of public space is that if people could allow a public space that takes courage and risk, that allows for collective experiences and remembrance, instead of a public space that performs only its infrastructural role.

Summarising the above ideas, I regard monotony and homogeneity as the main issues of gentrifying process. The ideas also coincide with the quality of former industrial space, as abandoned ruins often give an unknown, dangerous, and non-human spatial experience.

In terms of the conservation of industrial heritage within an urban development site. The scale of industrial heritage varies from large industrial landscapes to small pieces of machinery (Oglethorpe & McDonald, 2013). The variation in scale is potential for a complex and diverse public space. Mieg and Oevermann (2014) identify four understandings of industrial heritage conservation: *testimony to the past, cultural landscape, built infrastructure and spatial resources, architectural and atmospheric space*. The norm in Tallinn right now falls into the third category, and in the research plan, it is hoped to explore the possible balance among these four interpretations. Regarding the preservation of building materials, attention has to be paid to the balance between the raw preservation of the heritage and the management of space, as they are the tangible evidence of the primal age of industrialisation (Cossons, 2008).

Back to the formation of public space, Henri Lebevre’s concept of the “*production of space*” should be put into consideration. In his claim, the means of production of social space is a means of control, domination, and power (Lebevre, 1991). If the whole purpose of the research is to equally empower the individuals, the design proposal should allow to a certain degree public participation in the process.

Methodology

The main research question will be addressed by the dissection of the sub-questions into several aspects and tackling them by the three respective analytical methods. By singling out the research issues, it is hoped that the research could construct a clearer and more persuasive ground for the later design proposal.

Disciplinary Analysis

The disciplinary analysis will focus on exploring the unique architectural attributes of industrial heritage, the non-human scale spatial experience. The analysis will focus on the case of Kultuurikatel in Tallinn, which is a former power plant station being converted into a cultural centre.

Through the collection of photos and architectural drawings, the scale of the space and architectural elements in the building will be studied. By comparing the scale of people and elements that are originally designed for mechanical operations. We can study how the non-human dimensions are being repurposed and perform other functions when machinery operation no longer exists in the building.

The architectural drawing analysis will also compare the spatial configuration of Kultuurikatel in three different states: the original configuration, the architect's intention, and the final execution. From the comparison of the building at different times, we could soon understand how the building is renovated, for example, what elements are preserved and what are demolished or reconstructed to better reprogramme space for the new purpose. The drawings could also reflect the compromises that have been made and the limitations of the conservation process due to the deteriorating material condition as well as difficulties in management.

Contextual Analysis

Apart from studying the architectural quality of industrial buildings, the contextual analysis will, instead, focus on the interaction between renovated industrial heritage and their surrounding urban redevelopments in Tallinn. A comparative analysis will be carried out by Olivia and I, which focuses on three former industrial areas in Tallinn that have undergone urban redevelopments.

The comparative analysis consists of three sections: 1. understanding the development approach by investigating urban context; 2. analyzing how the architectural elements of industrial buildings are remodified under developers' agendas; 3. studying how the new buildings are responding to the industrial heritage and historical context by design and material used. A variety of media will be used in the analysis including diagrams, sketches, photos, collages, and texts.

The conclusion of the contextual analysis is aimed at identifying and evaluating the techniques used for the architectural interaction between development approaches and the industrial heritages in respective sites.

Through the summarisation of the design techniques, it is easier for us to judge if certain techniques have effectively responded to not just the development approach, but also the respect to the history, as well as the actual engagement of the public in the space. In the later stage of design, these judgments could help construct an evaluation guide for the effectiveness of my design proposal.

Methodology

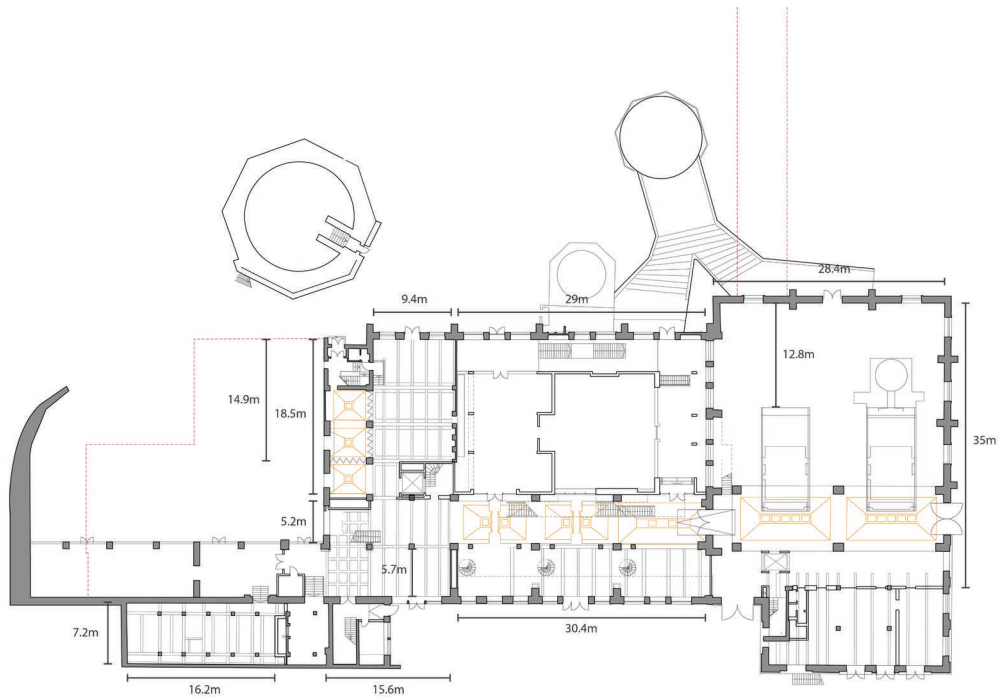


Fig 4. Disciplinary analysis extract

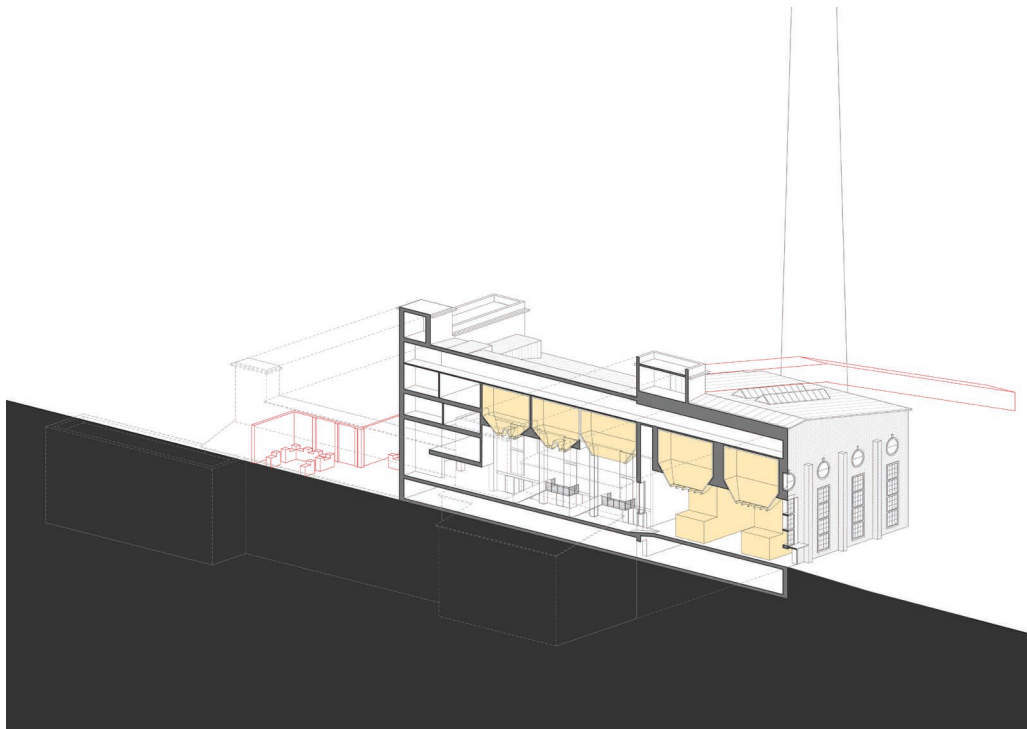


Fig 5. Disciplinary analysis extract

Methodology

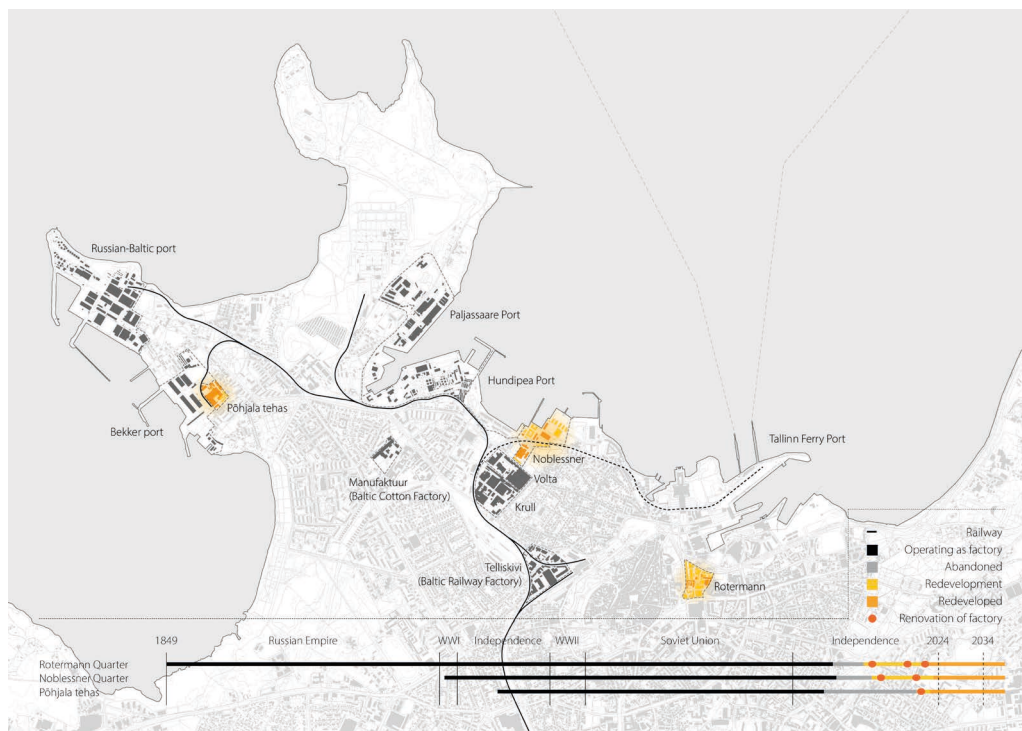


Fig 6. Contextual analysis extract

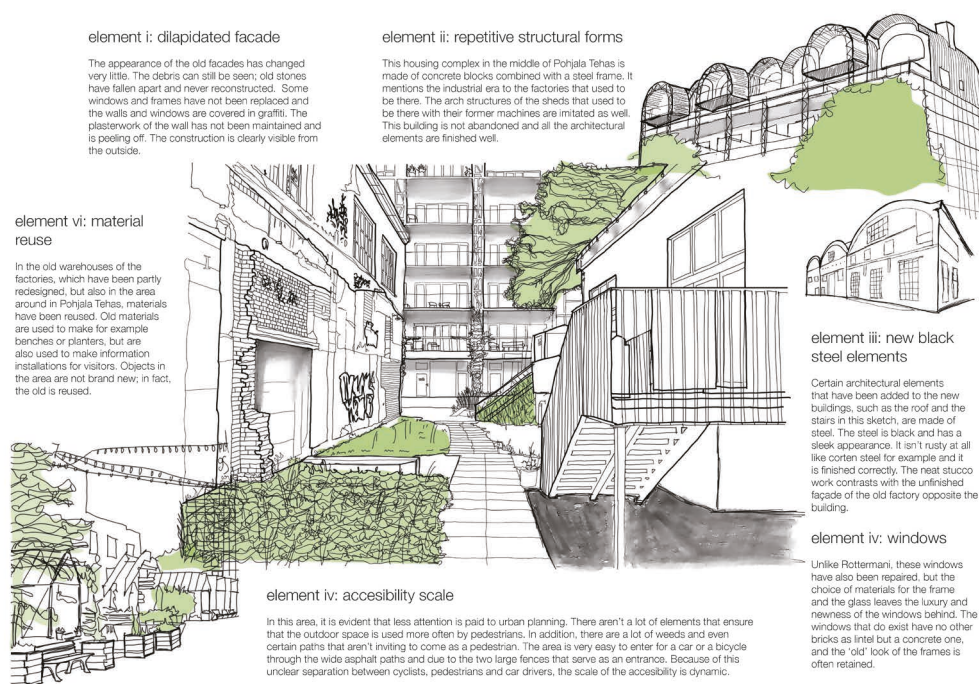


Fig 7. Contextual analysis extract

Methodology

Precedent Study

More precedent cases will be included to comprehend how industrial buildings are renovated in terms of their performance on flexibility, public engagement, and preservation of identity.

- LocHal Library

LocHal Library promotes the idea of “curatorship” which encourages interaction between visitors and professionals, by housing various programs in one same volume. In this case, the focus of the study will be on the division of programs, the visual and verbal interaction between users of different spaces, and the flexibility in spatial arrangement facilitated by the movable curtains.

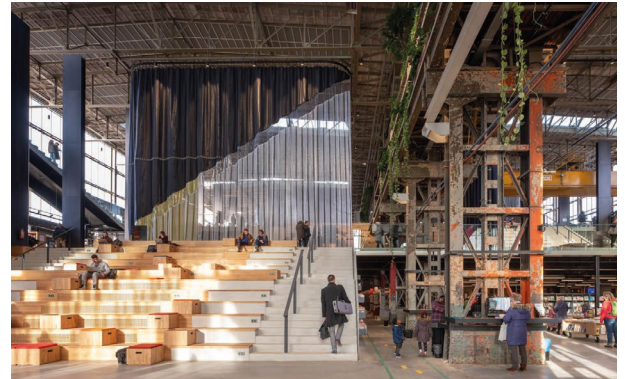


Fig 8. LocHal Library

- SESC Pompéia Factory

In this case, the focus of the study is how Lina Bo Bardi preserved not just the structure of the factory, but also the spontaneous use of it by the locals. The study will investigate how the materiality and comfort of space are enhanced while she attempts to deal the least damage to the spontaneity of the users. Besides, emphasis will also be put on how the new concrete sport complex tower generates dialogue with the factory in terms of form and material.



Fig 9 & 10. SESC Pompéia Factory

- NDSM Wharf (Kunststad)

NDSM Wharf is a former shipwharf that transformed into a hub for art and creativity-related activities, but also housing units. The highlight of this case is the deep involvement of the users in the creation and use of the industrial space. The research will focus on how flexibility and heterogeneity are being exercised by the guiding design principles within industrial shells. Especially inside Kunststad how programs built by various tenants coordinate and coexist with each other inside one volume.

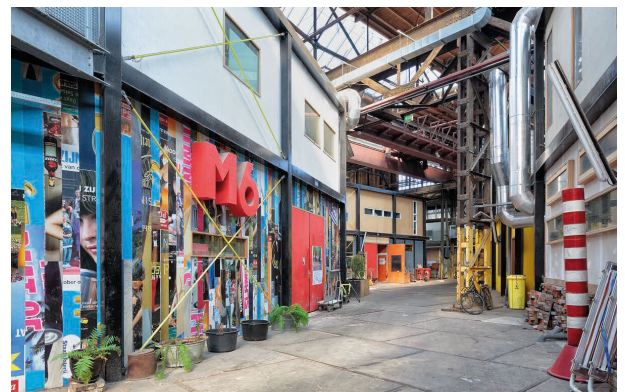


Fig 10. Kunststad in NDSM Wharf

Methodology

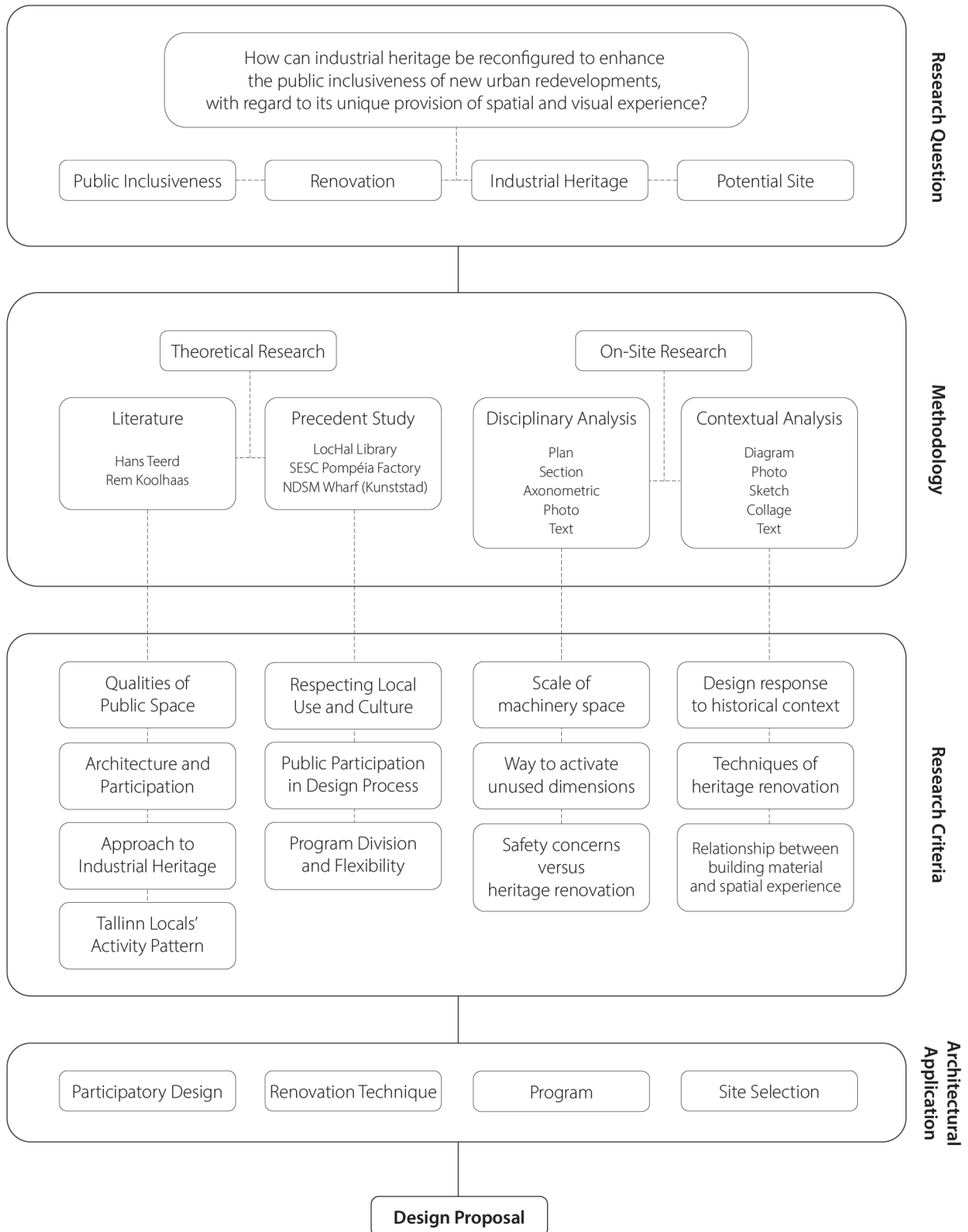


Fig 11. Diagram illustrating the research framework

Reflection

During the previous design studio in my student life, a design brief is usually given which somehow already limits the scope of design. This is the first time that I have to construct a comprehensive research to address the issue that intrigues me. Not only did I spend time researching the related theories and building up a smooth framework to support my design intent, but I also spent time asking myself what am I genuinely interested in. To address a particular issue in Tallinn, as an outsider who is amazed by its historical context as well as vibrant cityscape, is so hard as there are so many options.

At the end of the research plan proposal, I am relieved that I have achieved the essentials for architectural research, but also excited about the outcome of this research. At this moment, I am still asking myself if this is really what I am going to pursue for the coming year, but meanwhile, I am looking forward to opening up new potentials or directions of this topic in the next stage of analysis.

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Image Credit

Cover Author's work

Fig 1. Rotermann City (n.d.). *Rotermann Quarter* [photograph]. Visit Estonia. Retrieved from <https://visitestonia.com/en/rotermann-quarter>

Fig 2. Statistics Estonia. (2021). *Tallinna asumid, mille palgatöötajate kuu keskmine brutotulu oli 2018. aastal alla Tallinna keskmist brutotulu* [figure]. Estonian Association of Architects. Retrieved from <https://arhliit.ee/andro-mand-ja-katrin-koov-ees-ti-linnade-ruumilise-arengu-valjakutsed>

Fig 3. Author's work

Fig 4. Author's work

Fig 5. Author's work (collaborating with Olivia Lensen)

Fig 6. Author's work (collaborating with Olivia Lensen)

Fig 7. Mecanoo (n.d.). *LocHal Public Library* [photograph]. Mecanoo. Retrieved from <https://www.mecanoo.nl/Projects/project/221/LocHal-Public-Library>

Fig 8. Finotti, L., Kon, N., Markus Lanz / Pk. Odessa Co. (2015). *SESC Fabrica Pompeia, Sao Paulo* [photograph]. Arquitectura Viva. Retrieved from <https://arquitecturaviva.com/works/sesc-fabrica-pompeia-9>

Fig 9. Finotti, L., Kon, N., Markus Lanz / Pk. Odessa Co. (2015). *SESC Fabrica Pompeia, Sao Paulo* [photograph]. Arquitectura Viva. Retrieved from <https://arquitecturaviva.com/works/sesc-fabrica-pompeia-9>

Fig 10. Tilleman, R. (n.d.). *Art City NDSM* [photograph]. Eva de Klerk. Retrieved from <https://www.evadeklerk.com/projecten/kunststad-amsterdam>

Fig 11. Author's work

