

UNOBSOLETING

Restoring credibility to
dismissed architecture



Master Thesis in Architecture
June 2026

Oskar Gideon Lundqvist
Examiner: Naima Callenberg
Supervisor: Daniel Norell

Chalmers School
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Master's Programme of Architecture
and Urban Design (MPARC)
Architectural Experimentation

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ABSTRACT

The climate crisis has increased the awareness of the existing building stock as a critical resource. Yet certain categories of buildings are still more likely to be demolished rather than adapted. Architecture from the late modern and postmodern period (ca 1960-1990) has not yet achieved broad mainstream appreciation, but an enormous stock of office and industry buildings from this period awaits its destiny. To many stakeholders, planners, and architects its replacement seems regrettable but unavoidable. What makes buildings from this category obsolete, and what can be done to counter it?

Through the study of urban redevelopments in contemporary Sweden, this thesis highlights a lack of discussion preceding the demolition of buildings from this category. This “silent dismissal” is analysed through the emerging framework of architectural *obsolescence*: a loss of appreciation not caused by technical exhaustion, but by shifting fashions, demands, and ideals.

To counteract obsolescence, this thesis develops an architectural design method for investigating and addressing obsoleting factors. The first step is a thorough inventory of on-site architectural situations. The next step is a diagnosis where the main obsoleting factors as well as latent opportunities are identified. Inflexible spatial configurations diminish the buildings’ utility. At the same time, unfashionable architectural features, often framed by an urban context lacking basic architectural qualities, weaken their architectural appeal. Finally, the design stage turns the diagnosis into interventions which reframe the situations and improve spatial configurability and urban quality. Latent opportunities found on site are exploited opportunistically, trying to avoid both arrogant dismissal and narrow fetishisation.

This method is applied to a group of buildings in the Högsbo industrial area, Gothenburg, an area undergoing transition to mixed urban use. Selected situations are analysed and redesigned scenarios exemplify how buildings that are deemed obsolete can be transformed into valuable resources for the future city.

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Part I

Introduction +
Background

INTRODUCTION

We are living in a massive contradiction. The buildings which could house our future needs are already built, but likely they are also soon to be demolished. Across the suburbs of Swedens cities stand millions of square meters of industry and office buildings from the 60s, 70s and 80s. Often they are in perfect technical shape, with very permissible structures. Yet they are routinely dismissed.

This thesis explores a site located in the Högsbo Industrial area which is a typical example of this condition. It was created for manufacturing during the record years of the Swedish welfare state. It was reconfigured towards logistics and offices following the oil crisis. Today it is losing its office tenants to the inner city and industrial tenants to peripheral business parks.

When I was shown around in one of the buildings I am examining, the property owner actually apologized to me. Even as he was renovating it to bring it to modern technical standards, he did not trust in his building. At least he didn't trust that I could like it. Why is that? In this thesis I attempt to understand the mechanics of obsolescence on this site and to develop a design method for counteract it.



PURPOSE AND OBJECTIVES

Late century office and industrial buildings - LCOIs are rarely thought about and even then, seldom fondly. So why bother to take care of buildings which nobody seems to love?

The practice of adaptive reuse in architecture has been brought to the forefront of architectural discourse because of many different crises affecting the field, key among them the catastrophic environmental footprints of the building sector. The building sector contributes a huge amount of environmental harm, notably the green-house gas emissions associated with producing steel and concrete. Novel constructions tend to be built from large quantities of these carbon-intensive materials such as steel and concrete, and the construction and property sector accounted for the 22% of all Swedish greenhouse-gas emissions in 2022 (Boverket, 2025b). Demolitions in Sweden meanwhile, account for 39% of all waste generated in Sweden (2022) and the yearly amount has been increasing by 53% in absolute terms since 2014 to 13.6 million tonnes which corresponds to roughly 1 300 kg of waste per person (Boverket, 2025a).

Whereas much new developments often lack in character and spatial complexity, the last decades have provided many examples of transformation projects which proved successful and popular among users (Mjörnell & Bálint Palmgren, 2025, p. 18). But “Not all old factories can become cultural foundations” (Beroš & Savela, 2024). How to deal with the neglected majority of underloved buildings remain a central issue. Such buildings, those we currently dismiss, constitute a huge resource when reshaping our built environment.

Late century (1960-1990) office and industrial buildings (LCOIs) have particularly suffered from a lack of appreciation (Allan, 2022, p. 11). In fact, it is exactly those buildings which have lost their initial purpose but have not yet been reappraised for the aesthetic and heritage value which are most at risk of destruction (Lindberg et al, 2025).

By seeking to understand this unnecessary risk of destruction through the lens architectural obsolescence and developing a design methodology for reversing it, this thesis attempts to make a small contribution against these issues.

RESEARCH QUESTION

How can an “unobsoleting”
design method restore
credibility in dismissed
industrial and office buildings
from the late 20th-century?

DELIMITATIONS

This thesis is about:

- + Architectural methods for addressing obsolescence
- + The reuse of late 20th-century industrial and office architecture in Sweden

This thesis is not about:

- + Postmodernism as an aesthetic movement
- + Technical challenges and solutions to adaptive reuse
- + Political challenges and processes to preserve recent built heritage
- + Financial or economic models for achieving successful adaptive reuse projects
- + Optimal reuse of building materials

The reason for these omissions from the scope of the project, is not that these are not vital issues, but that I lack the time and previous knowledge to seriously investigate these questions. Instead I have chosen to focus on the questions of architectural form and use, an area in which I have comparatively more experience.

BACKGROUND: LATE CENTURY OFFICE AND INDUSTRY BUILDINGS

Late century industrial buildings

The design of industrial buildings of this time (1960-1990) was highly rational, but often specifically adapted for an intended tenant. Whereas industrial buildings often had many storeys during the early industrial period, after world war two the most common type became the one floor “shed” with an open adaptable layout and minimal structure, although multi-storey types persevered until the 1960s (Sennet, 2004, p. 818). The multi-storey buildings often featured a hybrid structure combining a system of concrete beams and columns with brick walls. These buildings more often had windows in the façade whereas the shed type relied more on artificial lights and skylights. The wide spans and minimal load bearing required for factories and warehouses normally meant the use of prestressed concrete beams or steel structures (Ibid). During the late 20th century, steel portals were increasingly the preferred structural solution, which could be combined with a free standing mezzanine floor when required (Ibid).

Late century office buildings

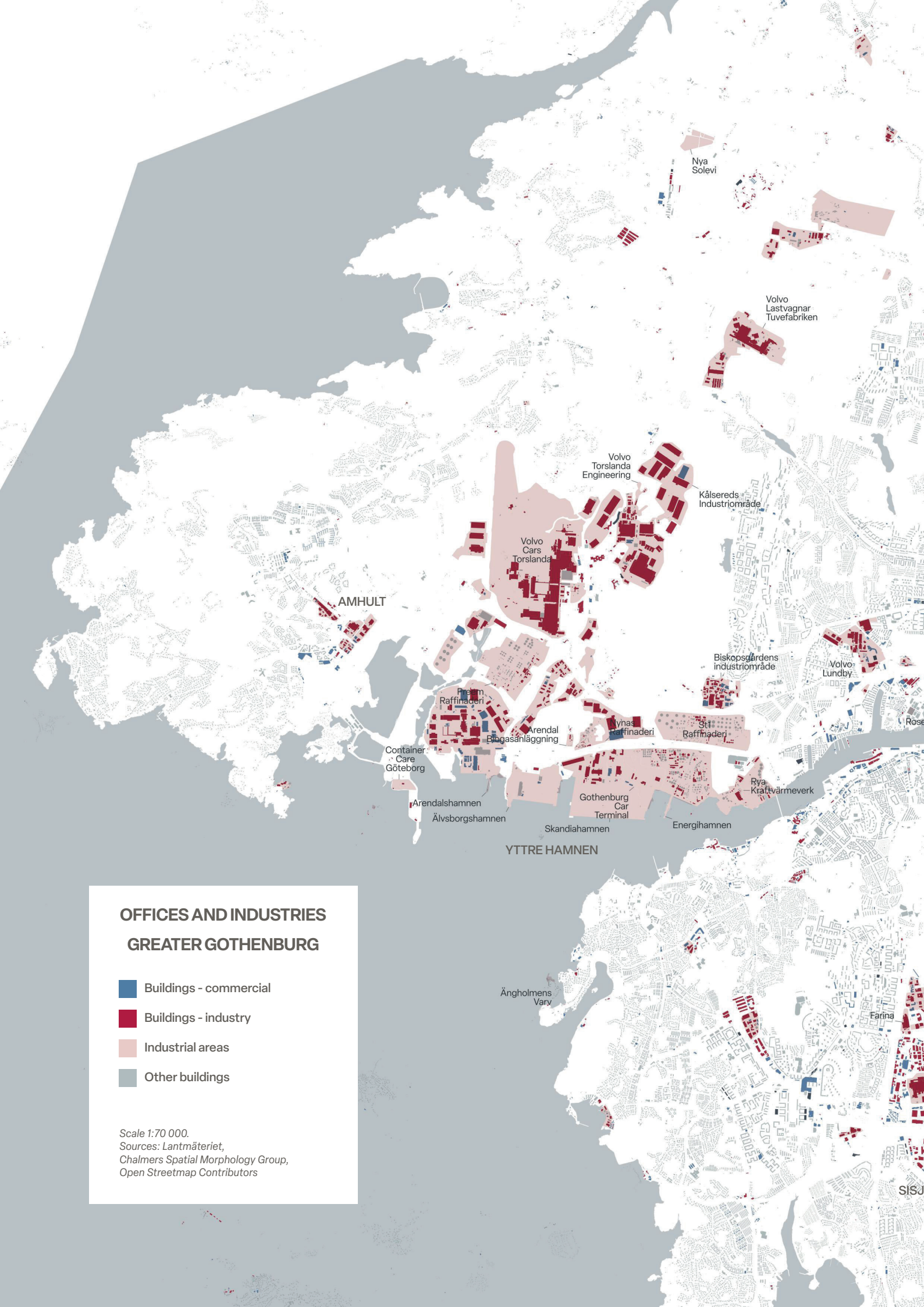
Attached to industrial buildings were often some kind of office. The office buildings of this era (1960-1990) differ but were generally designed to be highly rational, self enclosed units (van Meel, 2000). The traditional typology for offices involved load bearing exterior walls, with office cells around 4-6 meters deep behind them and a corridor in the middle (van Meel, 2000). In the mid 1960s, office buildings started to use prestressed concrete slabs which allowed for wider spans (Remøy & Vander Voordt, 2014, p. 14). This allowed for a new structural typology, employing Le Corbusiers Domino principles with a grid of columns (typically spaced 5.4-7.2 meters apart), cantilevered floors and curtain wall facades. This innovation led to the popularization of the efficient open-plan office layout (ibid). This kind of plan has three layers: first a layer of desks along the perimeter, followed by a thin layer

of horizontal circulation and finally a dark “core” containing services and vertical circulation. This new typology allowed buildings to become deeper, making them more economical but perhaps less adaptable to other uses (van Meel, 2000).

Whereas office buildings with load bearing walls typically had punched opening-style windows, the later domino-typology typically had a curtain wall façade. Most often this meant a regular system consisting of a continuous window strip, some kind of insulated paneling covering the edge of the floor slabs and often some kind of shading elements to prevent overheating (van Meel, 2000). In terms of architectural expression, some projects adopted a late modernist, rational expression, emphasizing the repetitive and technical structure of the building. Other projects, inspired by the post modern movement, featured significant decorative elements meant to evoke feelings of grandeur, tradition or playfulness.

For Gothenburg, which had been a commercial city of ports and industry from its founding in the 17th century, this period was marked by structural economic changes. The post war period of constant progress, marked by technological developments and increasing social welfare seemed to come to an end. A main cause for this was structural changes to the economy, with new technologies and political developments enabling global competition (Jörnmark, 2005). Most of the shipbuilding industry closed down in the late 1970s and small scale manufacturing saw a general decrease after in the 70s and on as well, owing to the increase in international competition (Ibid).

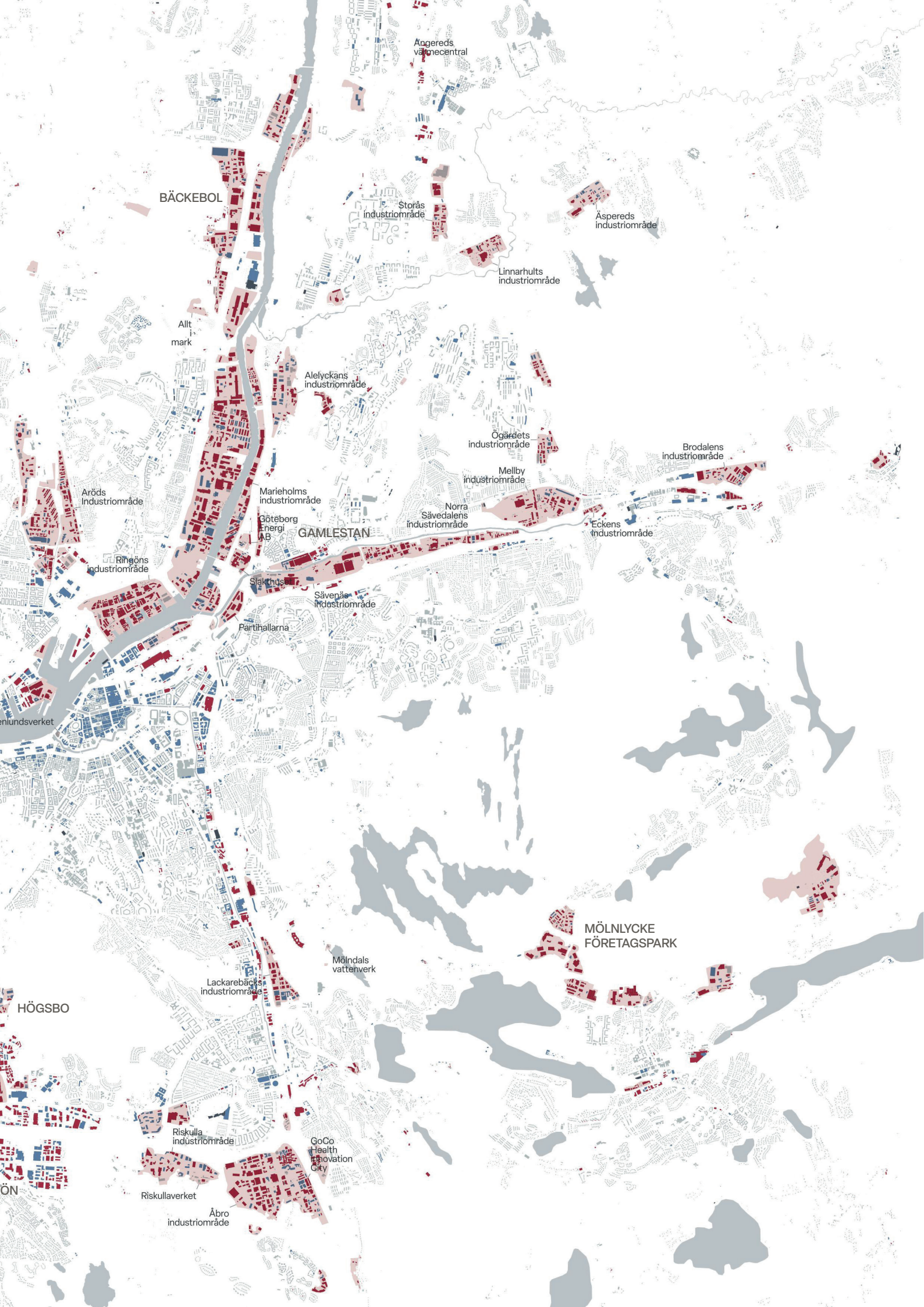
But as old established industries declined, a huge increase in higher education paired with accelerated progress in the engineering and scientific fields made Gothenburg welcome growing IT- and biomedical industries which required new facilities. A lot of these were situated in suburban office parks with post modern architecture, such as the Astra Hässle campus by Wingårdh Arkitekter or the developments along Datavägen in Åbro (Caldenby et al., 2022, p. 189). Offices and the services sector was the new growth sector and in the 1980s many office buildings were added to the designated “arbetsplatsområden”, workplace areas, created in the 1950 and 60s and then mostly intended for factories. In later years however, offices in suburban locations has seen a big reduction in demand owing to a shift in the workspace



OFFICES AND INDUSTRIES GREATER GOTHENBURG

- Buildings - commercial
- Buildings - industry
- Industrial areas
- Other buildings

Scale 1:70 000.
Sources: Lantmäteriet,
Chalmers Spatial Morphology Group,
Open Streetmap Contributors



BÄCKEBOL

Ågereds
värmecentral

Storås
industriområde

Åspereds
industriområde

Linnarhults
industriområde

Allt
i
mark

Alelyckans
industriområde

Ogårdets
industriområde

Brodalens
industriområde

Aröds
industriområde

Marieholms
industriområde

Melby
industriområde

Norra
Sävedalens
industriområde

Eckens
industriområde

GÖTEBORG
ENERGI
AB

GAMLESTAN

Ringöns
industriområde

Slakthus

Sävenås
industriområde

Partihallarna

enlundsverket

MÖLNLYCKE
FÖRETAGSPARK

Mölnåls
vattenverk

Lackarebäckens
industriområde

HÖGSBO

Riskulla
industriområde

GoCo
Health
Innovation
City

Riskullaverket

Åbro
industriområde

ÖN

preference of business towards smaller, centrally positioned office clusters (Mjörnell & Bálint Palmgren, 2025, p. 8).

Commercial and industrial development in Gothenburg 1960-1990

Excellent access to ports, railways and highways made logistics a major part of the industrial redevelopment of the city. The logistics business employs 30 000 people (Caldenby et al., 2022, p. 189) in Gothenburg, far more than Volvo Cars, the biggest manufacturer. Warehouses and large scale shopping occupies much of the industrial space which used to be for manufacturing.

Reuse potential

The rationality and sturdy materials of these buildings make them able to accomodate a range of tenants and activities. At the same time their depth, the limited options for circulation and commonly closed-off uninviting façades can make them feel unattractive (Remøy & Vander Voordt, 2014, p. 20).

The interfloor spacing in office buildings is often around 2.5 - 3 meters, so a risk factor in transformation to other uses is the possible need for HVAC-systems or acoustic insulation in ceilings and floors, reducing the potential free ceiling height (van Meel, 2000; Remøy & Vander Voordt, 2014, p. 20). Another potential technical challenge for reuse is vertical shafts. This tends to be a problem in buildings using prestressed concrete slabs, whose structural integrity might be destroyed if being opened (Remøy & Vander Voordt, 2014, p. 20).

Research by Mjörnell and Palmgren indicates that a significant portions of office buildings could be converted into housing. In fact, a majority (58%) of converted buildings in their 2025 inventory of reused buildings in Sweden were former industries or office spaces (Mjörnell & Bálint Palmgren, 2025, p. 8). They mention that post-war and post-industrial buildings make up an increasing share of this building stock and comments that “the main advantage in their conversion most probably lies in the reduced environmental impact of adaptive reuse compared to demolition and replacement by new construction” (Mjörnell & Bálint Palmgren, 2025, p. 11).

BACKGROUND: DISMISSED LCOIS IN SWEDEN

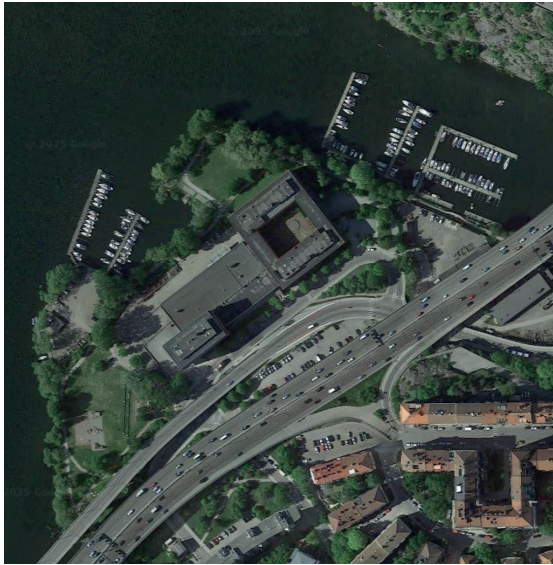
The decision and process of demolishing LCOIs often proceed with little public debate outside of the directly affected parties. Let's examine three examples of urban redevelopment in Sweden from the last decade, involving major demolition buildings of the sort discussed above.

Stockholm: Primusområdet - Lilla Essingen

On the Stockholm island of Lilla Essingen, a number of large office buildings on the northern edge constituted what is known of as the Primus-area, named after a former factory located here. The buildings made up a complex of around 33 000 square meters in gross floor area, and were built between 1961 - 76. In 2018 a new detailed development plan were enacted by the city, permitting the total demolition of all existing buildings in favour of new apartment buildings containing around 600 flats (Stockholm Stad - Stadsbyggnadskontoret, 2017). In the plan document, the existing building are described as possessing "great generality and flexibility" and being of a "coherent design" (Stockholm Stad - Stadsbyggnadskontoret, 2017). The antiquarian assessment by Stockholms stadsmuseum, quoted in the same document, classify the buildings as having "some cultural historic value" are "high cultural historic value" respectively (ibid). Despite this, no discussion of preservation of the buildings are included in the plan document.

Göteborg - Fixfabriken - Majorna

In Fixfabriken in Majorna, Gothenburg, a former fixtures factory and a bus depot were demolished in order to give room for dense residential development, with a few smaller buildings being preserved. The buildings slated for demolitions were discussed in two preliminary cultural heritage inventories (Melica, 2017) (Göteborg Stad - Stadsbyggnadskontoret, 2017b). Both of them highlight the architectural and heritage values of the factory, which was built in 1947 and extended many times until



Primusområdet 2018. Source: Google Earth.



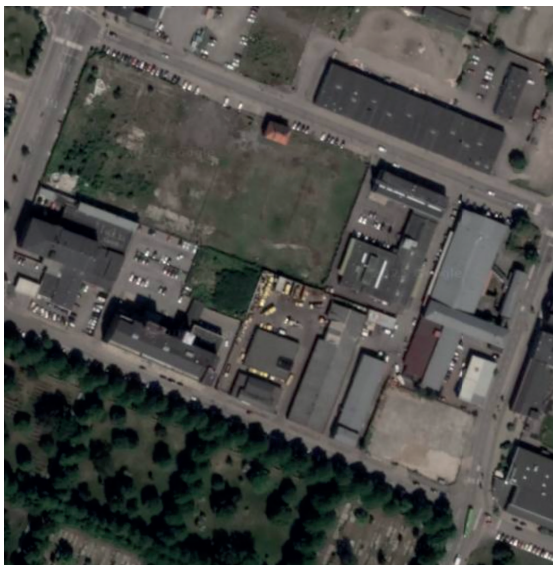
Primusområdet 2025. Source: Lantmäteriet.



Fixfabriken 2019. Source: Google Earth



Fixfabriken 2025. Source: Lantmäteriet



Kvarteret Brännaren 2018. Source: Google Earth.



Kvarteret Brännaren 2025. Source: Lantmäteriet

1986. In both of the inventories, the bus depot from the 1970s are mentioned only shortly and not attributed any particular value (Ibid) .

In the official description accompanying the detailed development plan, only the smaller buildings which were designated for preservation, are described in detail. The description states that “Within the limits of the current plan, tradeoffs have been made between the value of these buildings and the values which new development might add to the city’s current and future needs. This is a compromise in the issue of preservation of the buildings”(Göteborg Stad - Stadsbyggnadskontoret, 2017a, p. 29. My translation). As with the example from Stockholm, adaptive reuse of these buildings were not discussed in the official documents.

When the project was nominated for a national planning prize by Sveriges Arkitekter (the national Swedish guild of architects) in 2025, a public debate did erupt however. In Arkitekten (a national periodical aimed at architects), antiquarian Anna Reuter-Metelius criticises the jury for not adhering to Sveriges Arkitekter’s own recommendations, requiring circular design – including the reuse of buildings whenever possible (Reuter Metelius, 2025). Notably, the chair of the jury replied in Arkitekten, arguing that when that plan was developed, demolitions were not yet controversial (von Schmalensee, 2025).

Malmö - Kv. Brännaren - Norra Sorgenfri

Quite different is the example of the ongoing redevelopment of the area of ”Norra Sorgenfri” in Malmö. Initially, this urban transformation project had a rare commitment to preserving even the “less beautiful” buildings (Malmö Stadsbyggnadskontor, 2008).

“Kvarteret Brännaren” is a part of the Norra Sorgenfri redevelopment area which was the subject of a new detailed development plan in 2017. The area, a former industrial site, was home to industrial buildings of varying age and size. The official description of the plan includes a section about the cultural environment (“kulturmiljö”) and describes the architectural and cultural merit of many of the existing buildings. Whereas a few buildings are singled out as valuable, the oldest one even as “indispensable”, most buildings are not formally recognized as valuable. A building

cluster of industrial buildings, located in the western corner, are deemed less valuable because of with the comment that “the 1960s and 70s buildings and the distorted buildings inside the block are less interesting from a cultural environment standpoint” (Malmö Stadsbyggnadskontor, 2017, p. 5. My translation).

The plan description argues for a minimum of demolitions however: “Since the aim is to achieve a built environment mixing old and new, there is not a lot of room to demolish much more of the older building in the block” (ibid). Five building clusters singled out as worth saving in the description, but of them, only two were fully subject to demolition prohibition in the plan, and in one case, only the façades were protected. Three out of the five buildings were made partly non-permissible (“ej planenliga”), making it a virtual necessity to demolish them in the long run (ibid).

In a column in *Sydsvenskan*, the critic Julia Svensson discusses the result of the first stage of the project, kvarteret Spårvägen. She praises the initial visions for the project, especially the effort to preserve as much of the existing buildings as possible – even those which weren’t seen as ‘pretty’ (Svensson, 2024). But she is sceptical of the built result. She finds the new architecture bland, commercial and too large in scale. She is especially critical that the multi activity community centre which was planned in the former bus depot didn’t materialise and that a large part of the depot was demolished (Ibid).

Conclusions

From the three case studies we can observe that buildings of this kind can sometimes be appreciated by planners and antiquarian experts alike. But as the planning progresses and choices about what to keep and not are made, the preferred strategy seems to be silence, with little or no discussion of what is to be demolished in the official documents. In the cultural heritage assessments, the oldest buildings are usually given most attention, typically highlighting the high quality of materials, craft and architectural design while newer buildings from the 1970s and on are mentioned only fleetingly.

In the 2024 report “Att återbruka det ’fula’” (“Reusing the ’ugly’”), architectural practices BlickArk and HolstArk, discuss the issue of threatened buildings from the

late 1900s. They look at urban transformation projects of former workplace areas in Stockholm and show how the default strategy in seems to be to demolish most buildings, with exceptions only for those deemed to have special cultural heritage values or being very recently built. So it follows that the buildings most at risk are those not new enough to be considered modern but also not old enough to be seen as heritage (Lindberg et al, 2025), such as the sort of buildings this study is focused on. The authors recognise two sorts of arguments for why buildings are dismissed. The first one is about technical aspects: inadequate thermal performance, low quality construction, low ceiling heights and so on. But just as often, buildings are dismissed on a subjective, aesthetic basis, considered to be too ugly and without inherent value (Lindberg et al, 2025).

Lindberg et al discusses that technical justifications are discussed explicitly while a general perception of “ugliness” or outdated aesthetics are equally influential on policy decisions, if less explicitly stated. Buildings from the 1960s–90s often fall into a “no man’s land”, being too new for strong heritage protection but too old to be fashionable. It seems that detailed development plans tend to assume new construction as default. Even when heritage reports acknowledge value, preservation is treated as an exception, not a baseline. Outside of specialized or activist circles, demolitions often proceed quietly. When public debate does occur, it points to larger urban questions about sustainability, cultural memory, and the kind of city we want.

Part II

Theory

ARCHITECTURAL OBSCOLESCENCE

So, how can this silent dismissal observed in the previous examples be understood? These buildings are not useless but they show the signs of being *obsolete*. The Cambridge Dictionary defines it to mean “not in use any more, having been replaced by something newer and better or more fashionable”. (Cambridge University Press, n.d.) It is not a technical but a subjective designation. Buildings typically get designated as obsolete due to forces such as “the influence of fashion, change of habit, competition, development of new territory and shifting of the centres of population and business, altering of lines of transit.” to quote Reginald Bolton, early 20th century author and real estate writer (Abramson, 2014, p. 18).

The author Daniel Abramson explains how before the rise of industrial capitalism, buildings were essentially expected to last indefinitely. But as economic management grew more sophisticated in the 1800s, accountants invented measures to describe the financial value of any buildings:

Obsolescence emerged alongside depreciation as a financial risk management tool. Yet whereas depreciation resulted from slow, more or less predictable, physical wear and tear, obsolescence was different. It “was the loss which is constantly arising from the superseding of machines before they are worn out, by others of a new and better construction,” said Karl Marx, citing an 1862 English source. He called this process “moral depreciation,” but the more common term was obsolescence, from the Latin *obsolescere* (to grow old). (Abramson, 2014, p. 15)

Abramson explains how the thinking around obsolescence of buildings changed with the introduction of income taxes in the United States in the 1910s. This caused problems for the large and expanding real estate industry of that country whose profits now largely depended on these tax rates which in turn were based on the

valuation of their properties. So in the 1910s and 20s, they successfully lobbied for the idea that buildings lost their value because of obsolescence much faster than due to technical exhaustion. (Abramson, 2014, p. 21)

As the post world war two economic boom seemed to promise endless progress and development, obsolescence thinking spread. Abramson explains how the idea of architectural obsolescence came to disseminate into the public understanding, leading to demolition and redevelopment being seen as a natural, even desirable development. In the urge for modernisation, governments in both Europe and North America, in the socialist east and capitalist west, came to make use of the concept to motivate large urban redevelopments. But crucially, the obsolescence factor of a building was not exactly measurable, since it tried to reflect intangible aspects such as the perceived fashion of the architectural expression.

Responses to obsolescence

Throughout the late 20th century, the architectural discipline fractured into several competing camps regarding how to handle the inevitable aging of buildings. Some architects argued that obsolescence was an unavoidable fact of our modern world defined by constant progress, and as such architecture should give up its pretences of permanence. In 1963 British architectural collective Archigram published a journal issue named “Expendability: Towards Throwaway Architecture” exploring the possibility of the built environment changing completely every 5 years. (Abramson, 2014, p. 75).

But others disagreed. “The purposes for which a building is used are constantly changing and we can not afford to tear down the building each time.” warned leading modernist architect Mies van der Rohe (Abramson, 2014, p. 85). A common solution was flexible or modular architecture, aiming to design buildings as essentially open areas with technical and structural elements being hidden away as to accommodate changing layouts and movable interior walls. This strategy is still in use for airports and factories for example but proved less successful for buildings like schools, where the adaptable features were rarely used and users complained about the industrial aesthetics. (Abramson, 2014, p. 130)

Meanwhile opposition to the very concept of obsolescence was brewing as the preservation movement grew stronger in the 1960s. In her influential book “The Death and Life of Great American Cities” (1961) Jane Jacobs claimed that “There is nothing economically or socially inevitable about [. . .] the decay of old cities - Cities need old buildings.” (Jacobs, 1961, p. 140). Opposition against what was seen as needless and brutal demolitions took hold across the political spectrum, from conservative movements in Britain and America to communist politicians in Italy and even East Germany. (Abramson, 2014, p. 112).

The post modern turn in architectural discourse brought a questioning of the notion of constant progress and even function itself. Stewart Brand, influential writer of “How Buildings Learn”, argued for reparation over replacement as a means of facilitating change. Aldo Rossi argued for buildings which could stand the test of time through “eternal” civic types and strong forms. Denise Scott Brown and Robert Venturi examined the commercial architecture of the Las Vegas Strip and came to understand contemporary buildings as a “decorated sheds”, which could, once they became obsolete, always be updated with new decorations to become unobsolete again (Venturi, Scott Brown & Izenour, 1979, p. 89).

But perhaps most influential of the responses against obsolescence was the movement of Adaptive Reuse, which argued for the continuous adaptations of buildings to suit contemporary needs, while preserving resources and collective memory. Another contemporary tendency, influenced by the looming crisis of climate change, has been to see old buildings as large repositories of physical resources to be recycled in order to diminish the environmental impacts of future constructions. This however, risks promoting the idea of buildings as becoming obsolete and giving a moral pretext for their destruction. I would argue that we must have a wider view, considering also how architecture interacts with society through urban context, symbolic value and collective memories.

Obsolescence as a deficit of credibility

The economic calculus, often the real decision maker, is downstream of people and their beliefs. The mechanism of financial obsolescence is triggered by a decline in demand and interest by stakeholders. All demand comes from people trusting

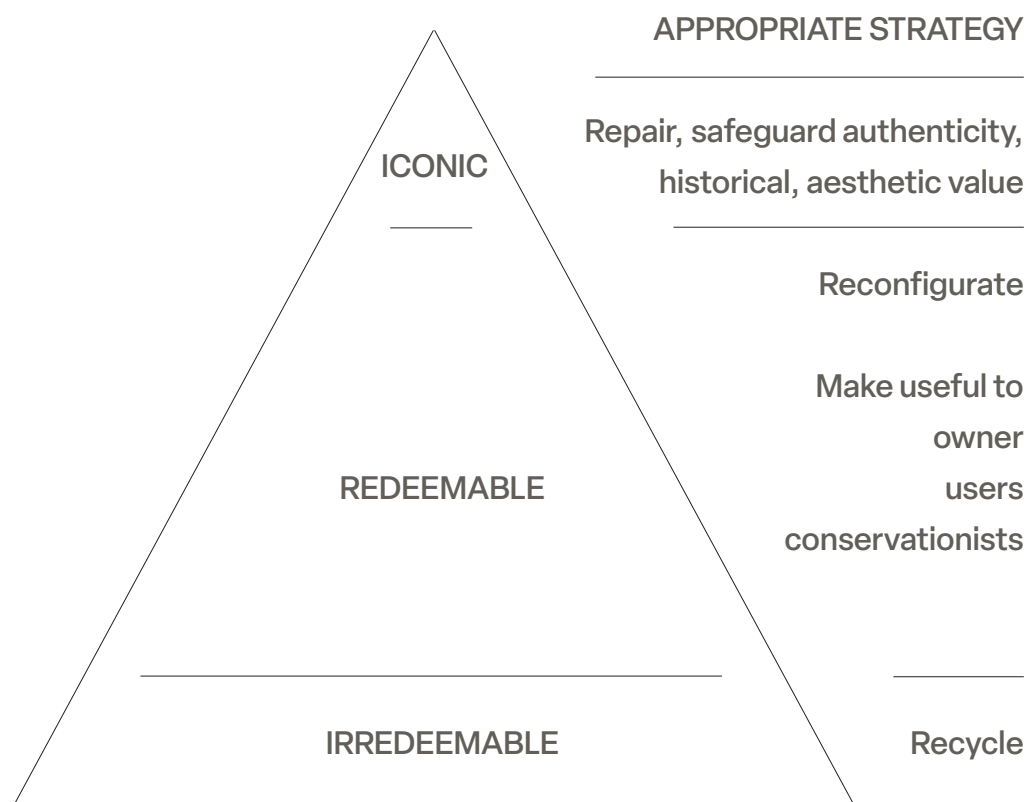
that something will be useful or enjoyable in the future which is why credibility is central. An area must show a credible case for it to become a living, dynamic part of the future city for investors and city planners to be attentive to it. And buildings that can not credibly perform their function will not attract tenants. This is also true for the intangible aspect of architecture, what Abramson discusses as the general perception of the building as ugly, unfashionable or emitting the wrong values and connotations. Tenants will hesitate to trust from buildings and urban areas with low status aesthetics to represent them.

So the designation of obsolescence follow a deficit of credibility in buildings which in turn is prompted largely by factors due to architecture. It follows that there should be architectural ways of undoing those factors. How can you do address these architectural issues in a building where the architecture is ordinary or even dismissed? This is the subject of the 2022 book *Revaluing modern Architecture* by British conservation architect John Allan. These “regular” projects, which Allan calls “redeemable”, must follow a pragmatic performance led process, respecting the concerns of all stakeholders. (Allan, 2022, p. 139)

Allan identifies three stakeholder groups, each with their own needs and conversely their own definition of obsolescence. The first is the owners/investors who are interested in their building as a real estate asset, where key considerations are the amount of floor space but also the “image” of the building. The second group is users and care-takers whose primary motivation is that the buildings are good to work and live in. And the final group is the conservation lobby who is interested “in authenticity and ‘significance’, and so is biased towards preservation and repair of original fabric” (ibid). The sum of these needs, Allan argues, encourage the use of “reconfiguration” over just “repair”, the bold reinterpretation of spaces and functions within the existing fabric, and even additions where appropriate (ibid).

In fact, the very act of transformation can be considered unobsoleting in itself, because it signals a renewed commitment of care and resources. It undeniably shows that a trajectory of decline has been interrupted and prompts the reevaluation of previously held beliefs about the building.

The modernist building stock according to John Allan, where the absolute majority of buildings are neither iconic or beyond repair, but "redeemable", able to be of social use again given proper architectural care.



Financial unobsoleting

But addressing points of failing credibility is only the first half of a viable “unobsoleting” strategy. Even a “redeemed” building with rehabilitated demand will not be feasible unless it can yield a satisfactory return on the invested capital (ROI). In other words, interventions can not be too expensive in relation to their “unobsoleting effects”. Conversely, low revenue from a building can in theory be accepted as long as it does not require expensive investments.

There is a caveat to this however. In addition to the relative return on capital investment, another crucial factor is the total revenue generated by a property. In the choice between a healthy return from a 3 story building or a humble return from a 20-story, the second option will nevertheless give more total cash. If these two options are available, economists say there is an “opportunity cost” imposed on the lower revenue option, the transformation option in our example (Law & Owen, 2010). In other words, as long as another more revenue generating option is available, traditional economic rationale considers it an expense to settle for a low cash flow generating transformation.

This presents a severe problem for transformation architecture globally. In jurisdictions with liberal building regulations, such as those studied by Abramson in North America, the pursuit of maximum floor space can lead to enormous opportunity costs at desirable locations, making demolition highly probable. In the Swedish context though, municipalities enjoy a planning monopoly, meaning they can legally prohibit developments which does not align with their goals, such as urban quality, social needs and sustainable development.

Using this power to cap the maximum buildable volume, effectively remove the “20-story” option from the table which neutralizes the extreme opportunity costs. This combined with the a decent ROI stemming from a low-effort high-impact design strategy forms the economic case for unobsoleting. In the next chapter different opportunistic design strategies will be presented which can enable such low-cost, high-credibility-impact interventions.

OPPORTUNISTIC DESIGN STRATEGIES

Since buildings become obsolete when they are no longer trusted, ‘Unobsoleting’ must be the act of proving that buildings can be relied upon as participants in the future city; to prove that their “heyday” lay in the future (Plevoets & Clempoel, p. 29). How can design intervention do that while keeping the size, cost and resource usage of the transformation as low as possible?

The decision to trust something is not just rational but also intuitive and emotional, so credibility must aim for a positive overall impression. No building can hope to earn trust on a purely utilitarian basis. Likewise, it would be vain to ‘facelift’ a building which is clearly hard to use. Unobsoleting requires a holistic design approach.

Small interventions with big effects

This leads us to the concept of high leverage or minimal intervention design. Both the financial imperative discussed earlier and the responsibility to use resources sensibly rely on using what is available in a clever way. Thankfully there are a lot precedents to learn from.

The principle of minimal intervention can be traced back a long time. In the 1800s, the debate stood between architects like Eugène Viollet Le Duc who wanted to restore buildings to an ideal state and those who argued for authenticity and against intervention, such as John Ruskin. In the 1900s, the Burra Charter insisted on the principle of readability and reversibility, that what was changed should be easy to understand, and possible to undo (Wong, 2017, p. 8-10). But these ideas are a framework for dealing with monuments and buildings of great heritage value. Today, we are faced with an enormous stock of “regular” buildings requiring adaption and other more pragmatic conceptual approaches might be necessary. The limiting factor in adaptive reuse is usually a lack of funds, with adaptive reuse often being equally or

even more expensive than new construction, so trying to do as much as possible with what you have becomes an obvious strategy. Minimal interventions is today less a question of aesthetic restraint, but more a question of leverage; letting small, precise actions unlock outsized spatial or social value.

The British architecture collective Assemble Studio have produced several projects which defy the “common knowledge” of architecture practice. In Granby Four Streets in Liverpool, the studio worked with the local community to adapt a derelict neighbourhood through economical yet unexpected interventions (Wainwright, 2015). Instead of offering a “total solution”, Assemble examined the precise spatial opportunities at every situation and worked with the users to come up with specific interventions for it. In Granby, that meant for instance turning a severely broken house into a shared garden, instead of demolishing it or replacing the floor slabs (Assemble, n.d). “We want to celebrate the idiosyncrasies of the existing derelict buildings,” says Assemble’s Lewis Jones. “If a floor is missing, why not leave it out and have a double-height space?” (Wainwright, 2015)

“Never demolish, always add” is the mantra of French architects Anne Lacaton and Jean-Philippe Vassal. One foundation of their approach is to appreciate what already works well, and what needs users actually have, before proposing any change (Zabalbeascoa, 2019). The practice openly focus on and present the costs of projects: “...cost control obliges one to prioritise” (Zabalbeascoa, 2019). One of their most famous projects is the renovation of residential towers in Bois-le-Prêtre in Paris. Instead of replacing the façade with a better insulating envelope, they chose to add balconies on the periphery, simultaneously adding a layer of thermal protection and extending the residential spaces by 30%, all within the same budget as a traditional façade renovation. Here we find high leverage by getting social, environmental and economic benefits from the same intervention. This example emphasize how non-monument buildings are formed more by limitations in the form of program, budget, regulation and zoning than by pure artistic intent. So when working with period coded aesthetics, it is smart to avoid both fetishization and blanket dismissal. A strong expression is a resource to be used. But a commitment to an imagined authenticity can be a trap; a way of cementing unfortunate compromises.

Exploiting latent opportunities

When minimising the size of interventions, it helps to be open to different approaches. If confronted with a “decorated shed” (Venturi, Scott Brown & Izenour, 1979, p. 89), a “re-decoration” might be the shortest path towards credibility. In other cases a Viollet Le Duc inspired “elevation” to an imagined ideal state, can unobscure it more effectively (Wong, 2017, p. 8-10). A thorough examination of the conditions can liberate the designer to act more “opportunistic”, tactically exploiting what is latent on the site. “Latent” refers to what is almost there, dormant qualities, the seed of what could be with the help of a slight intervention. Latent affordances focus on the functional dimension of perception, latent typologies on the organisational and latent framings on the representational.

Latent affordances - what the environment almost enables

“The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill” according to leading perceptual psychologist James J. Gibson. He developed the theory of perception called the “ecological theory”, which sees perceiving as a “direct and active process” where we notice affordances without conscious thought. In other words, we perceive our environment in terms of what it enables us to do (Maier & Fadel, 2009, p. 394).

If humans fundamentally perceive their environment as a set of affordances, it makes perfect sense to start here when we want to edit the perception of a space. Most of us can relate to the particular feeling of confused delight when a familiar space is changed to offer new affordances, for instance when a parking lot is redesigned as a public space and you suddenly can sit there and enjoy the environment. I would also argue that the creation or enabling of affordances have secondary effects: when you notice other people are using and enjoying a space you are probably more likely to have a positive opinion of it.

The design ethos of Danish urbanist Jan Gehl has been largely based on offering affordances to people in public spaces. Spaces for walking, spaces for sitting, for seeing, hearing and talking are key to making them feel more comfortable, safe and social according to Gehl (Gehl, 2011, p.129).

An example of a latent affordance being used in adaptive reuse architecture is the Cineroleum, the very first project by Assemble Studio. The project was a self initiated transformation of an abandoned petrol station in to a cinema. The simple shape of the steel supported roof was completely reimagined as the ceiling of a “black box” and the three missing walls were made up of a curtain sewn from roofing membrane (Assemble Studio, 2010). Instead of seeing a derelict urban ruin they choose to see an affordance waiting to be exploited for community benefit.

Latent typologies - how the space is almost organised

Typology, or type, offers an alternative more architectural way of reasoning about buildings than obsolescence, with its origin in accounting. It is a very broad term with a rich history but for the purpose of this thesis I will use it to refer to “patterns of spatial organisation”.

Some theorists, such as Aldo Rossi saw types as something that could be stable over time. He believed that cities are made up of enduring primary types such as towers, streets and courtyards. These permanent types can be observed by studying the city, and they persist through history because they answer basic spatial and civic needs (Rossi, 1977. p. 182).

The philosopher and politician Carlo Giulio Argan saw types as emergent empirical categories instead of as preexisting platonic ideals. He defines types by the overlapping similarities within a range of buildings. The typology is just a phase in the design process. In the subsequent adaption to the specifics of program, site and context, the specific overcomes the generic and the design achieves it's own architectural articulation. Only after that, can we again analyse it and see whether similarities remain to other examples of the type (Moneo, 1978, p. 35-36). Types here, are cultural categories, open to interpretation.

Accepting both the views of Rossi, that types provide stable categories which guide our experience of architecture, and Argan's view that types can flexibly emerge from similarities across existing buildings, opens the door to *typological reinterpretation*. To uncover a latent, “almost” present typology can reframe the project and drastically expand the possibilities for design.

Slight adjustment in the built structure can be enough to change the typological lens through which we interpret a space and thus completely change our perception of it. We can uncover a latent possible type. A parking lot, half surrounded by buildings, could be transformed into a piazzetta through the additions of a few missing walls and a change of the ground material. A loading bay could become a portico, through the removal of the garage door.

Rafael Moneo, in the essay *On Typology*, argues that types no longer carry the symbolical content they once did. Because of the fragmented state of contemporary culture, with no universally agreed upon visual, symbolic and formal values, types struggle to achieve universality (ibid, p.38). So, leaving the symbolic potential of types aside for now, I would argue that unexpected typologies still have perceptual effect through other means. According to Gibson our understanding of the environment is largely informed by what it can do. So by “swapping” the typology, the organizing principle of a space, the syntax of the whole is upended, and every space is given a new meaning. And our patterns of interaction are completely transformed. We might enter it from a new point, we will literally see it from new angles, we come close to parts which used to be distant and vice-versa. By redesignating space instead of just moving mass we can create a perceptually novel environment.

A brilliant example of a “typological swap” in architecture is Vandkunsten’s “Torpedohallen” project. They transformed a huge former torpedo boat workshop by the canal in Copenhagen into a fascinating residential complex. While the perimeter and general shape of the workshop remains, its spatial organisation is turned “inside-out”. As a naval workshop, it was a large hangar covering a boat slip connected to the canal, allowing work to be done under roof on floating boats (Vandkunsten, n.d). After the transformation, the centre of the building was made into an outside courtyard sloping gently towards the canal. The circulation which was previously on the outside perimeter was moved inside. The former roof is still implied by the preservation of thin beams, creating a perception of being in two kinds of spaces at the same time.

Latent framings - how you could almost see it

In the visual arts, the literal framing or crop of a piece influences how a reader understands it. In architecture, this includes how a space is approached, cropped,

or contextualised. These choices guide perception as much as material form. Latent framing refers to perceptual or contextual cues that are already embedded in the environment but remain hidden or unactivated.

By subtly editing it's physical surroundings, the cues can be uncovered to make a buildings seem intentional and valuable. Perceived effort seems to be a major factor in how we value any human artifact. "People often say, 'A lot of work went into this' when they sense the care and skill that its maker has lavished on a carefully constructed object." writes Peter Zumthor (Zumthor, 1999, p. 12). Subsequently, a lack of care and intentionality in their surroundings can frame even great buildings as non-valuable. Because of this "smell" from poor context, any serious attempt at unobsoleting must involve the urban space. But this does not involve major reconstruction if latent opportunities are cleverly employed.

Framing can operate through unfamiliarity. The hypothesis is that people perceive familiar things without much effort and curiosity, relying on preconceived ideas over lived experience. So, by subverting expectations and making the familiar appear strange, people become alert and more perceptive of actual experience, a kind of perceptual reset. Reordering strategies can help achieve this, that is changing what parts are prominent and hidden, which parts are reachable and not. Finally, latent contextual cues can be uncovered. Highlighting latent "urban artifacts" or traces of history can make a form legitimate in the eyes of the perceptive reader.

A project using framing in these ways is Herzog & de Meuron's extension of the Unterlinden Museum in Colmar. The museum is composed of a monastery and a new addition, located at different sides of an urban space. The architects recognized this space, a car park and bus stop, as a latent piazza bringing the disparate volumes together. The original architectural composition was informed by the canal of Sinn which used to go through the space, but later was made subterranean. So they resurfaced the canal along with an entrance pavilion which echoed a former house on the same site (Arquitectura Viva. n.d.). By restoring this historical urban composition, they uncovered a latent framing, making it possible to experience the monastery in the original way.

ARCHITECTURE BEFORE PROGRAM

While buildings can last for hundreds of years, the way we want to use them change all the time. To counteract the premature aging of architecture, many architects has argued for designing the permanent and the changing stuff separately. In *How buildings learn*, Stewart Brand discusses how certain layers such as Services, Space Plan and Stuff changes much more often than the more permanent Site, Structure and Skin (Brand, p. 12). The implication becomes that for buildings to remain useful over time they should be designed with each layer as "detached" (Duffy, p. 17) from the others as possible in order to accomodate change in.

The Open Building concept proposed by John Habraken similarly divides the built into "Support" and "Infill". Support such as roof, columns, floor slabs and utility shafts are the responsibility for the owner or community and is expected to last for generations. The "infill" however, such as partition walls, kitchens and bathrooms, finishes and furnishings are the responsibility of the user / tenant and is likely to last for 15-20 years according to Habraken. Thus the job of the Architect is not to design one floor plan, perfectly adapted for one use but a structure which can reasonably accomodate several different uses (Habraken).

Many buildings, especially industrial ones, adhere to the principles of a detached autonomous structure simply because they are simply and rationally constructed. Many industrial buildings, especially later ones can be aptly described of as "decorated sheds" (Scott Brown, Venturi). This alone does not future proof them however. As Habraken notes, "infill" is also dependent on the possible ways of circulating (effectively limiting how space can be divided) and access to daylight.

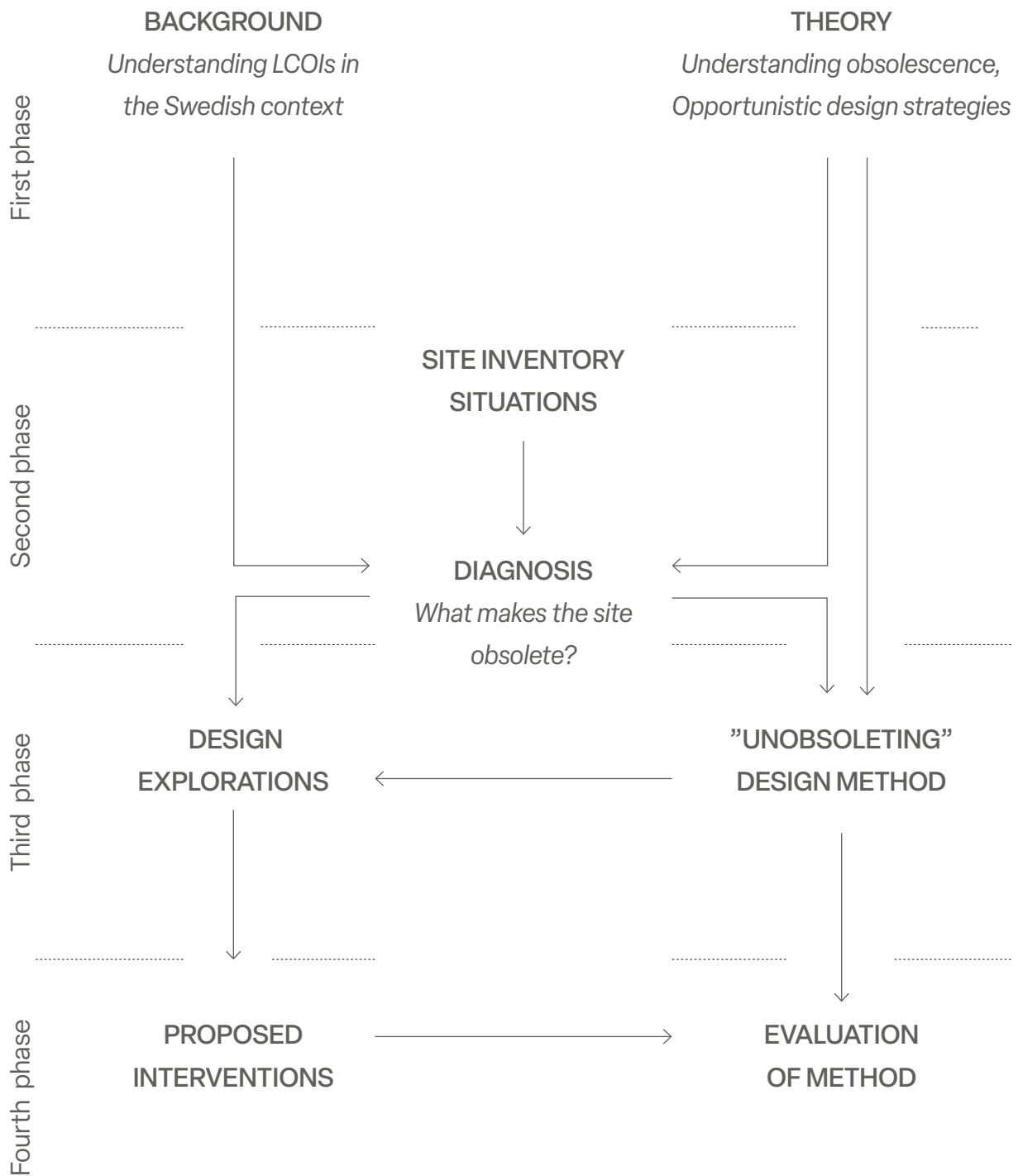
Artem Kitaev of Kosmos Architects introduces the concept of "Software" and "Hardware", where the robust loadbearing hardware act as host for the easily

changed architectural “Software”, which “adapt the Hardware to meet specific functional requirements” (Kitaev, p. 97). The temporary nature of the software allows the users to achieve more autonomy in changing their environments and allows for faster adaption to changing circumstances.

By identifying and enhancing an autonomous and open host structure it seems possible to avoid obsolescence due to functional inflexibility. There is a risk of interpreting this normatively however, legitimizing unsustainably short life cycle for the non-structural layers. Another risk is that we overemphasize the temporary. If we use our limited resources to build things which become permanent but were not designed to be functionally or structurally enduring this might obsolete a space. The aesthetics of the “makeshift” might signal optimism when new, but can signal decay and lack of care after its planned lifetime has passed.

Part III

Method + Site



METHOD

To lay a base of understanding, literature on obsolescence, 20th-century architectural heritage and reuse, as well industrial and office development in the relevant period is studied. This is complemented by a small scale study around the discourse and demolition of the relevant type of buildings.

This thesis employs a site specific approach to exploring the topic in order to reach beyond generalising abstractions. The goal is to pinpoint specific obsolescing architectural characteristics on a real site. A thorough inventory of architectural situations is made with the aim of letting real world observations inform the thesis' understanding of obsolescence.

A site is chosen using strict criteria to select a site representative of the issue as informed by the first phase. A "boring", typical site, lacking extraordinary or obvious "qualities" is favoured because it will force the subsequent phases to focus on the mechanics of obsolescence rather than over-indulging in idiosyncrasies. In order to achieve as comprehensive an inventory of the perceptual conditions as possible, this thesis looks at urban space as well as buildings.

The inventory is made through site visits, collecting and reviewing documentation which show situations of note. The observations are both on-site, documented using photography and photogrammetry to present the "as-found" state, but also come from the study of drawn and written research material.

The site specific approach invite a conflict between exploring the general issue and a specific case however. A site specific approach does not, by definition, deliver readily generalisable solutions. However, approaching the problems of perception of a space cannot successfully be done in the abstract because it requires intense looking at the real world. Thus the contribution of this thesis to the field will not be the proposal

itself but the method of design and enquiry.

The diagnosis is a written analysis of the observed situations, and how they contribute to the obsolescence of the site. This diagnosis can not be described as either fully subjective or objective. It is a judgement based assessment of both analytical and subjective observations.

The other half of the thesis involves exploring obsolescence and the trying to establish a design method for “unobsoleting” spaces using purely architectural means. The reason that this thesis emphasise the purely architectural is that discussions on economic, social or technical reasons for obsolescence are well represented in the literature, but architectural reasons for the phenomenon are not as explored. The design method will be described as a written provisional “manifesto”, outlining the principles established along the way.

The original intent of the design phase of the project was to propose design proposals on top of previously presented situation. This approach was abandoned however because the diagnosis clearly pointed out larger scale, wholistic problems. In the end, a few limited “interventions” are presented to represent ways of trying to adress different aspects of architectural obsolescence.

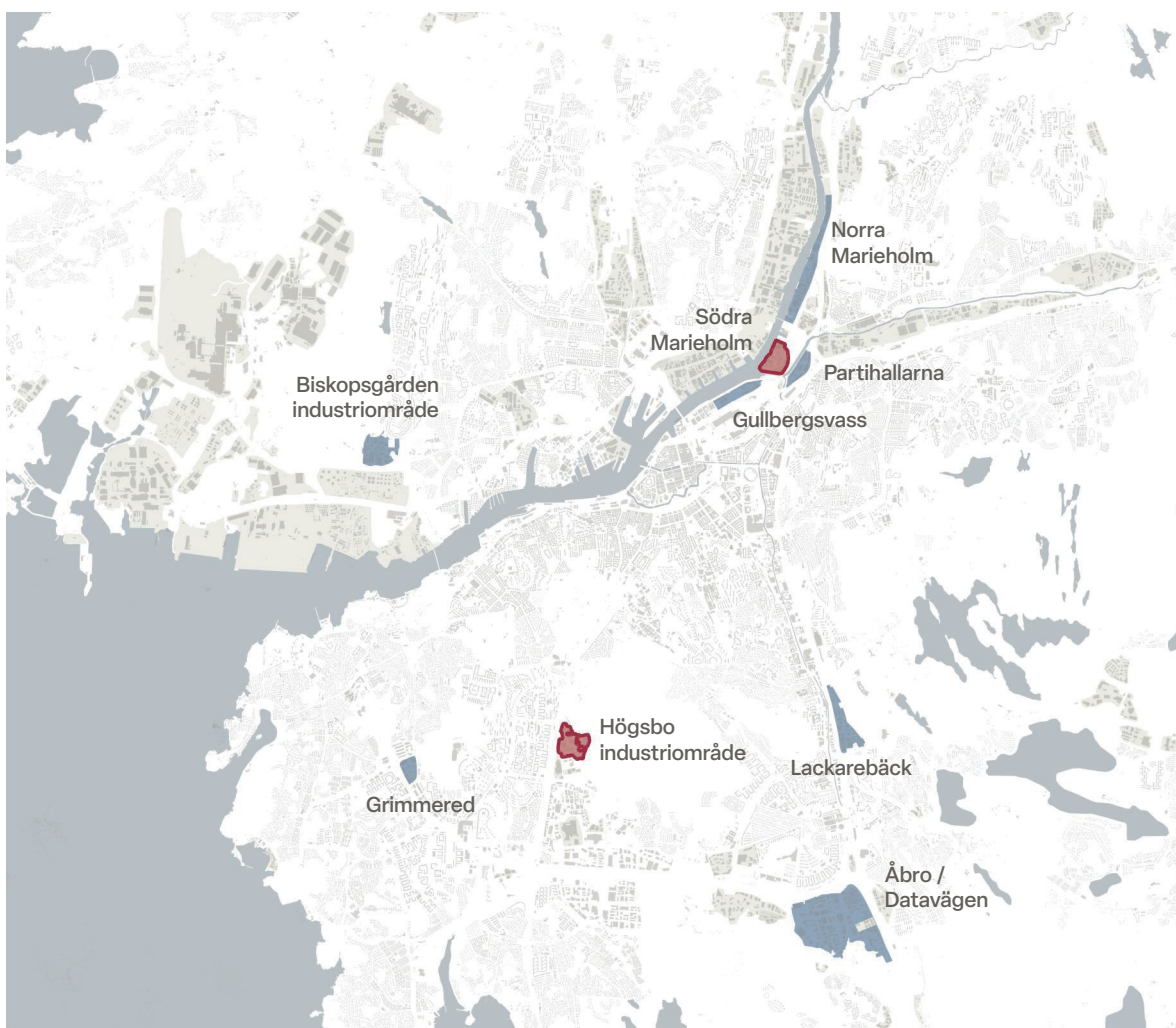
A larger scale, overall urban intervention is also included however, partly to adress the urban causes of obsolescence as identified in the diagnosis, but also to contextualise the smaller scale interventions.

Finally, the design explorations does not propose specific new programs for the spaces. There are two reasons for this: firstly, spaces which are overly optimized for a specific use have are at a greater risk of premature functional obsolescence given that the programatic needs change frequently. Secondly, this thesis explores the notion that architecture can be autonomously affecting obsolescence without relying on a new program to absolve it.

Finally, the “unobsoleting design method” and the designed results are critically discussed in relation to the theory.

SELECTION OF SITE

Selection criteria	The selection of site was based upon the suitability for testing the design method described previously. Potential sites was found using the mappings from the background chapters and were evaluated using the criteria below.
Research considerations	+ Does the site contain offices and industrial buildings built between 1960-1990? + Could some of the buildings be described as architecturally and or commercially obsolete? + Does the site have the potential of a meaningful interaction with the surrounding urban fabric? + Is the site relevant from a planning perspective? Are there currently plans to redevelop this area?
Practical considerations	+ Is the site of a suitable size (between 4-12 buildings, area between 10 - 50 thousand square meters)? + Is the building in the Gothenburg metropolitan area and accessible for investigation? + Are there publicly accessible drawings of the main buildings?



-  Examined sites
-  Selected site candidates

SELECTED SITE : NORRA HÖGSBO INDUSTRIOMRÅDE

Description and history

This site is the northern tip of a larger industrial area in southwestern Gothenburg. It is situated between the highway Dag Hammarskjöldsleden and the nature reserve of Änggårdsbergen. Before 1950s, this area was largely agricultural. In 1945-50 a pegmatite mine was operating here (Dreijestam, 1998 p. 24). With the general plan of 1959, large scale developments began with the highway and tramways dividing the area of Högsbo into a residential west side and an industrial east side. The selected site is around 35 000 square meters consist of three properties featuring industrial and office buildings from ca 1963-1987.

Urban surroundings

The site lies by a circulation corridor connecting the southern area of Frölunda with the city core and Linnéplatsen, approximately 2,5 km to the north. Dag Hammarskjöldsleden acts as a major barrier to the surrounding city, with only two rather exposed viaducts connecting the two sides for pedestrians and bicyclists. To the immediate south, a new detailed development gained legal status in 2022. This plan aims to redevelop a large part of Högsbo industriområde from industrial to mixed use, featuring around 1 900 new apartments but requiring demolition of most of the existing buildings (Göteborg Stad - Stadsbyggnadskontoret, 2019). Such an influx of residents would likely change the character and requirements of the site.

Buildings

The oldest building within the site limits (3A) is also the biggest one, at around 50 meters of depth with a slimmer office part extending of from the main building. This building was already present before the city plan of 1967. There is a large factory like addition (3B) directly attached to it and a smaller one a bit to the north, both having been built at a later date. The buildings south of it (1, 2) was built in 1976-77. Building 1



Location of site within Gothenburg and Högsbo

is a deep building, built as the combined office and warehouse for a mail order sports company, with the one next to it (2) being a slimmer office+workshop building. Both of these buildings have brick and metal facades.

Current use and ownership

All properties are owned by major real estate companies with 1:1 being owned by Balder, 1:4 being owned by Platzer and 1:3 being owned by Svenska Hus (Lantmäteriet, n.d.). The buildings are sublet to various commercial tenants, many active in the manufacturing and logistics sector.

Municipal plans and aims

The city of Gothenburg has ambitious plans for this area to be transformed into a mixed use, mainly residential area with urban characteristics. Central to this ambition is the transformation of the highway to a boulevard, with the aim of create a more urban environment and freeing a lot of land for redevelopment. A part of that project will be the removal of the elevation separation of that road ("planskildhet") and the creation of new crossings to integrate the new developments with the existing western side of Högsbo (Göteborg Stad - Stadsbyggnadskontoret, 2019). The previously discussed detailed development plan to the south of the site is intended as a first step of the transformation of the area.

It features major efforts like the planned "Olof Asklunds park" city park and a green corridor to connect the Änggårdsbergen nature reserve to the city (Göteborg Stad - Stadsbyggnadskontoret, 2019).



Property	Owner	Building	Floor area (ca)	Current use
1:4	Platzer	1	2 600 m ²	Shop, office, vacant
1:3	Svenska hus	2	3 500 m ²	Offices, logistics, vacant
1:1	Balder	3A	7 700 m ²	Offices, manufacturing, vacant
		3B	2 000 m ²	Logistics, manufacturing
		4	400 m ²	Logistics

Source: Lantmäteriet, n.d.



Composite floor plan

Is an intervention justified?

Since the municipal plans to redevelop this area has already been set in motion, it is more likely a question of how than if this area is going to be redeveloped. Thus, it feels highly relevant as a case study for an urban redevelopment plan which reuses exiting industrial buildings. Of course, any redevelopment risks raising rents and upsetting an established urban ecosystem.

Risks

The comprehensive plan of Gothenburg lists a few risks in the vicinity, including the risk for heavy rainfalls causing flooding and the risk for contaminated ground due to the industrial history of the site (Göteborg Stad, 2022). The ambitious but not yet started plans of building the boulevard creates uncertainty in the planning process.

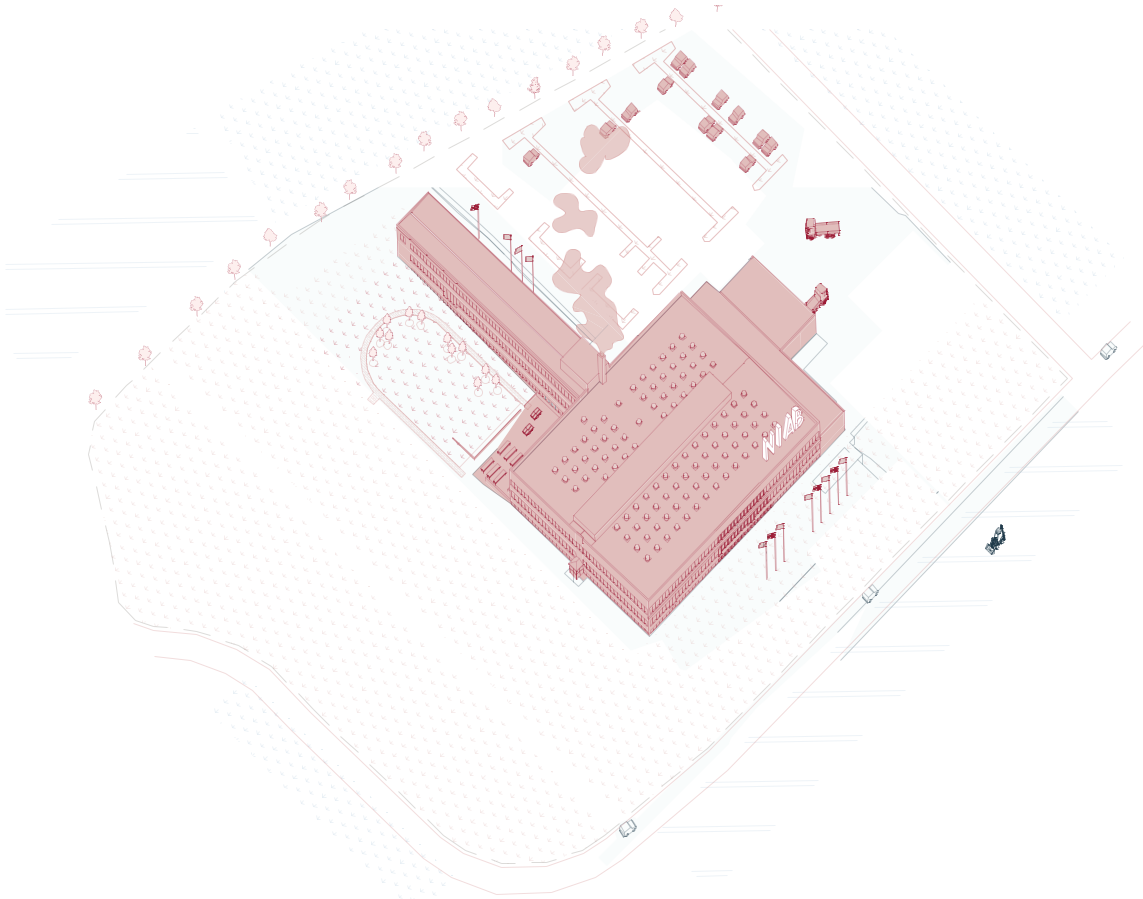
Part IV

Results +

Discussion

THE SITE OVER TIME

FORDIST PRODUCTION (1960-1972)



CONTEXT

Record breaking economy, strong domestic demand for manufactured goods

EXTERIORS

Spaces were optimistically designed with formal entrances, gardens and clearly designated areas for parking and logistics and greenery and employee recreation.

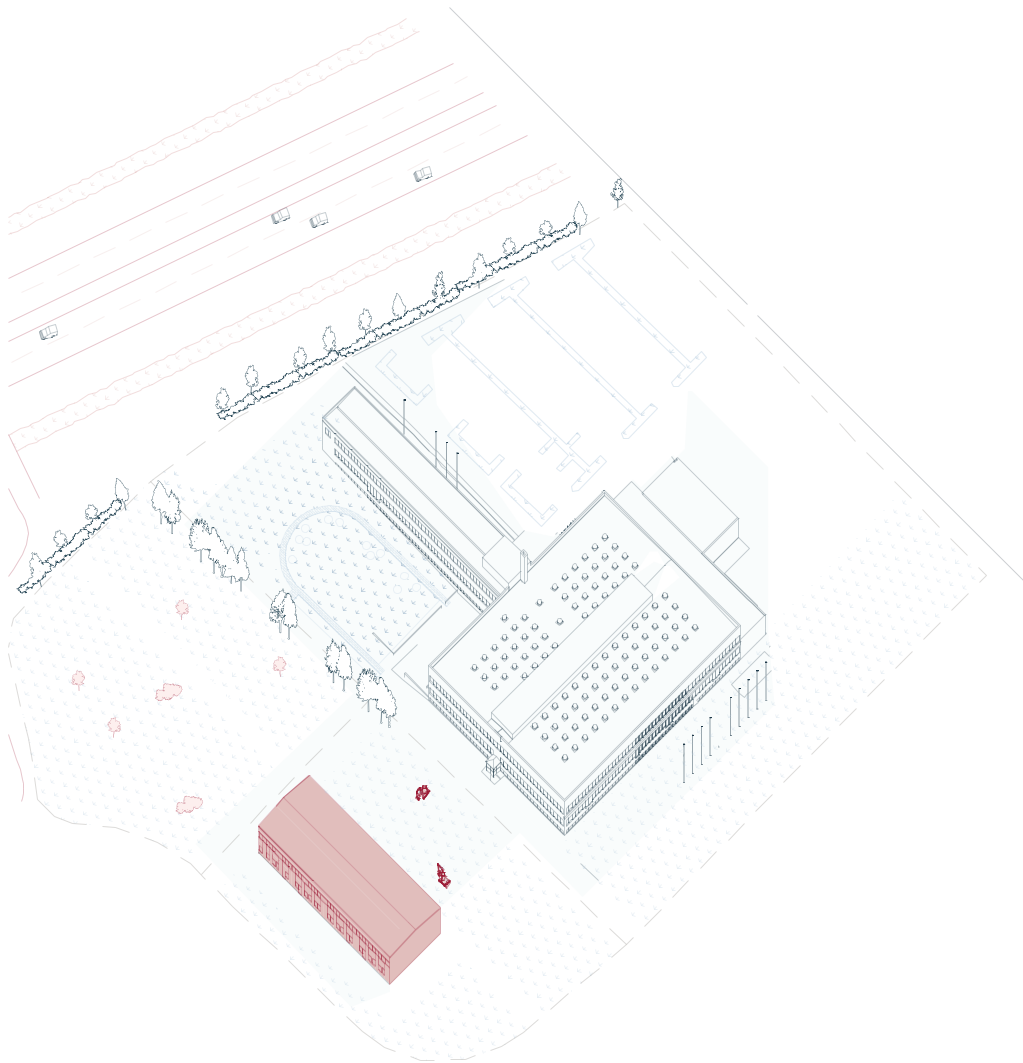
URBAN

Relatively “high-road”. Modernist ethos of honest communication of the scale and generality of the buildings leads to

INTERIORS

Deep floor plans support large areas for production. Daylight only where strictly needed. Circulation patterns subservient of logistic needs.

OIL CRISIS / FIRST OBSOLESCENCE (1972-1979)



CONTEXT

Oil crisis and globalisation made manufacturing uncompetitive. “Fordist” tenant (NIAB) leave.

URBAN

Large scale loading bays, corporate main entrances and cafeteria gardens at once made obsolete.

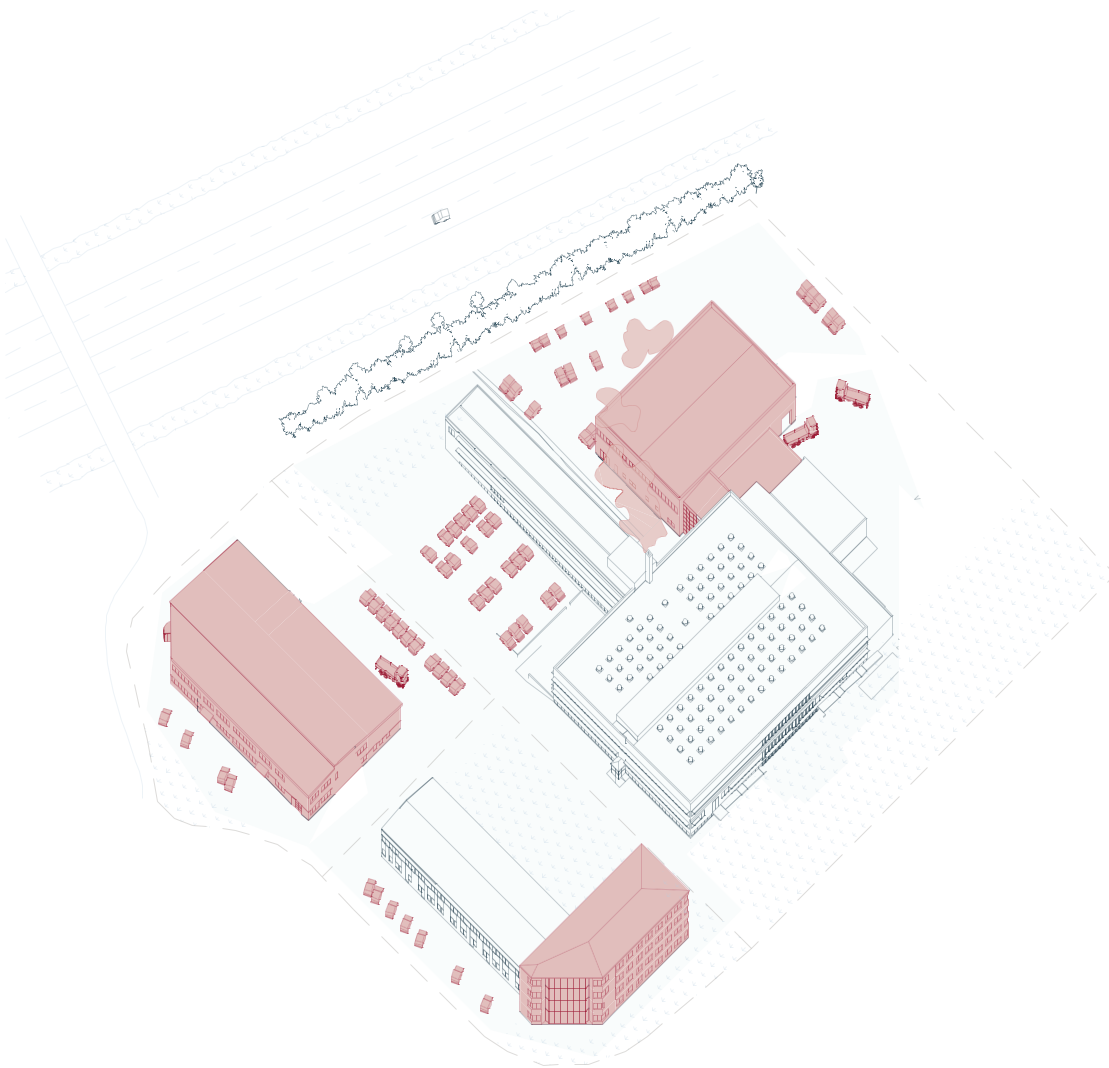
EXTERIORS

Corporate signs removed. Buildings can no longer be seen as great wholistic machine of production.

INTERIORS

Manufacturing equipment and partition walls are removed, revealing the raw space of the constructions.

LOGISTICS AND SERVICES (1979-1992)



CONTEXT

Rise of service industries. Offices, small logistics and construction firms fill the gaps, adapt site

URBAN

Most in-between space is turned into parking, with new tenants. Areas for different tenants are fenced in.

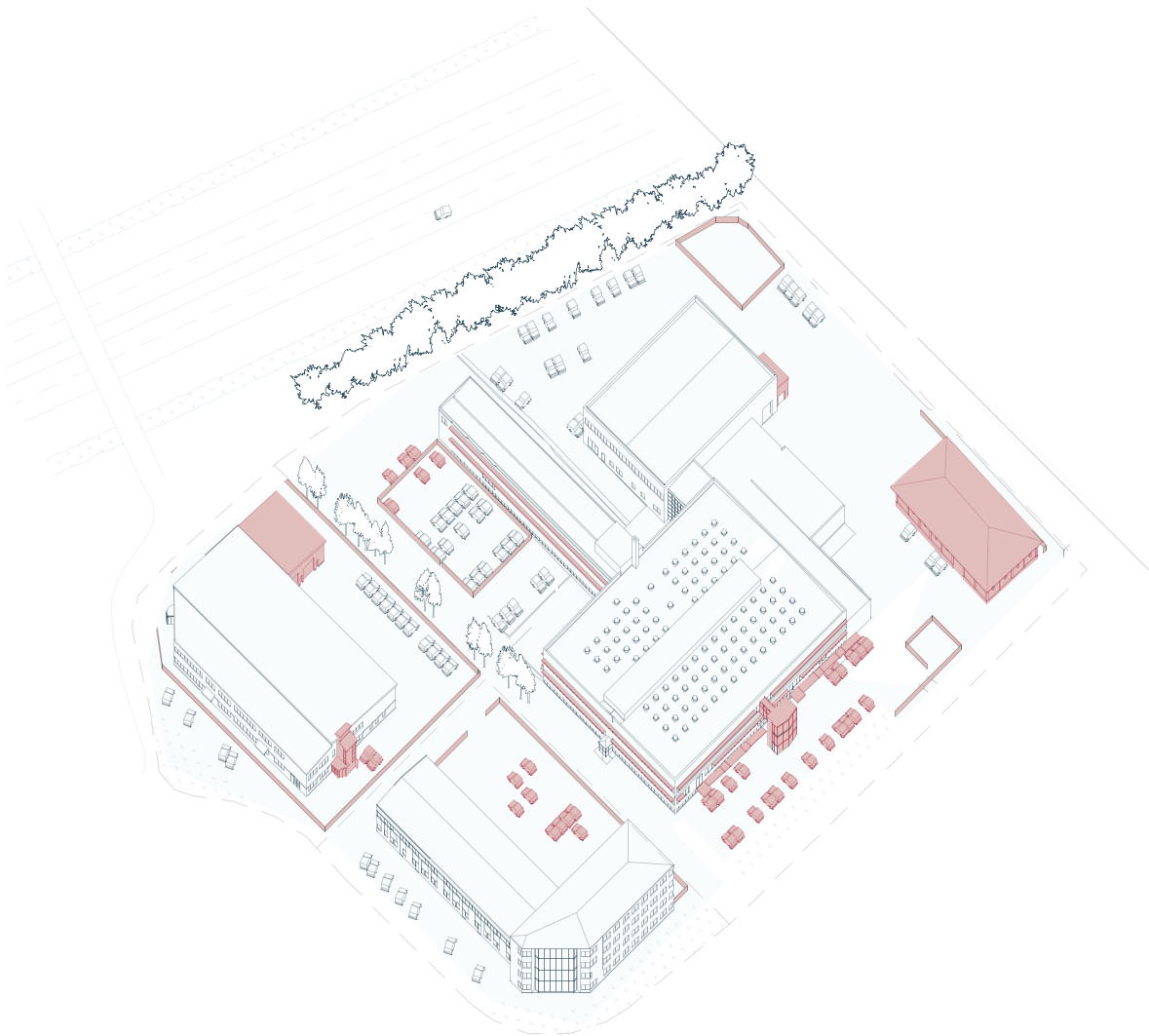
EXTERIORS

Ad-hoc entrances and additions are added to adapt to needs of new tenants. Additions tend to be more “low-road”. No real “front” of buildings remain.

INTERIORS

Spaces are pragmatically divided for ever more tenants, lack of daylight and circulation options make spaces awkward to use.

AD-HOC AND OBSOLESCENCE (1992-2026)



CONTEXT

Flight of tenants to inner city and peripheral business parks

URBAN

Degradation of urban quality accelerates as scrap material and machinery are permanently stored around the buildings haphazardly.

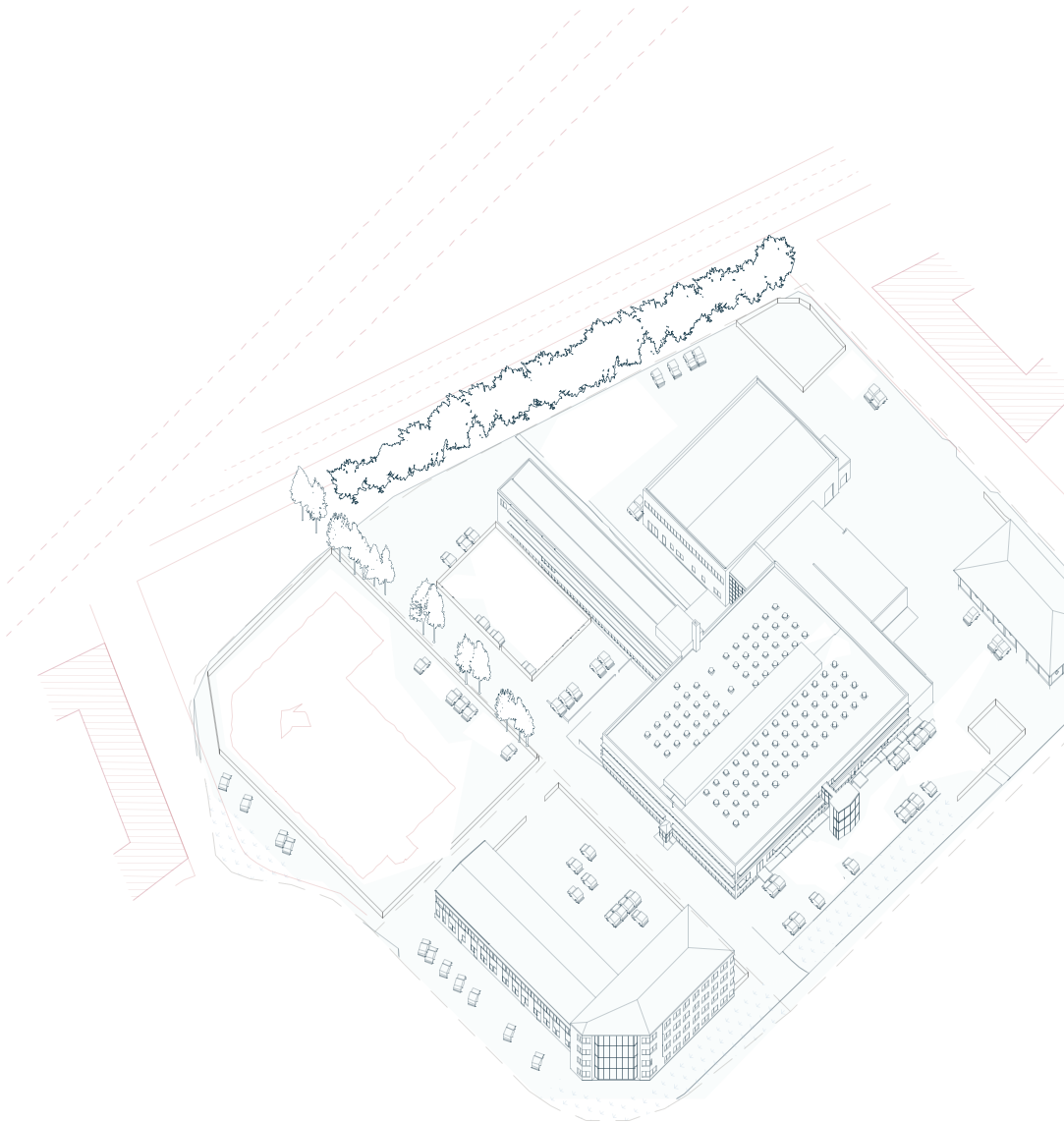
EXTERIORS

Buildings are either physically deteriorating or having band-aid fixes.

INTERIORS

Large areas are without tenants, or underutilised as random storage etc.
Spotwise surface renovation.

FUTURE SCENARIO: STASIS



CONTEXT

Low willingness to invest in housing due to weak economy and stagnating population. Property owners bide their time and allow the gradual decline of the neighbourhood.

URBAN

Run down buildings demolished, otherwise fabric remains unchanged, still vague and uncomfortable. Bottom-up intervention possible but harder given disinterest of owner

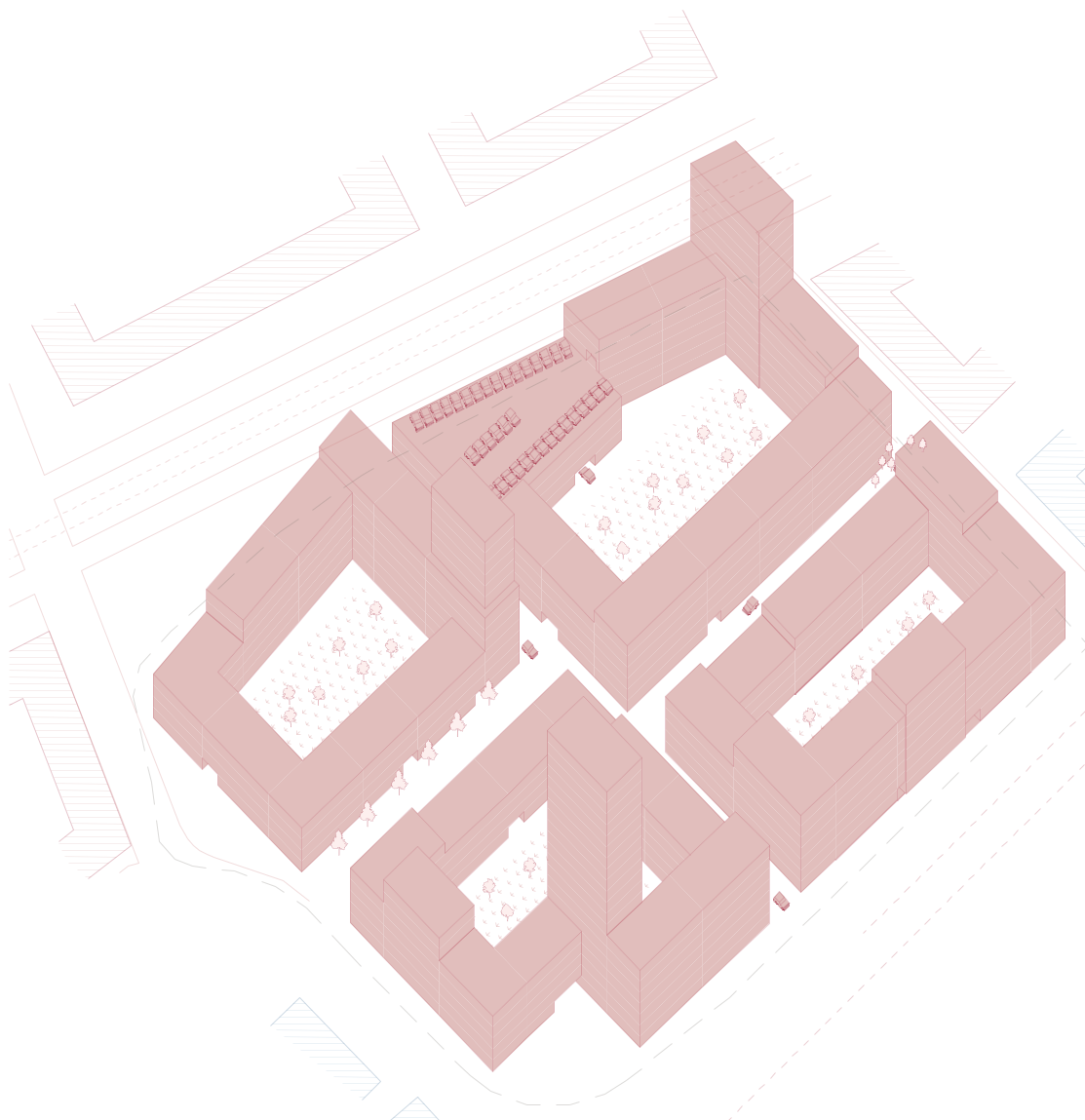
EXTERIORS

Unchanged, gradual material decline.

INTERIORS

Low-enough rents might welcome unexpected agents and a creative transformations. However large scale improvements in spatial quality is hard to achieve without owner engagement. Obsoleting factors remain.

FUTURE SCENARIO: BLANK SLATE REDEVELOPMENT



CONTEXT

Value of land is much higher when zoned for high density housing. Property owners and politicians encourage this.

URBAN

Generic, insensitive urban blocks with standardised street designs and few public spaces. Most urban movement is oriented towards commuting to inner city.

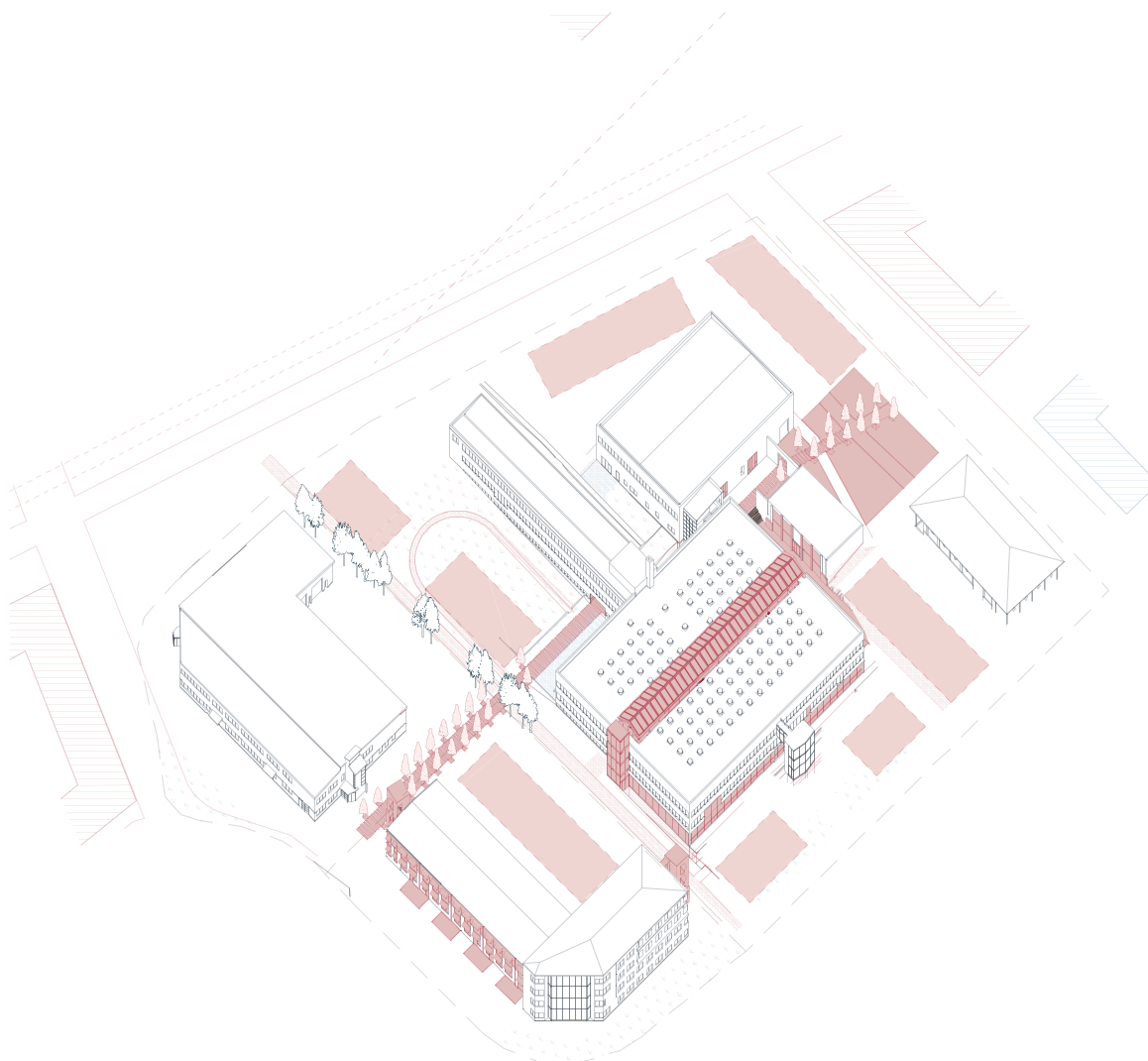
EXTERIORS

Façades most likely similar to most commercial housing development, with optimized plans determining the look. Cheaper façades dominate with certain moments of high quality design. No history is legible at all.

INTERIORS

Highly space-optimised building creates “ducks” which might not be able to adapt well if the demand in housing shifts.

FUTURE SCENARIO: UNOBSOLETING TRANSFORMATION



CONTEXT

Willingness of investment low or zoning demanding the preservation of buildings.

URBAN

An alternate circulation path is carefully placed through the middle of the properties, where it is easier to reframe and activate qualities than on the inert peripheral roads. Potential site for exploitation are “cultivated” thus, letting time decide.

EXTERIORS

Buildings reorient themselves towards new patterns of (pedestrian) movement and seen from new angles. Framed by new additions and trees.

INTERIORS

Coherent intervention addresses lack of daylight and lack of generic circulation. This unlocks “open” space which allow for different trajectories of development.

INVENTORY OF SITUATIONS

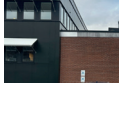
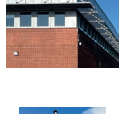
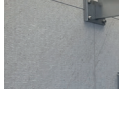
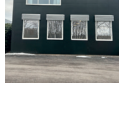
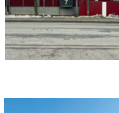
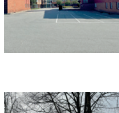
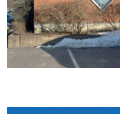
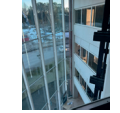
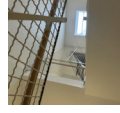
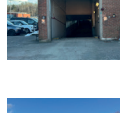
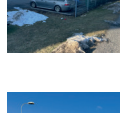
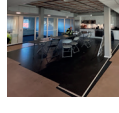
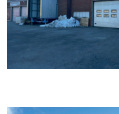
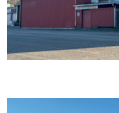
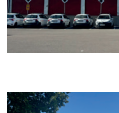
In order to build a thorough understanding of the obsolescence as it specifically manifests on the site, an inventory was carried out with the focusing of highlighting specific situations of interest. These situations are not necessarily problematic, but they are noteworthy architectural situations with a suspected effect on the architectural obsolescence of the site as a whole, whether positive or negative.

An example of a situation is the one called “3A.06 External Stairwell” which refers to the stairwell extension built in the 2000s on the east side of building 3A to accommodate independent access to the second floor of that building.

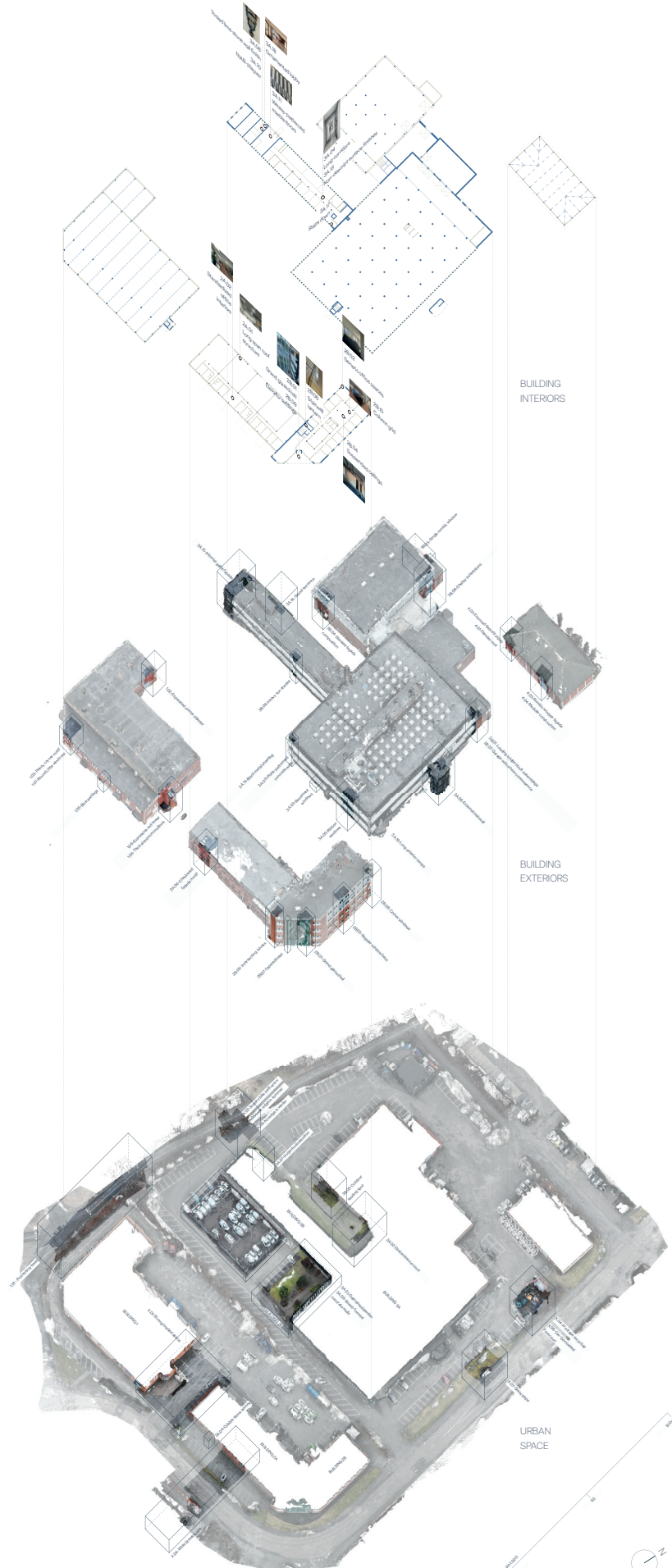
The situations were documented using photography and drone based photogrammetry and later analysed using several different conceptual frameworks. One framework used was the conceptual triad of Utility, Firmness and Delight borrowed from Vitruvius, making mapping of how each situations contributed to the given vitruve (see example below). Another was a matrix analysing the presence or absence of certain qualities related to architectural obsolescence. All in all 50 situations were documented in this way forming the basis for the subsequent diagnosis. This material is omitted from the final presentation due partly to a lack of space and partly because the final diagnosis was conceptual evolved.

The gallery of situations on the next page forms a visual presentation of the site and lets the viewer subjectively review its visual state. The second axonometric drawings shows the situations as they are located on the site whether inside, on the exteriors or between the buildings.

GALLERY OF SITUATIONS Nominal size 700x1500 Set at 20% scale.

	105 Thin aluminium railings		2A.03 Cobble stone aprons		2B.04 Superficial ceilings		2B.09 Elevator landings		3A.04 Long corridors		3A.09 Bored formed concrete walls		3A.14 Black metal sheeting		3A.19 Long garages		3B.06 Deep Louvers		4.02 Exposed retrofit piping		X.02 Steely blue path entry		X.07 Gross slope to a street
	104 Thin aluminium railings		2A.02 Standardised office interiors		2B.03 Regular window bays		2B.08 Corner Windows		3A.03 Basement windows		3A.08 Tied-in stone wall finish		3A.13 Frontal gable facade		3A.18 Overheated lobby		3B.04 Stalled facade treatment		4.02 Romatic windows		X.01 Strong implied space		X.06 No slope in winter
	103 Polychrome motif		2A.01 Long span roof structure		2B.02 Regular office spaces		2B.07 Tapered inset		3A.02 Dual entrance court		3A.07 Huge front entrance		3A.12 Aluminium Blaise-Soliel		3A.17 Steps down		3B.03 Single rombic window		4.01 Slender roof		X.09 Fenced in parking		X.05 Frontage recycling
	102 Expressed corner plaster		1.07 Round title wind trap		2B.01 Grand glazed hall		2B.06 Stairwell barn		3A.01 Depressed garden		3A.06 External stairwell		3A.11 Wave-patterned marble floors		3A.16 Grand entrance		3B.02 Outdoor seating spot		3B.09 Ramp to basement		X.08 Car-Domestic Forecourt		X.04 Wild streetscape
	101 Projecting trees		1.06 Expressive mid tower		2A.04 Overhead facade motif		2B.05 Intersecting blocks		2B.10 Column grid		3A.05 Reborn Windows		3A.10 Talismanic		3A.15 Iron-bleached surface finishes		3B.01 Outdoor bridge black assemblage		3B.08 Shelter extensions		4.04 Modular construction		X.03 Urban edge in summer

ATLAS OF SITUATIONS
 Nominal scale 1:500
 Nominal size 700x1500
 Set at 20% scale.



DIAGNOSIS OF SITE: WHAT CAUSES A LACK OF CREDIBILITY?

ARCHITECTURAL CONDITION	PERCEPTUAL RISK	EFFECT ON STAKEHOLDER TRUST
Buildings are period-coded and unfashionable.	<i>Struggle to resonate or relate to the architectural expression</i>	<i>Unwillingness to be represented by.</i>
Buildings appear unwelcoming and have an ambiguous relationship to the public space.	<i>Confusion and discomfort. Visitors feel lost and unwelcome.</i>	<i>Not convincing as public realm.</i>
Building tectonics feel hollow and inauthentic.	<i>Not built to last. Not valuable.</i>	<i>Unwillingness to commit to or identify with.</i>
Lack of maintenance, worn down materials	<i>No one takes care of this place.</i>	
Poor architectural composition and proportions.	<i>No one cared when building this</i>	
Deep floor plans, unsuitable for non-logistical use.	<i>Discomfort, weak sense of place</i>	<i>Expectation of spatial qualities to be permanently compromised</i>
Inert circulation patterns, due to floor height levels, openings, lack of stairwells etc.	<i>Confusion, discomfort, embarrassment</i>	

ARCHITECTURAL CONDITION	PERCEPTUAL RISK	EFFECT ON STAKEHOLDER TRUST
Occurrence of makeshift solutions and temporary band-aids	<i>Sense of low commitment and low care</i>	<i>Doubts about being taken care of. Doubts about reliability.</i>
The public space lack a sense of direction, protection and comfort.	<i>Sense of discomfort and exposure.</i>	<i>Not convincing as public realm, civic space.</i>
Abundance of cars and equipment in public space.	<i>Sense of intrusion and alienation. .</i>	
Difficulty of orientation and navigation	<i>Confusion and alienation.</i>	
Logistical uses reserve large spaces	<i>Alienation, sense of marginalization.</i>	<i>Difficulty of seeing spatial potential, expansion.</i>
Poor integration into urban fabric.	<i>Sense of remoteness.</i>	<i>Doubts about accessibility, urban relevance</i>

The lack of basic architectural qualities in the space as a whole is a more acute issue than the dated architectural expression. Aesthetic appreciation ebbs and flows according to predictable patterns. But this site has seen a gradual deterioration of qualities of both "utility" and "delight". Signals of stagnation, low care and inflexibility naturally make people hesitant to commit emotionally or practically through investment and labor. Buildings have been changed for one tenant at a time but never "future-proofed" by addressing their typological limit. Haphazard "band-aids" have made the site more spatially chaotic. The prioritization of logistics and ever more parking space make pedestrians feel lost and exposed.

DESIGN EXPLORATIONS

The following four (work-in-progress) drawings show the results of the design explorations.

PERSPECTIVES

Nominal size: 350x1500mm
Set at 20% scale.

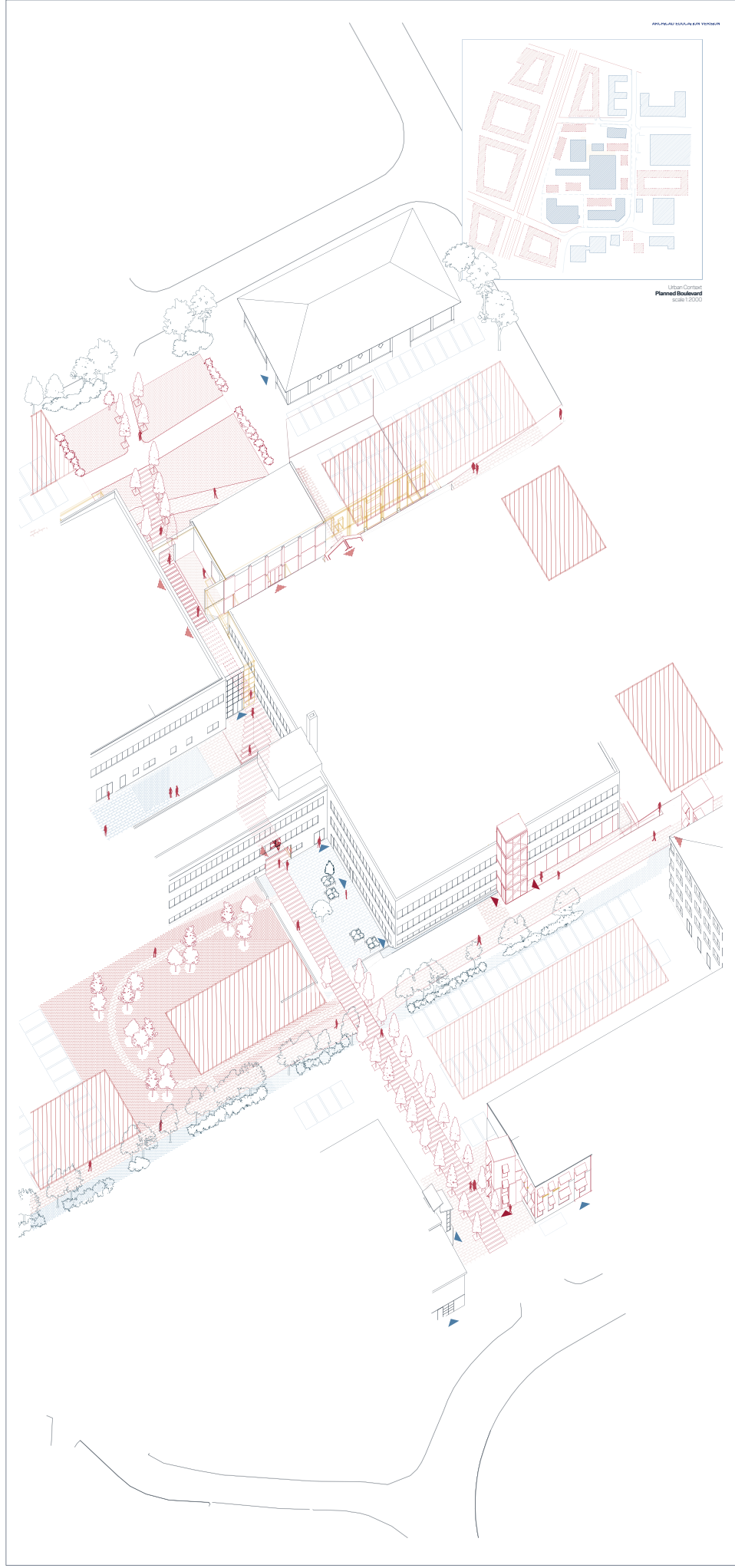


URBAN AXONOMETRY

Nominal scale 1:200

Nominal size: 700x1500mm

Set at 20% scale.

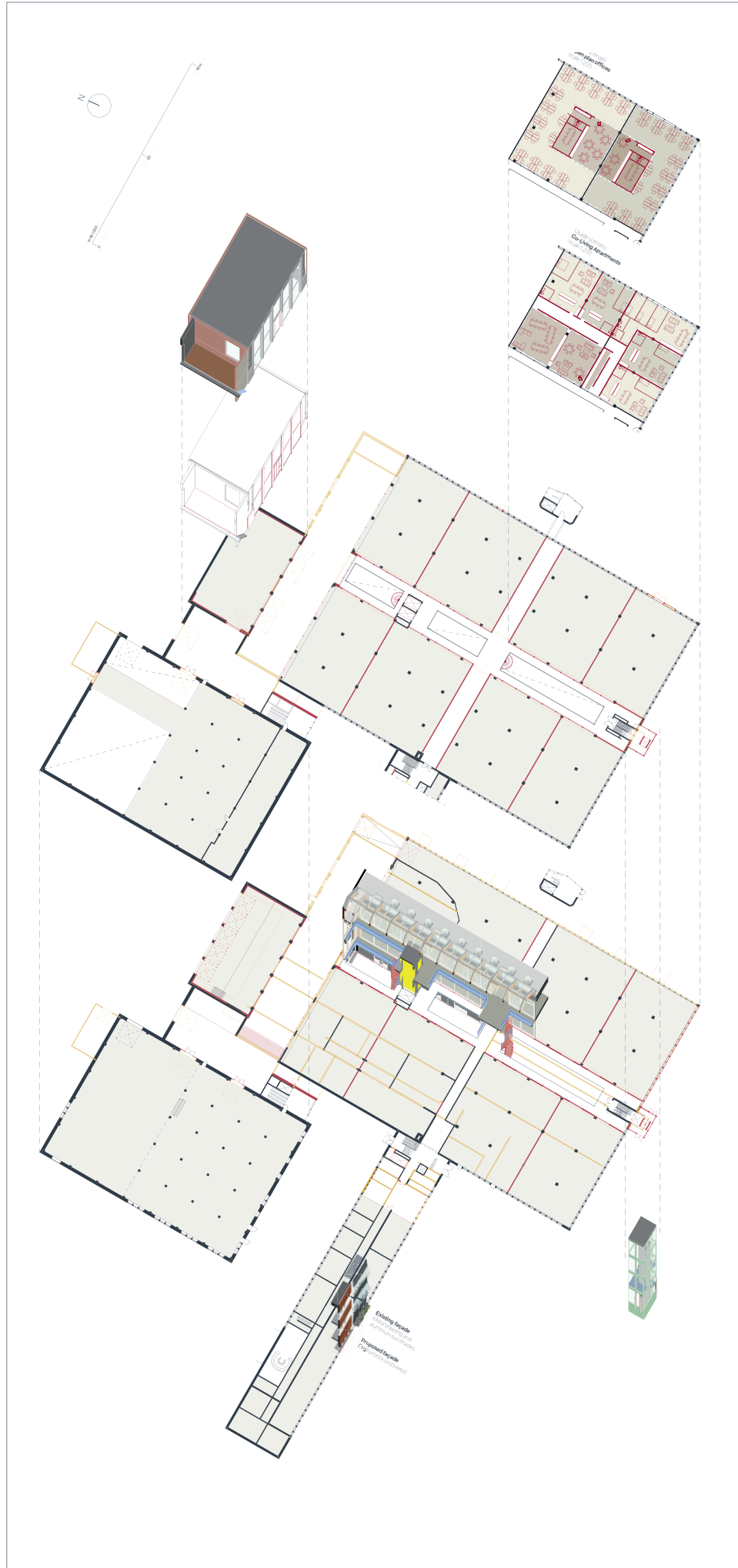


COMPOSITE DRAWING BDG 3

Nominal scale 1:xxx

Nominal size 700x1500

Set at 20% scale.

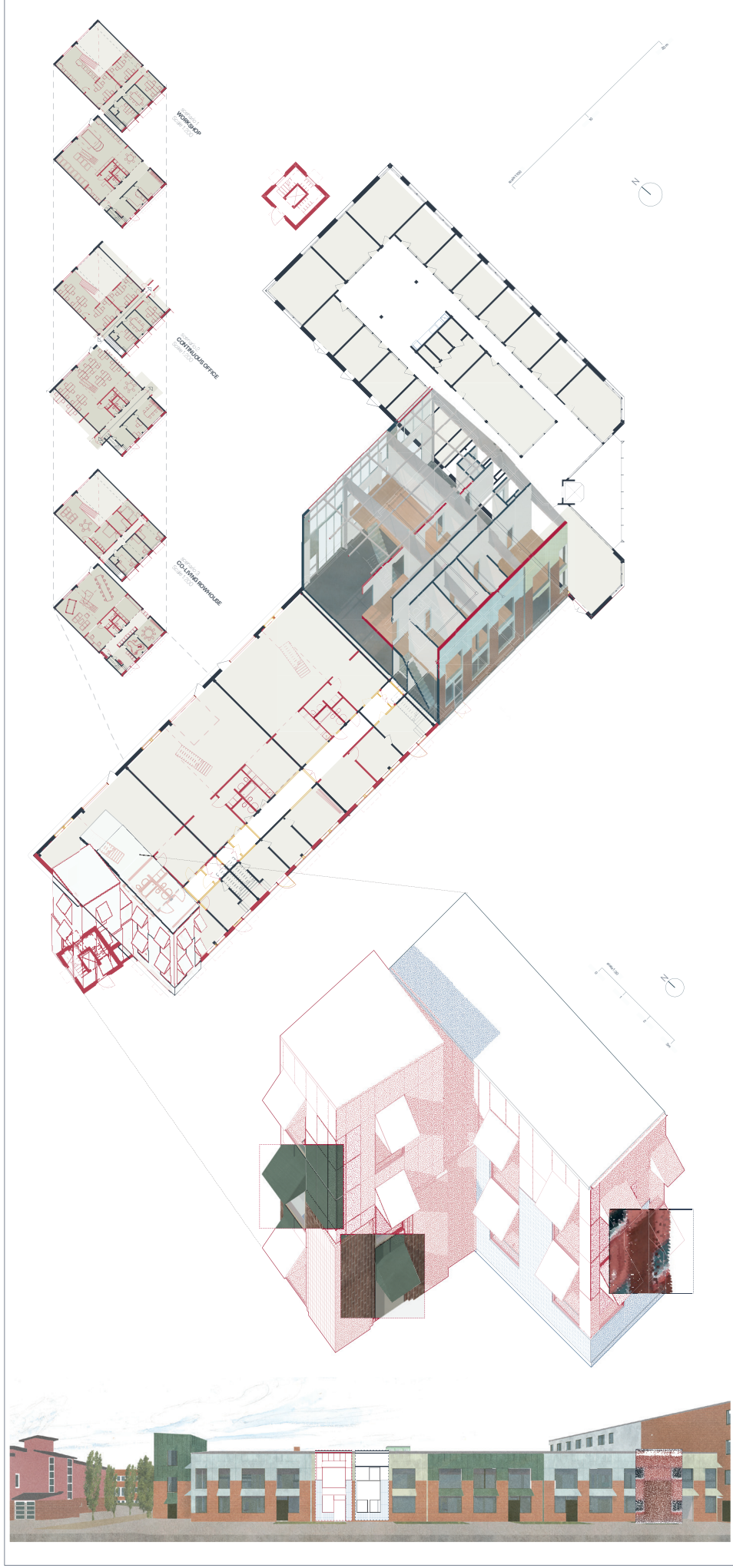


COMPOSITE DRAWING BDG 2

Nominal scale 1:xxx

Nominal size 700x1500

Set at 20% scale.



REFLECTION

On the concept of “unobsoleting” architecture

I chose the topic for this thesis because of a deep personal frustration: the notion that functional buildings are dismissed as obsolete, seems not just highly irresponsible, but also an egregious waste of existing resources. But if I was correct, and this was indeed a product of irrationality, disinterest and lack of imagination, it meant there was room for architecture to act as autonomous force. Architectural seeing and design could make something apparently worthless worthwhile by realising latent values. Of course, this is not to say that there is always potential in dismissed buildings, and that latent value can always be found. But there seems to be a chicken and an egg problem when dealing with dismissed spaces which I wanted to try and break. If stakeholders already believe there is no potential, no effort will be made to prove that potential exists.

Challenges in designing

To try and get around the “chicken-and-egg” conundrum, I chose to carry out design explorations without adapting for a specific program because I wanted to show what the buildings themselves could do, not just how new exciting uses could rejuvenate them. While theoretically sound, this turned into the biggest challenge of the design process. In practice, the program became a sort of host structure resistant to obsolescence. The designs are not literal proposals for what to build, rather they represent a first step towards the next phase, a state where multiple possibilities exist alongside each other. It is a thought experiment of sorts, exploring tactics for how to intervene in inflexible structures. Eventually, I included plan pictograms to show possible use cases within the structure. This was meant to help the reader understand and evaluate the main plans but might have been a compromise of the original concept.

The idea of low-intervention high-outcome design sounds very promising, but it is harder to know if a certain intervention actually meets those criteria. Is for example, the removal of the metal sheeting covering original brick walls a small intervention? It is not strictly necessary. Is it high outcome? The façade's utility is slightly decreased and the aesthetic effects are totally subjective. In the end I had to follow a gut feeling that the original façade would meaningfully contribute to credibility through authenticity and permanence. When exploring design options, the reflection was made that a certain threshold of transformation had to be overcome for the space to be felt as something "new". Strictly adhering to the rules of low intervention could have prevented proposals which on their own seem to have low impact but taken together radically change how the environment feels as a whole.

Did the thesis successfully show how to exploit latent opportunities? This is hard for the author to determine, but it is not immediately clear that obvious "uncoverings" were done. Probably, the very act of looking for hidden capabilities is more valuable than the findings themselves, because it sets the designer in a mindset beneficial for coming up with low-intervention high-outcome ideas.

One of the stated design principles was to avoid both "fetishization and blanket dismissal" of the already built. Again this is more of an intention than an actionable tactic. In the design explorations, this was mostly navigated by a relentless focus on which qualities were deemed to be "unobsoleting", while acknowledging the legitimizing effect authentic traces can have on a general perception. A sensitivity for subtle character combined with a "don't fix what ain't broke"-stance might be the most important lessons learned.

The problem with editing perceptions

A light intervention which elegantly alters how a building is perceived, is very alluring as an ideal for a resource responsible working method when dealing with dismissed architecture. But it turns out that "just changing the perception" is a very difficult proposition. Whose perception do we need to change? The owners, the politicians and civil servants, the prospective tenants or the citizens? Whose taste decides? And can we be certain that the proposed architecture will be regarded more favourably? The idea of "editing perceptions" assumes that how "people in general" will see a

change in the built environment can be predicted.

Basic “quality of life” interventions as carried by a competent designer, with the aims of simply making a space more comfortable and well functioning can reasonably be assumed to have a positive effect on a “general perception”. Such interventions seem worthwhile and will likely have an “unobsoleting” effect. But can directly targeting how a building looks, the aesthetics, have an “unobsoleting” effect? There is no assurance that opting for one “look” over another will have such an effect in the long run. Styles and aesthetic ideals shift constantly.

One possibility is to try to avoid stylistic arbitrariness by aiming only for a notionally objective “qualitative form” (“god färg och formverkan”, “god gestaltning”), as design professionals sometimes claim to do. Pandering to an assumed “popular taste” is of course another possible strategy. But this assumes most people are homogenous in taste and will remain so. It might prevent an authentic creative process, which is often claimed to be the key to real aesthetic expression.

The third option is to acknowledge and embrace your own subjective aesthetics. But it would be disingenuous to argue that this would lead to a positive change in the “general” perception. A comment I have repeatedly received on this thesis project, is that overexposure to the material would make me lose my “aesthetic compass” and be alienated from the aesthetic perception a “regular” person would have. Whether this phenomenon is a problem or not, and whether I have fallen victim to it is left for the reader to decide. Taken together, it seems to me that a productive “unobsoleting” design method involves addressing poor “quality” but not “poor taste”. But where to draw the line between these is a tremendously difficult challenge.

Economics, gentrification and obsolescence

Abramson and Allan alike frame the concept of obsolescence in relation to the concept of real estate economy. From the economic standpoint, a building is obsolete when it is financially rational to replace it with a building of higher total value, or higher yield. It is at least conceivable that low-intervention tactics can enable an acceptable return of investment. But to address the alternative cost problem it seems necessary to lean on the municipality to limit the buildable volume. Since

Swedish municipalities have legal responsibility to responsibly use land and resources and often climate pledges to consider, this is not implausible. But the municipalities are themselves stakeholders that enable obsolescence, and to just appeal to their sense of responsibility is insufficient as a strategy.

There is also a flip side to the “low-intervention high-return” scenario. The increased yield necessarily comes from increased revenue from property sales and rents, which is exactly what drives gentrification. This brings up the question of to “whom” a space is obsolete. Abramsson mostly discusses it in terms of the property owner, where an underperforming asset becomes obsolete to its owners. But such a property might be very valuable to the tenants benefitting from low rents, perhaps benefiting the greater community by providing affordable services or a vibrant cultural scene. It seems, either way someone loses?

In fact, the motivation behind the unobsoleting method is to bridge this conflict of interest. The problem with LCOIs seems to be that they struggle to find tenants at all, being neither cheap or attractive enough as is. Unobsoleting interventions try to increase the use-value and attractiveness in order to eliminate vacancies. The unobsoleting method revolves around making existing space useful and available, increasing the amount of affordable floor space. That’s not to say there are not options where it would be most socially useful to just leave LCOIs alone. In the case study of this thesis, a city densifying around the site means the pressure of eviction will loom over the current tenants unless there is a plan to integrate the existing buildings into the emerging urban fabric.

In the end I think transforming buildings out of obsolescence is to reject the false choice between stagnant decay and displacing redevelopment. If architecture can be an autonomous force for a sensitive, gradual and people-centric evolution of our cities, the profession itself would regain lost credibility.

REFERENCES

Abramson, D. (2014) *Obsolescence: An Architectural History* (1st) Chicago: The University of Chicago Press

Allan, J. (2022). *Revaluating modern architecture - changing conservation culture*. London: RIBA Publishing. DOI: 10.4324/9781003277880

Andrew, A (2019). *Retrospective Lacaton & Vassal*. The Architectural Review N°1463 p. 77-86. https://www.lacatonvassal.com/data/documents/20190711-1603451917_The Architectural Review_compressed.pdf

Arquitectura Viva. (n.d.). *Musée Unterlinden, Extension, Colmar*. Retrieved Nov 3, 2025, from <https://arquitecturaviva.com/works/ampliacion-del-museo-unterlinden-5>

Assemble Studio (2010). *The Cineroleum* <https://assemblestudio.co.uk/projects/the-cineroleum>

Assemble Studio (2019). *Granby Winter Garden*. <https://assemblestudio.co.uk/projects/granby-winter-gardens>

Beroš, A. D., & Savela, M. (2024, May 2). *The future resides in what we already have*. e-flux Architecture. Retrieved August 23, 2025, from <https://www.e-flux.com/architecture/framing-renovation/606290/the-future-resides-in-what-we-already-have>

Boverket. (Jan 29, 2025). *Bygg- och fastighetssektorns uppkomna mängder av avfall*. <https://www.boverket.se/sv/byggande/hallbart-byggande-och-forvaltning/miljoindikatorer---aktuell-status/avfall/>

Boverket. (Jan 29, 2025). *Utsläpp av växthusgaser från bygg- och fastighetssektorn*. <https://www.boverket.se/sv/byggande/hallbart-byggande-och-forvaltning/miljoindikatorer---aktuell-status/vaxthusgaser/>

Brand, S. (1995). *How buildings learn: What happens after they're built*. Penguin Books.

Caldenby, C., Hallemar, D & Helsing C. (Red.). (2022) *Staden, platserna och husen - Göteborgs Arkitektur 1921 - 2021*. Arkitektur förlag.

Cambridge University Press. (n.d.). *Obsolete*. In Cambridge Dictionary. Retrieved July 24, 2025, from <https://dictionary.cambridge.org/dictionary/english/obsolete>

Dreijestam, D. (red), 1998, *Färdvägar i Västra Frölunda*, Frölunda hembygdsförening,

Gehl J. (2011). *Life Between Buildings*. Island Press: Washington DC. 978-1-59726-827-1

Göteborg Stad - Stadsbyggnadskontoret (2017). *Detaljplan för Bostäder i Fixfabriksområdet inom stadsdelarna Sandarna och Kungsladugård i Göteborg, en del av BoStad2021*. Retrieved August 24, 2025, from <https://geodata-external.sbk.goteborg.se/dokument/planer/1480K-2-5432.pdf>

Göteborg Stad - Stadsbyggnadskontoret (2019), *Detaljplan för Stadsutveckling vid Olof Asklunds gatan inom stadsdelen Högsbo i Göteborg, en del av BoStad2021*, Retrieved August 6, 2025, from <https://goteborg.se/wps/portal?uri=gbglnk:gbg.page.bb7386fd-1152-47cb-9da4-d06bd7780a77&projektid=BN1337/15>

Göteborg Stad - Stadsbyggnadskontoret. (2017). *Byggnadsantikvarisk beskrivning. Fixfabriken – GS Hallen – Värmecentralen*. Göteborg Stad. Retrieved August 24, 2025, from [https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planobygg.nsf/vyFiler/Majorna - Bostäder i Fixfabriksområdet \(Bostad2021\)-Plan utökat förfarande - granskning-Bebyggelseantikvarisk beskrivning/\\$File/Ny_Byggnadsantikvariskt underlag.pdf?OpenElement](https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planobygg.nsf/vyFiler/Majorna - Bostäder i Fixfabriksområdet (Bostad2021)-Plan utökat förfarande - granskning-Bebyggelseantikvarisk beskrivning/$File/Ny_Byggnadsantikvariskt underlag.pdf?OpenElement)

Göteborg Stad, (2022). *Göteborgs stads Översiktsplan*. Retrieved August 5, 2025, from <https://oversiktsplan.goteborg.se/>

Göteborg Stad, (n.d.). *Kartor från Jubileumsutställningen*. Retrieved August 5, 2025, from <https://goteborg.se/wps/portal/start/bygga-bo-och-leva-hallbart/bygga-riva-och-forandra/stadsbyggnadsforvaltningens-kundservice/kartor-fran-jubileumsutställningen-1923>

Göteborgs Stad. Trafikkontoret. (2021). *Åtgärdsvalsstudie Dag Hammarskjölds boulevard: Slutrapport*. Göteborgs Stad. Retrieved August 6, 2025, from [https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planbygg.nsf/vyFiler/Dag%20Hammarskjölds%20boulevard-Åtgärdsvalsstudie-Slutrapport%20ÅVS%20Dag%20Hammarskjölds%20boulevard%20/\\$File/Slutrapport%20ÅVS%20Dag%20Hammarskjölds%20boulevard.pdf](https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planbygg.nsf/vyFiler/Dag%20Hammarskjölds%20boulevard-Åtgärdsvalsstudie-Slutrapport%20ÅVS%20Dag%20Hammarskjölds%20boulevard%20/$File/Slutrapport%20ÅVS%20Dag%20Hammarskjölds%20boulevard.pdf)

Göteborgs Stadsmuseum. (1999). *Kulturhistoriskt värdefull bebyggelse i Göteborg - ett program för bevarande*. (Volym 1 del II). Göteborgs Stadsmuseum. <https://goteborg.se/dx/api/dam/v1/collections/9c870fa2-264a-4995-b637-82d257fed365/items/c9b9b22e-d417-433c-9221-2a9f5423b348/renditions/c1bbfecc-bc0a-49c9-8f89-5bed9e7482b4?binary=true>

Habraken, J. (1972). *Supports: An Alternative to Mass Housing*. Architectural Press, London

Jacobs, J. (1961). *The Death and Life of The Great American Cities* (1st). New York: Vintage books.

Jörnmark, J. (2005). *Göteborgs globalisering*. Göteborg: Göteborgs Stadsmuseum. 9789185488773

Kitaev, A (2024), *Reinterpreting the existing, A Critical Review of Hardware and Software in Architecture Design Principles as a Strategy*

for Adapting Existing Built Stock to Evolving Needs. Practices in Research #05, 96-115.

Lantmäteriet. (n. d.). *Vem äger fastigheten?*. Retrieved August 5, 2025, from <https://www.lantmateriet.se/sv/fastighet-och-mark/information-om-fastigheter/vem-ager-fastigheten/>

Lindberg E., Lindberg, D. & Holkers, J. (2025). *Att återbruka det fula*. Arq.

Maier, J & Fadel, G. (2009). *An affordance-based approach to architectural theory, design, and practice*. Design Studies (30), 393-414. 10.1016/j.destud.2009.01.002

Malmö Stadsbyggnadskontor. (2008). *Planprogram Norra Sorgenfri*. Malmö Stad. Retrieved August 23, 2025, from https://geo.malmo.se/planvisaren-server/pdf/dp/DP5399_1.pdf

Malmö Stadsbyggnadskontor. (2017). *Detaljplan för Kvarteret Brännaren*. Malmö Stad. Retrieved August 23, 2025, from https://geo.malmo.se/planvisaren-server/pdf/dp/DP5399_1.pdf

Melica. (2017). *Kulturmiljöunderlag - Program för området kring Fixfabriken, Göteborg*. Göteborg Stad - Stadsbyggnadskontoret. Retrieved August 24, 2025, from [https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planbygg.nsf/vyFiler/Majorna - Bostäder i Fixfabriksområdet \(Bostad2021\)-Plan utökat förfarande - granskning-Bebyggelseantikvarisk beskrivning/\\$File/Ny_Byggnadsantikvariskt underlag.pdf?OpenElement](https://www5.goteborg.se/prod/fastighetskontoret/etjanst/planbygg.nsf/vyFiler/Majorna - Bostäder i Fixfabriksområdet (Bostad2021)-Plan utökat förfarande - granskning-Bebyggelseantikvarisk beskrivning/$File/Ny_Byggnadsantikvariskt underlag.pdf?OpenElement)

Mjörnell, K & Palmgren O. (2025). *Transformation of existing buildings to new uses: A snapshot of conversions in Sweden*. Bebyggelsehistorisk tidskrift, 87, 6-31. ISSN online 2002-3812

Moneo, R. (1978). *On Typology*. Oppositions - Journal for Ideas and Criticism in Architecture, Summer 1978:13, p. 22-45.

Remøy, H. T. & Vander Voordt, D.J.M. (2014), *Adaptive reuse of office buildings: opportunities and risks of conversion into housing*. Building Research & Information 42:3, 381-390.

Reuter Metelius, A. (2025). "Nominera och prisa projekt som visar vägen framåt!". Arkitekten. Prepublication online. Retrieved August 24, 2025 from <https://arkitekten.se/debatt/nominera-och-prisa-projekt-som-visar-vagen-framat/>

Rossi, A. (1977). *The Architecture of the City* (1st paperback edition 1984). Cambridge: MIT Press / Opposition Books

Sennot, Stephen R. (2004). *Encyclopedia of 20th-century architecture: vol 1*. New York: Taylor & Francis Books, Inc

Stockholm Stad - Stadsbyggnadskontoret (2017). *Planbeskrivning - Detaljplan för Primus 1 m.m. i stadsdelen Lilla Essingen, Dp 2006-05021*. Retrieved August 24, 2025, from <https://etjanster.stockholm.se/byggochplantjansten/pagaende-planarbete/planarende/2006-05021>

Svensson, J. (2024, January 24). *Malmö stad skulle aldrig ha rivit bussgaragen*. Sydsvenskan. Retrieved August 20, 2025, from <https://www.sydsvenskan.se/2024-01-26/malmo-stad-skulle-aldrig-ha-rivit-bussgaragen/>

United Nations Environment Programme, & Yale Center for Ecosystems + Architecture (2023). *Building Materials and the Climate: Constructing a New Future*. <https://wedocs.unep.org/20.500.11822/43293>.

van Meel, J. (2000). *The European Office - Office Design and national context*. Rotterdam: 010 Publishers

Vandkunsten (n.d.). *New homes in the old torpedo boat workshop*. Retrieved Nov 4, 2025, from <https://vandkunsten.com/en/projects/motortorpedohallen>

Venturi, R., Scott Brown, D., & Izenour, S. (1977). *Learning from Las Vegas*. The MIT Press.

von Schmalensee, M. (2025). REPLIK: "Planerna för Fixfabriken togs fram innan rivning var kontroversiellt". Arkitekten. Förhandspublicering online. Retrieved August 24, 2025 from <https://arkitekten.se/debatt/replik-planerna-for-fixfabriken-togs-fram-innan-rivning-var-kontroversiellt/>

Wainwright, O. (2015). *The street that might win the Turner prize*. The Guardian, May 15 2015. <https://www.theguardian.com/artanddesign/architecture-design-blog/2015/may/12/assemble-turner-prize-2015-wildcard-how-the-young-architecture-crew-assemble-rocked-the-art-world>

Wong, L. (2017). *Adaptive Reuse - Extending the Lives of Buildings*. Liliane Wong (1st edition). Birkhäuser Verlag GmbH, Basel. 978-3-03821-537-0

Zabalbeascoa, J. (2019). *Bigger, better and still affordable*. Domus, N° 1034, 424-429. https://www.lacatonvassal.com/data/documents/20190624-1647391904_DOMUS_1034.pdf

Zumthor, P. (1999). *Thinking Architecture* (1st ed). Birkhäuser, Basel. ISBN 3-7643-6101-8

APPENDIX: STUDENT BACKGROUND

Oskar Gideon Lundqvist is an architecture Student from Gothenburg interested in context, history, perception and urban space.

Prior expereince

2019-2020	History of Art, University of Gothenburg
2020-2023	Bachelor of Architecture, Chalmers
2023	"Vision Norra Hamn", exhibition and camapaign against demolitions in Luleå (with collaborators)
2023-2024	Internship, Fredblad Arkitekter in Gothenburg
2024-2026	Master of Planning and Architecture, Chalmers
2025	Second prize, Wernstedsskissen Architecture Competition, Chalmers
2025-2026	Exchange, Lisbon School of Architecture, Portugal

APPENDIX: USE OF ARTIFICIAL INTELLIGENCE

None of the text presented as part of this thesis have been written or edited by LLMs. None of the drawings or graphics were done using AI Image Generation, but Photoshop's "Generative fill" feature was used to edit textures. Google Gemini was used to translate and explain English terms in the research process.



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