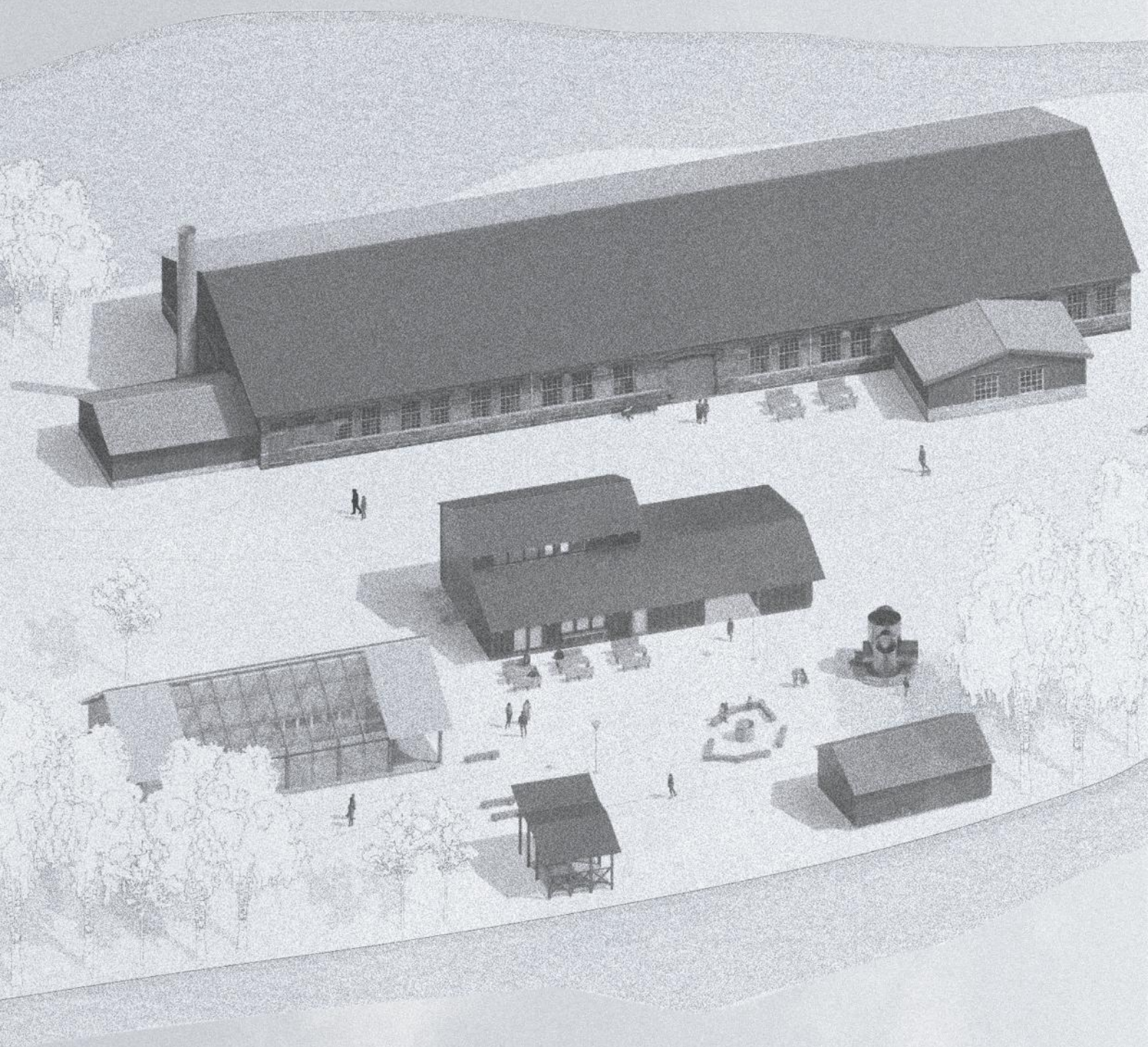


RURBAN COMMON SPACES

In future scenarios of collaborative economy and local self-sufficiency



Master's Thesis 2023
Chalmers University of Technology
Department of Architecture and Civil Engineering
Master's Programme of Architecture and Urban Design
Rurban transformations

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Abstract

Although we find ourselves in the age of climate emergency, the gap between climate pledges from authorities and impactful action is undeniable. Many mean that current economic systems, oriented towards infinite growth, are working counteractive to a transition and that the solutions lie beyond them.

The non-urban context is often overlooked in discussions about future development that responds to the climate crisis. Sweden largely consists of areas that can be categorized as in between rural and urban – rurban. These places have undergone substantial transformations during the last century where profit driven urbanization and globalization processes have caused job opportunities and services to move elsewhere.

Simultaneously, there is a growing movement of people wanting to explore alternative ways of life within the planetary boundaries. There are many examples of bottom-up initiatives, often based in a rurban context, using the conditions to their advantage. This thesis explores this window of opportunity.

The aim is to explore alternative strategies for development of the Swedish rurban context beyond the economic growth-oriented norm through the following questions:

How can the needs for rurban communities in future scenarios of collaborative economy and local self-sufficiency be spatialized?

How can the spaces be characterized to relate to the identity and history of a site while proposing an alternative future?

Literature studies on future scenario narratives of collaborative economy and local self-sufficiency is used to compile a collection of design principles applicable to different scales. The site of the thesis is the former mill town Strömsfors, Sweden. The principles are filtered through findings from the site analysis resulting in site sensitive design strategies for common rurban spaces. The strategies describe the need for spaces used for sharing, connecting and using local resources.

An important enabling factor for implementing these functions is a strengthened sense of community, possibly achieved through revitalization of common spaces and buildings with heritage value. The transformation proposal consists of adaptive re-use of buildings and activation of in-between spaces.

The thesis concludes with discussing the importance of contextualization in design of rurban common spaces and how the thesis is a way to raise questions on the topics and visualize one of many possible futures.

Keywords

Rurbanism, collaborative economy, local self-sufficiency, common spaces, adaptive re-use, heritage

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Reading instructions

This thesis is divided into six chapters:

Introduction

Introducing the background of general topics and themes explored in this thesis.

Outline

Framing the project through thesis questions, aim & purpose and delimitations. Methods and process are described.

Theory

The theory is based upon a series of future scenario narratives beyond economic growth. Two narratives are chosen depending on the context and these are translated to spatial design principles using the matrix of convivial technology (Vetter, 2018).

Context & site

The context where the design principles are to be implemented is introduced. The historical development and current issues and opportunities are analyzed.

Design

The theory is filtered through the context resulting in site specific design principles that form a concept of strategies. This is tested and implemented at the site through a multi-scale design proposal.

Discussion

The thesis closes by discussing the explored themes and critically reflecting on the thesis process and findings.

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Thank you,

Marco for sharing your knowledge and endless engagement, Nils for great discussions and insights, 5th floor buddies for making this process a blast.



Fig. 1. Throwaway living. Originally published by LIFE Magazine in 1950s. (McCool, 2020)

Introduction

Alternative futures

In the age of climate emergency this thesis explores alternative futures. The urgency is declared in unison by governments and organizations, but there is an undeniable gap between climate pledges and real action. Some mean that the economy which society is based on, the model of economic growth, is working counteractive to a sustainable transition in the western world. When resources are not valued and priced as finite, economic growth is strongly linked with continuously increasing carbon emissions. It also promotes mechanisms of exploitation and social inequalities (Hagbert et al., 2019). The infinite growth-oriented model causes a very fragile system where either natural resources are impoverished and environmental systems distressed, or society is threatened by continuous recession (Hagelberg, et al., 2022). There are development models stating that GDP growth can be decoupled from emission output. An idea where growth is maintained by continued high economic activity based on technological solutions that reduces strain on the environment. Sociologist Anthony Giddens' theories on modernity and risk present two ways of approaching societal issues; either we handle the root of the problem, or we create an industry profiting from the consequences. Critics mean that the idea of decoupling or "green growth" is doing the latter.

To implement the large-scale transitions needed to approach the root of the problem current growth-oriented systems are not compatible (Hagelberg, et al., 2022). Climate activist Greta Thunberg states that:

"Economic growth since the 1992 Earth Summit has at least brought us one major advantage—it has proved beyond all reasonable doubt that our ambition was never about saving the climate, it was all about saving our way of life. And it still is."

(TIME, 2023, para. 4)

Taking a position beyond the norms of GDP growth as measurement for development allows for explorations of alternative future development strategies and changed ways of life within the planetary boundaries. Additionally, economic long-term forecasts predict an undeniable decline in economic growth compared to the current normal levels due to the impacts we already see from climate change. (Hagbert et al., 2019). Imagining, evaluating and visualizing alternative future scenarios can help us create change by design and not by collapse.

Background

Swedish rurban context

The dense urban context has for long been the focal point in the development of sustainable solutions within planning and architecture. There is a prominent “focus on the ‘sustainable city’, rather than the sustainable society” (Hagelberg, et al., p. 16, 2022). The rural context is often seen as an exception or a phenomenon on the verge of extinction, but excluding the rural from development strategies disqualifies many possible solutions and can contribute to divisions between city and countryside. (Hagelberg, et al., 2022).

The Swedish countryside has gone through substantial transformation during the last 100 years, driven by mechanisms of economic profit and growth. In the first half of the 1900s, small towns were often based around agricultural practices or a local independent small-scale industry and inhabited its workers and their families. The modern Swedish welfare system developed during this period and worked towards better living standards for all. Large public investments were made which enabled services as schools, police and healthcare facilities existed in small rural villages. This created more equal social standards irrespective of geographical location and conditions. (Hagelberg, et al., 2022).

The 1970s and 80s were characterized by increased globalization and urbanization and small-scale industries had a hard time to keep up and, the communities died with them. When low-density areas were disadvantaged through profit-oriented processes, they were assigned the role of being a provider for the urban, contributing with natural resources, recreational activities and summer houses for the urban population. Instead of being adequate communities, the rural is valued based on its proximity to nearest town where job opportunities and welfare services can be accessed (Hagelberg, et al., 2022).

The differences in job opportunities, education, health and welfare services are growing in between and within regions, but the lines between rural and urban are more blurred (Fredriksson, Björling, 2018). This is a result of multiple structural changes. One being societal processes where quick transportation allows for increased personal mobility. “Movement patterns for housing, work and leisure are distributed in a cross-municipal and regional scale” (Fredriksson, 2014, s. 9). This contributes to Sweden containing many areas that can be defined as in-between this urban-rural divide, geographically located in between the two and/or possesses inherent qualities of both - Rurban.

Industrial and cultural heritage

Many rurban areas have an industrial history which has left its traces in the built environment. Former factories and other utility buildings does often mirror the local ideals and architectural styles dominating specific time periods. They tell stories of past lives and visualizes traces of time. Spaces characterized by its heritage seems to create a common will to care for them, avoiding the history and identity getting lost. Today it is very common to revitalize these areas through a development driven by new economics that merge heritage and entrepreneurship (Lagerqvist & Bornmalm, 2005). Cafés, museums and art studios are common ways to repurpose the past industrial spaces and using tourism as a driving force.

Could repurposing these buildings and spaces serve other purposes more focused on the needs within the local community? Unused building and infrastructure also present a value in material resources and offers opportunities for reduced resource use when repurposed. Going beyond economic growth as a driver could create a combination of working with keeping past stories alive while visualizing new narratives and ongoing transitions to new kinds of economies and societies.



Fig 2. Collage of past and present: Strömsfors bruk 2022 & 1952.

Alternative development models

The trend of depopulation of the Swedish countryside seems to have stopped off during the latest decades (SCB, 2018). Instead, it attracts people seeking a life beyond the urban norm, people wanting to explore alternative ways of life within the planetary boundaries. There are many examples of bottom-up initiatives, often based in a rural context, using the conditions and values to their advantage. The rural realm offers possibilities of access to larger spaces and agricultural land through smaller investments. These rural conditions enabling civil society to practice locally anchored sustainable development processes are now to a bigger extent seen as a “catalyst for change” (Hagelberg, et al., p. 12, 2022).

The critics of the “growth at all costs”-narrative proposes alternative development models that fall into the themes of degrowth. A term and movement that advocates for societies where social and ecological well-being is prioritized over excess consumption and corporate profits. This through redistribution and shift of common values. “Degrowth means transforming societies to ensure environmental justice and a good life for all within planetary boundaries” (degrowth, p. 1, 2023).

This thesis will mainly focus on alternative development strategies within the themes of collaborative economy and local self-sufficiency.

Glossary

Rurban

Areas that can be defined as in-between the urban-rural divide, geographically located in between the two and/or possesses qualities of both.

Collaborative economy

A socio-economic idea which involves sharing resources and services between consumers to reduce material consumption. Collaborative approaches and networks are used in creation, production and ownership.

Local self-sufficiency

A socio-economic idea that focuses on using local resources and conditions to reduce consumption. Economies are smaller and more locally anchored.

Cultural Heritage

“Cultural heritage can be defined as the legacy of physical artifacts (cultural property) and intangible attributes of a group or society inherited from the past.”, “a concept which offers a bridge between the past and the future “ (CEU, para. 1, 2023).

Outline

Aim & purpose

This thesis aims to explore future scenarios for development of the Swedish rural context using alternative development strategies. The purpose is to visualize development beyond the norms of economic growth, alternatively exploring strategies of collaborative economy and local self-sufficiency as a way to reduce resource use and transition towards a just life for all within the planetary boundaries. The general approach is to create change through design and not by collapse.

Alternative development strategies intend to be translated to the rural context and implemented through design in the context of the former mill town Strömsfors. The project aims to be grounded in the local history and use heritage as a driver for development.

Thesis questions

How can the needs for rural communities in future scenarios of collaborative economy and local self-sufficiency be spatialized?

How can the spaces be characterized to relate to the identity and history of a site while proposing an alternative future?

Delimitations

This thesis is about...	This thesis is not about...
Exploring alternative development strategies beyond economic growth as driver.	Concluding that economic growth never is or can be beneficial
Defining possible enabling factors for economies and societies that thrive within the planetary boundaries	How and which societal enablers should be implemented
Translating theoretical framework to context specific design strategies	General strategies and solutions
Spatializing the framework through design of public spaces	Residential development or private space design.
Imagining how specific spaces could be designed and used	Proposing a fixed project plan

Method & process

The methodological process is summarized in fig. 3.

This thesis starts with establishing a critical approach to economic growth as development driver and introduces a background on the themes discourse through referencing literature.

The theory chapter is conducted through a research for design approach through literature studies on alternative development strategies that go beyond the norm of economic growth. A report on *Futures beyond GDP growth* (Hagbert et al., 2019) is used as a framework and themes of collaborative economy and local self-sufficiency are chosen as strategies for the thesis. Another theoretical reference, the *Matrix of convivial technology* (Vetter, 2017), is used to translate the general themes into principles for spatial design and architecture on multiple scales.

Reference projects are introduced and their approaches to rural design, function, scale and implementation are discussed.

The local context of the former mill town Strömsfors is examined using historical development analysis of spatial configurations and functions, connections to surroundings, current values and issues. The findings are summarized and used as a part of the framework for possible future interventions.

The thesis then moves into a stage of research by design methodologies. The theory is filtered through the context and form site sensitive design strategies. These are then used for a multi-scale intervention approach including adaptive re-use of existing buildings and activation of in-between spaces, both striving to contribute to and support development according to the collaborative economy and local self-sufficiency scenarios.

The design of new structures uses a method of defining past and present building characteristics and abstracting them to create something new that still relates to the history and identity of the site and community.

The general process is characterized by iterations between theory interpretation and spatial translation. The general discourse and the thesis process is reflected upon in the discussion chapter.

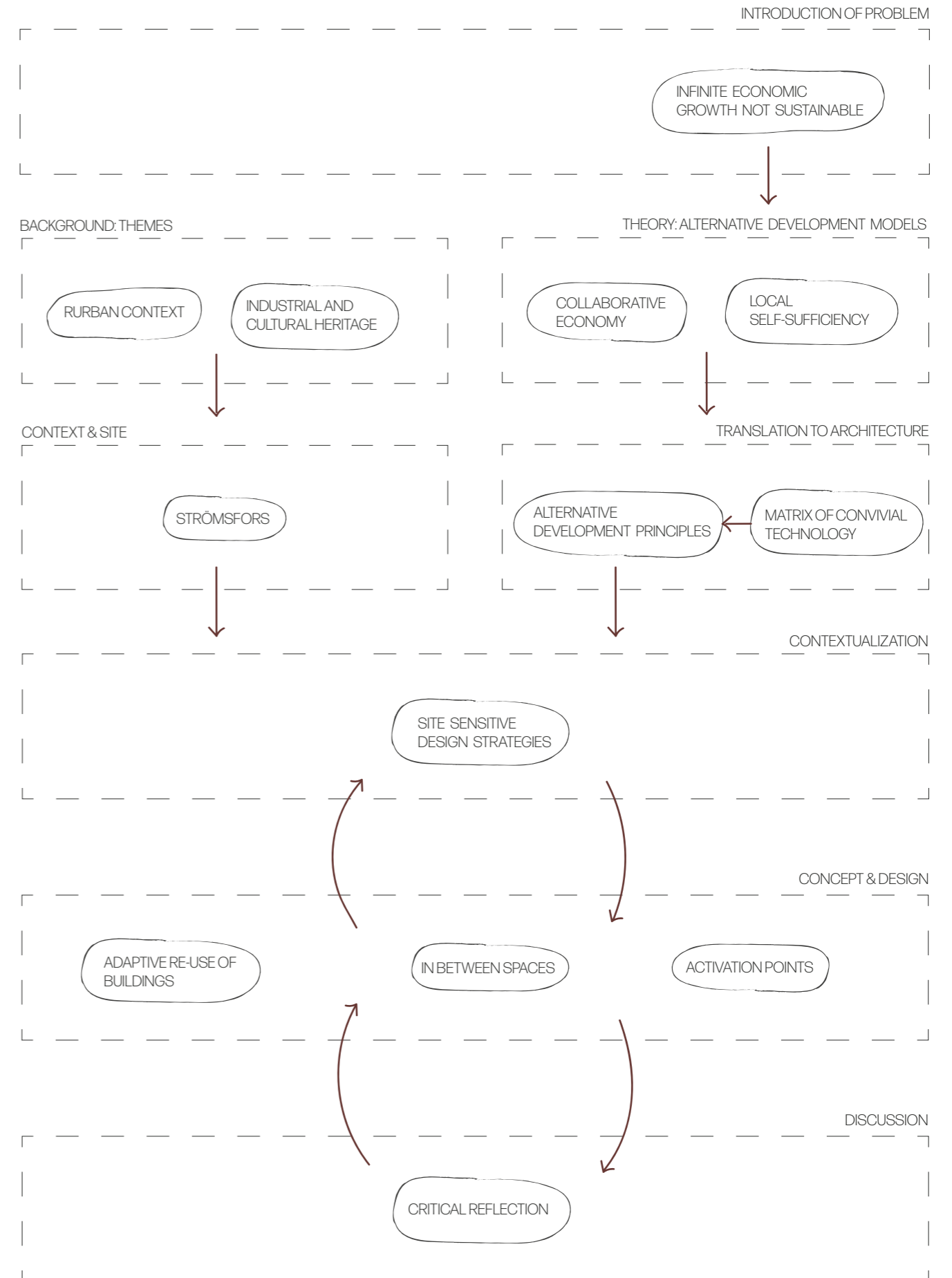


Fig. 3. Methodological process diagram

Theory

Futures Beyond GDP Growth

The report from the research programme *Beyond GDP growth: scenarios for sustainable building and planning* will be used as a foundation for the theoretical framework in this thesis. It is a trans-disciplinary project conducted between 2014-2018 that explored “sustainable future developments beyond traditional GDP growth” in a Swedish context. It involved researchers from fields like environmental systems analysis, future studies, sociology, urban studies, political science, social anthropology, economics and human ecology and collaborated with societal partners like municipalities and organizations. Multi-target backcasting was used to develop the scenarios. It is a method where multiple targets are established and backcasting is used to develop several alternative development scenarios where those are fulfilled (Hagbert et al., 2019).

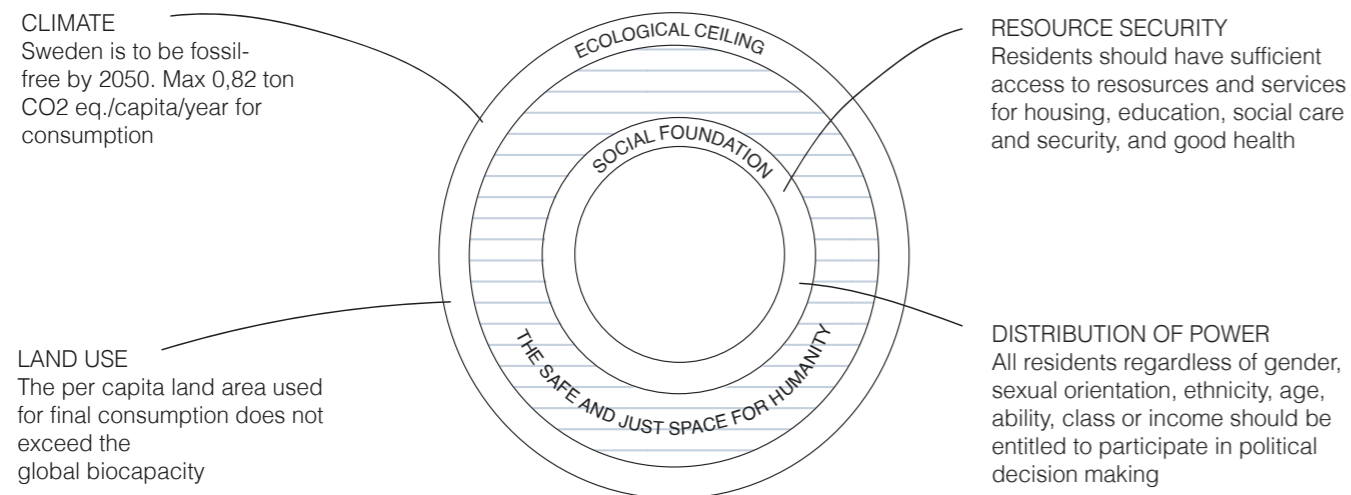


Fig. 4. The goals in *Futures beyond GDP growth 2050* illustrated through the donut. Adapted from (Hagbert et al., 2019.)

Goals

The goals set in the project are based the UN Sustainable development goals that relate to policy and planning and uses Raworth’s ideas about the donut as a framework for sustainable development by taking both environmental and social issues into account. The targets are adjusted to apply to Sweden in 2050 while “assuming a global equal distribution of environmental benefits and burdens”. (Hagbert et al., 2019, p.5) Four goals were set, two environmental focused: **climate** and **land use**, and two focused on social issues: **distribution of power** and **resource security**. Illustrated in fig. 4.

Scenarios

The developed scenarios illustrate four possible development trajectories using different strategies to fulfill the environmental and social targets. They explore a longer time frame where risks and opportunities can be evaluated from several points of view. The scenarios should not be seen as predictions or utopias but rather as a few possible futures that create basis for discussion.

All scenarios explore radical shifts from the current Swedish society since they present futures where the economy is either steady state or declining. There is a common shift in resource use, where society is characterized by sufficiency rather than consumption and the consumption based in other countries is reduced. Other large impacting factors are reduced international aerial travel and transition to a vegan diet. The societal foundation remain, Sweden exists as a nation with democratic governance and some form of common national legislation. (Hagbert et al., 2019) Goals are fulfilled using different strategies in the four scenario narratives, which are the following:

Collaborative economy

A future scenario characterized by sharing, trading and borrowing practices and co-creation. Societal power is distributed over many actors and there is more collective ownership. This is enabled by digital and physical networks and allows the population to be scattered in clusters. To maintain the networks more work is spent unpaid in the community.

Local self-sufficiency

The second scenario focuses on smaller communities that bases their production and consumption on local resources and conditions. Globalization and urbanization winds down and local markets thrive. The foundation for this transition is a change of ideals, where people strive to live within the planetary boundaries. Open knowledge exchange is important as well as voluntary work in the community. The population mainly lives in the countryside.

Automation for quality of life

This scenario builds upon rapid technological development that creates fully automated processes in many fields. This is managed through governmental and corporate collaboration and the scenario proposes increased opportunities for direct democracy. The automation causes drastically reduced paid working hours and people having much more free time. The automated society is taking place in an urban context and the areas outside is mainly a provider of nature and recreational activities.

Circular economy in the welfare state

In this case the economy shifts from linear flows to circular and renewable energy is used. This creates new jobs in re-use and recycling fields. These processes are large scale and centralized to metropolitan areas. In combination the welfare state is strong and people have more time to spend on culture and nature experiences (Hagbert et al., 2019).

Contextualization

The scenarios all present narratives for possible futures in Sweden. On a societal and individual scale, general and specific, they describe how life could be like in 2050. One key point in all scenarios is that multiple societal parameters would need to change to achieve the sustainability goals. The parameters in the various scenarios are not described as exclusive but rather presented in a way that illustrates possible combinations of strategies through which the targets can be reached. The scenarios are more or less desirable to different people. While the environmental goals can be reached through all, some solutions may impose risks of social issues and inequalities in certain contexts. (Hagbert et al., 2019) To use the scenarios as a foundation for design strategies in a Swedish urban setting, they need to be translated to the context.

Collaborative economy & Local self-sufficiency

These narratives propose futures where civil society has a higher grade of power and informal economic activities are more common. This could lead to more locally anchored bottom-up processes and create new or enhance existing opportunities for urban development. The development is characterized by community collaboration through networks where digital and physical spaces blend. Digital networks could be an important factor in bridging physical distances that are a common issue in the urban context. It is also a way to counteract the risk of isolation between groups within the local self-sufficiency scenario. Decreased time spent in employed work allows for more hours spent on other practices in community, for example sharing practices.

Automation for quality of life & Circular economy in the welfare state

These scenarios both propose increased power of government and businesses. Production is steered towards service and reduced material consumption and the approaches are large scale and centralized. These top-down solutions have a risk of leaving the urban context out of a transition and focus development solely on urban areas. In doing so maintaining the current issues where the non-urban is seen as a resource provider rather than a sufficient place to live. While they have clear benefits, the possible risks and where the focus is directed leads to the conclusion to leave these scenario narratives out of the development framework for this thesis.

Alternative development principles will be extracted from the Collaborative economy and Local self-sufficiency scenarios and translated to spatial design in the local context.

Matrix of convivial technology

To translate the themes into design strategies, the *Matrix of convivial technology* (Vetter, 2017) was used. It is a collection of terms that describes desirable technologies in degrowth societies. From the matrix, terms that relate to the chosen scenarios of collaborative economy and local self-sufficiency in various scales are summarized in fig. 5.

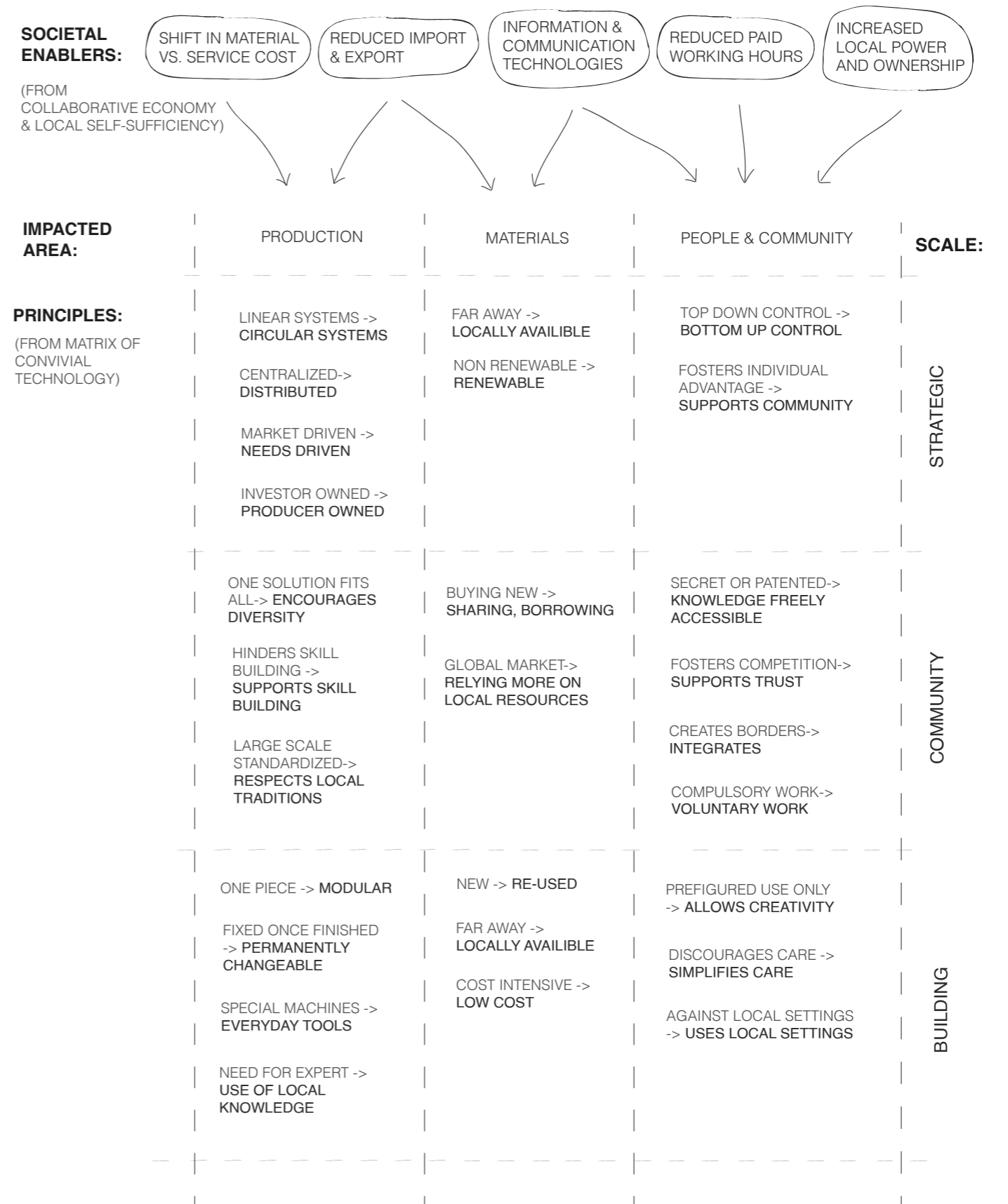


Fig. 5. From theory to design principles

Context & site

Strömsfors

Strömsfors is a former mill town located in the southwest inland of Sweden, in Svenljunga municipality. The power from the river running through the Strömsfors enabled production on the site. The industrial businesses of ironworks at Strömsfors Bruk was established in the 1850's and later developed into glassworks and machine innovation. The production and had large impact on the community and the built environment and has been largely dependent on economic growth throughout history. The community was centered around labour in the local business which flourished up until during 1960s and 70s. When the practices closed due to national and global competition, complementary services and public spaces also vanished one after one and caused the space to be barely a residential area in a semi-rural setting.

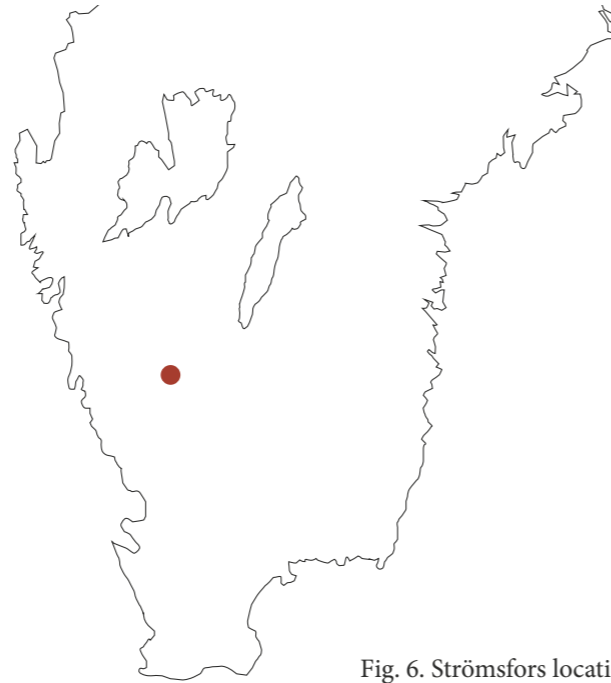


Fig. 6. Strömsfors location



Fig. 7. Strömsfors through past and present. Archive images of buildings and functions (black and white) are blended into the present-day site. The river in a central position as a crucial enabler for the establishment of the settlement and its practices.

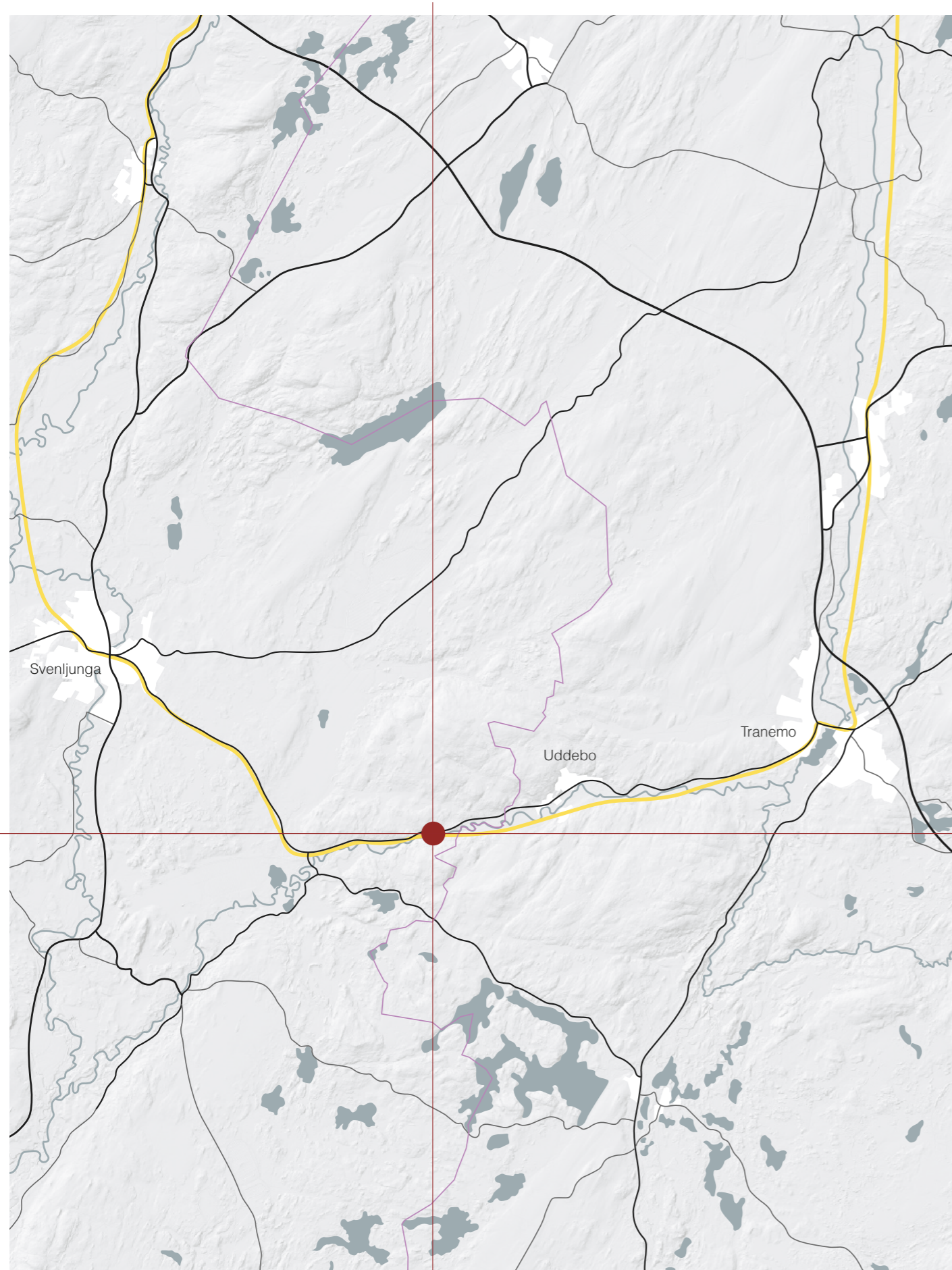


Fig 8. Municipalities and connections

Strömsfors

— Sjuhäradsrundan (Bicycle route)
— Municipality borders

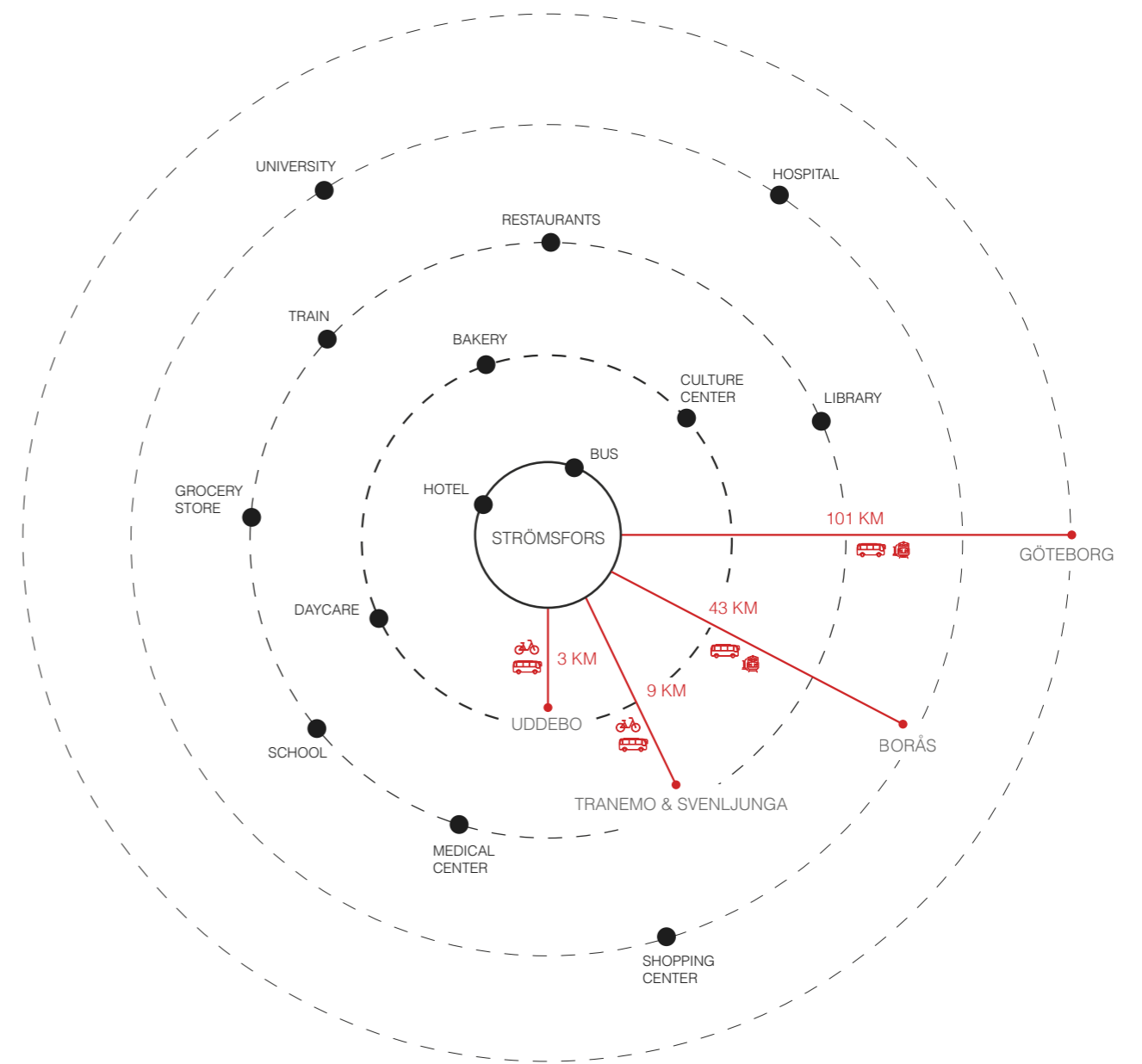


Fig. 9. Strömsfors connections

In-betweenness

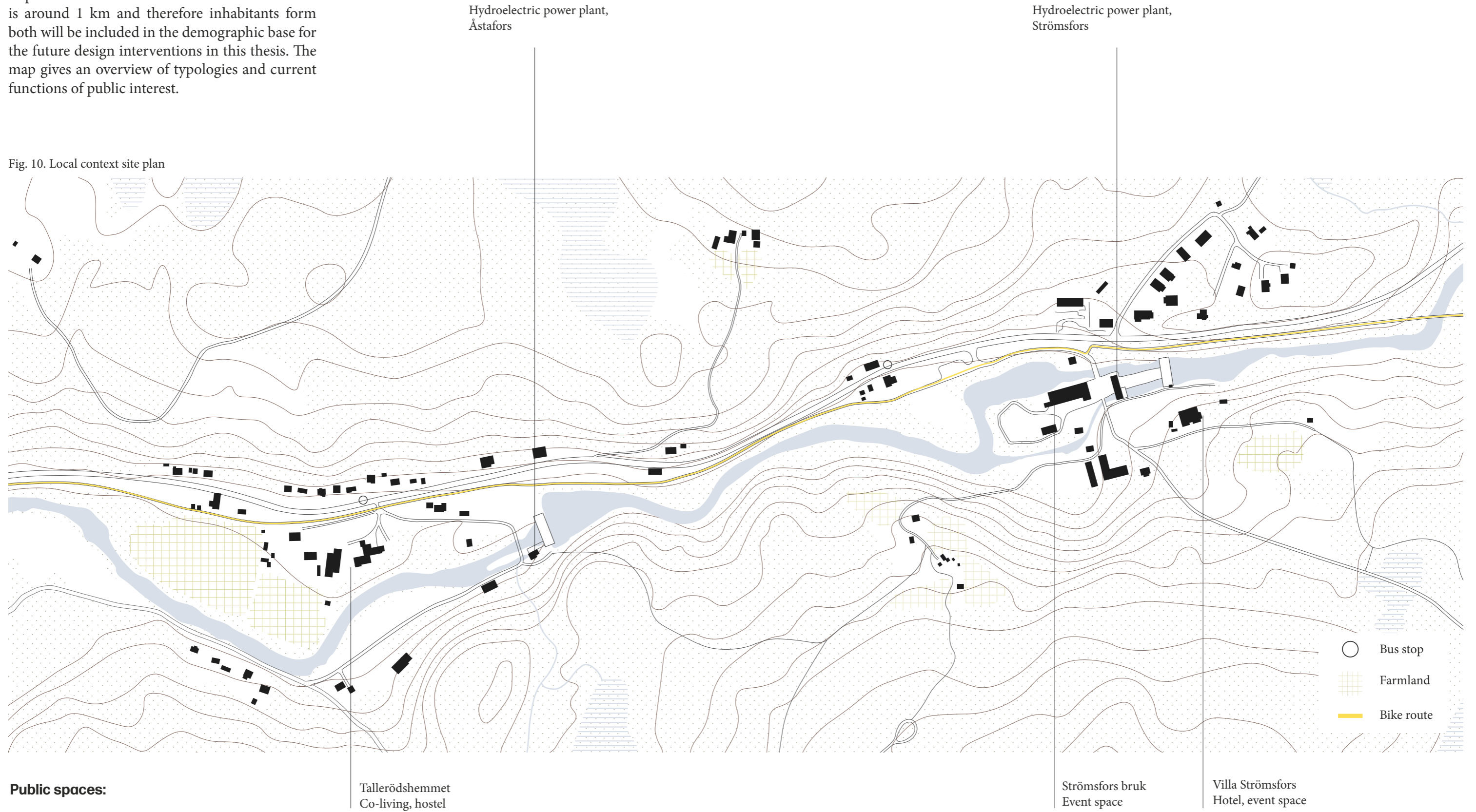
There are today approximately around 50 inhabitants in Strömsfors and around 100 inhabitants in close proximity (1 km). It is located on the border of Svenljunga and Tranemo municipalities. Both have around 10 000 inhabitants and consists of one main town and multiple small towns and countryside. The population living in non-urban areas is larger in these municipalities than the state average (SCB, 2022).

Fig. 9 above showcases the connections and distances to the surrounding towns and settlements. Strömsfors is clearly dependent on its surroundings in terms of services. The position and experience of the spatial qualities of Strömsfors can seem peripheral, but the actual distances are quite small. There is a bike route called “Sjuhäradsrundan” that ties the small communities together. Buses also traffics the main roads, but departures are scarce.

Local context

The area consists of two smaller settlements: Strömsfors and Åstafors. Both were locations for industry in the 1900s due to their location along the river where hydroelectric power plants were implemented. The distance between the settlements is around 1 km and therefore inhabitants from both will be included in the demographic base for the future design interventions in this thesis. The map gives an overview of typologies and current functions of public interest.

Fig. 10. Local context site plan



Public spaces:

Tallerödshemmet
Co-living, hostel

Strömsfors bruk
Event space

Villa Strömsfors
Hotel, event space

Reference

Uddebo is a village located around 3 km from Strömsfors. It has a similar history of production that was discontinued and the site had a descending development. This has been turned around during the latest decade due to strong local engagement. Initiatives to strengthen the community and enable alternative ways of life outside the urban norm has caused a movement of people moving to Uddebo.

Strategies of collaborative economy and local self-sufficiency are in many ways already practiced here. Väveriet is a former textile factory transformed to be a multifunctional space containing offices, studio spaces, small scale community farming. There is also for example a culture house, a community building and tiny house collective.

On one hand, this thesis is taking the current practices of Uddebo into account and exploring possible synergies and future networks between the two and adapting proposed new functions to complement the existing supply. But on the other hand, it is also exploring what ultra-local spaces Strömsfors inhabitants could need, irrespective of Uddebo. Then serving as a reference of possibility and approaches relating to stakeholders and implementation.

Fig. 11. Spatial connections



Fig. 12. Väveriet. (ArkDes, 2021)

History of Strömsfors

The industrial practices and its surrounding supplying functions has had large effect on the spatial development and the architecture we now may consider to characterize the site. An analysis of this historical development will be conducted on the following pages and concluded with an analysis of the spaces today.

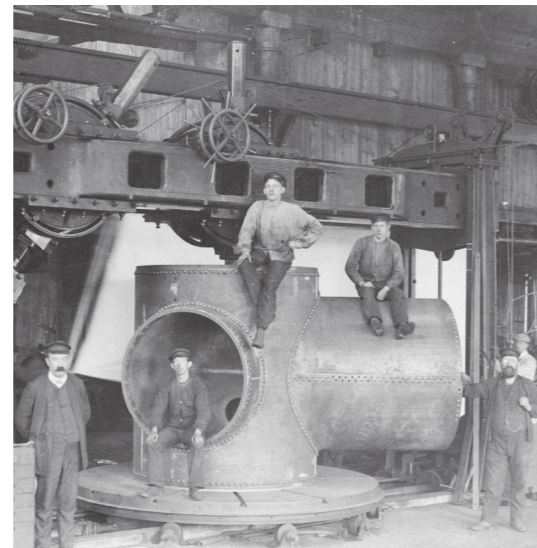


Fig. 13-18. Strömsfors, archive images (Digitalt museum, 2022)

Historical spatial development

1905

The center piece for the businesses, Strömsfors bruk was established strategically along the river and close to the power station. The river's formation determined what space could be used and created an island containing the workshop and foundry. The railway was built in 1904 and along came a complimentary train station and hotel. Worker's residences were placed along the road, a bit outside of the area of business. The barn and forestry buildings were built logically on the edge of the forest.

The architectural styles and expression can show the purpose and status of the buildings and its functions. Bruket is a durable brick building, but its ornamentation and detailed brickwork implies that it was the centerpiece. The public buildings hotel and train station were built in a national romantic style typical for its time. The level of ornamentation emphasizes the importance of the railway and shows its visitors that this community is at the forefront. Other utility buildings had wood constructions with a simpler expression.



Fig 19. Strömsfors bruk (Digitalt museum, 2022)



Fig 20. Train station (Digitalt museum, 2022)

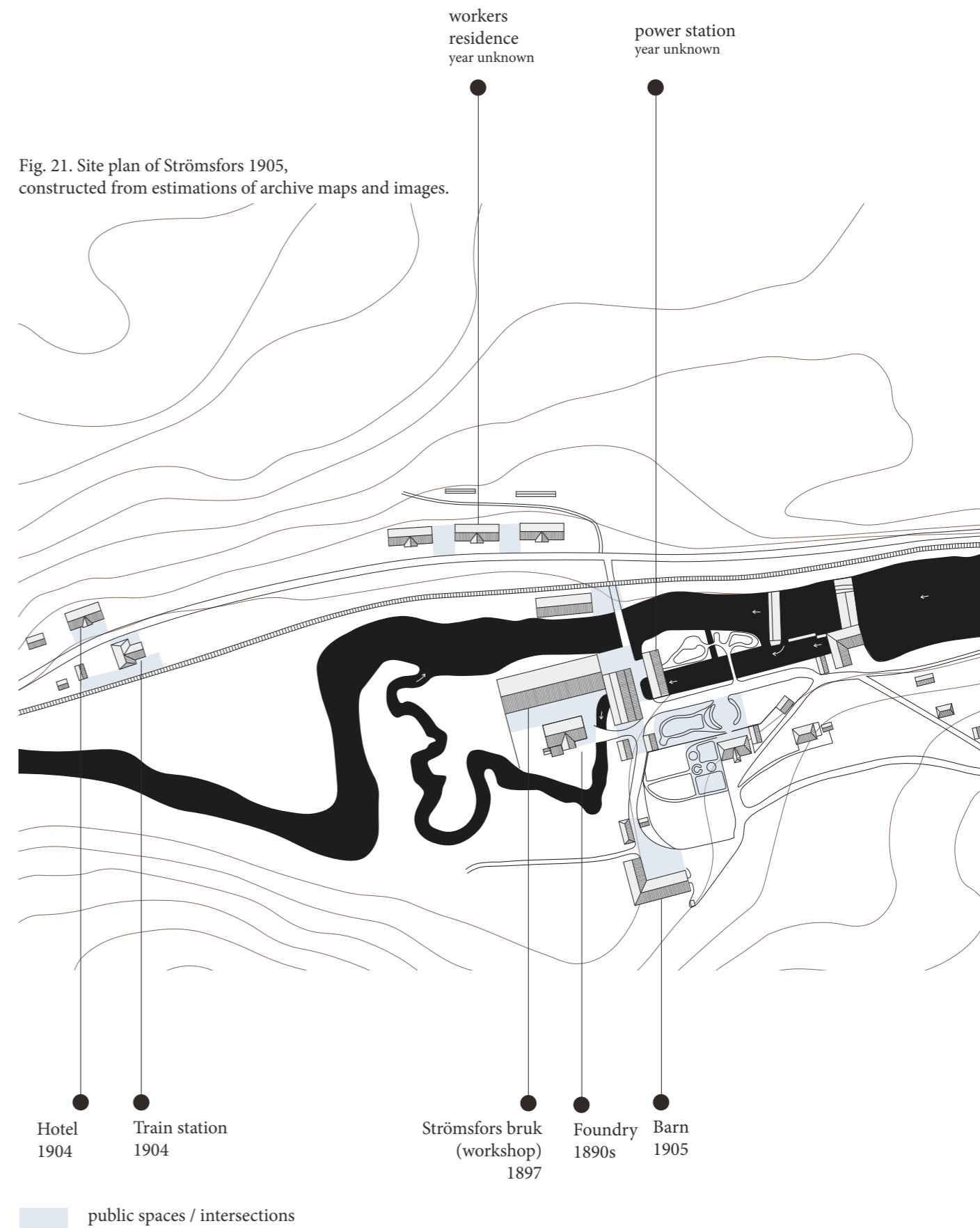


Fig. 21. Site plan of Strömsfors 1905, constructed from estimations of archive maps and images.

1910-1950

In the early 1900s, Villa Strömsfors was built as a residence for the business owner and his wife. It was built on the hill looking out over the business and dramatically contrasting all other building typologies, standing out as a marker of status and hierarchy. There was also a garden and greenhouses connected to the villa.

The power station was modernized during the 1930s and a new dam and canal was built, changing the space surrounding Bruket. The space on the island grew and allowed for new utility buildings within the business.

Multiple surrounding functions were developed during this period, in many cases funded by the business owner. A chapel and bell tower, a local school, additional worker's residences, common laundry room and fire station were some of the functions that were implemented in the community.



Fig. 22. Strömsfors Disponentvillan 1922 (Digitalt museum, 2022)



Fig. 23. Forge (Digitalt museum, 2022)

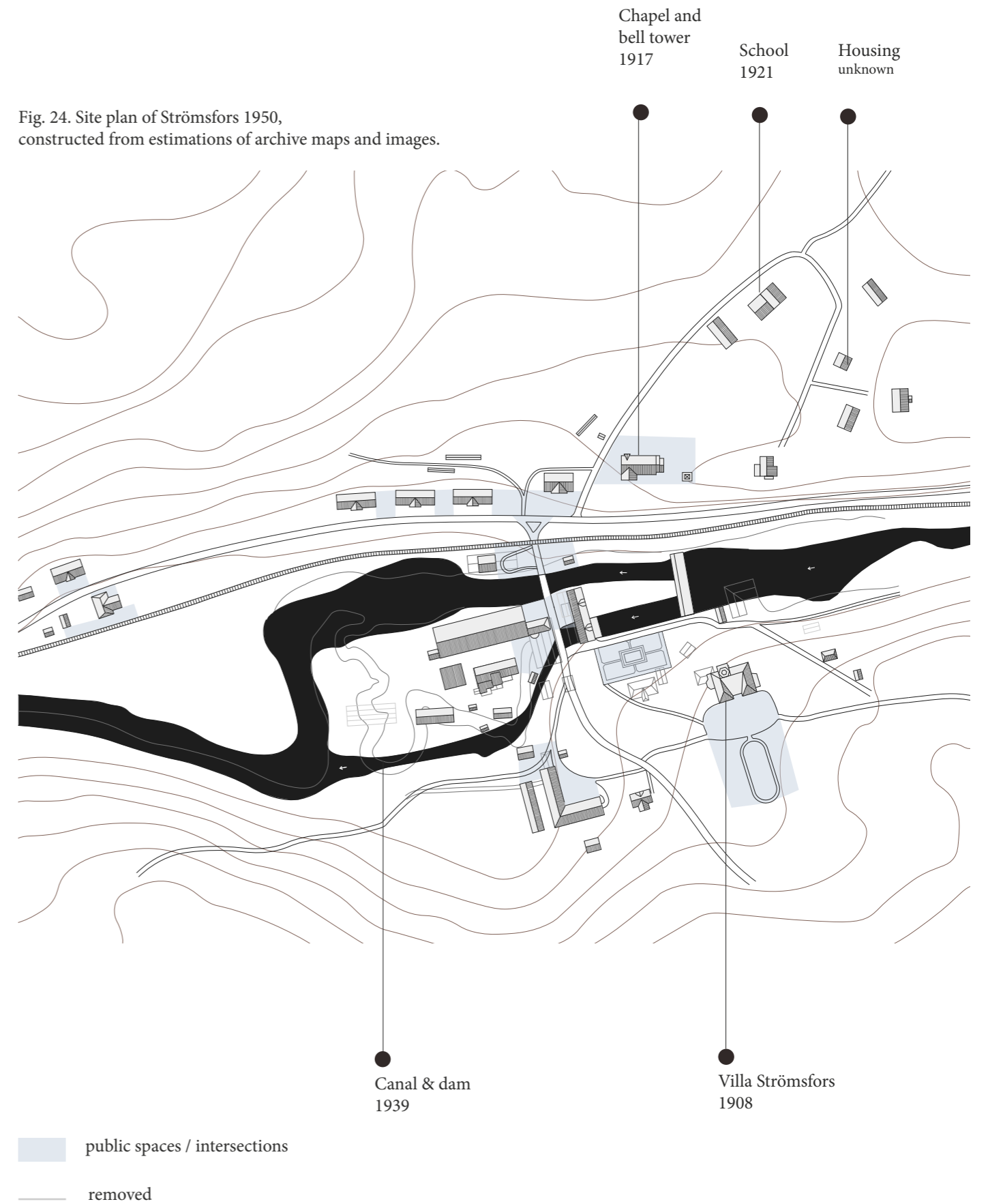


Fig. 24. Site plan of Strömsfors 1950, constructed from estimations of archive maps and images.

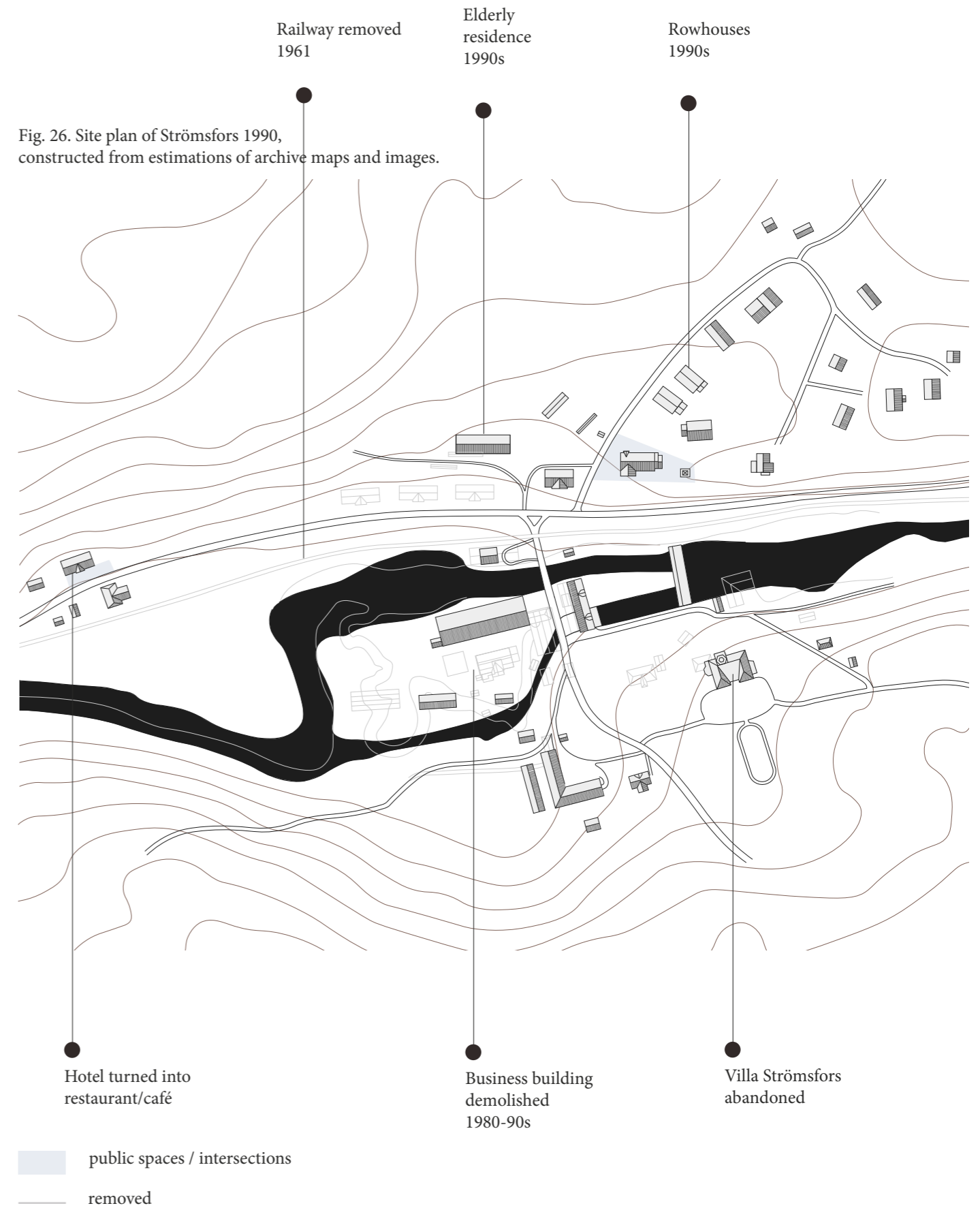
1950-1990

The last half of the 1900s were characterized by the business, the motor in the mill town, closing down. Some of the functions, such as the hotel were repurposed to restaurant/café but the buildings no longer in use were being abandoned or demolished. The railway was also removed.

The new additions during the 90s were elderly homes and rowhouses built by municipal investments.



Fig. 25. Villa Strömsfors (Borås Tidning, 2014)



Strömsfors today

Many of the former public buildings and surrounding spaces have been sold to private individuals and transformed to housing. Strömsfors Bruk and Villa have been bought by companies and restored to host event space and hotel with focus on tourism. These spaces are fenced in and only public at certain events, therefore qualifying as semi-private.

The publicly used spaces remaining today consists of nature areas, a parking lot, the entrance in front of Bruket and the main roads. These spaces have characteristics of indeterminacy, meaning that they are changeable and in a dimension of in betweenness. The area surrounding the former barn is unused and is a type of void that is slowly being taken over by nature.

The current issues and opportunities are analyzed using a SWOT analysis made by local community association Strömsforsgruppen. (Strömsforsgruppen, 2016) and own observations and encounters with people on site.

Current issues

No local job opportunities, lack of local engagement, old age in Strömsforsgruppen, lack of meeting places, expensive investments needed to develop and transform buildings, lack of engagement from municipality.

Current opportunities

Rich cultural and industrial history, initiatives to communicate this to the public through information boards, newly established businesses, tourism, collaboration with surrounding settlements.

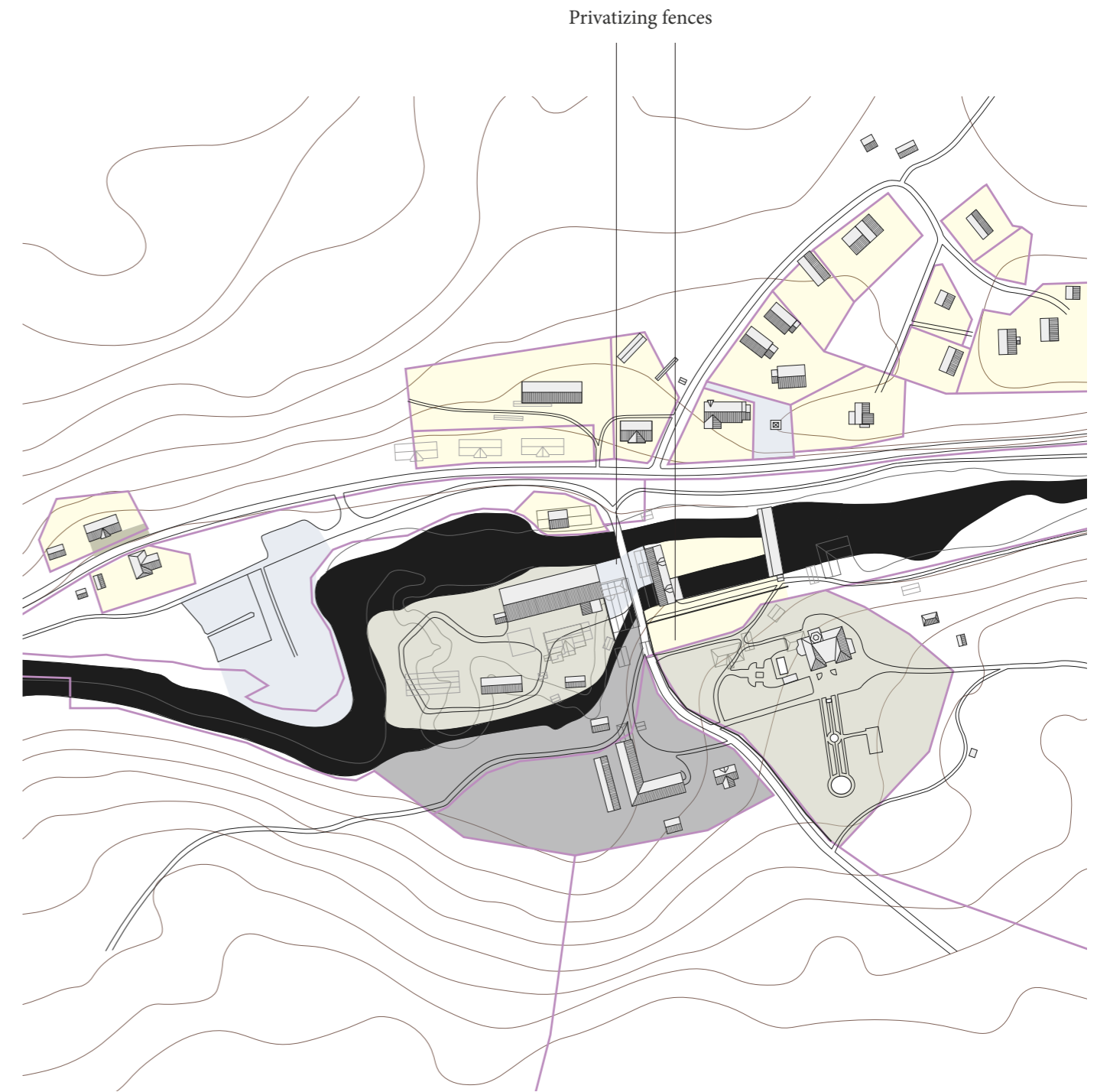


Fig. 27. Site plan of Strömsfors

Legend

- Private space
- Unused/ left space
- Public space
- Property borders



Fig. 28. Villa Strömsfors exterior, 2022



Fig. 30. Villa Strömsfors interior, 2022



Fig. 32. Former barn, Strömsfors, 2022



Fig. 29. Strömsfors bruk exterior, 2022



Fig. 31. Strömsfors bruk interior, 2022



Fig. 33. Former garage, Strömsfors, 2022

Heritage approach

The buildings and spaces that were left abandoned and uncared for after the 70s have been approached differently. Bruket and the villa, the most unique and characteristic buildings of the area in the public eye was brought by companies during latest decade. They were then repaired and restored through large investments. The spaces were revitalized and currently host functions targeted towards visitors and tourists.

Recurring events such as markets, conferences, weddings and Christmas dinners take place in these buildings. Although the reactivated buildings elevate the perception of the place, they do not necessarily serve as local meeting places creating day-to-day value for the inhabitants.

This thesis focuses on the less valued buildings that are still left uncared for. The former barn, garage and sawmill will be subjects of transformation into spaces needed according to the collaborative economy and local self-sufficiency principles.



Fig. 34. Former sawmill, Strömsfors, 2022

Summary

Former mill town possessing heritage values

In-between / rurban qualities

Historical development has drastically reduced local public spaces and sense of community

Opportunities of collaboration with surrounding villages

Material and emotional value in unused buildings



Fig. 7. Strömsfors through past and present.

References

BOOM/BUST

Newfoundland, Canada
Lateral office, 2019

Boom/Bust is a design project that highlights the heritage of past typologies while proposing new typologies that “sidestep the existing, growth-oriented, economic model” and “imagines architecture for new forms of labor, new understandings of resources, and new notions of collectivity and stewardship.” (Lateral office, 2019)

The typologies host functions that line up with non growth-oriented development strategies, for example a live-work stage, a market hall and a build-it-yourself structure.

This thesis is referencing Boom/Busts approach of working with these themes while also including heritage and identity in the design process. It also references the scale of intervention and its relation to the larger context.

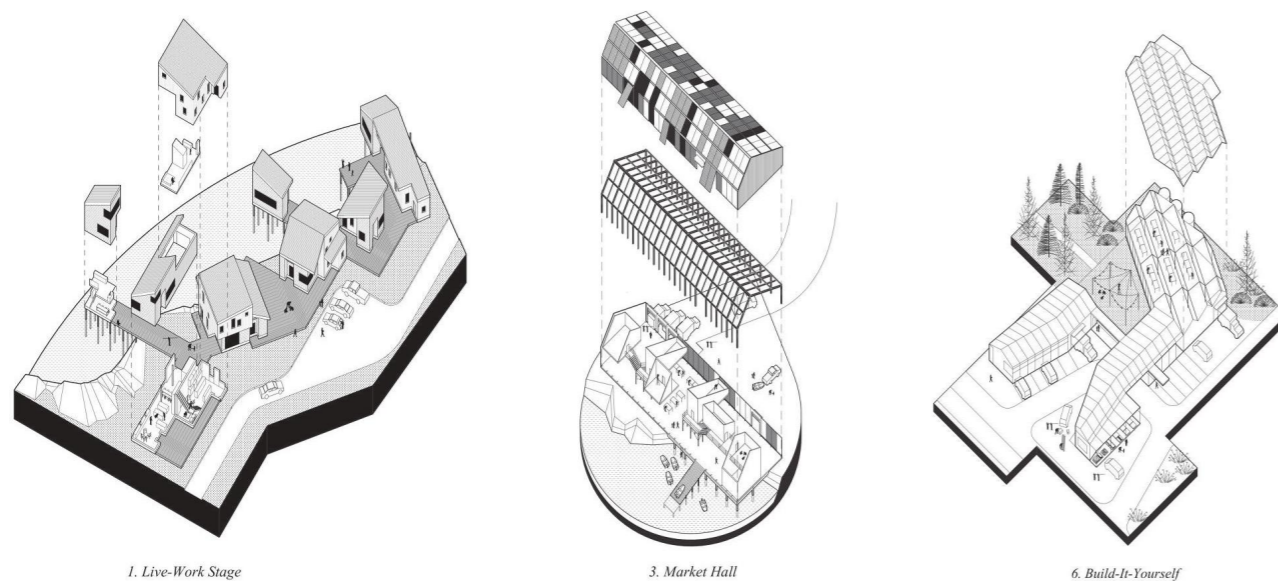


Fig. 35. Typologies.
(Lateral office, 2019)

R-urban

Colombes, France
AAA, 2014

R-urban is a project by activist practice Atelier d'Architecture Autogérée (AAA). The practice revolves around the theme of urban resilience and has the purpose to “enable citizens to reclaim space in the city and transform it to urban commons” (Urban commons handbook, p. 64, 2022).

A series of resilience hubs are created, containing spaces to share knowledge, creativity and labour within themes of urban agriculture, construction and recycling. By getting various local stakeholders and initiatives involved, a network of hubs are forming.

While the context of this thesis is closer to the rural realm than the urban, there are elements of this project that can be referenced. Firstly, how the functions promote alternative ways or using resources while simultaneously creating public spaces and meeting platforms. Secondly, the conceptual approach of creating a network to enable synergies and visualize material flows.

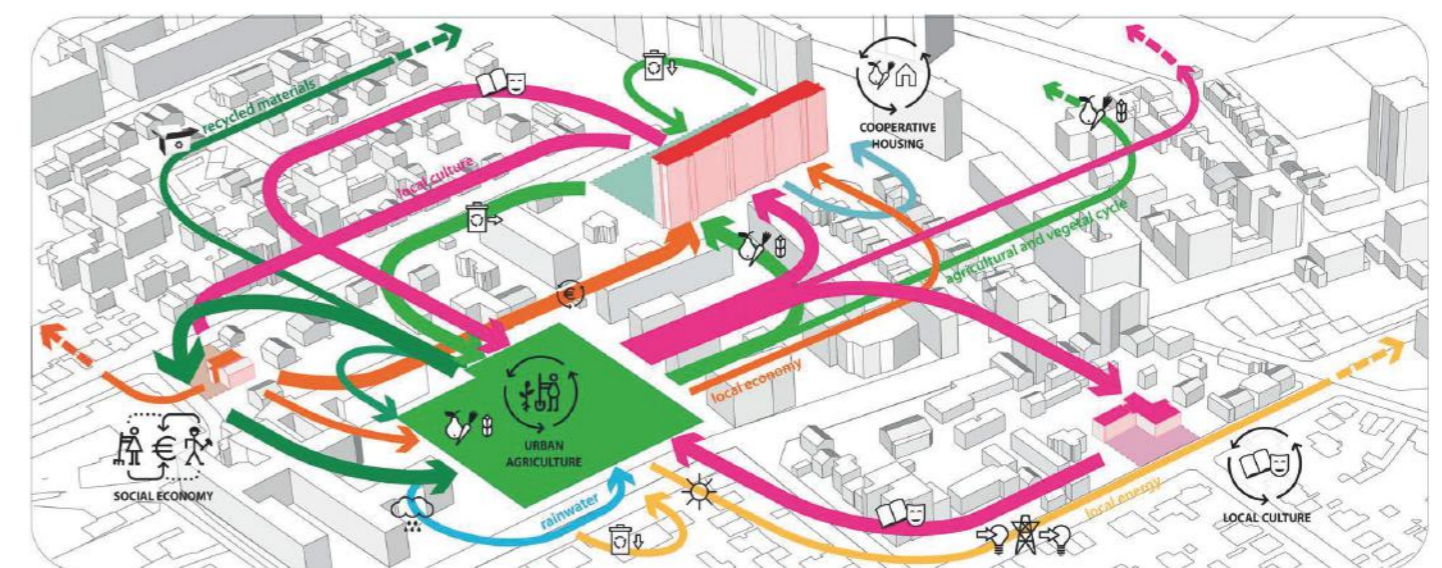


Fig. 36. R-urban local ecosystems.
Illustration by AAA ,Through (Petrescu, D., Petcou, C. & Baibarac C. (2016)

Design

Site specific design strategies

Moving into the design phase of the thesis, the theoretical framework of principles is further contextualized to be applicable in the specific case of Strömsfors. This process is illustrated in fig. 5. The design principles that are of bigger focus in this project is highlighted, mostly focused on the community and building scale. These are summarized and formulated into three main design strategies, spaces to: share, use local resources and connect.

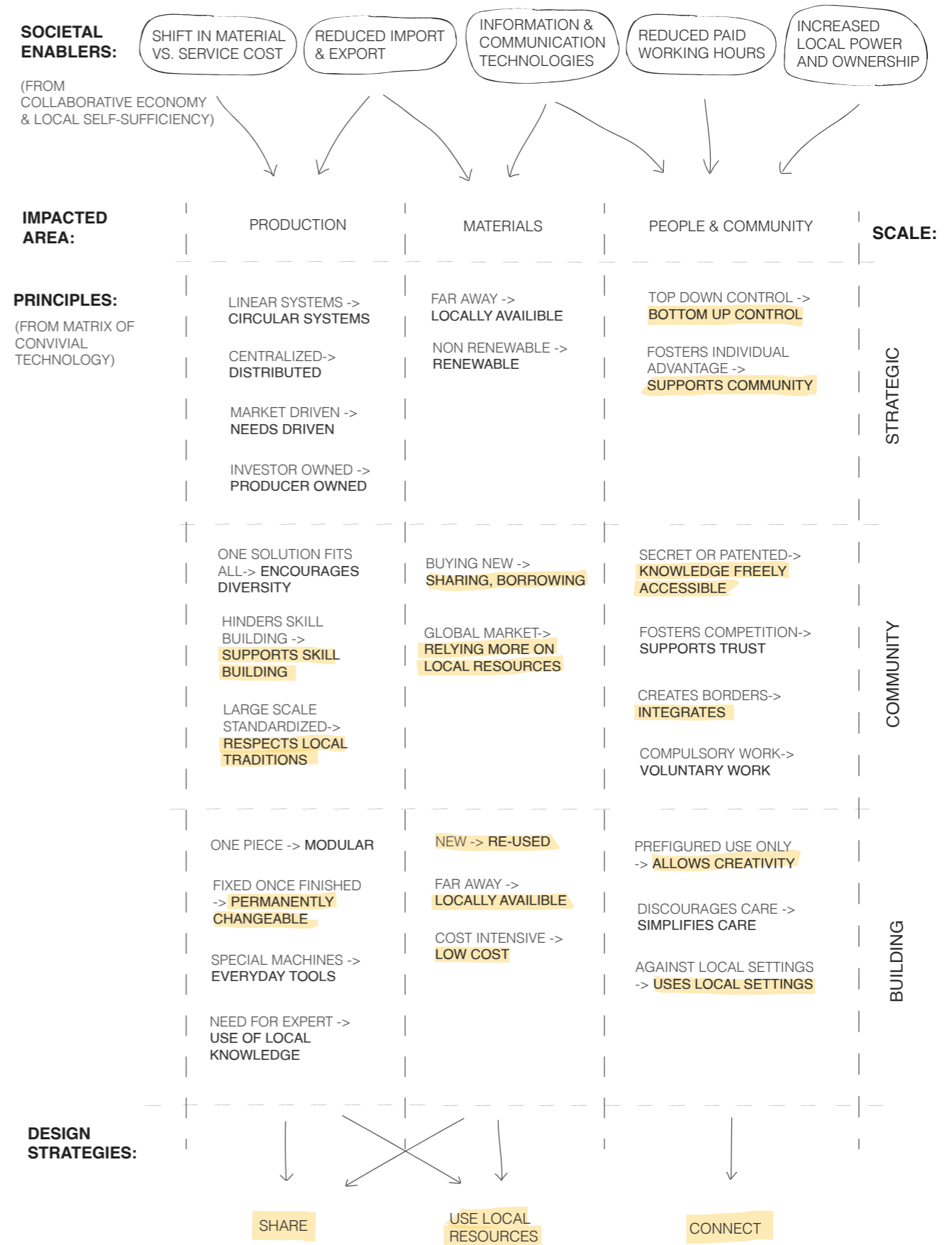


Fig. 37. Site specific design strategies.

Design strategies diagram

This diagram further specifies what types of spaces fall into the strategies of share, use local resources and connect. For example, a place to connect could mean connections between people or spatial connections. This will be used as a framework guiding the design in the thesis.

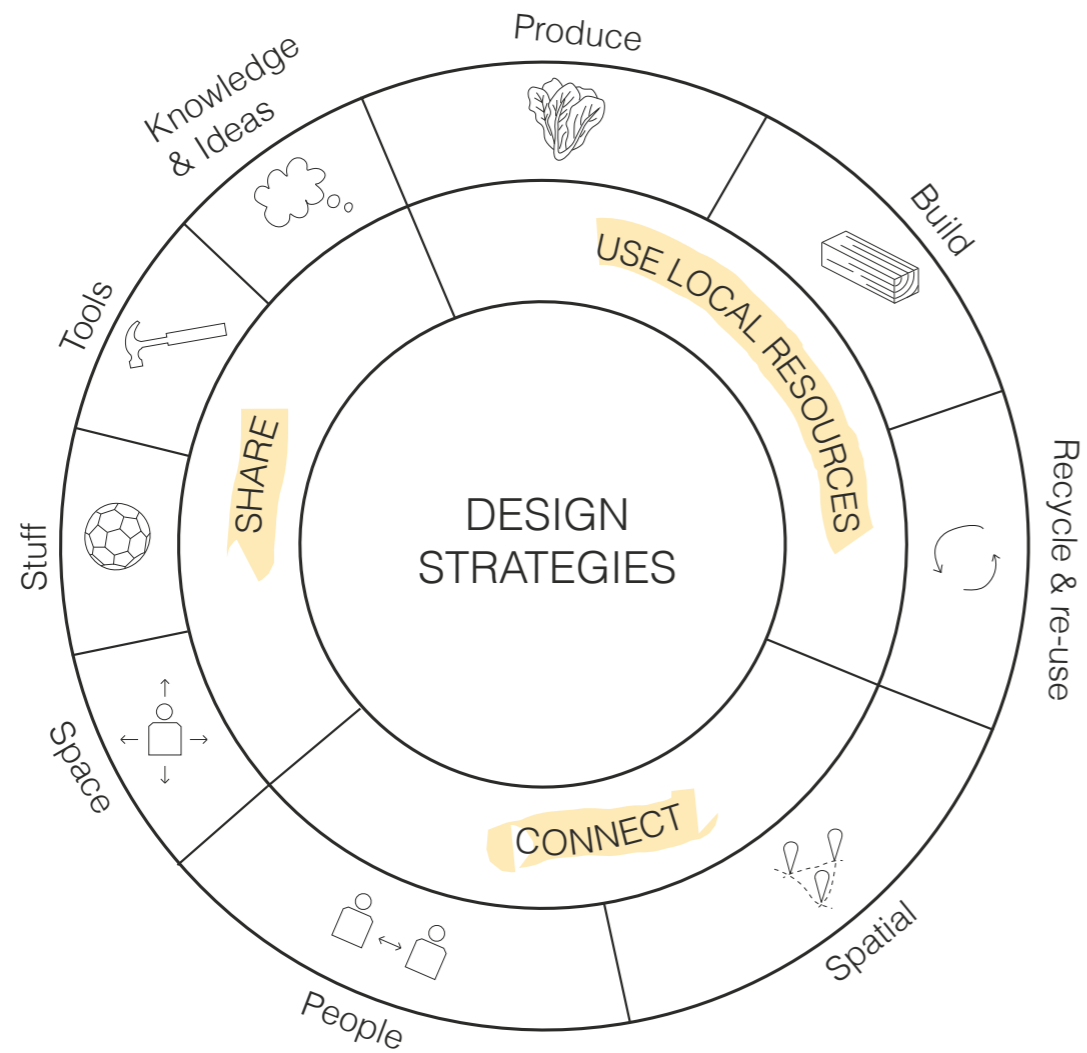


Fig. 38. Design strategies diagram

Concept

The overarching concept for transforming the site consists of two parts: adaptive re-use of existing buildings and the activation of in-between spaces. Both focuses on creating public spaces that benefits from each other and host functions according to the design strategies.

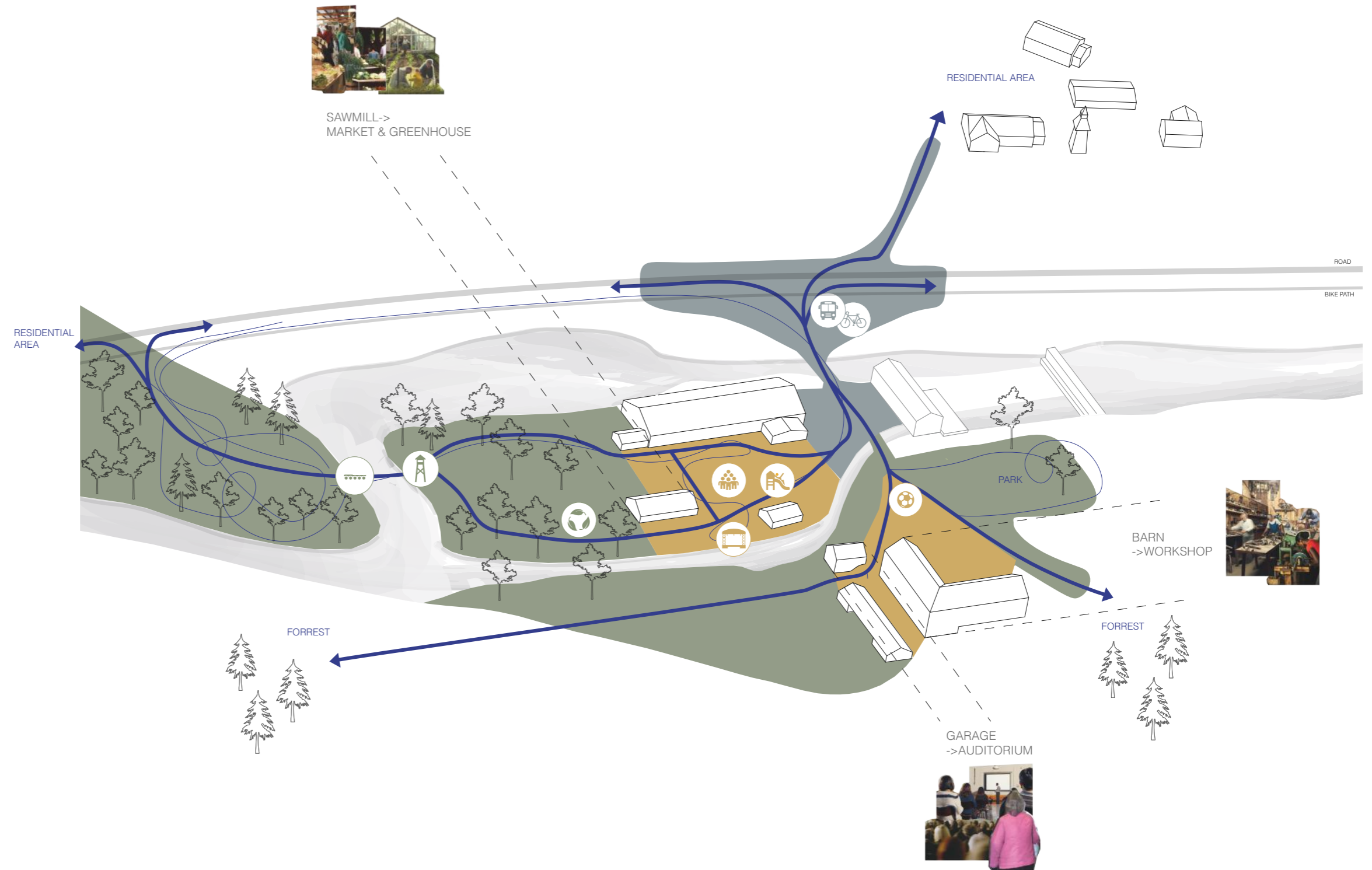


Fig. 39. Concept overview

Adaptive re-use

Workshop

The first of the repurposed buildings is the old barn. The former business included forestry to maintain the material needs of the production and agriculture to supply employees and animals. The barn was the center for these activities and was built in 1905 and modernized during the 1940s (Strömsforsgruppen, 2022). There is also a former vehicle shed in connection to the barn. The buildings are currently privately owned and seemingly used as storage space. The space is large and has several entrances, allowing for it to be divided into separate functions. It has poor light conditions due to the shading panels and is an uninsulated space. The building shape frames a courtyard.

With the building conditions and spatial properties in mind the proposed transformation turns the building in to a workshop for reuse, repair, recycle, production and creation. Tools, machines, materials and storage space can be shared.

There is also a purpose of knowledge exchange through practical demonstration and collective building practices. This creates a meeting place that can extend beyond the local context and be open for people outside the community.

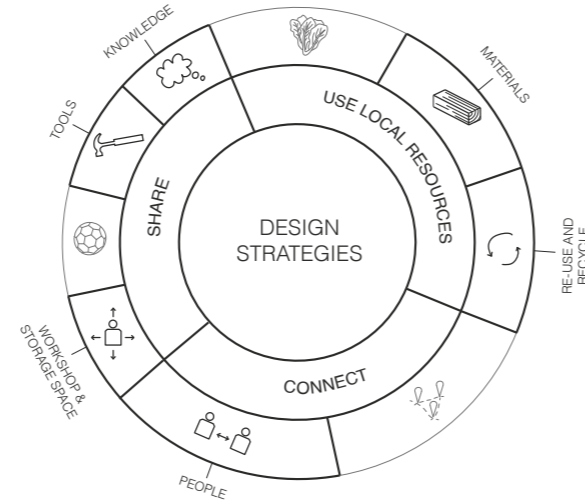


Fig. 40. Strategies applied to workshop



Fig 41. Collage of AI-generated (Dall-e) images that illustrate the functions and use.



Fig. 42. Barn, 2022



Fig. 43. Vehicle shed,



Fig. 44. Barn to workshop transformation collage

Auditorium

The former garage was built sometime during the 1910s. The company owner David Nylander bought his first car in 1912 and had a personal driver (Strömsforsgruppen, 2022). The building is currently seemingly used as storage. The building is split level with a stone foundation and main entrance on the upper level. This creates a relatively large volume while the building is tucked into the landscape.

The proposed new use is a small auditorium where the split-level of the building is used and parts of the floor removed to create an auditorium seating. The purpose of the space is share knowledge through physical presentations or lectures, but also have the possibility to enjoy for example movies together.

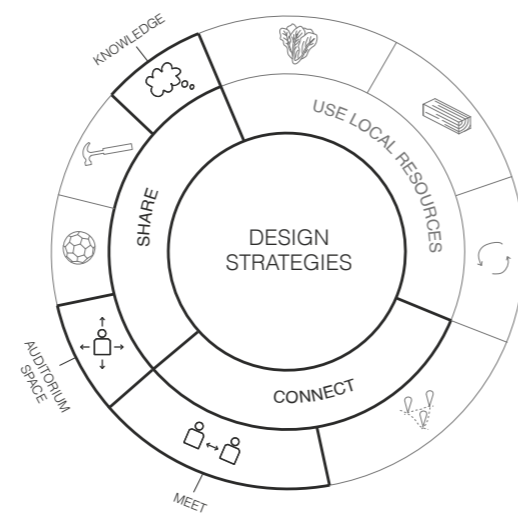
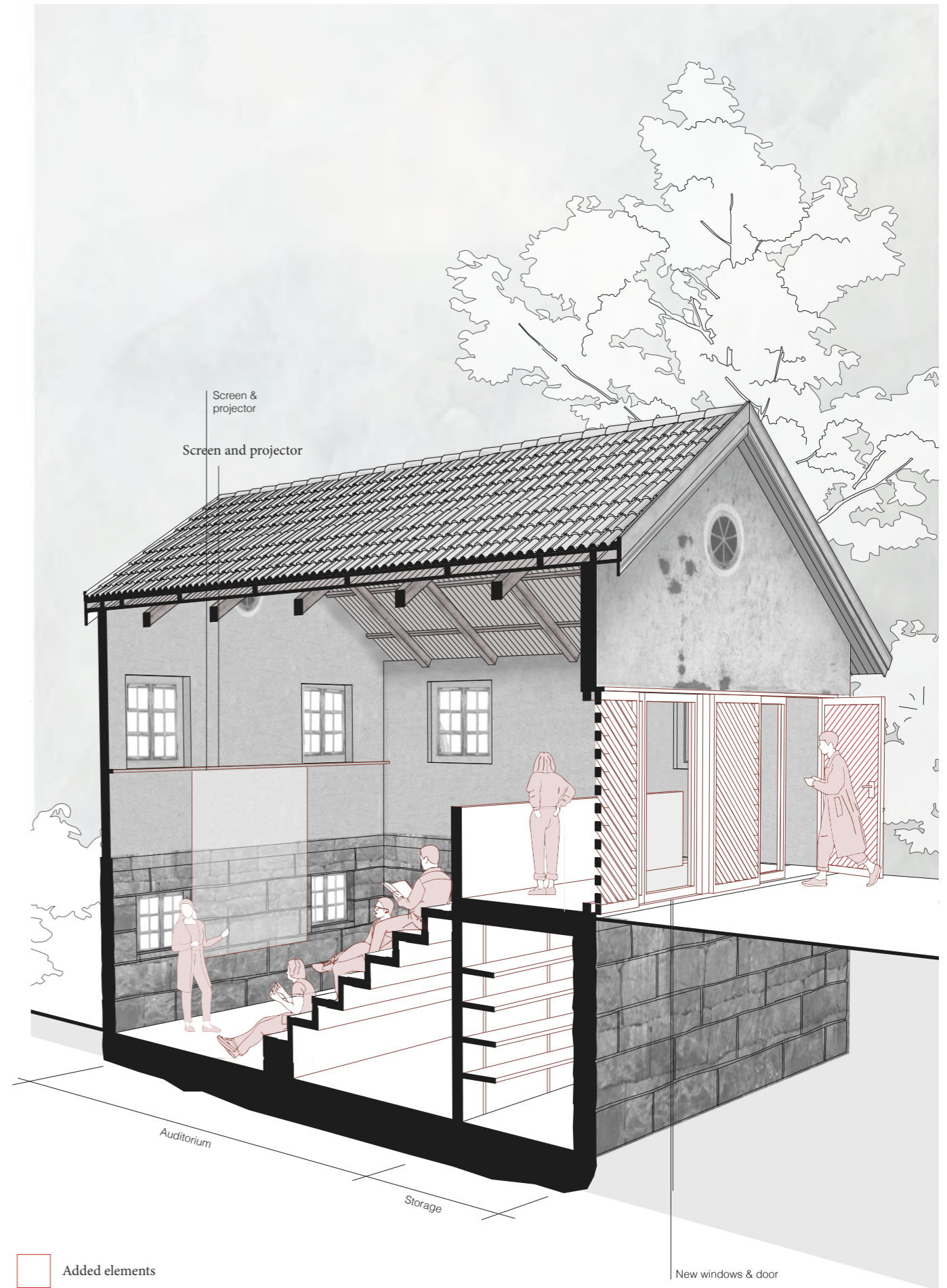


Fig. 45. Strategies applied to auditorium



Fig. 46. Collage of AI-generated (Dall-e) images that illustrate the functions and use.

Fig. 47. Garage to auditorium transformation collage



Market & greenhouse

The old sawmill was built in 1934 and used to refine wood from local forestry to be used for building needs related to the industry (Strömsforsgruppen, 2022). The building is of a wooden construction, uninsulated and has several exposed openings. The interior volume is large and constructed to fit a mezzanine floor.

The proposed new use relates to local resources but focuses on food rather than wood. Half of the building is insulated and used as a **local farmers market** and the other half is transformed with glass walls and roof to form a **community greenhouse**.

The idea is to create a central place for buying or trading locally produced food. A building assigned for this purpose could enable and encourage inhabitants to consume more local resources and also serve as a meeting place. The building and functions could be governed by producers and inhabitants using digital networks such as social media groups.

Local farmers market

There are multiple potential ways of using the space: individually booking produce online from local producers that then delivers weekly to the market, have certain food stored and use the space as a small-scale shop, or host recurring events like harvesting festivals.

Community green house

The greenhouse is also a way of producing locally, but mainly purposed as a common space where people can meet to spark interest and exchange knowledge.

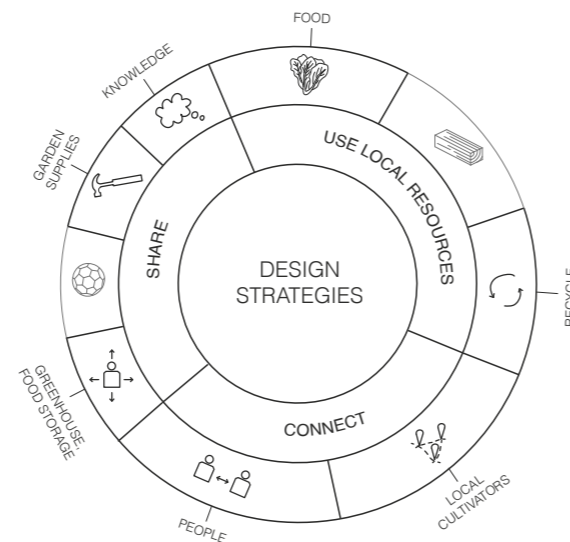


Fig. 48. Strategies applied to auditorium



Fig. 49. Collage of AI-generated (Dall-e) images that illustrate the functions and use.

Fig. 50. Sawmill to market & greenhouse transformation collage



In-between spaces & activation points

The in-between spaces are defined according to their current qualities and how they will be enhanced or changed.

The entrance area is determined by it being the space where the roads from the residential area and the bicycle road meets the bridge into the former business area. The bus stop is proposed to move here as well. The activating point in this area is a new transport hub where functions benefitting all these groups are gathered.

The urban squares are spaces that are spatially framed, where multiple functions are gathered in clusters and movement paths pass through creating natural meeting points.

The nature transition areas are located at the border between programmed and unprogrammed space. The activation points are on the theme of enhancing experiences in nature and offers new paths for movement, recycling space and spaces to share outdoor equipment.

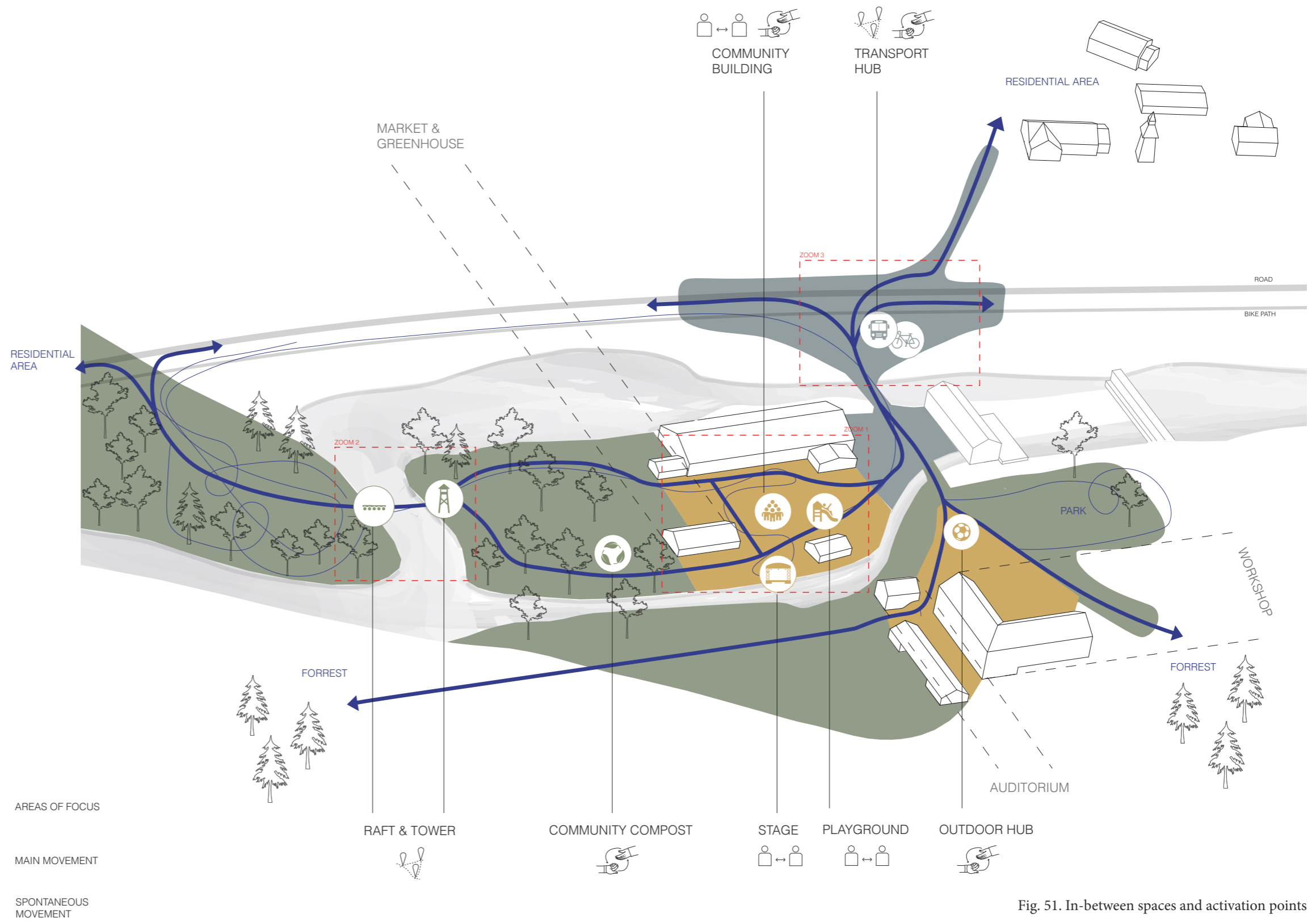


Fig. 51. In-between spaces and activation points

Design process

To design the architectural expression of the activation points in relation to the surrounding buildings and heritage of the site, a process of identifying the characteristics of building typologies of past and present buildings have been used.

The matrix below summarizes the findings which are then used as a framework for abstracting and reinterpreting elements, presented on the next page. These are then used as a base for further development into specific activation points with assigned functions.

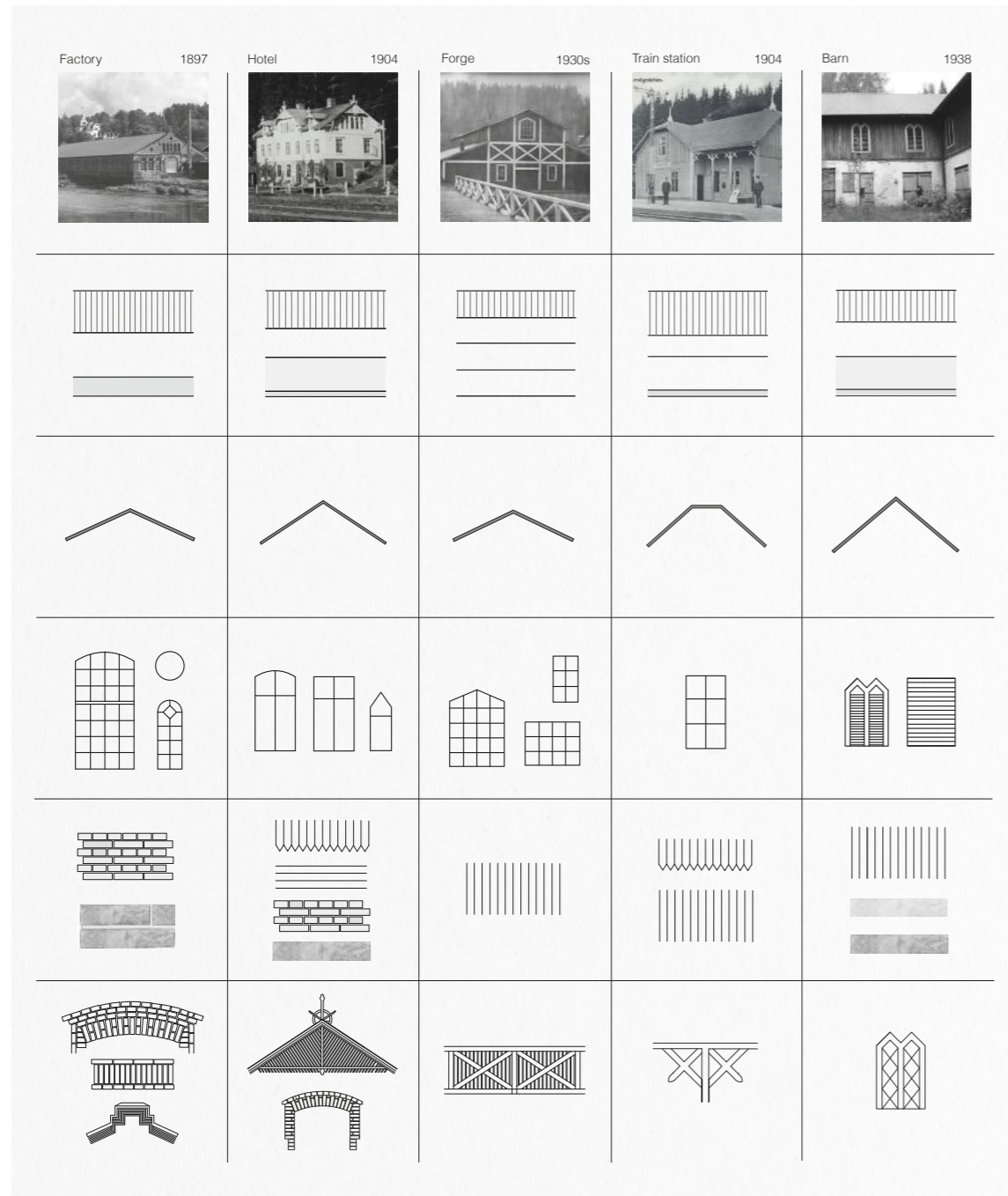


Fig. 52. Matrix of Architectural elements of the past and present, Strömsfors.

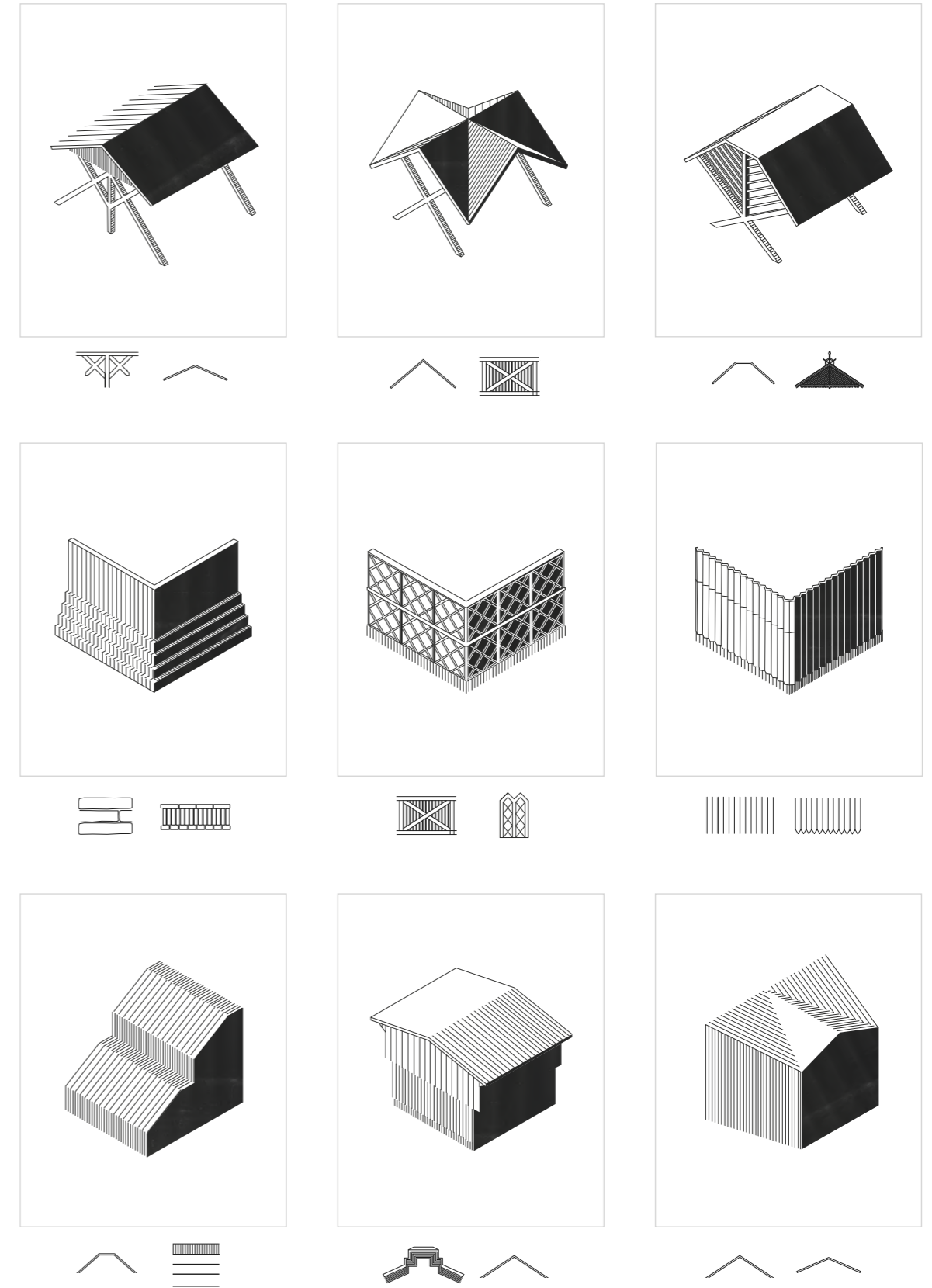


Fig. 53. Abstracted structure, pattern & form.

In-between space: Rurban square

The first zoom in of an in-between space is the rurban square. The main activation point is the proposed community building. Its placement and form are referencing the former utility-buildings that used to be there, creating smaller courtyards or framed spaces. Together with the other activation points, an outdoor stage & playground and the transformed market & greenhouse the space is framed and multiple in-between rooms created. These have a purpose of working multifunctionally, both for a smaller group of people, larger gatherings or people passing by. To let the functions in the buildings extend out when needed and also act as standalone rooms.

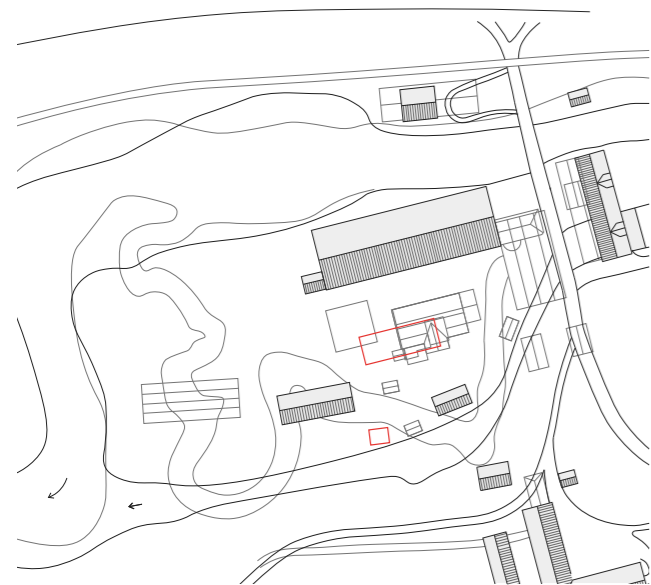
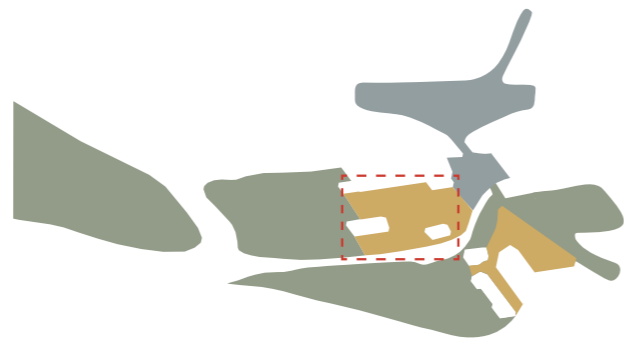


Fig. 54. Past and present buildings and spaces

- Activation points
- Past typologies



Fig. 55. Rurban square overview

- Market & greenhouse
- Stage
- Playground

Activation point: Community building 

The community building is a reinterpretation of the classic Swedish rural community buildings called Bygdegårdar. The phenomena arose during the early 1900s as a reaction to industrialism and the changing society. It served, and still serves in many cases, as place for the inhabitants to meet but also to preserve the local history.

This building has a purpose of being a central meeting place in the spirit of the Bygdegård, where spaces can be shared for various purposes, summarized in the diagram below.

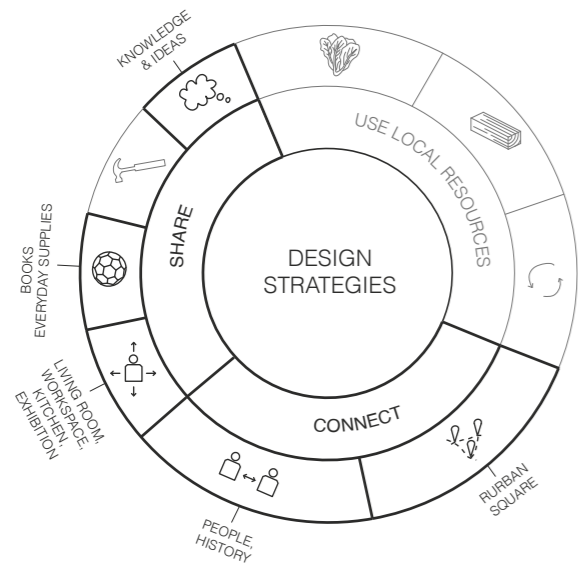
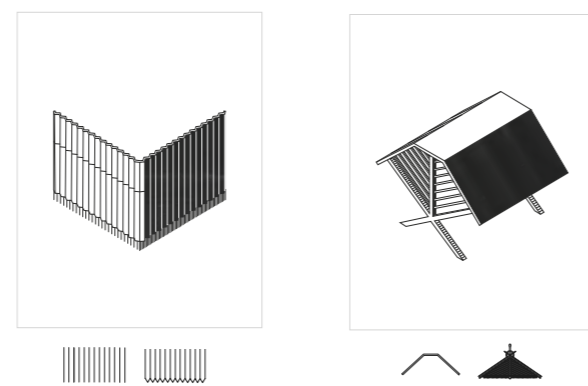


Fig. 56. Strategies applied to community building



Reimagined historical building features used as inspiration for the design.



Fig. 57. Community building: entrance and exhibition

The building has a passage through which the urban square is reached. On one side of the passage is an open exhibition space, on the other is the entrance to the building. The building is designed to function as one unit but also to be closed off in sections. That way the spaces can have multifunctional use that changes throughout the day and year.

- 1 Exhibition space
- 2 Storage
- 3,4 Bathroom
- 5 Passage
- 6 Entrance
- 7 Bathroom
- 8 Living room
- 9 Meeting/working/dining
- 10 Kitchen
- 11 Storage
- 12 Outdoor seating
- 13 Workspace

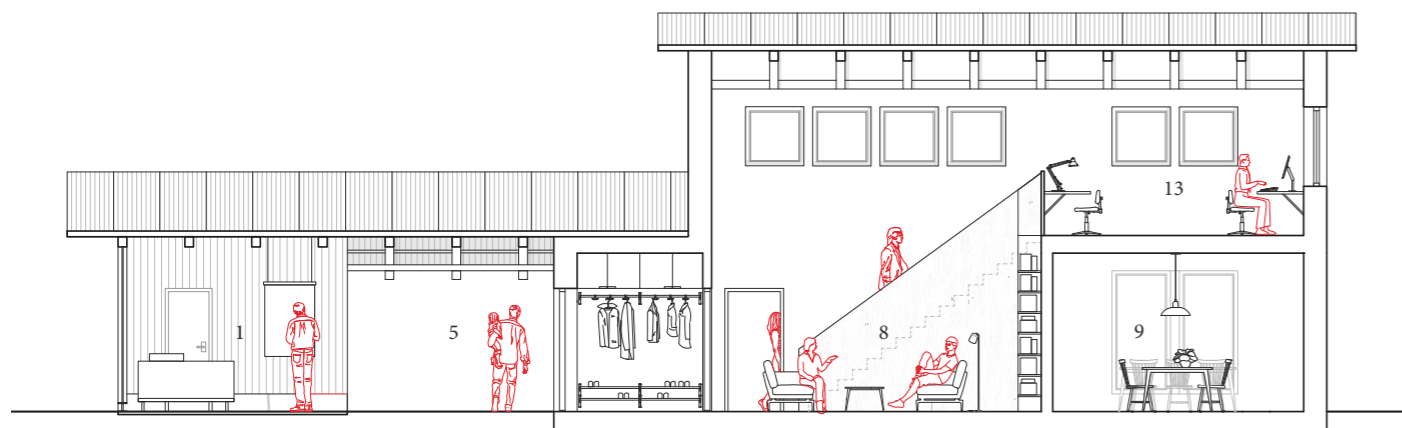


Fig. 58. Community building section
1:150

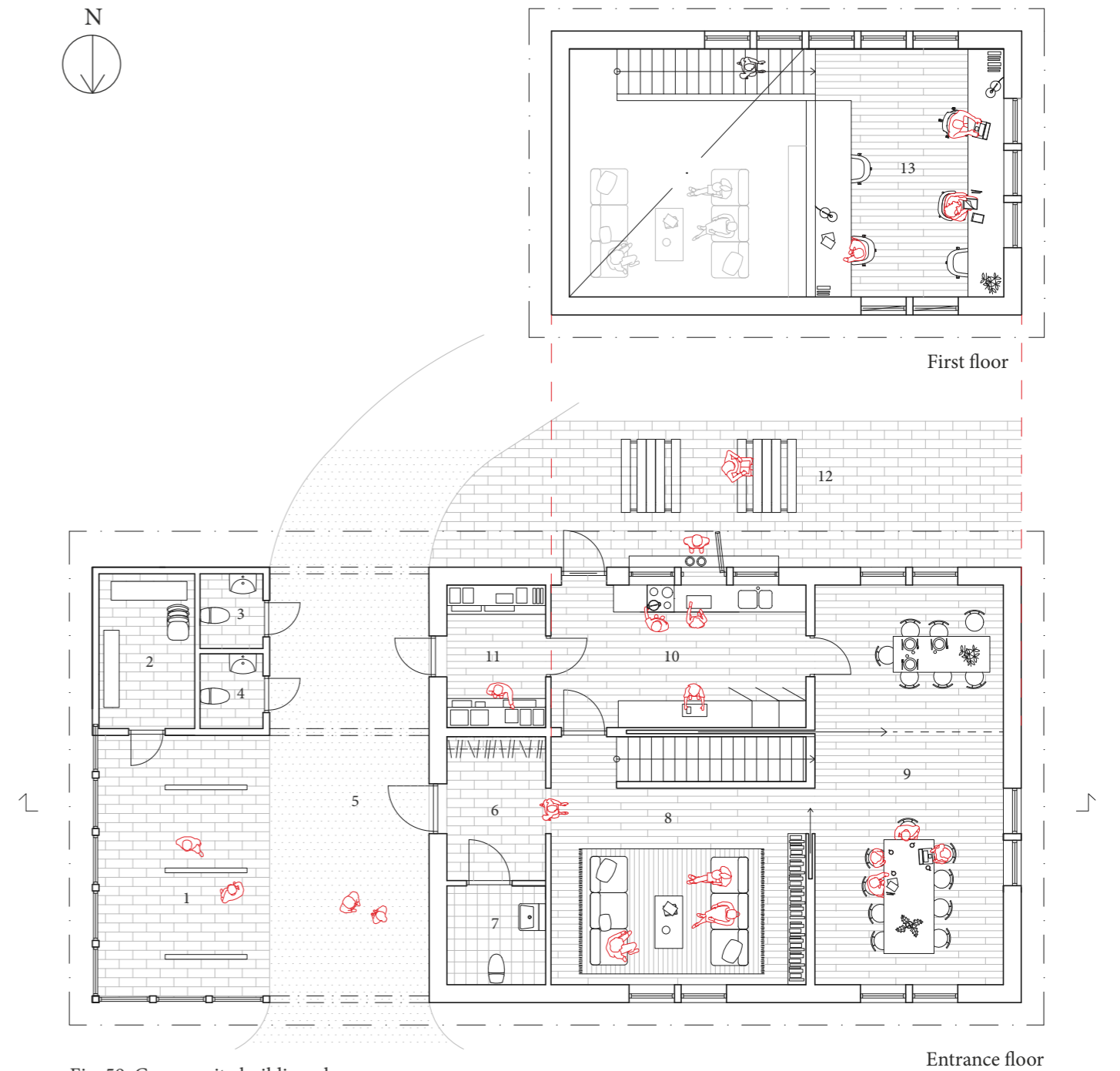


Fig. 59. Community building plan.
1:150



Fig. 60. Passage through community building, sightline towards bruket.

In-between space: Nature transition

The space to the west of the river, called Stinsens åker, has a tradition of being used as a Valborg celebration place. Its enjoyable location next to the river also invites car driven summer tourists to take a break here.

The proposed activation point is a viewing tower and hand pulled raft to pass the river. In that way connecting Stinsens åker and the residential area of Åstafors to the “Rurban square“ through a pathway where nature is in focus.

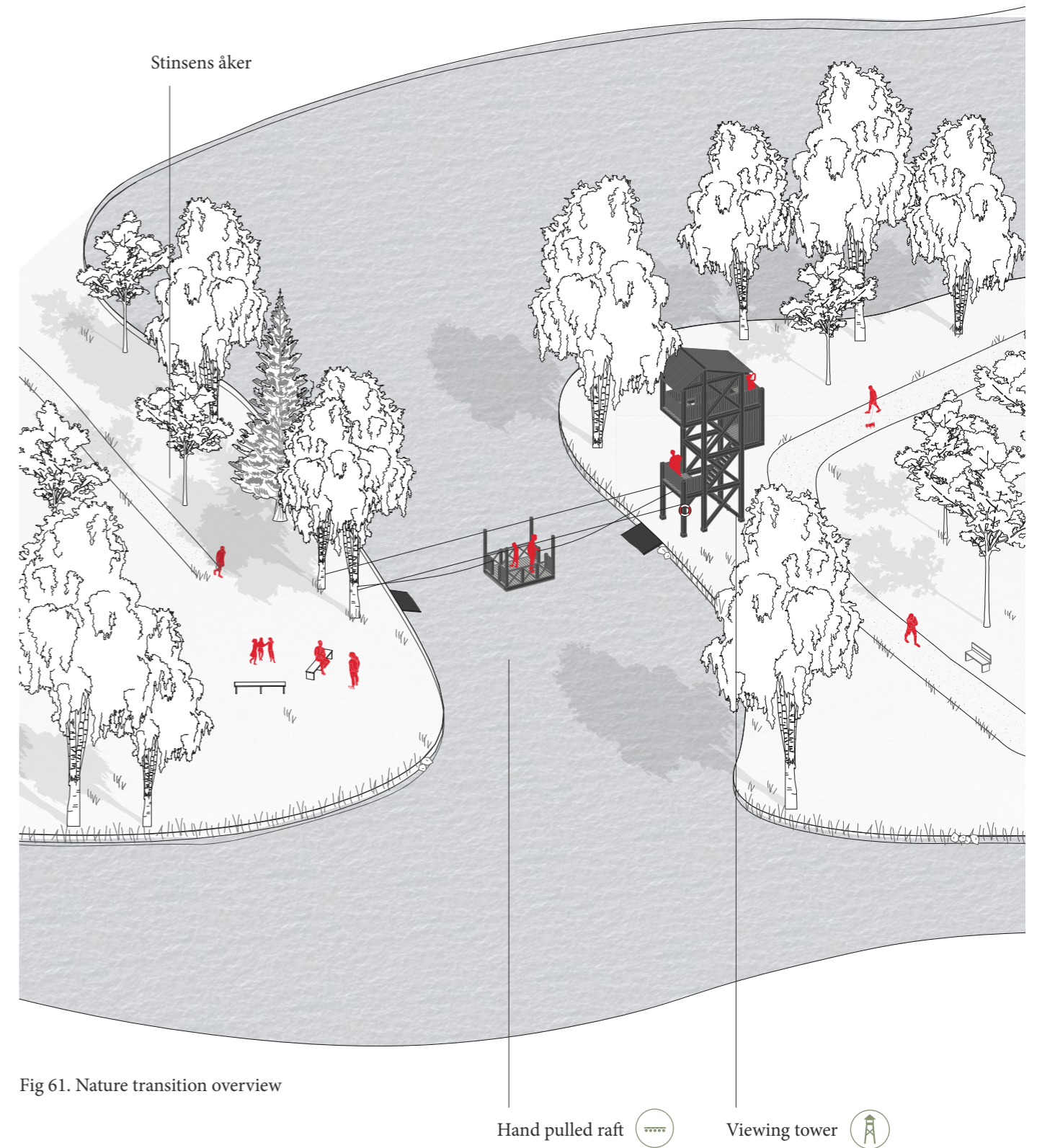
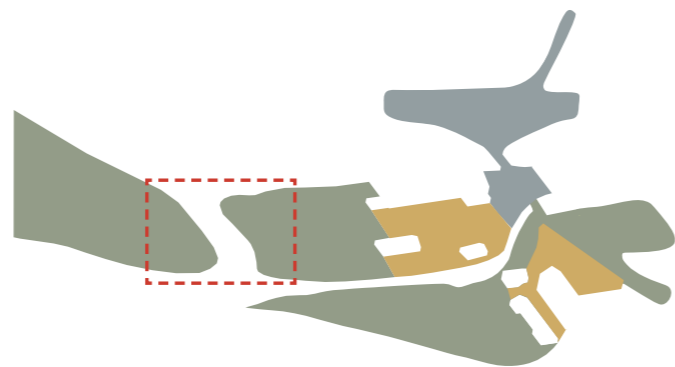


Fig 61. Nature transition overview

Activation point: Raft & tower



The raft and tower both share a purpose of activating the natural spaces and offering a different experience, ex. getting closer to the tree crowns and getting an overview of the site or being in closer contact with the water. Making the path attractive to use for both visitors and inhabitants.

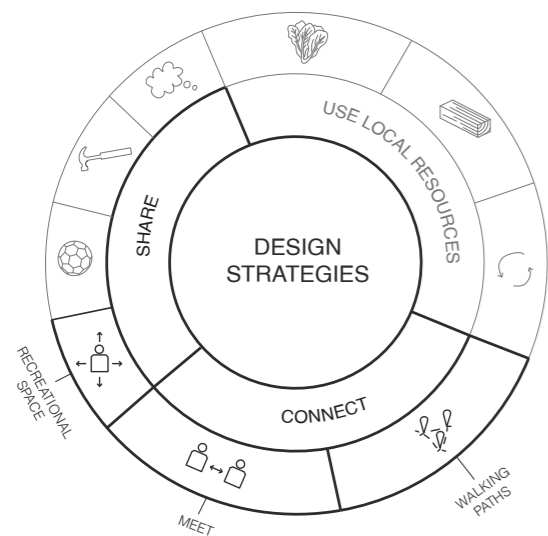
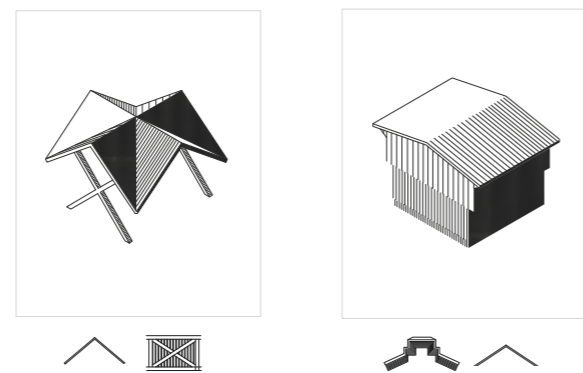


Fig. 61. Strategies applied to raft & tower.



Reimagined historical building features used as inspiration for the design.



Fig. 62. Perspective of viewing tower

In-between space: Entrance area

This space is characterized by many connections converging here. The roads from the residential areas connect to the main road, but lacks pedestrian walkways or passages over the road. The cycle path also connects to the road leading in to the former business-area.

The Strömsfors bus-stop is currently located near the former train station, but is in this proposal moved to this entrance area, creating a multifunctional transport hub welcoming inhabitants and visitors to the area. Additional pedestrian crossings and walkways ties the area together.

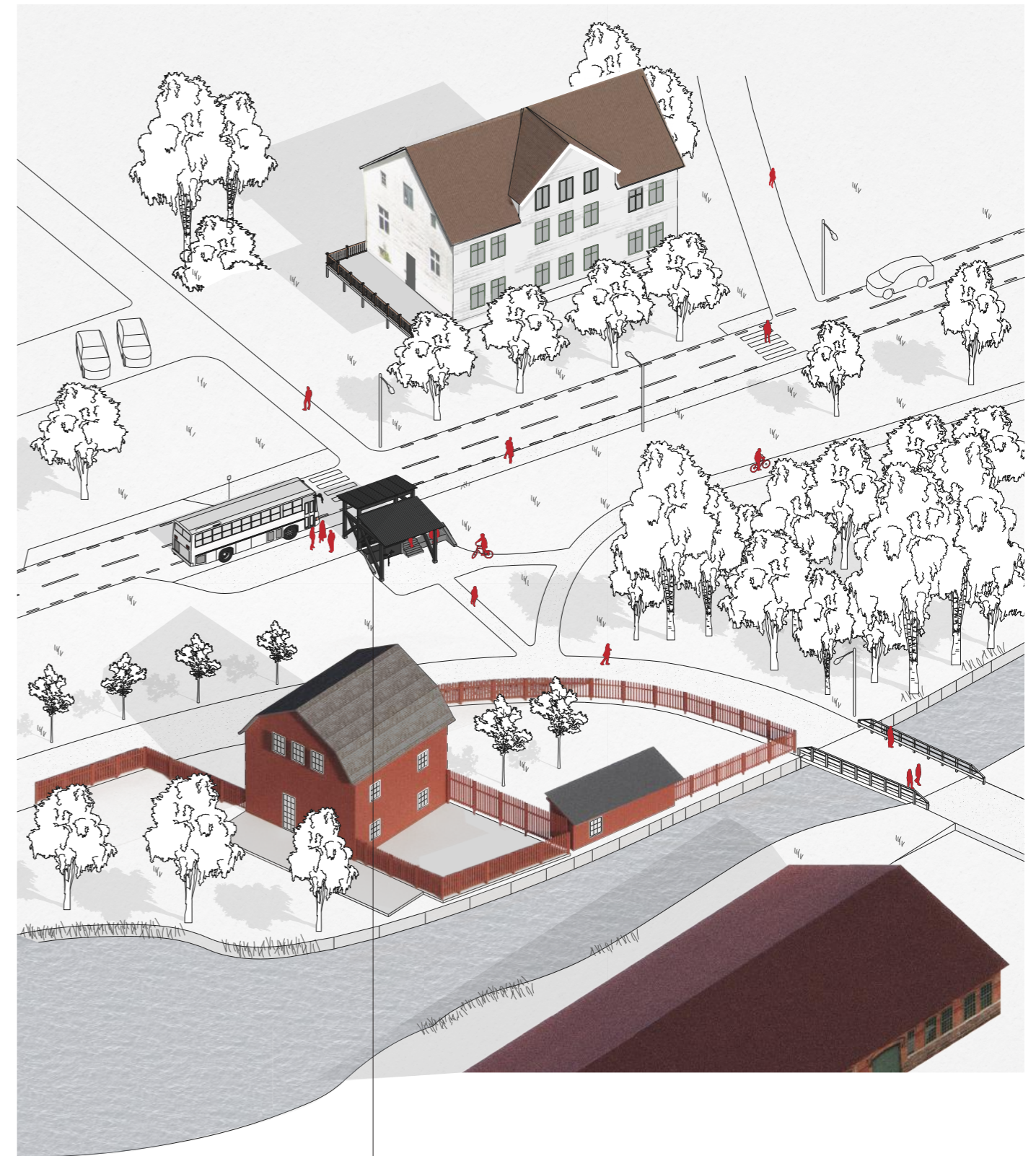
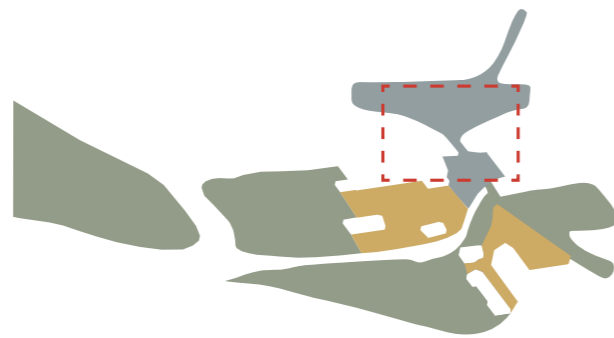
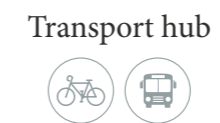




Fig. 63. Entrance area overview



Activation point: transport hub  

The transport hub hosts a bus stop, bicycle parking and shared space for bike repairs and maintenance. Stairs connect the two levels and serve as a passage for pedestrians, further activating the space. It also has a notice board for communication within the community.

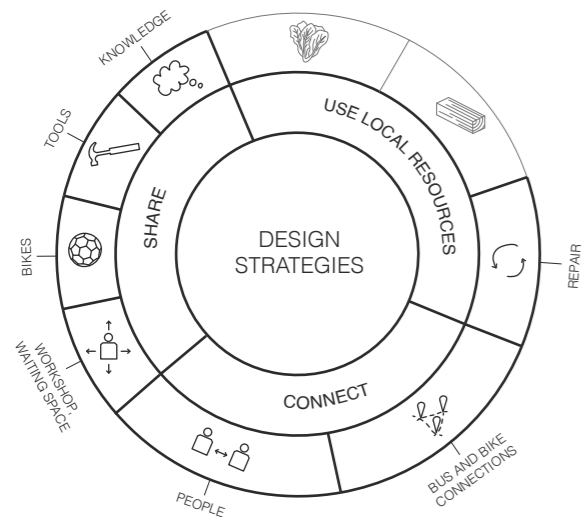
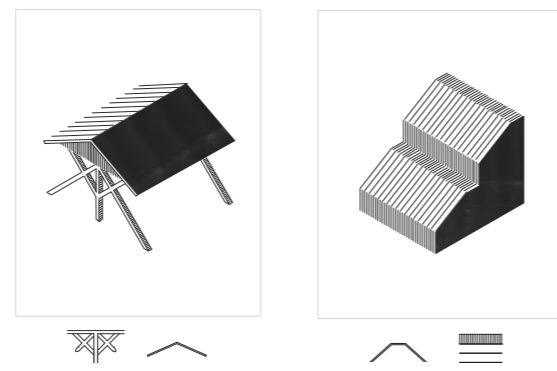


Fig. 64. Strategies applied to transport hub



Reimagined historical building features used as inspiration for the design.



Fig. 65. Perspective of transport hub

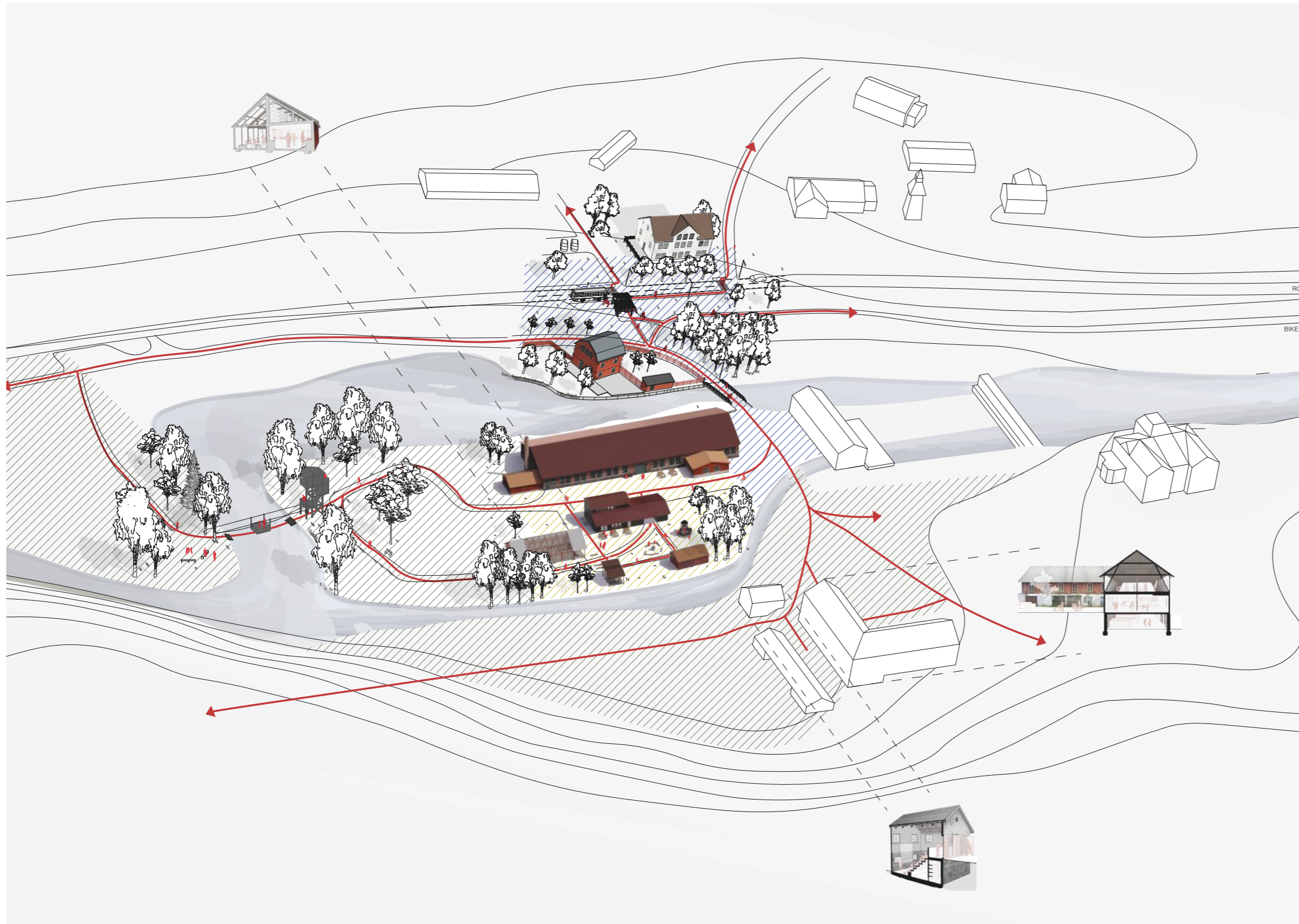


Fig. 66. Summary of transformation

Time perspective

This illustration summarizes the proposed interventions and changed movement-flows in Strömsfors. One important factor in this process is the time perspective, deciding factors for the priorities and order of interventions. Societal enablers from the scenarios, impacting funding and time management at large, would be key factors in a transformation. Stepping aside from those, I believe that the community's needs calls for a common space to meet. Therefore, activating the rural square for the public would be a logical starting point. If the assumption is that the community builds the structures on their own, there is also the argument to start with smaller structures. To create a process of building community while building and transforming the physical space, letting local interests and engagement lead the way.

Discussion

Aim

The aim of this thesis has been to explore future scenarios for development of the Swedish rurban context using alternative development models. The purpose has been to visualize development beyond the norms of economic growth, alternatively exploring strategies of collaborative economy and local self-sufficiency. To investigate what different conditions and opportunities for smaller communities could be created through using strategies born out of these themes.

Rurbanity and heritage discourse

The question of rurbanity, an in-betweenness of urban and rural, is a central element of this thesis. The smaller rurban communities were often formed around one dominating industry or business, and has through history generally lost its job opportunities and services due to urbanization processes. The current infrastructural conditions allow for much larger every-day movement patterns for people. It is not unusual to live in one place, work in another and spend free time in a third. This enables life in smaller villages to have an urban dimension while the local conditions are imminent rural. Solely residential villages cause a reduced social dimension in the local context.

There is also the aspect of heritage, in many cases industrial and cultural related to past industries and lives. Traces of time are left through the built environment and is an intrinsic value of the place for the inhabitants. There are many examples of unused former industrial buildings being repurposed into cafés, studios or museums that help to revitalize the site. The emotional values together with the material assets in abandoned buildings can be enabling factors for new economies and societies. In that way heritage can work as a driving force in transformation of these areas.

The thesis site is Strömsfors, a former mill town in Västergötland, Sweden. It is currently mostly residential, but during the latest decade two heritage buildings have been transformed into event space and hotel, attracting tourists. The site has many spatial qualities that could be defined as rural but the traces from industry, the new functions and the geographical in-betweenness causes it to also possess an urban dimension.

Process reflection

The themes of collaborative economy and local self-sufficiency are researched through a report exploring future scenarios from a trans-disciplinary societal perspective. It was evident that the different narratives are more or less attractive to different groups and that no scenario narrative is applicable everywhere. Therefore, they needed to be contextualized to the rurban context and adapted into principles that apply to spatial design. This process was characterized by starting general with societal enablers for change and then successively narrow it down to design principles relating to different scales within the rurban context. Using the *Matrix of convivial technology* (Vetter, 2017) as framework for definitions in this process was useful and contributed with a concrete dimension to an otherwise very generally formulated theory. When applying the design principles to Strömsfors and creating site sensitive design strategies, there were a risk of losing important factors. The conclusions drawn from this process is that the act of filtering the theory through the context implies that the factors valued as most important acquire more focus. Architecture and planning practices are largely about defining priorities.



Design reflection

The first thesis question, “how can the needs for rural communities in future scenarios of collaborative economy and local self-sufficiency be spatialized?” is largely dependent on the local context. Strategies originating from the alternative development themes can suggest what new functions to add in a transformation and propose strategies that would need certain societal enablers to be realized. But for the design to be grounded in reality, it has to be equally determined by local spatial conditions, local stakeholders and interest and engagement in the community. This thesis uses the purpose of visualizing interventions that individually are feasible in current conditions but might need enabling factors such as changed economies or work situations to be implementable in a more holistic manner or bigger scale.

The conclusions drawn from the design implementation in Strömsfors was the need for public spaces for sharing, connecting and using local resources. The network of functions and activated in-between spaces aims to create more common rural space. Reimagining the former public spaces of Strömsfors such as the local factory, church, restaurant or train station. In contrast to urban approaches, lack of space is rarely an issue, but rather to activate it and take advantage of its natural qualities. These spaces should relate to the smaller number of inhabitants in these communities. One way to do that in relation to resource efficiency is to create multifunctional spaces where use can differ during the day or year. The desired increased sense of community could cause a growing will for inhabitants to participate in sharing practices and local resource use.

The digital dimension should also be considered when designing these spaces since it is a huge part of our everyday lives and supposedly even more so in the future. The combination of digital networks that also have access to physical spaces can be an effective combination. That way certain acts of sharing can happen digitally and others in a physical space, enabling the space to be used more flexibly and effectively.

An important aspect that this thesis has limited from exploring in depth is the community driven, bottom-up processes that drives these transformations today. The thesis focused on the future scenario narratives and the framework they formed. A possible further development of the thesis is therefore to engage more with the local community and explore the mechanisms of participatory design in this context.

From my research I have concluded that the role of the architect in these types of processes can be different from the norm. The act of concretizing theory and research into graspable matrixes and design strategies is one important part which I worked with in my matrix (available also in the appendix). This aspect can be seen as a design result in itself, providing a long-term perspective and creating a framework for design which can be beneficial for the community. There is also the aspect of identifying existing spatial qualities and visualize the different opportunities buildings and spaces hold. Doing so, enabling increased resource efficiency and possibly sparking ideas.

The second question, “how could the spaces be characterized to relate to the identity and history of a site while proposing an alternative future?” is approached using a method of abstracting past and current building characteristics into new design elements, but also by analyzing the past spatial conditions and typologies. This method was useful when starting out the design work, but there is also a risk of getting stuck in past expressions. It is important to also suggest new expressions and narratives that mirror the changed ways of life according to the scenarios.

Conclusion

This thesis adds a spatial and architectural interpretation of the general themes of collaborative economy and local self-sufficiency in a rural context to the discourse. It explores a combined process of working with alternative futures beyond the norm of economic growth as driver and discusses aspects of heritage. In conclusion, the thesis expresses the importance of contextualizing theory and working in a site-specific manner. It does not offer definitive answers but raises questions and visualizes one of many possible futures.

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Figures

Figure 1. “Throwaway living” Originally published by LIFE Magazine in 1950s. [Photography] by Peter Stackpole. Dieline (2020-10-03) *The History of Plastic: The Invention of Throwaway Living*. <https://thedieline.com/blog/2020/3/10/the-history-of-plastic-the-invention-of-throwaway-living>

Figure 12. Väveriet. [Photography] by Ken Buslay. ArkDes thinktank (2021). *Livskvalitet i tid och rum*. <https://arkdes.se/wp-content/uploads/2021/06/arkdes-thinktank-rapport-2021-68s.pdf>

Figure 13-18,19-20,22-23. Archive images Strömsfors. [Photography] Digitalt Museum. Public Domain Mark. <https://digitaltmuseum.se/search/?aq=owner%3A%22SBS%22&q=str%C3%B6msfors>

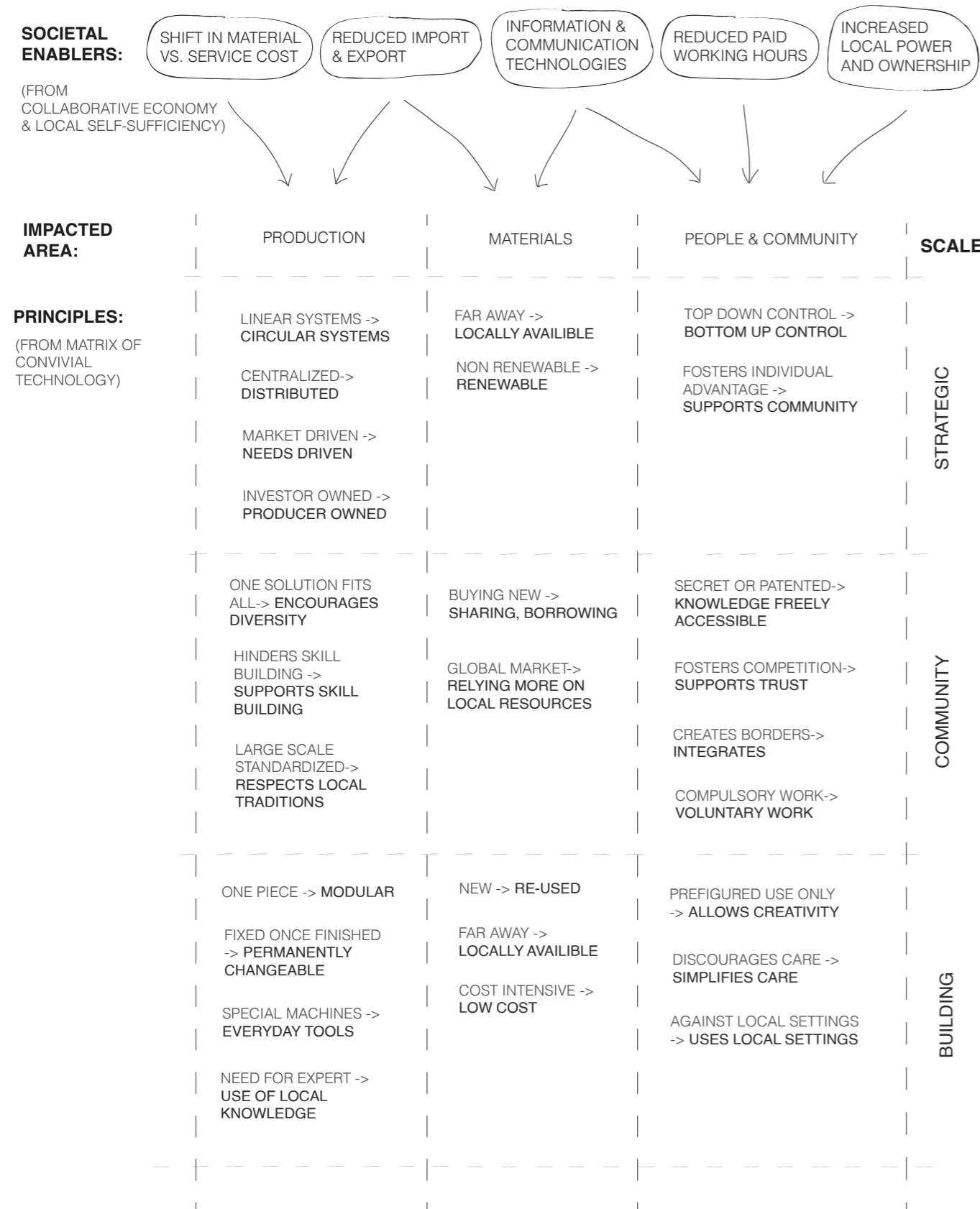
Figure 25. Villa Strömsfors. [Photography] Borås Tidning (2014-02-19) “Villan såld - för mångmiljonbelopp” <https://www.bt.se/svenljunga/5-villan-sald-for-mangmiljonbelopp>

Figure 35. Typologies. Lateral Office (2019). *BOOM/BUST*. <http://lateraloffice.com/BOOM-BUST-2019>

Figure 36. R-urban local ecosystems. Illustration by AAA through Petrescu, D., Petcou, C. & Baibarac C. (2016) *Co-producing commons-based resilience: lessons from R-Urban*. <https://www.tandfonline.com/doi/full/10.1080/09613218.2016.1214891/>

Appendix

From theory to design principles



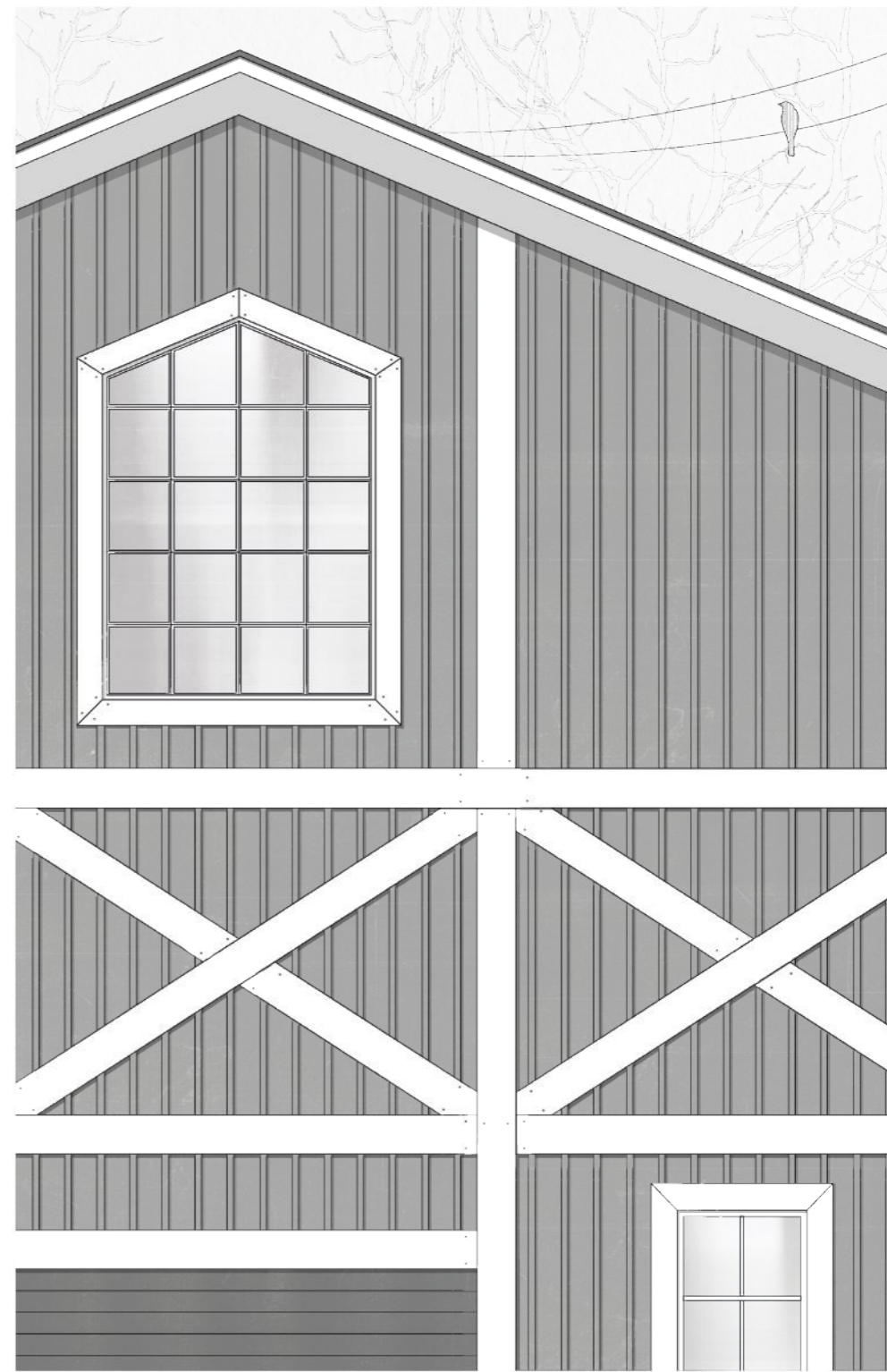
Pre-study of historical facades in Strömsfors

Searching for building characteristics and to visualize a memory or a moment in time. Some buildings do not exist anymore, others have been transformed and some have gone through decay.





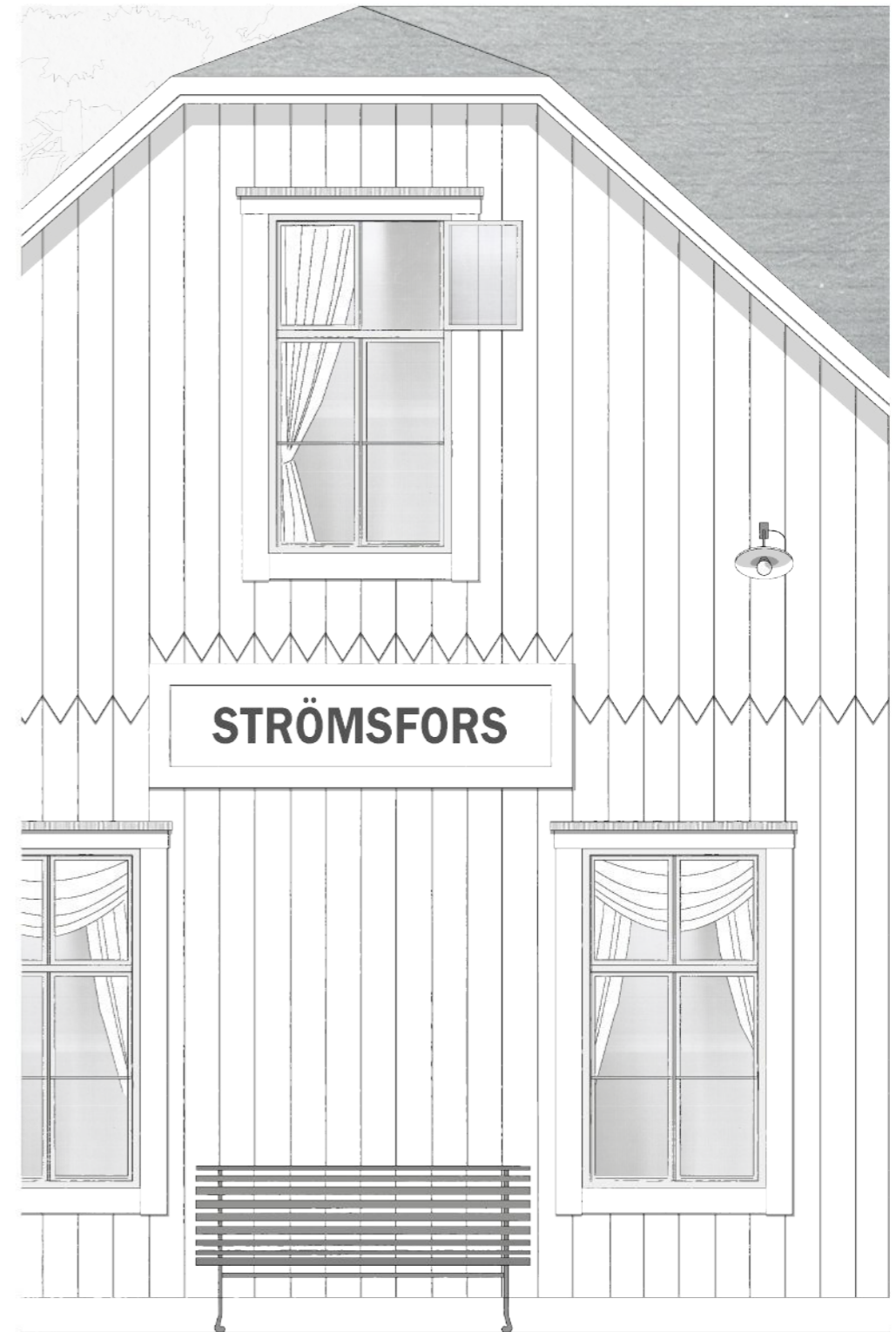
Factory (1897)



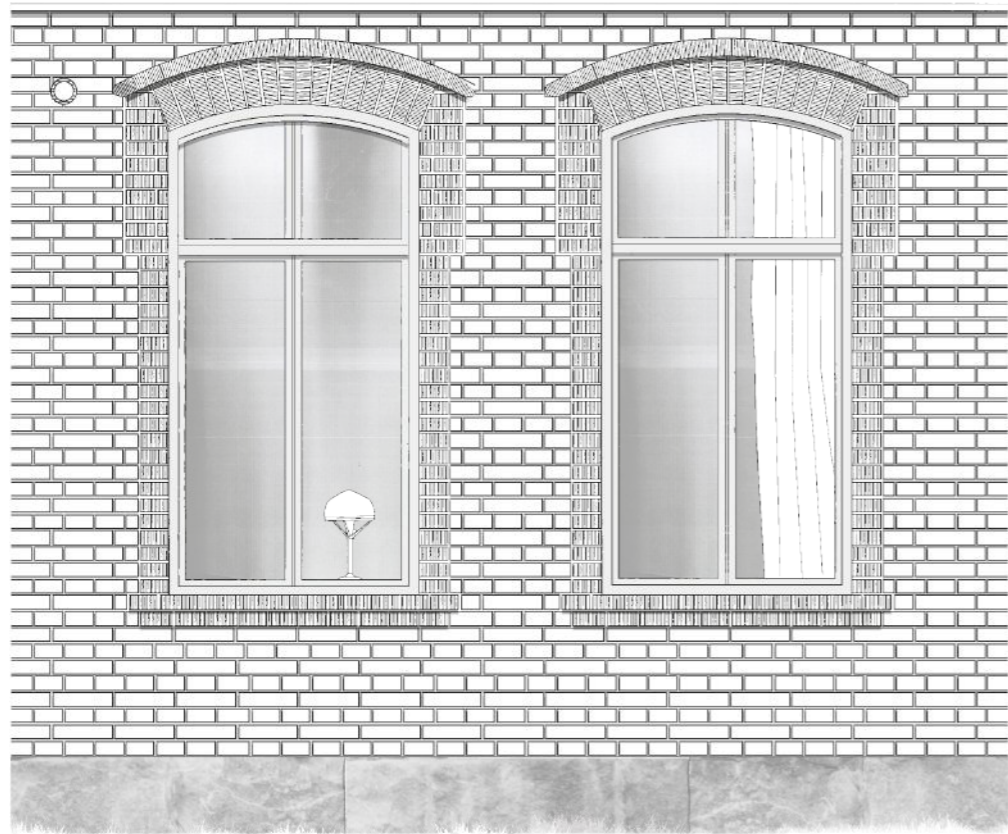
Forge (1930s)



Barn (1938)



Train station (1904)

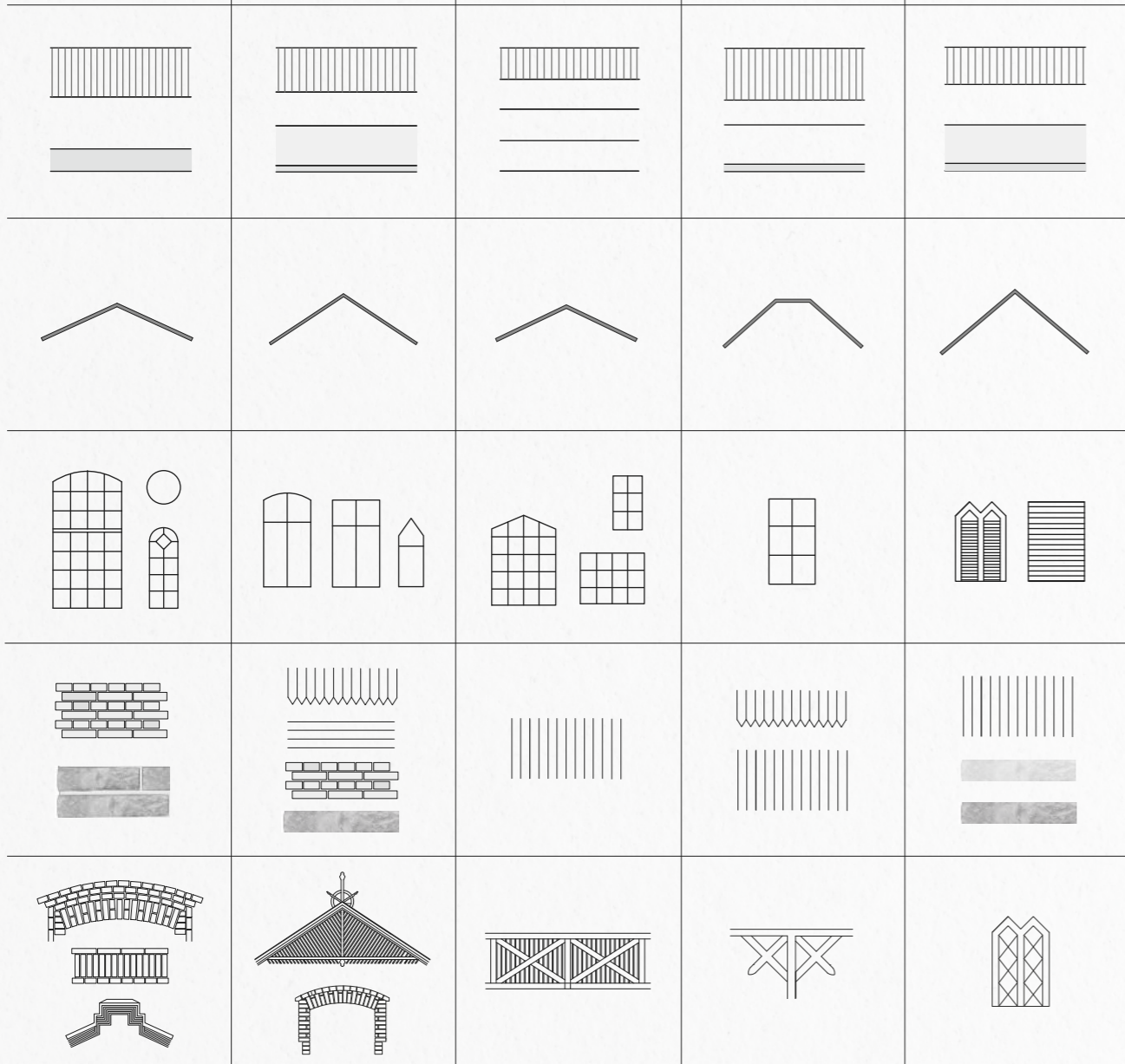


Hotel (1920)

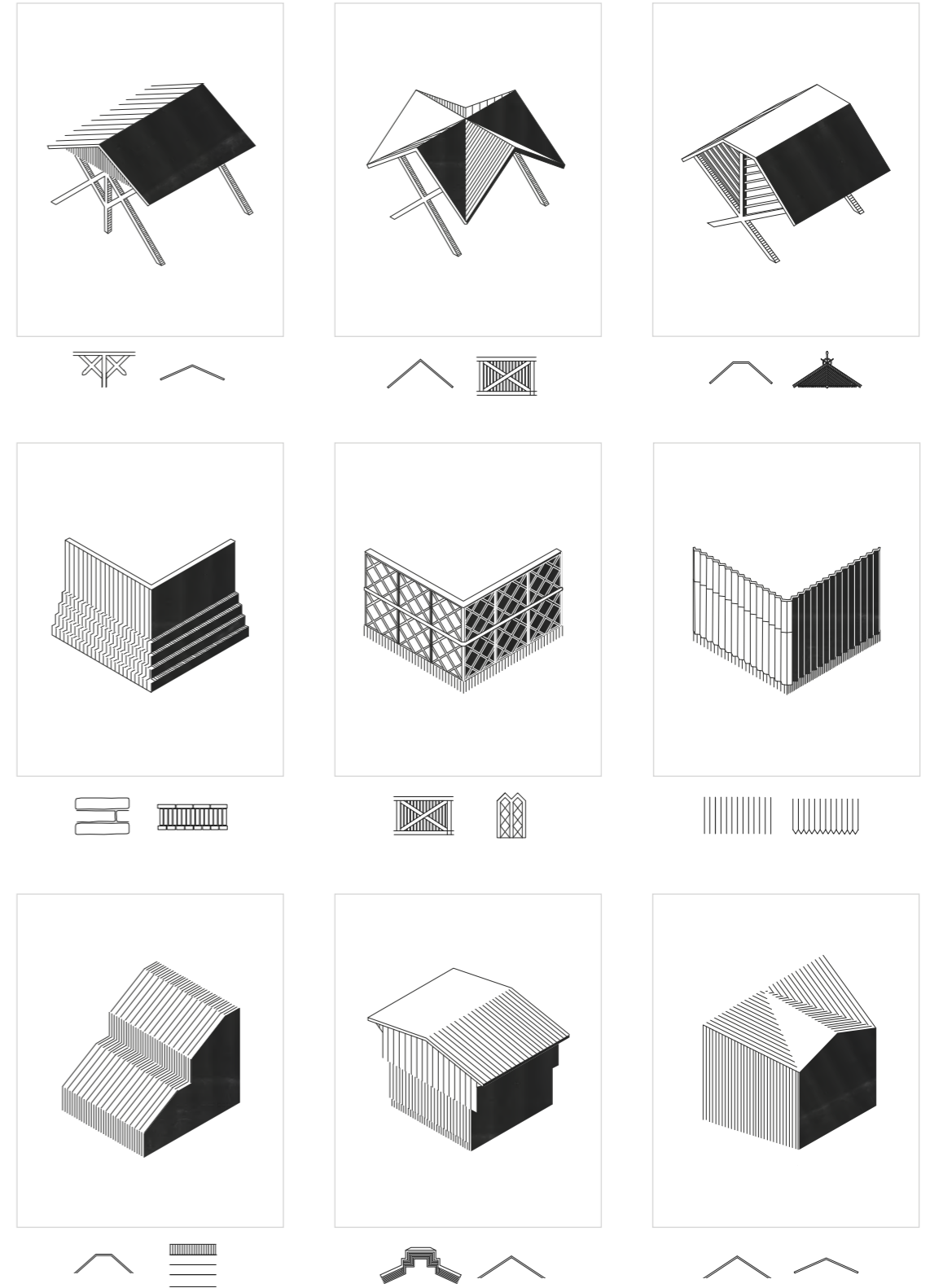


Hotel (1920)

Architectural elements of the past



Abstracted structure, pattern & form





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Lisa Johansson
Master's thesis
2023