

MATRUM

A space for learning, experimenting & sharing around food

Raquel Hernández Pacheco

Chalmers School of Architecture
Department of Architecture and Civil Engineering

Examiner: Marco Adelfio
Supervisor: Ida Röstlund

MATRUM

A space for learning, experimenting & sharing around food

Raquel Hernández Pacheco

Chalmers School of Architecture

Department of Architecture and Civil Engineering

MSc in Architecture and Urban Design

Gothenburg, Sweden. Spring 2021

Direction: Rurban Transformations

Examiner: Marco Adelfio

Supervisor: Ida Röstlund



CHALMERS
UNIVERSITY OF TECHNOLOGY

Abstract

We live in a globalized world with hyper-connectivity: individuals and communities are more connected than ever before.

Food-related issues emerge when discussing about globalization: on the one hand, the global flow of people leads to multiculturalism and the opportunity of sharing food knowledge which previously was kept inside the physical borders. On the other hand, there is the threat of homogenization. New global standards around food are being created, to the detriment of local food cultures and its social structures, which are based on centuries-old place identity. Knowledge about food is disappearing as its production is becoming more and more industrialized.

This thesis explores the creation of a platform in the urban context, a *Matrum*, which stimulates a local food community, giving the tools necessary to engage people to question their beliefs around food, seek knowledge for better food management, and sharing this knowledge with their peers. Its strategy is about connecting the geographical preconditions of a place with the local knowledge of its community, drawing a difference between what traditional and local food knowledge is.

The process starts taking references in food culture, both in the Nordic and Mediterranean countries, learning how they relate to place and identity. Parallely, a context study based on site analysis, observation and statistical data is carried out to understand the local community and explore the context-dependent qualities required for such platform to exist.

As a result, the *Matrum*, or “food room”, is a pavilion-like structure in the middle of a park in the neighbourhood of Kvillebäcken in Gothenburg. This room serves as a center of support for activities related to food for the surrounding community, focusing on the local aspect: it has a very close connection to its geographical and social context. As a last step, there is a brief study on a speculative implementation of a network of *Matrum* on a city scale.

Keywords : matrum, food culture, local, eating, cooking, farming, community

Manifesto

mat-: in Swedish, food
-rum: in Swedish, room

Matrum is a meeting point for a community, where everyone is welcome to come in and talk, learn and experiment with food. A platform where old and young meet and learn from each other.

The trigger for the creation of a micro-food culture, where there is a connection between the local food, depending on climate and place, and the local food knowledge, depending on the people who lives there.

Imagine a place where someone can show you how to succeed in growing tomatoes, and then learn how to cook a tomato sauce, storing the flavour for months after harvesting. Or where you can finally learn ways to store the excess of apples from your garden that usually go to waste.

That is the *Matrum*.

Table of Contents

Abstract	5	Stakeholders & users	48
Manifesto	7	SWOT	50
About the author	10	Summary	51
1. Introduction	11	4. The Room	53
Problem statement	12	Concept	54
Purpose	14	Location strategy	56
Research questions	15	Context-dependency strategy	58
Method	16	Building design strategy	60
Delimitations	17	Proposed activities	63
2. Background	19	Program	65
Glossary	21	Site plan	66
Food culture	23	Ground floor	68
Sweden: food history	24	First floor	69
New Nordic Kitchen	26	Façades	70
Nordic countries vs. Mediterranean Europe	28	Sections	72
Reference projects	30	Images	74
Summary	35	A network of rooms	76
3. The Site	37	5. Discussion & Reflections	79
Municipality context	39	Discussion	80
Borough of Lundby	41	Reflections	83
Flunsåsstråket	43	References	85
Fjärdingsparken	44	Appendix (sketches)	91

About the author



The author was born and raised in a rural environment in Northeast Spain, near the Mediterranean sea: food is a part of her culture and heritage.

She moved to Gothenburg, Sweden when she was twenty-two years old and has been living there since.

Defined by her dual identity, this thesis is part of her journey as a person who has two homes, trying to relate her story to others through food, culture and architecture.

1. Introduction

Problem statement

We live in a globalized world with hyper-connectivity: individuals and communities are more connected than ever before.

Globalization has a list of consequences that can be viewed as both positive and negative depending on their context (see Diagram 1). On the one hand, the global flow of people leads to multiculturalism and the opportunity of sharing food knowledge which previously was kept inside the physical borders. On the other hand, there is the threat of homogenization, as everyone has access to the same resources worldwide (DeSoucey, 2010).

Food-related issues emerge when discussing about globalization, as they are embedded in the culture of a place and its social structures (Touzard et al., 2016). To begin with, the act of eating is becoming individualized and dehumanizing (Marshall, 2005). The access to food makes it easier for humans to keep us satisfied on a biological level without the need of learning how to cook or knowing where the food comes from. The social structures around food are disappearing.

New global standards around food are being created, to the detriment of local food cultures that are based on centuries-old place identity and knowledge (DeSoucey, 2010). Knowledge about food is being lost as its production is becoming more industrialized.

As important as the cultural and heritage issue is the environmental one. The global food production is not sustainable; it is causing deforestation, greenhouse gas emissions and loss of biodiversity among other problems (Ritchie and Roser, 2020). There should be initiatives that encourage consumers to eat more local and educate themselves on what they eat, as well as teaching local producers of the potential of both traditional and new crops. These initiatives could take advantage of the resurgence of localism and local products consumption triggered by the recent pandemic (Duncan, 2021; FAO, 2020).

There must be a call to action to benefit from the global context we live in and the good opportunities that globalization offers. There should be a strategy to connect the multicultural knowledge to the locality of a place. Traditional knowledge, the one embedded in the cultural heritage, is not the local knowledge anymore, as people move around more than ever before.

This approach could rescue the social and cultural opportunities around food from disappearing, while implementing them in the current global context. It could generate a food culture that is in flow, as communities and information are nowadays.

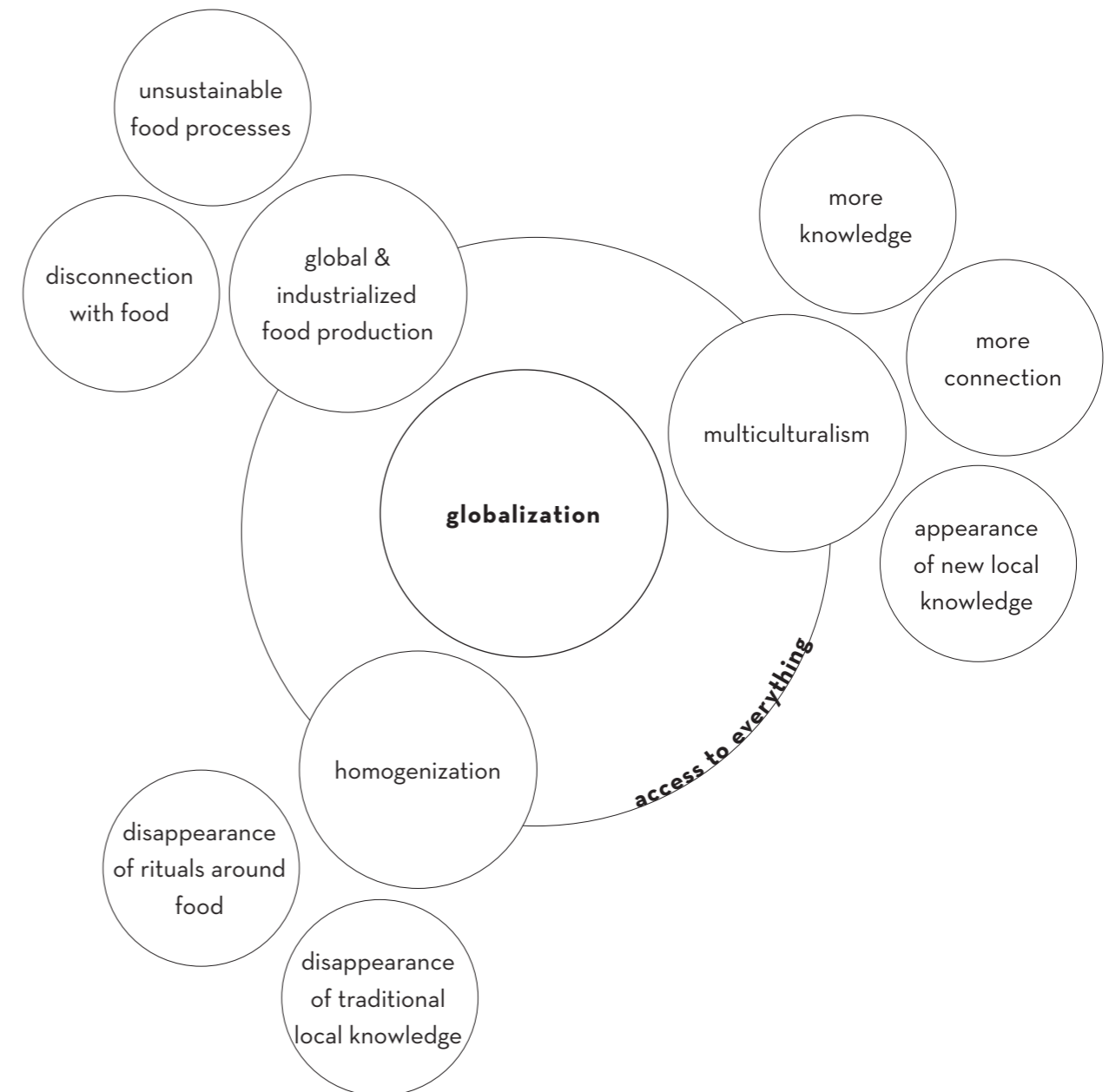


Diagram 1. Author's work on consequences of globalization, based on information from literature (DeSoucey, 2010; Marshall, 2005; Ritchie and Roser, 2020).

Purpose

The main purpose of this master thesis is the design of a *Matrum*, in Swedish “food room”.

This multipurpose space for everything related to food and food knowledge, from farming to cooking and eating. This spaces is closely connected to its local context. It is built for the communities surrounding it, with no distinction to cultural and socio-economical backgrounds or age: school kids can learn about healthy eating and where the food comes from (under the platform of the already existing school subject *hemkunskap*), young adults can learn to grow their own food in urban farming schemes, and older people can share their gained knowledge with their neighbours.

The project aims to create a platform where knowledge about food can be shared. In traditional ways, the knowledge is shared from generation to generation, but new ways can be implemented, giving the tools necessary to engage people to question their beliefs around food and seek knowledge for better food management.

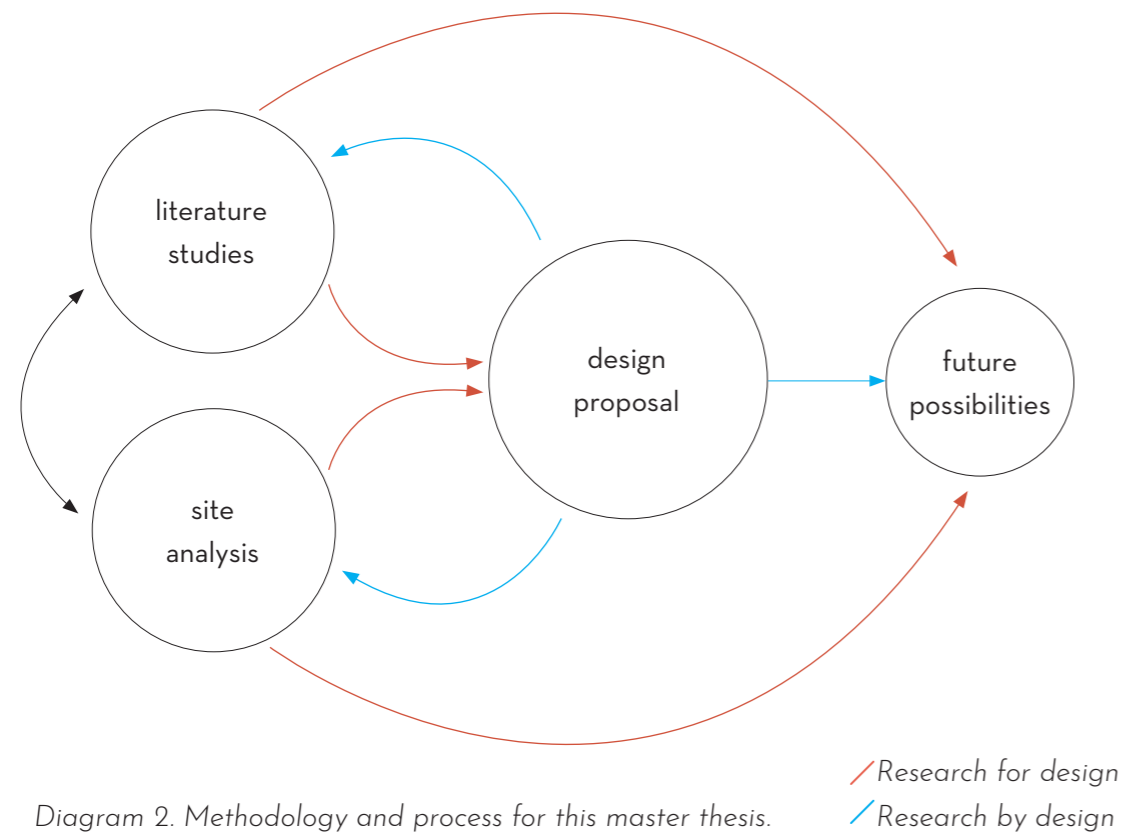
The testbed for this project is Fjärdingsparken, a park located in the district of Kvillebäcken, in the north part of the city of Gothenburg. This area is close to both industrial hubs and the center of the city. It is under intense urban development, which is transforming both the building environment and its community.

Research questions

How can architecture and urban planning strengthen the cultural aspects around food and use it for community development?

How would the concept of a *Matrum* work as a community development platform in the local context of Kvillebäcken, through a building design?

Method



There are different methods that are relevant for producing this master thesis. They all involve both research for design and research by design types of research design (Hanington and Martin, 2012).

The starting point is building a theoretical background based on literature studies, reading references in food anthropology in the Mediterranean and Nordic countries (Bergflødt, 2012; DeSoucey, 2010; Hermansen, 2012; Jönsson, 2020), followed by the analysis of architectural reference projects to explore in which spatial way they deal with food-related issues.

Parallely, a context study based on site analysis, observation and statistical data is carried out to understand the local community and explore

the context-dependent qualities required for a food-related platform to exist.

The knowledge gained on the background and site studies is translated into a design proposal, the core of the master thesis: a *Matrum*, or food room. This space has a very close connection to its context, and its design development is based on the key aspects taken from both the literature studies and the site analysis.

The last step of the design process is a brief speculative exploration on how a similar space could be implemented in other sites.

All this methods have been complemented with continuous documentation production and self-evaluation.

Delimitations

THIS THESIS IS ABOUT:

A space for community development.

Food: farming, cooking and eating.

A space for sharing knowledge between parts of the community with different cultural and socio-economical backgrounds, that brings traditionally rural aspects of food production to the urban context, and engages people to get knowledge about the food chain and sustainable food choices.

A space with a strong connection to its local context, that could be replicated in other sites, but should always be adapted to them.

THIS THESIS IS NOT ABOUT:

It is not only a community kitchen.

Even if community development and strengthening is at the core of the purpose of the project, it is not a participatory design process.

It won't take into account food technology or food science.

It doesn't focus on local context building materials.

The designed space is not movable to other sites, since it depends on its local context.

2. Background

Glossary

ANTHROPOLOGY

: the study of human beings and their ancestors through time and space and in relation to physical character, environmental and social relations, and culture

CULTURE

: the customary beliefs, social forms, and material traits of a racial, religious, or social group

also : the characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time

FOOD

: material consisting essentially of protein, carbohydrate, and fat used in the body of an organism to sustain growth, repair, and vital processes and to furnish energy

HERITAGE

: something transmitted by or acquired from a predecessor

PATRIMONY

: an estate inherited from one's father or ancestor

TERROIR

: the combination of factors including soil, climate, and sunlight that gives wine grapes their distinctive character

TRADITION

: an inherited, established, or customary pattern of thought, action, or behavior (such as a religious practice or a social custom)

(Merriam-Webster, n.d.)

Food culture

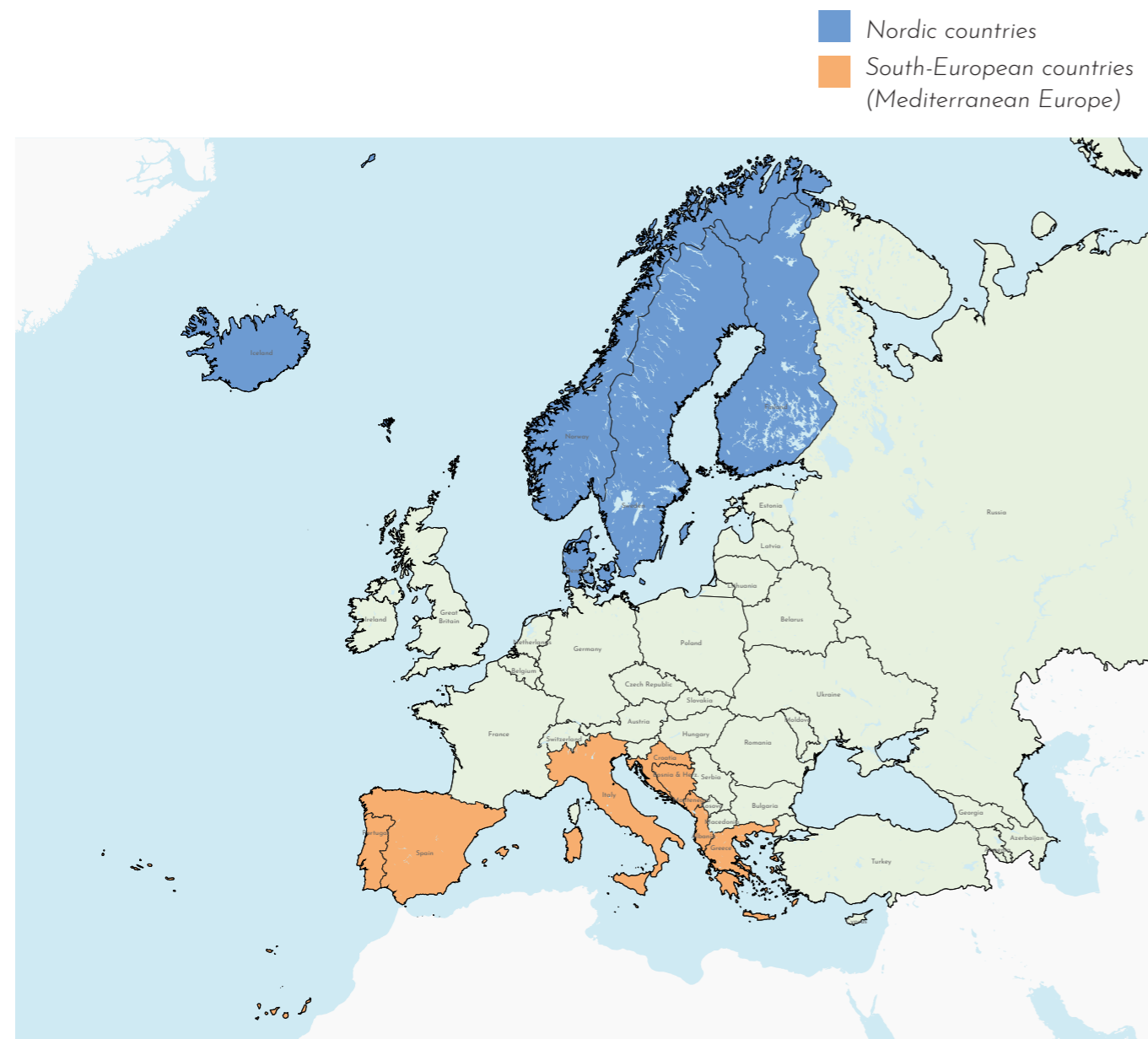


Figure 1. Highlight on the Nordic countries and the South-European countries by the Mediterranean sea. Base layer retrieved from FreeVectorMaps.com (2021).

Food culture refers to the practices, attitudes, and beliefs as well as the networks and institutions surrounding the production, distribution, and consumption of food, the material our body uses to sustain growth, repair and, basically, survive.

Since food is one of the physiological needs of the human species, it is something that all humans have in common. The culture part adds on the way human beings relate to the food, both at individual and community level; it includes heritage, traditions, ethnicity and even environment. While food is the fuel, the culture shapes the people's identity (Mintz and Du Bois, 2002).

It is important to frame this concept because depending on the culture, people relate differently to food. So important is how humans relate to food, that there is a special science studying and trying to understand its processes, food anthropology (Mintz and Du Bois, 2002).

The topic of food and culture cannot easily be constrained to demarcated geographical regions, as it is generally the result of cultural meetings and exchange (Bergflødt et al., 2012).

In this current work, there is a focus on north- and south-European food cultures. Both areas include different cultures within, with exchanges and influences between each other. In the north-European side, or the so-called Nordic countries¹, there is a focus on Sweden, as it is the chosen physical context for the project. In the south-European² group, the author refers to the countries surrounding the Mediterranean sea, as their food culture is used as referent in health and heritage issues (Fournier and Michel, 2017; Lăcătușu et al., 2019), and its diet is registered as Intangible Cultural Heritage of Humanity (UNESCO, 2013).

¹ The Nordic countries or Nordic region consists of Denmark, Norway, Sweden, Finland, and Iceland, as well as the Faroe Islands, Greenland, and Åland.

² Although the Mediterranean region also includes parts of North Africa and the Near East, the author will only refer to the south-European countries in this work.

Sweden: food history

The geographical position and climate of the Nordic countries have historically had a big impact into its diets and food cultures, more so before trade and industrialization began in the 1800s, when its populations could only rely on locally-produced food (as explained by Tellström in Bergflødt, 2012). The same applied to Sweden; short 120 day-long summers followed by long winters meant a surplus in food had to be produced and stored to survive the cold months, and even famine, wars and plagues. For storing purposes, food was mostly pickled, fermented, dried, smoked or salted. Something still common nowadays on traditional Swedish food.

Tellström (Bergflødt, 2012) explains that in Sweden, as a poor country with challenging climate, cereals like rye or barley, and later wheat, were the main cultivated crops. This made bread and porridge staple foods. Different bread types related to type of mill, water or wind: in the north, the use of water mills twice a year (with snow melt and autumn rains) produced hard breads ready to be stored; the famous crisp bread or *Knäckebröd*. In the south, the use of wind mills produced soft breads, like for example *kavring*, a soft rye bread. There was some meat and dairy that complemented the diet, mostly eaten by the religious community (*Prästost* as an example, translated as Vicars cheese), nobility and bourgeoisie. The latest picked up food trends from other European countries in seasoning and preparation, but used local products and substitutes.

In the early 19th century, there were two changes in diet: potatoes took the role of staple food and bread became a complement, and the invention of the wood stove, which was revolutionary. New type of dishes were introduced, which are still common today: *husmanskost*, and refer to the traditional dishes with meat, potatoes, gravy and some vegetables.

Tellström continues saying that by this time, industrialization was on its way in Sweden, a process stimulated by the government. People started moving from the countryside to the cities and farmer activity became big-scale, monocultural (few crops) and less self-sufficient. There was transportation of food all around the country and raw ingredients imports, which meant there was more fresh food but also food standards started appearing and regional varieties of food disappear. New dishes and new ways of cooking and eating appear. But even though the need of a food storage system starts to vanish, its use continued until the Second World War (Bergflødt, 2012).

Alcohol consumption in Sweden had been controlled since the 1850s by municipalities through companies called *Systembolag*. These were the first versions of the still existing *Systembolaget*, the current state monopoly to sell alcohol products with higher alcohol content than 3,5%. In the beginning, the objective was to bring order and "decency" to working class people. Nevertheless, even when class differentiation disappeared with democratic development and the right to equal

vote, politicians still saw a need to regulate the consumption of alcohol, maybe due to the Lutheran protestant ethics. Rationalization of alcohol was applied to all establishments since 1922 until the 1960s (Jönsson, 2020).

Jönsson (2020) argues that this rationalization led to a late development of the gastronomic experiences (eating out) and some socio-economical structures developed during the period still remain nowadays.

By the end of the 20th century, though, there was a very different social, political and economical landscape in Sweden. Years into the social welfare system, Sweden was not the poor country it had been a hundred years before. Sweden became part of the EU in 1995, which meant open borders for trade, including food. Postmodern and hedonistic views were appearing all over the world; people started paying more attention on the food they ate, the pleasure part of it, rationalization was over, and wine consumption increased (Bergflødt, 2012; Jönsson, 2020).

Ethnic food is easily found in Sweden, but then again more than 10% of the population in Sweden today is assumed to be first or second generation immigrants. The variety of backgrounds in the population carry different food cultures, including habits, rituals and choices, both individual and in community.

This and the fact that there are only around

1% farmers in Sweden nowadays, mixing little local food production with imported products, means the food culture has become quite eclectic in choice of products, but always trying to suit these products to the Swedish taste and texture (Bergflødt, 2012).

Since the beginning of the 21st century, there has been an effort from from a political level to create a culinary image for Sweden (Jönsson, 2020) in the framework of the New Nordic Kitchen (more on this in the next chapter). The most common way to demarcate the culinary qualities of a nation by political authorities (gastronationalism¹) is using the culinary heritage (heritagization). It is a popular belief that Sweden has no culinary heritage, due to its late progress and rationalization.

Sweden has separated from this idea of using the heritage for its culinary image and has gone the opposite way: using the absence of heritage. Jönsson (2020) explains that heritage, in the Swedish context, is interpreted as a threat to the inclusive national image that Sweden wants to give as an open country—open to new influences and ideas. While traditionally food is used as nations to sustain national attachment (DeSoucey, 2010), Sweden focuses on progress, innovativeness, and multiculturalism. As Jönsson (2020) says, a "postnationalist gastronationalism".

¹ *Gastronationalism is a concept coined by DeSoucey (2010), "that describes the use of food production, distribution, and consumption to create and sustain the emotive power of national attachment. Furthermore, gastronationalism addresses the use and influence of nationalist sentiments in the production and marketing of food. From the standpoint of gastronationalism, food is a fundamental aspect of collective identity."*

New Nordic Kitchen

Since the beginning of the 21st century, there has been a debate over food and culture in the construction of Nordic identity. Even though a food culture has always existed, it was not until the last generation that it became more visible through media and politics (Bergflødt et al., 2012).

From this debate, there has been the development of a program called Nordic Food Diplomacy, a tool for communicating the values of this food culture. This program contains the New Nordic Kitchen, a concept promoted by some renowned chefs in the Nordic region, including René Redzepi from Noma in Copenhagen (a restaurant that was number one on the San Pellegrino World's 50 Best Restaurants list several years) among others, and tries to set the rules for a kind of cuisine that fits in the Nordic context (Bergflødt et al., 2012; Jönsson, 2013; Hermansen, 2012).

The New Nordic Kitchen concept consists of four parts: a manifesto launched in 2004 (see Figure 2), the New Nordic diet, the Nordic terroir and the principles of Good Flavor. Some ideals behind the concept are about bringing back old storage flavors with modern fresh tastes, using raw ingredients from the forests and seas prepared using new techniques, often in a post-modern, artistic way and developing a new seasonal-based kitchen based on both history and innovation (New Nordic Cuisine, 2008). In Hermansen's (2012) words, New Nordic Kitchen is described as a "post-national

movement, especially because it reproduces a Nordic imagined community based on the (re)creation of a Nordic cuisine that takes its meaning from the production of locality, in the form of the Nordic terroir¹."

Nevertheless, some authors have criticized the ideals of this new movement. Andreassen (2014) argues that the movement's celebration of The Nordic is exclusionary towards immigrants and gives superiority to the "authentic" Nordic race, in a time when the Nordic societies are becoming increasingly racially diverse. Leer (2016) mentions the elitism of the movement: made by chefs, and theoretically made for the public in general, but in practice, only developed for the same chefs. Murcott (2005) emphasizes this ambivalence between the ideals found in the public discourse (officials and media communication) and everyday eating practices of the majority of the population. Neuman and Leer (2018) criticize the generally accepted idea that the New Nordic Kitchen is a post-national food movement, as Hermansen (2012) defines it, and see it instead as a gastronationalism scheme.

There is a political interest and a mainstream gastronomic awareness; the construction or revival, of a cultural identity (Bergflødt et al., 2012). However, there is a gap between the public discourse and the reality of food in the homes of Nordic people (Andreassen, 2014; Leer, 2016).

The aims of the New Nordic Kitchen are:

1. To express the purity, freshness, simplicity and ethics we wish to associate to our region.
2. To reflect the changes of the seasons in the meal we make.
3. To base our cooking on ingredients and produce whose characteristics are particularly in our climates, landscapes and waters.
4. To combine the demand for good taste with modern knowledge of health and well-being.
5. To promote Nordic products and the variety of Nordic producers - and to spread the word about their underlying cultures.
6. To promote animal welfare and a sound production process in our seas, on our farmland and in the wild.
7. To develop potentially new applications of traditional Nordic food products.
8. To combine the best in Nordic cookery and culinary traditions with impulses from abroad.
9. To combine local self-sufficiency with regional sharing of high-quality products.
10. To join forces with consumer representatives, other cooking craftsmen, agriculture, fishing, food, retail and wholesales industries, researchers, teachers, politicians and authorities on this project for the benefit and advantage of everyone in the Nordic countries.

Figure 2. New Nordic Kitchen Manifesto (New Nordic Cuisine, 2008).

¹ The concept terroir is traditionally connected with French wine production and can loosely be translated as the 'taste of place.' In the case of the New Nordic terroir, the concept tends to be used in the context of the traditional image of the uncultivated, pristine, wild, fresh Nordic nature" (Leer, 2016).

Nordic countries vs. Mediterranean Europe

It is commonly thought that Nordic countries lack food culture in comparison to South-European countries (Bergflødt et al., 2012), but this is a malinterpretation as different food cultures build on different dimensions, as seen in the case of Sweden (Jönsson, 2020).

Food has been an important aspect in the identity of Mediterranean countries since the Roman Empire (Essid, 2012), while it was never prominent in the construction of national identities in the Nordic countries (Bergflødt et al., 2012), heritage plays a big role in the food identity in the Mediterranean. Geographic and climate contexts have an influence, meaning that in the Nordic context of scarcity and poverty because of short seasons, food became a necessity and had a strong symbolic connection with nature. As seen on Figure 3, the approaches vary in core values and premises, and they affect both mentality and place of food in public discourse (Bergflødt et al., 2012).

With the introduction of the New Nordic Kitchen, the idea of nature is very relevant, as it has been historically strongly connected with food. At the same time, there are some references directly to South-European food mentality, such as the attachment of food to a place of origin, or locality, with the concept of terroir. This is interpreted in the concept of Nordic terroir by Hermansen (2012), as seen in the previous chapter.

The fact of basing quality in origin and tradition has historically led Mediterranean countries to initiatives of protectionism of their own food

products and traditions. This protectionism of foods and industries as representatives of cultural traditions or identities can be seen as part of gastronationalism schemes originating between homogenizing tendencies by globalization (DeSoucey, 2010).

In 1992, the EU instituted a program to register food products with three different labels: Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), or Traditional Specialty Guaranteed (TSG). These labels aim to protect food products from imitation and designate their unique characteristics, mostly associated with place (European Commission, 2021a). Most of the Mediterranean European countries had a similar regulating scheme before this program appeared, so it was a natural transition for them. However, this program was completely new to other countries such as the Nordics.

The difference in quantity of labels registered between Mediterranean and Nordic countries (Figure 4) can be explained by the weight of heritage and protectionism, but also by the difference in core values on food shown in Figure 3. As in the case of Sweden, heritage is seen as a threat, same as hierarchies between which products are deemed for protection over others (Jönsson, 2020).

These ideas strengthen the fact that these countries do have all food cultures, but all built in different values, usually closely linked to the historical, cultural and socio-economical dimensions.

	South-European	Nordic
Quality is linked to...	culture, origin, taste and typicity	technique, health, nutrition, animal welfare and hygiene
Quantity	abundance	scarcity and poverty
Food is...	pleasurable, shared with people	necessity
Most important in food is...	authenticity and tradition	nature

Figure 3. Different ideals hypothesis by the author, related to food depending on South- and North-European food cultures interpreted after texts from Barjolle and Sylvander (2000) and Bergflødt et al. (2012).

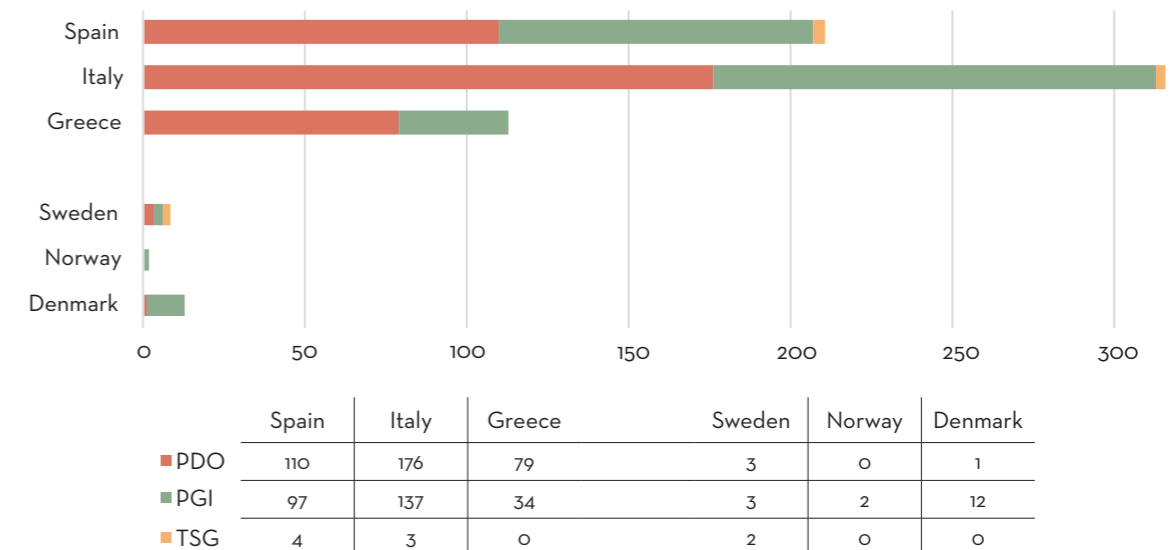


Figure 4. Quantity of PDO, PGI and TSG labels registered by Mediterranean countries and Nordic countries (European Commission, 2021b).

Reference projects

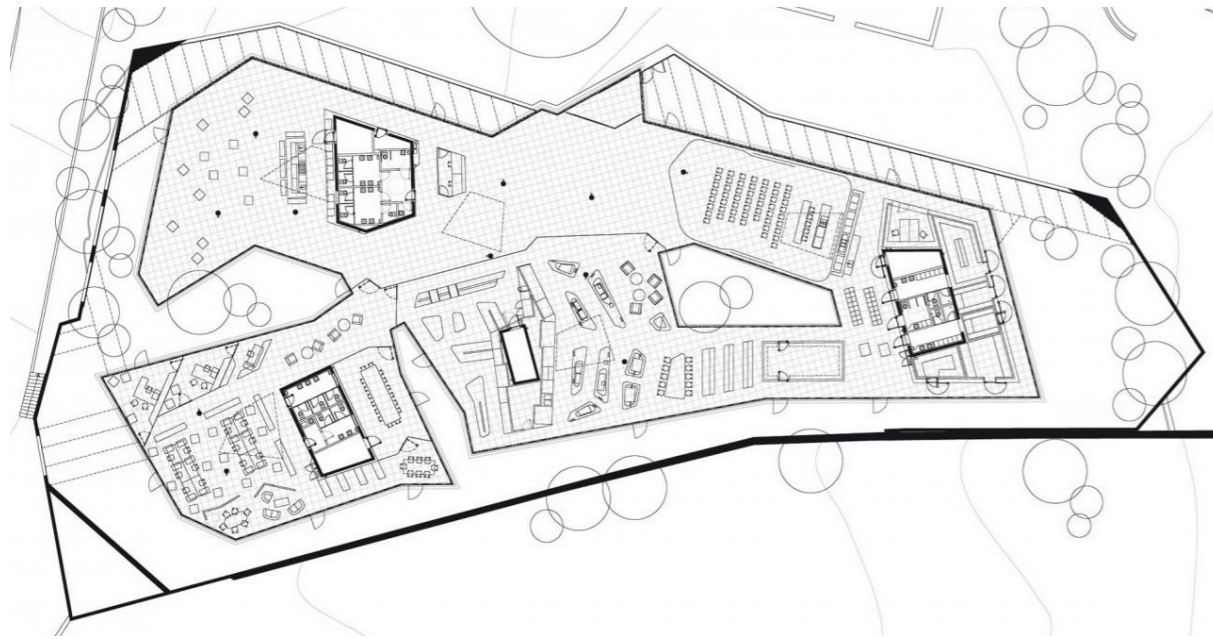


Image 1. Clotet+Paricio (n.d.). Ground floor of the building.

FUNDACIÓ ALÍCIA

Architects: Lluís Clotet, Ignacio Paricio

Alícia Foundation takes its name from two words: Ali-mentació and cièn-cia (alimentation and science). It is a no-profit research center for technological innovation in cuisine, improvement of eating habits, evaluation of food, gastronomic heritage research, technological development activities, training and information about food-related issues (Fundació Alícia, 2021).

The foundation is located close to the Monastery of Sant Benet de Bages, in rural Catalunya, Spain. The building lies on a flat site filled with crops, next to an old textile mill and the house of its past owners, by the shores of the Llobregat River. It is an individual building in the form of an A, laid out on a single storey and with an open-plan approach with multiple functions and activities.

Aiming to offer the user the experience of being surrounded and pervaded by nature, the vertical front that separates the interior from the exterior is built entirely with glass, transparent or shiny, which manages to make the volume disappear at some points and at others meld seamlessly into the environment, by reflecting the exterior as a mirror.

The geometry of the floor plan is the consequence of an attitude of respect for the old prairies, fences, paths, crop fields and trees. This has gradually defined a free-flowing form, polyhedric, where interior and exterior embrace tightly.

KEY ASPECTS

- Connection to surroundings and nature through building geometry and glazing.
- Open plan which can accommodate multiple functions and activities.



Images 2-6. Lluís Casals (n.d.). Fundació Alícia building from outdoors and indoors.

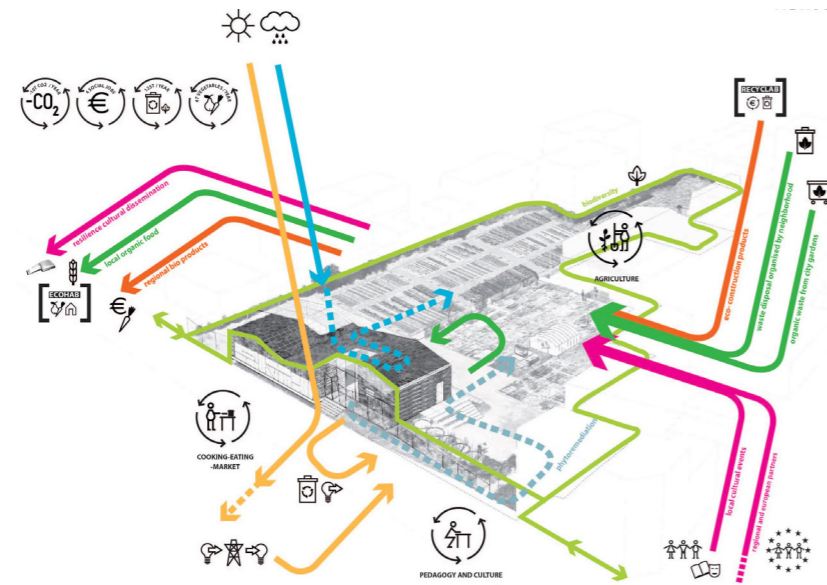


Image 7. Atelier D'Architecture Autogérée (n.d.). AgroCité scheme.

AGROCITÉ - R-URBAN PROJECT

Atelier D'Architecture Autogérée

R-Urban is a bottom-up strategy which explores the possibilities of enhancing the capacity of urban resilience by introducing a network of resident-run facilities to create complementarities between key fields of activity (economy, housing, urban agriculture, culture). R-Urban initiates locally closed ecological cycles that will support the emergence of alternative models of living, producing and consuming between the urban and the rural.

There are different initiatives inside the R-Urban project, such as AgroCité. It is designed to introduce and support the dynamics of urban agriculture and provide support for the cultural and educational activities.

AgroCité is a collective self-management project. It aims to empower people by establishing community gardens and providing the ecological and productive infrastructure, to then be managed autonomously by collectives of users.

The building was on a temporary loaned piece of land, so it was built with that in mind. Low-cost materials, which were easy to build and assemble, were used, with big glazed openings on the façade towards the garden. The indoor space was dominated by one big flexible room that allows different activities to take place: from community meetings to educational gatherings.

The outdoor space was treated as a complement for these activities in the indoor space, also thought as a flexible-use area with close connection with the gardens.

KEY ASPECTS

- Collective self-managed project: its own users manage the space.
- Big flexible room that can shelter different activities led by the community.
- Connection between indoor and outdoor space, including gardening area.



Images 8-12. R-urban project (2013). AgroCité.

Summary

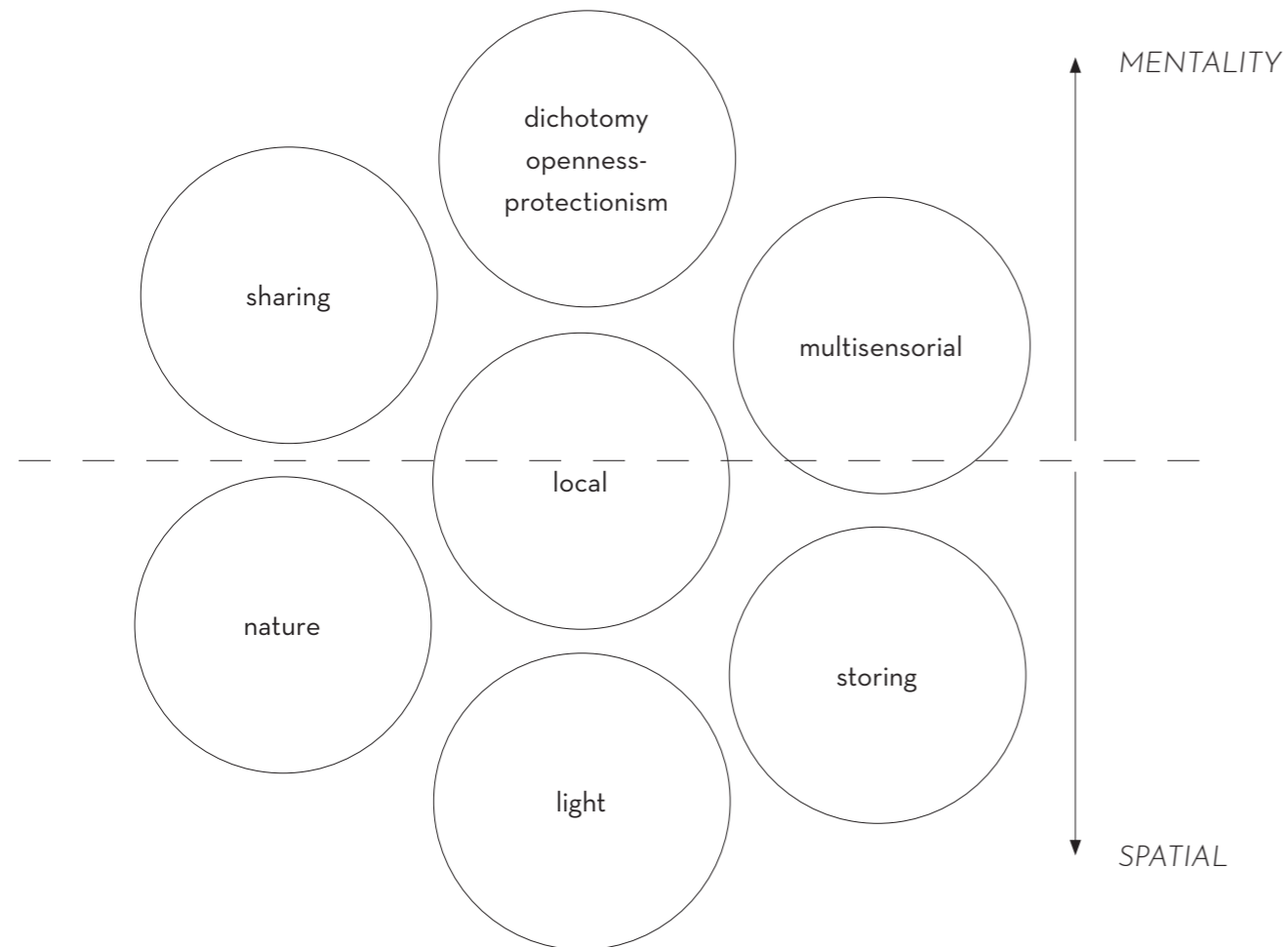


Diagram 3. Main concepts taken after readings on food culture, both at mental and spatial level.

MENTALITY

- Sweden is a good context to try to implement new ways of dealing with food, due to its openness and innovation (Bergflødt, 2012; Jönsson, 2020).
- The new ideology of New Nordic Kitchen serves as a good framework on how to act to build a strong Nordic food culture(s). However, since it is quite new, it still faces two challenges: including the ethnic mix existing in the Nordic region and applying these ideals to everyday food practices (Andreassen (2014; Leer, 2016; Murcott, 2005).
- Both Mediterranean and Nordic countries have a strong connection between food and its place of origin, a concept referred as terroir or locality (Hermansen, 2012).
- There is a spectrum that repeats itself between openness and protectionism of foods, highlighted by globalization. Both can be positive when it comes to food culture development (DeSoucey, 2010; Jönsson, 2020).

SPATIAL

- Food has a strong connection to nature (reference project Fundació Àlícia). This aspect is emphasized in the Nordic culture (Bergflødt et al., 2012).
- Social structures are embedded in food processes (Mintz and Du Bois, 2002). The spaces which deal with food-related issues usually feature flexibility to house different community-led activities (reference projects Fundació Àlícia and AgroCité).
- The treatments of both light and sensory experience are usually embedded in food spaces through open-plan approaches and glazing (reference projects Fundació Àlícia and AgroCité).
- Storing food was required before industrialization, but became unnecessary with the appearance of global food chains (Bergflødt, 2012). Food storage systems could be recovered to support local-produce consumption.

3. The Site

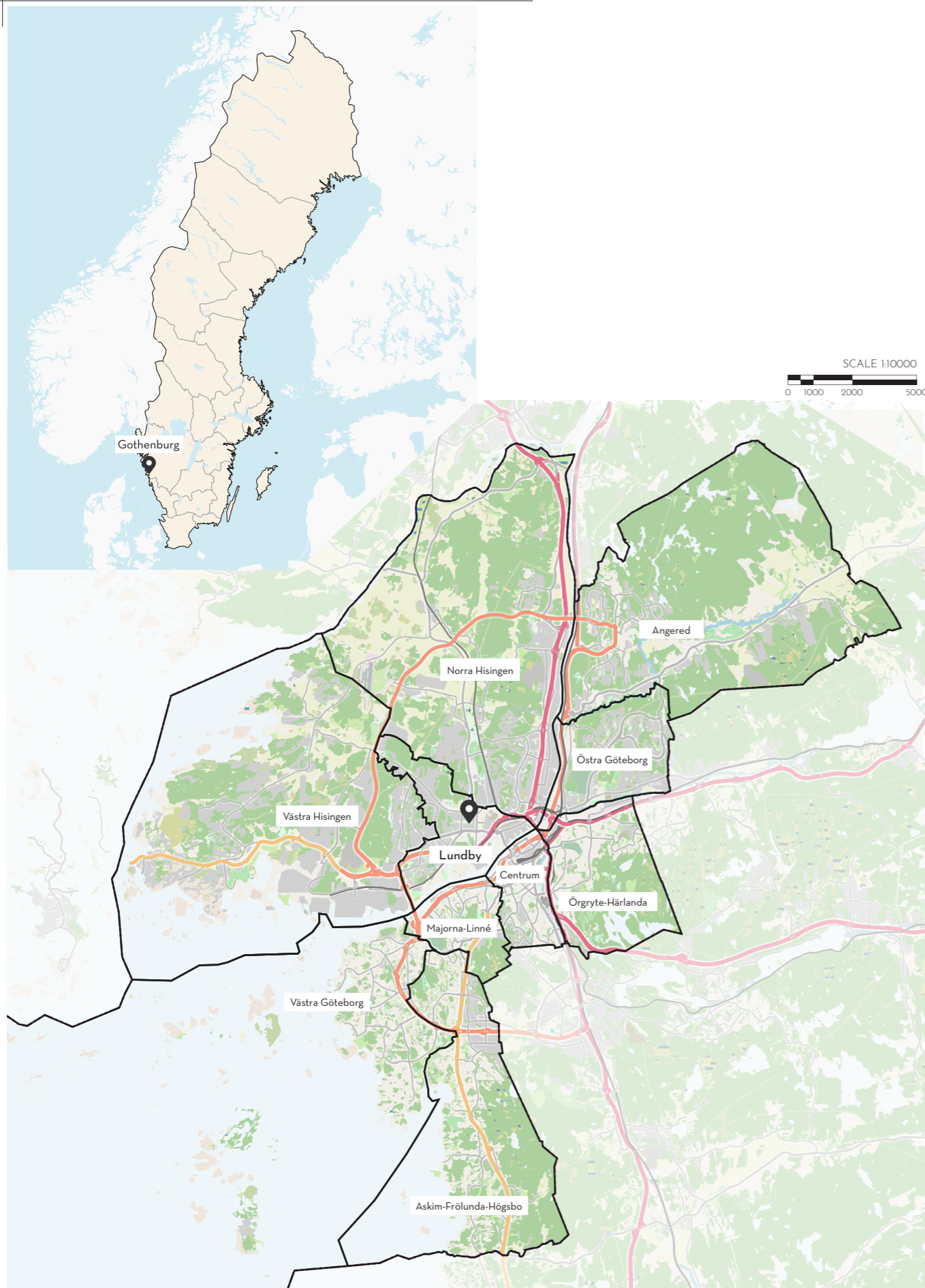


Figure 5. Map of Gothenburg's municipality, which is divided in ten boroughs. Base layer retrieved from OpenStreetMap (2021).

📍 Project location

Municipality context

The site for the project is located in the city of Gothenburg, on the Southwest of Sweden.

Gothenburg is the second biggest city in Sweden, with a population of 580 000 inhabitants (Göteborg Stad, 2021a), distributed in its ten boroughs¹. Three of them, Västra Hisingen, Norra Hisingen and Lundby, are on the island of Hisingen, Sweden's fifth-biggest island.

The city is facing the channel of Kattegat and is very close to the borders to both Norway at the north, and Denmark at the south.

Historically, Gothenburg has been a big harbor city. Already in the 1800s, it was the gateway of Sweden for trade. It also became a big shipping and industrial town (Hilmersson, 2015).

In the 20th century, the island of Hisingen became an integral part of the city with the construction of two bridges, Götaälv and Nya Älvsborg. At the same time, there was a big shipyard crisis, leading to the disappearance of almost all the shipbuilding industry, mostly located on the north riverside on Hisingen.

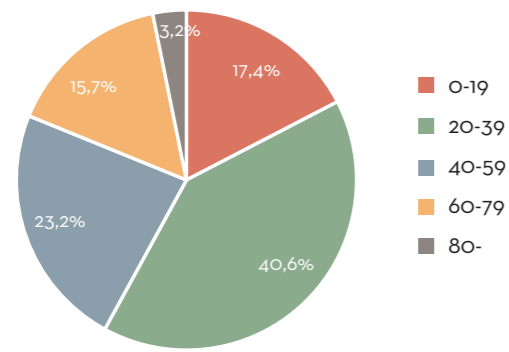
Nowadays, Gothenburg is a city leading in technology, with headquarters of big firms such as Volvo and Ericsson. A huge transformation is taking place, the old river industry buildings are becoming new developments for housing and technology. At the same time, the city tries to keep its heritage, as fishing and sea life are still a big part of its identity, having Scandinavia's largest fish auction for instance (Göteborg Stad, 2021b).

The density of population of Gothenburg is almost five times lower than Stockholm (Statistikmyndigheten, 2021). The urban space is sprawled, and parks and nature reserves are very close to the urban fabric. Due to the extension of the built environment, some neighborhoods can feel as suburbs even if they are central.

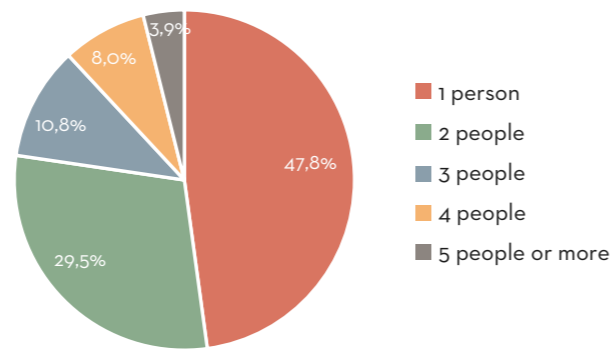
The main challenge the city now faces is carrying out a fast sustainable development of its urban fabric while keeping its identity and heritage.

¹ The division of Gothenburg in boroughs (stadsdelsnämndsområden) was recently changed and the city is now divided in four bigger boroughs which include the old ten ones: Nordost, Centrum, Sydväst and Hisingen (Göteborg Stad, 2021). For statistical purposes, the author has decided to work with the old division.

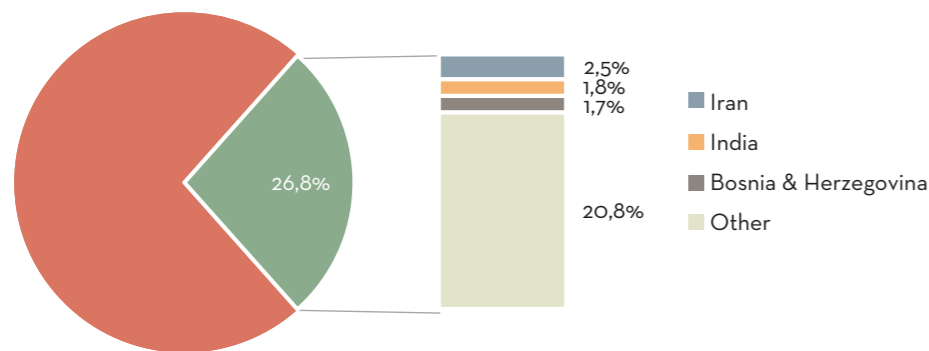
POPULATION BY AGE



PEOPLE PER HOUSEHOLD



FOREIGN-BORN POPULATION



Figures 6-8. Statistical information on Lundby (Göteborgs Stad, 2021a).

Lundby is one of the three boroughs on the island of Hisingen, north of Gothenburg, and the closest to the center of the city, connected by two bridges, Götaälvbron and Nya Älvsborgsbron.

The population of Lundby is young, almost half living by themselves (see Figure 6-7). Another important feature is its international character, since more than a quarter has foreign background (Figure 8).

The district has direct connection to the river: it encloses most of the north riverside, which historically was where all the shipyard industry was located (Göteborg Stad, 2021b). Some of these buildings have now been transformed to or replaced by office and residential buildings (Lindholmen and Eriksberg), but in some

areas there are still some standing (Ringön and Frihamnen).

Further from the riverside towards north, there are the districts of Rambergstaden and Kvillebäcken, where the project is located. Both are mostly residential areas, closer to green areas and commercial hubs, such as Backaplan, and industrial campus, such as Volvo Group headquarters.

The central and riverside districts of Lundby have big potential for development due to their central location in the city context and their need to update outdated buildings. Kvillebäcken has lately become the focus of heavy urban development, which has caused problems of gentrification (Thörn & Holgersson, 2016).

Borough of Lundby

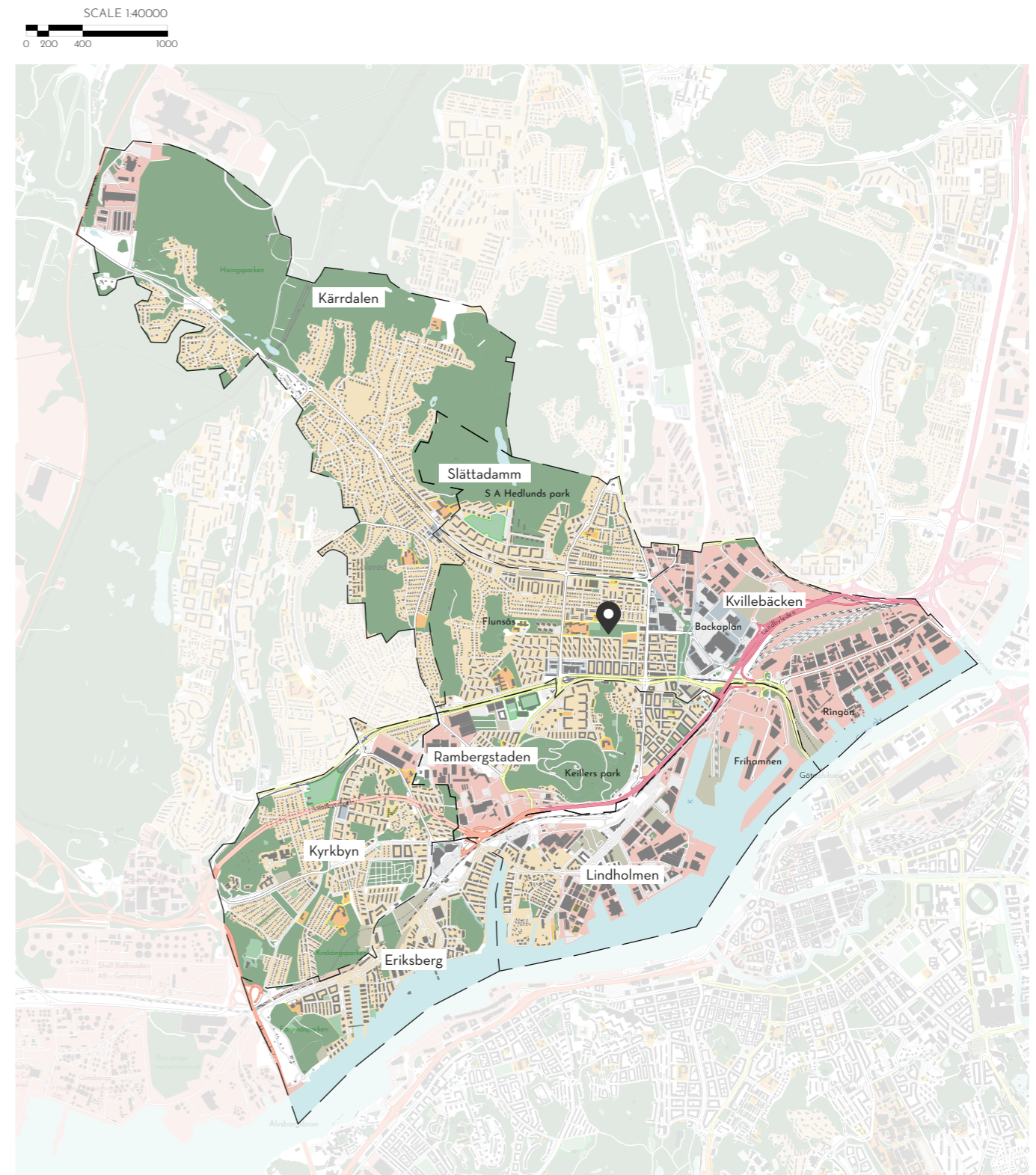


Figure 9. Map of Lundby borough on the Hisingen island. Base layer retrieved from OpenStreetMap (2021).

Flunsåsstråket

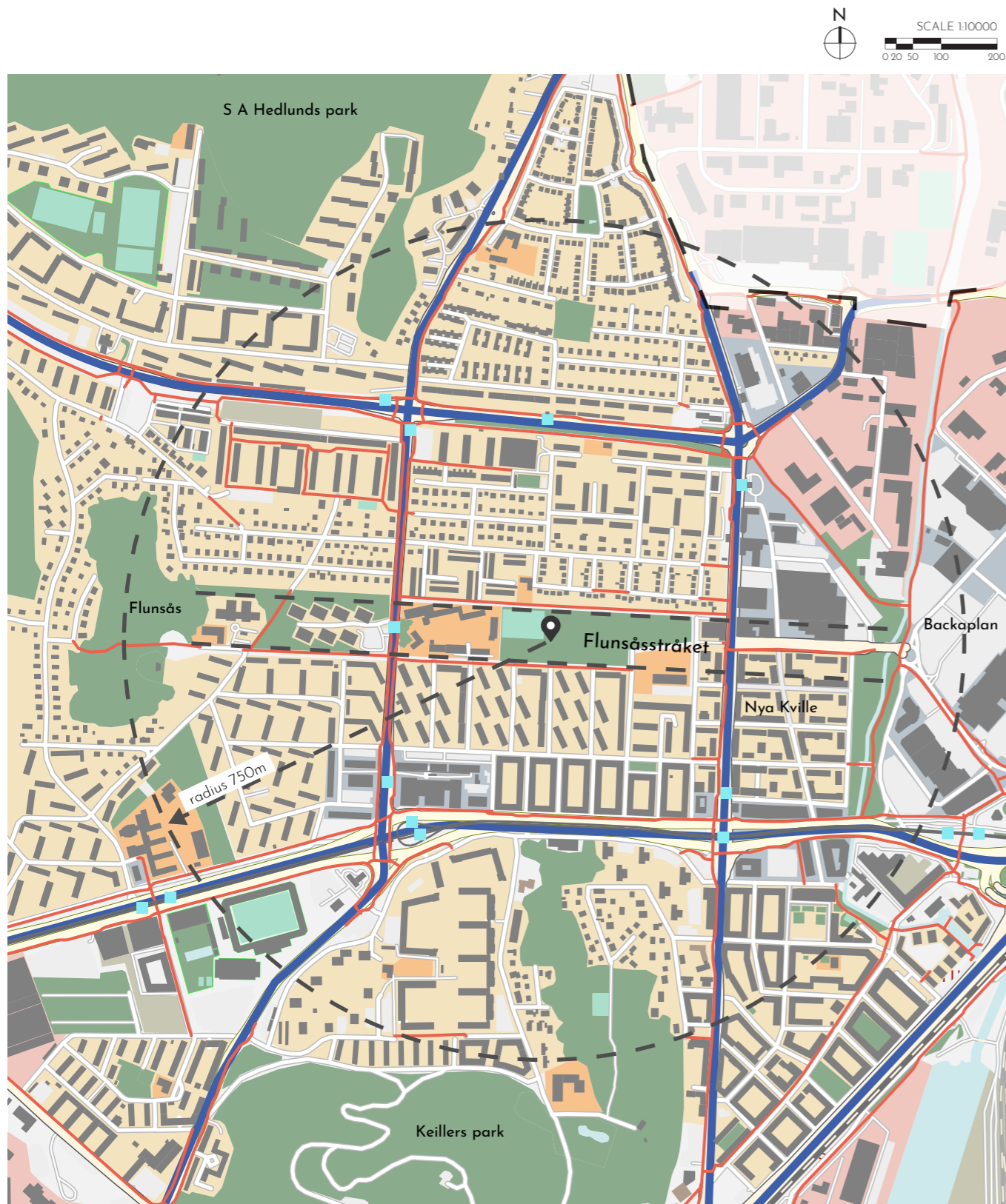


Figure 10. The district of Kvillebäcken in central Lundby, with Flunsåsstråket in the middle.

Base layer retrieved from OpenStreetMap (2021).

Project location

Flunsåsstråket, translated as “Flunsås lane” in English, is located in the district of Kvillebäcken in central Lundby. It is a traverse of approximately 750 meters and connects the park Flunsås on the West, to the commercial area of Backaplan on the East. Through this traverse, there is a variety of built environments: a nursing home, several schools, apartment buildings and a park.

Different parts of Flunsåsstråket have been recently developed, including a school, a sports field and the park called Fjärdingsparken (Stadsutveckling Göteborg, 2021). It is in this park where the *Matrum* is located.

The surroundings of Flunsåsstråket are mostly residential, with mixed typologies of housing (see Figure 10). As mentioned in the previous chapter, it is an area under

strong urban development. For example, the area closest to Backaplan, renamed as Nya Kville, has suffered a complete transformation over the last ten years, from small-property businesses to apartment buildings. This development has been regarded as problematic under gentrification issues (Thörn & Holgersson, 2016). Nevertheless, other areas in Kvillebäcken are following the same development model (Lundbypark, n.d.).

There are two details related to food production worth mentioning: there is a newly built food market, Kville Saluhall, close by the project location. Also, the farmers market REKO (REKO Backaplan/Göteborg, n.d.), which is a platform where local food producers sell their goods directly to the consumer, takes place on a parking lot at Backaplan every week.

Fjärdingsparken



Figure 11. North-South section on Fjärdingsparken.

Fjärdingsparken is the park where the *Matrum* is located. This park has been recently renovated and improved through participatory process, in dialogue with the surrounding communities (Stadsutveckling Göteborg, 2020). The renovation was planned in three stages, two of them finished and only the final one remaining, and it has been part of the greater development of Flunsåsstråket (Stadsutveckling Göteborg, 2021).

As seen in Figure 12, the area surrounding Fjärdingsparken is mostly residential, both rental and tenant-owned, with apartment buildings and detached houses as main housing typologies.

Fjärdingsparken is a big open grass area of approximately 3000 square meters, its shorter section is 100 meters (see Figure 11). There are no high buildings around, which means it is bathed by sunlight during the whole day. Its location, surrounded by housing and secluded from the main roads and public transportation traffic, gives it a local character. In other words, the users are mostly people that live in the area because others living further may not know of its existence.

Apart from a big lawn, other park's features include a sports field, a playground, table and seating areas, several flowerbeds with insect hotels and bird houses, and an urban farming scheme run by a local association (Stadsplaneringsforum Centrala Hisingen, 2021). See Figure 13 for more information on the park's different components.

The availability of different kind of activities and the fact that there are different housing typologies in the surrounding area means potential users of the park can come from different socio-economical backgrounds. Also, several schools which are located at walking distance can benefit from its features.

Most of the surrounding residential areas have plenty of garden space, both at private and public level. This spaces have potential to integrate gardening and urban farming schemes for its neighbors (see Figure 9), aided by an initiative like a *Matrum*.

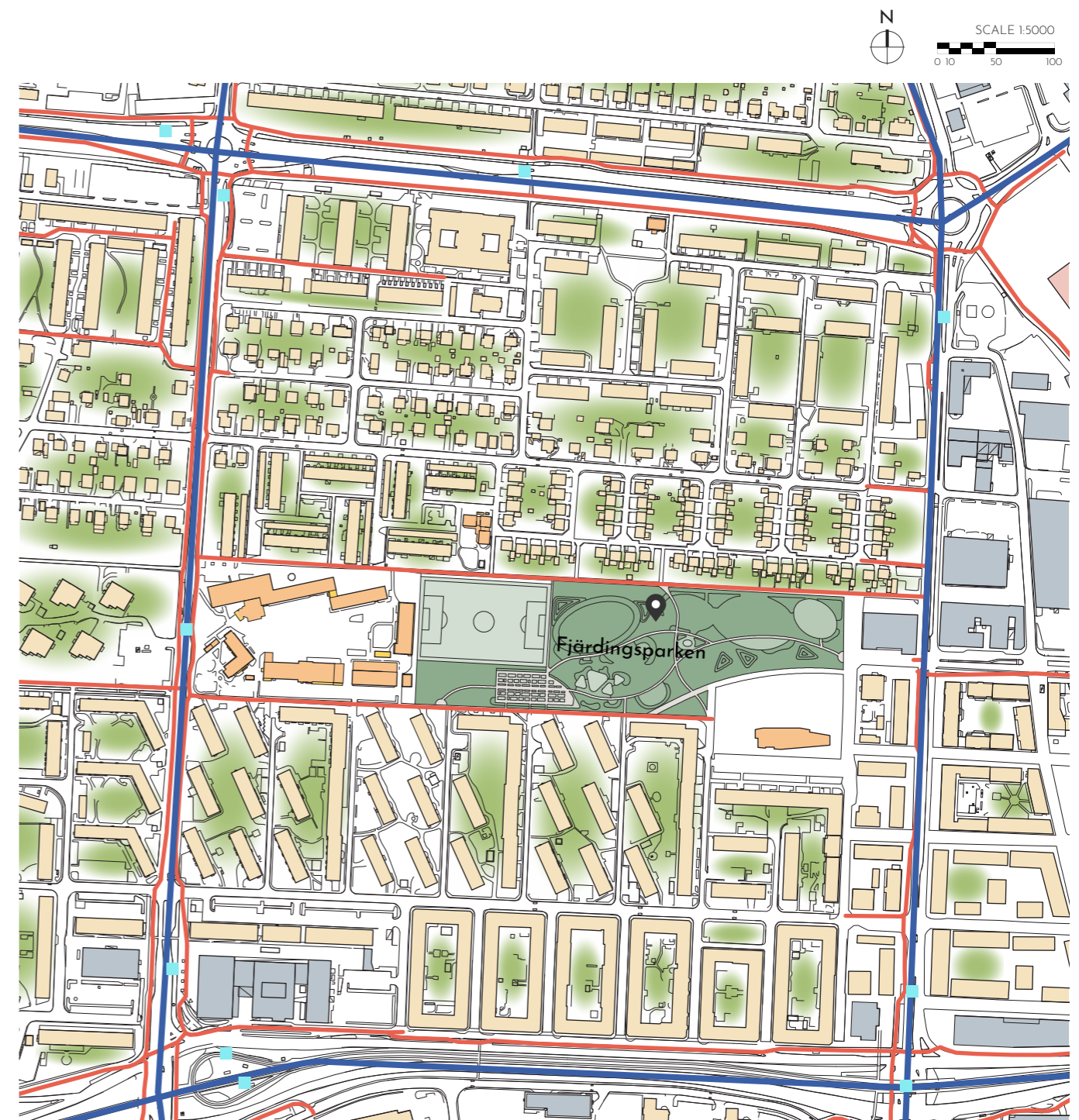


Figure 12. Fjärdingsparken and its surroundings. Base layer retrieved from Chalmers Geodata Portal (2021).

● Project location

- Residential
- Industry
- Commercial
- Education
- Green areas
- Spaces with gardening potential
- Main roads
- Bike lanes
- Tram/bus stops



Figure 13. Overview of Fjärdingsparken. Illustration retrieved from Stadsutveckling Göteborg (2021).



5a Flowerbeds, benches, bird houses.



5b Flowerbeds, bird houses.



1 Sports field.



2 Urban farming.



6 Playground.



7 Hammocks, flowerbeds, insect hotel.



3 Flowerbeds, insect hotel.



4 Big lawn.

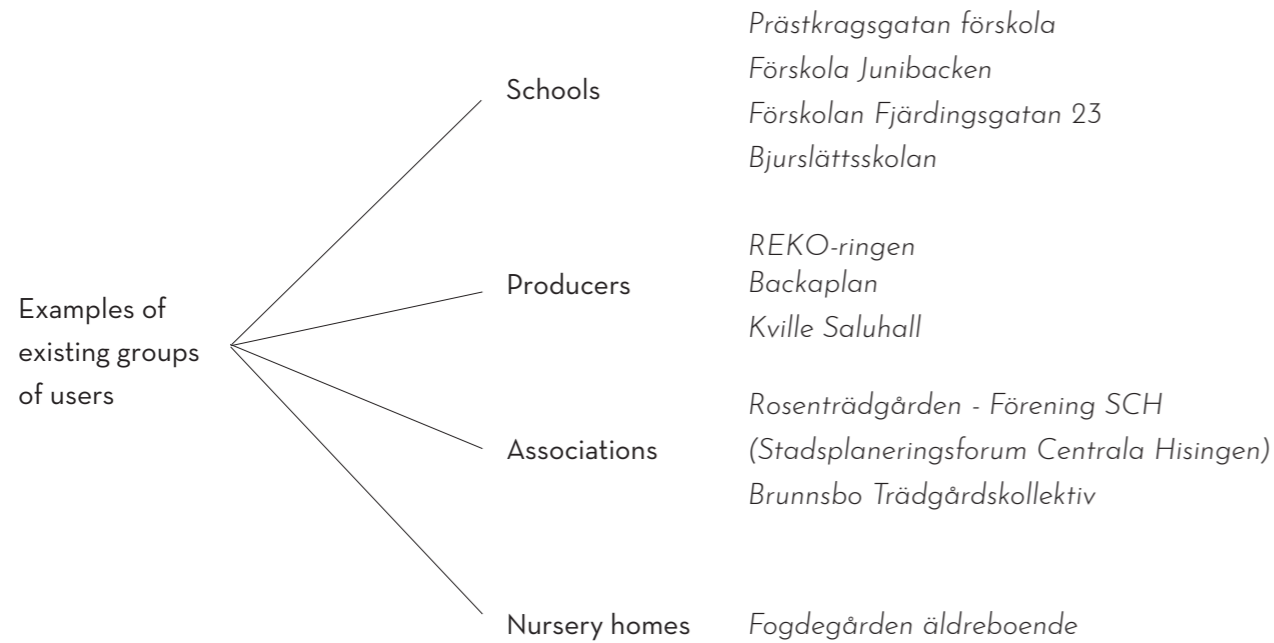


8 Flowerbeds, benches, drinking fountain.



9 Seating, boules court.

Stakeholders & users



The idea behind the *Matrum* is that it can start as a municipal platform, where Göteborgs stad is the main stakeholder and develop the platform, getting in touch with all kind of users that could take advantage of the place.

The group of users is diverse and fits on the concept of knowledge sharing; different target groups mean different kinds of knowledge and backgrounds, which will enrich the experience of anyone using the room. The examples shown above are the potential existing users on a local level.

The neighbours living in the surrounding residential areas and associations (*föreningar* in Swedish) that deal with topics of food or want to use food as means for their aims can use the space as a community center.

On the next level, there are the schools and nursing homes. These two groups of users are important for keeping the traditional

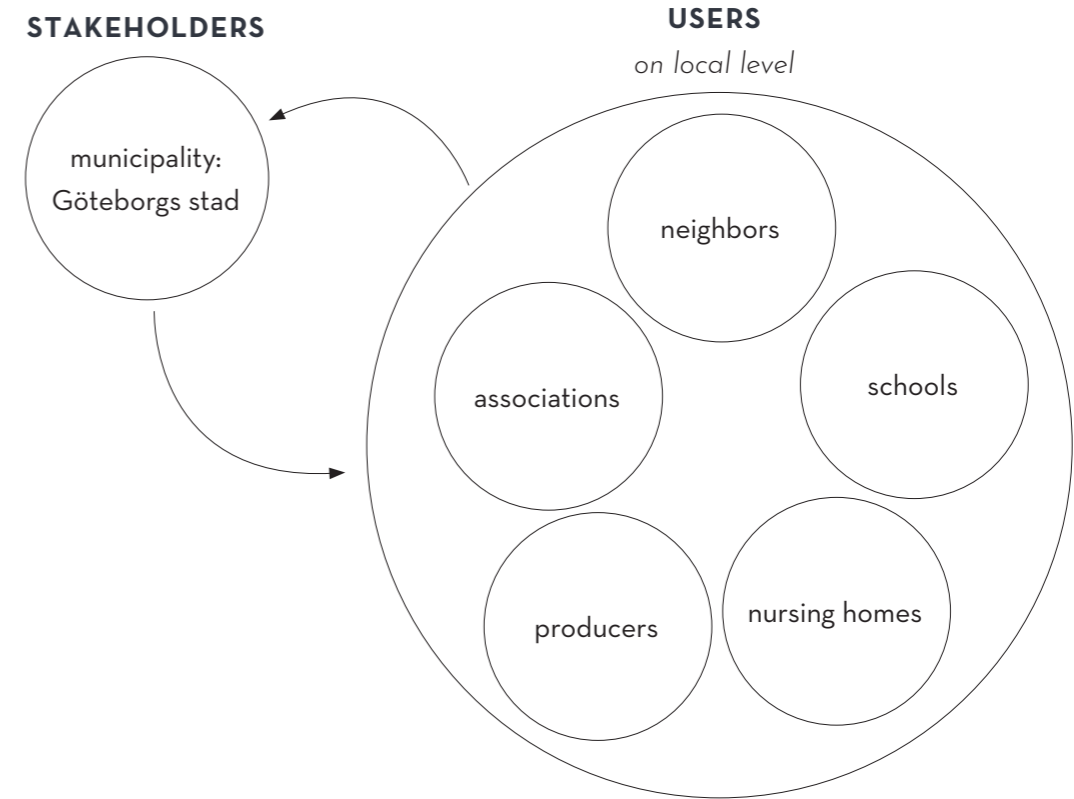
knowledge and teach new generations about the past and the current food developments in a sustainable way.

Lastly, there are local producers that can both give information and let themselves be known by the community.

There will come a time when the *Matrum* will have been established and developed by the municipality with the feedback of these different target groups. It will be then when the municipality can leave the control to the own users: thus, creating a co-operative of users that become the stakeholders (see Diagram 4).

With the co-operative model there should be a democratic and circular flow of information and responsibilities within the organization. Since all parts control and use the space, the needs and expectations are known with transparency.

Starting point:



Future:
OPTIMAL
ORGANIZATION

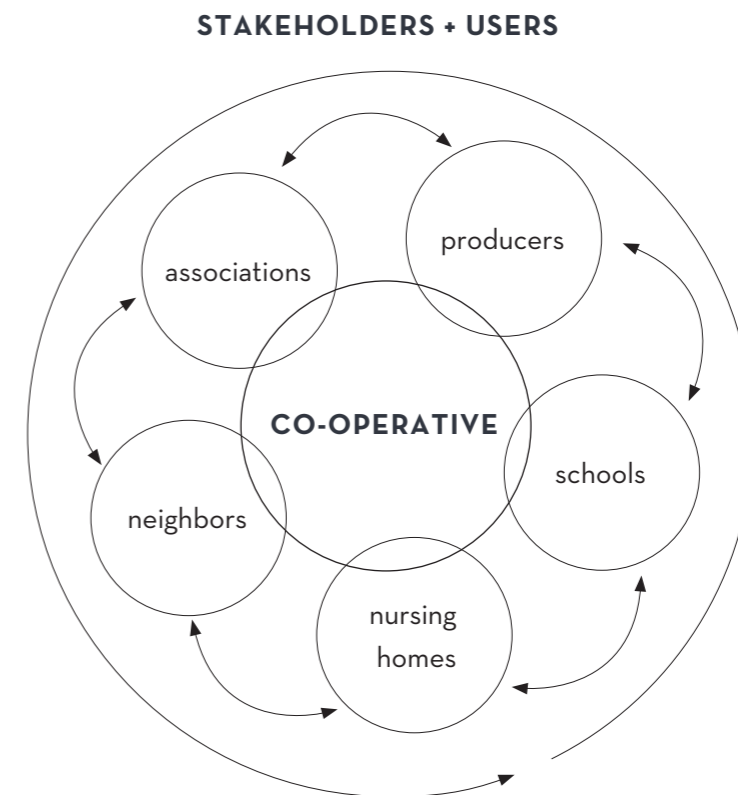


Diagram 4. Possible organization of the *Matrum*: diagram above shows how it can start (as a municipality-led platform) and diagram below shows what the optimal organization can become (a co-operative between users and stakeholders).

SWOT

Summary

STRENGTHS

Recently renovated park with participatory design process: community already involved.

Existing urban farming space and plenty of outdoor space with potential for gardening schemes.

WEAKNESSES

No community center or building supporting community activities in the area.

OPORTUNITIES

Good preconditions of site related to food and biodiversity: for example, insect hotels and bird houses.

Big open space, sunlight all day long.

Several stakeholders in the area that could benefit from a *Matrum*.

THREATS

Gentrification: new developments are being built around the area.

FJÄRDINGSPARKEN IN LUNDBY AS PROJECT LOCATION

- Lundby's population is defined by being younger than the average in the city of Gothenburg. Almost half of its population live by themselves.
- The local population has heterogeneous cultural backgrounds.
- Fjärdingsparken has been recently renovated in dialogue with the local community in participatory process, which means it is done by and for the community.
- There are several schools in the surrounding areas of the park.
- The park's surroundings have potential to sustain urban farming schemes.
- Some associations and initiatives related to food, such as urban farming or farmers' market, already exist.
- It is an area under development, with threats of gentrification.

4. The Room

Concept

Influenced by the background studies and the site analysis, the concept of the *Matrum* sets the objectives which this space has in the context of Fjärdingsparken. Some objectives can be general and could be applied to other sites (see chapter "A network of rooms"), but others are dependent to the context of Fjärdingsparken and its surroundings at Kvillebäcken.

The main objective of the *Matrum* is becoming a platform for knowledge sharing on food between the different groups that are part of the community. This is referred as local knowledge, which could be defined as the knowledge that the current inhabitants of the area have on food. This is directly linked to their cultural and socio-economical background. It is worth mentioning that local knowledge is different than traditional knowledge, which would be the one related to the national identity of the place (in this case, Sweden) and historically linked with the geographical characteristics of the place.

While local knowledge is in flow and depends on the community, the food that can be produced locally, referred as local produce, can also depend on the community, but has the big geographical constraint of climate. The place of origin (going back to the concept of terroir) has intrinsic value.

The *Matrum* links local knowledge with local produce; providing knowledge about local food to the local community to make better and more sustainable food choices. At the same time, sharing this knowledge between the different users and stakeholders in the community contributes to connection between them, encouraging community development.

As seen in the background studies, food structures work on social and cultural levels, and the impulse of a local food culture through a *Matrum* stimulates the community development.

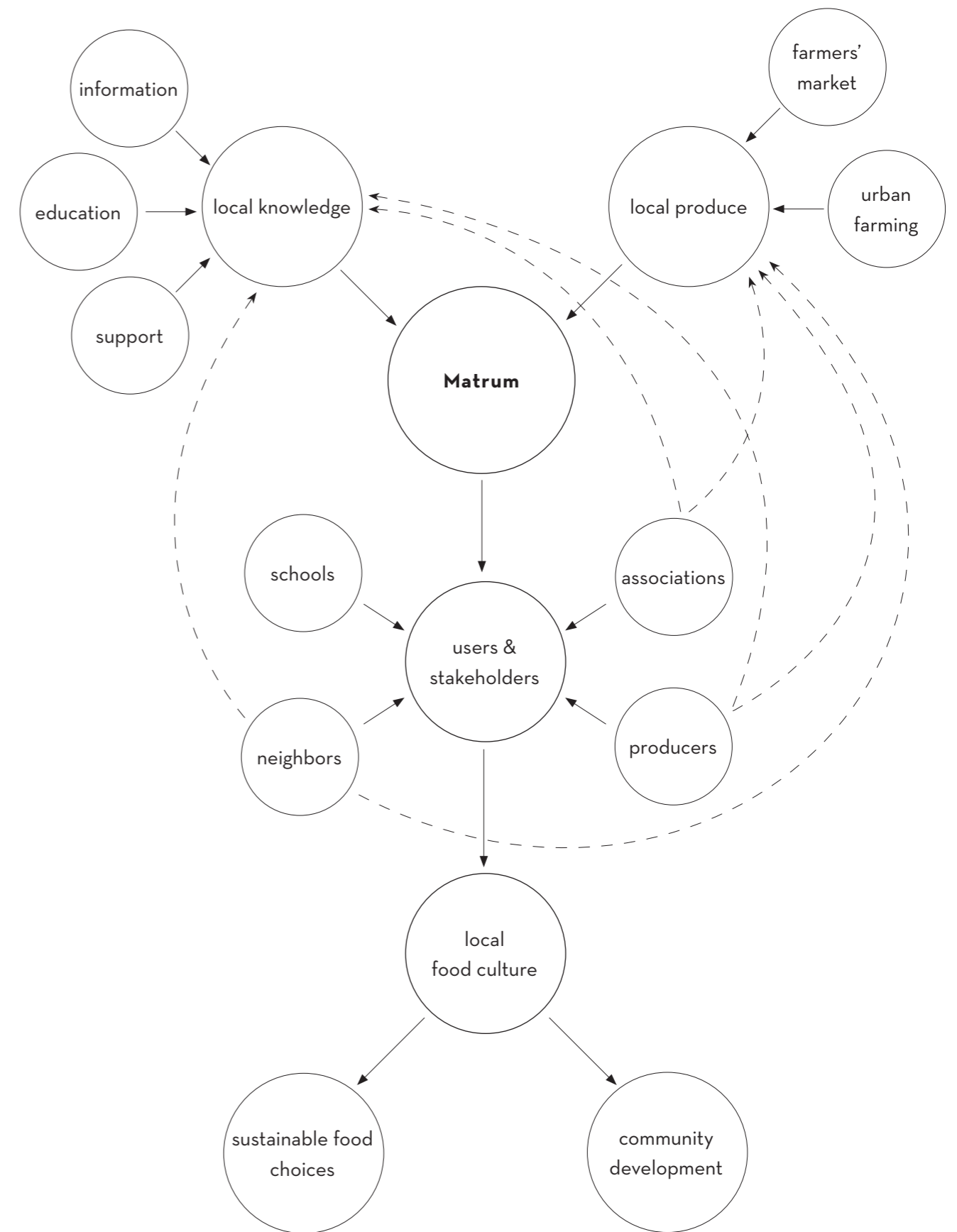


Diagram 5. System on how the *Matrum* concept works.

Location strategy

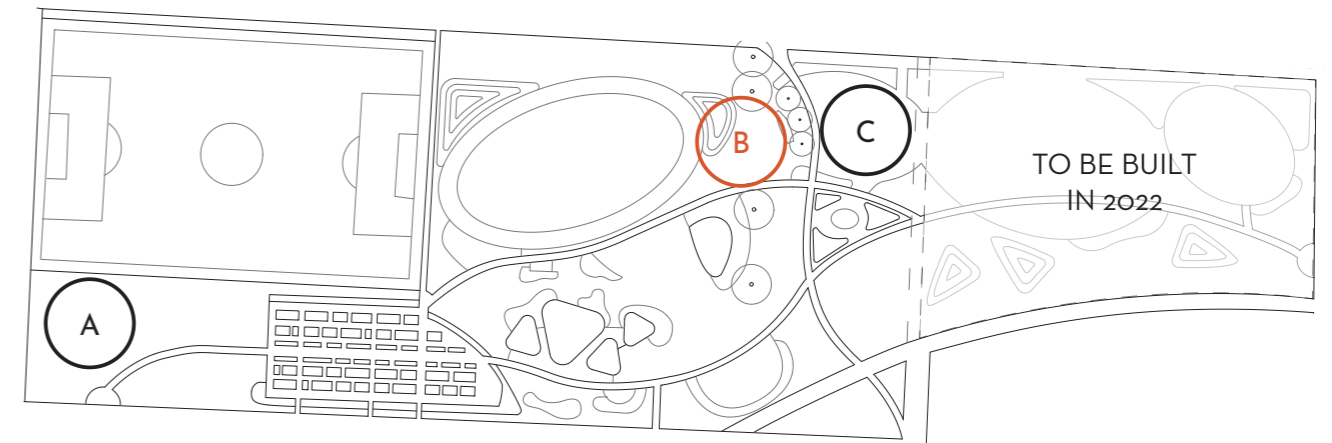


Figure 14. Possible locations of the Matrum in Fjärdingsparken.

After the site analysis and the study of Fjärdingsparken and its different physical components, there are three potential locations inside the park area for the *Matrum* (see Figure 14). These potential locations are on the West entrance (A), by the existing urban farming scheme, or on the North side, either by the big lawn (A) or the central square (C).

The choice of location is done following three different criteria: the amount of free outdoor space available surrounding the building (inside-outside), the visibility and accessibility of the building inside the park area (visible and accessible) and the avoidance of affecting already built structures, such as the playground, the existing urban farming scheme, or vegetation in the park, such as trees and flowerbeds (not intrusive).

The best location between the three is B, by the big lawn, as it is central and visible in the park. It is important that it has the big lawn as open outdoor space to the West, which means it can take advantage of long hours of sunlight in the afternoon.

Also, a *Matrum* on this location means that the building is at a very close distance from other components that offer leisure activities, so it would naturally fit in the flow of activities planned for the park.

The only downside of this location might be the need to relocate one of the artificially-made "hills" by the lawn, but it is considered that the East side of the park (the only one remaining to be finished) will also incorporate these elements.

CRITERIA FOR LOCATION	A	B	C
Inside-outside. <i>The building has direct connection to free open outdoor area, which can be used as an extension of the indoor area.</i>	+	+	-
Visible and accessible. <i>Easy to spot from any part of the park.</i> <i>Location makes it easy to access the building.</i>	-	+	+
Not intrusive. <i>It doesn't affect existing built structures or old trees.</i>	+	+	+

Context-dependency strategy

The concept of *Matrum* could work in different contexts, but for it to work seamlessly in a particular context, it has to adapt and be integrated to it.

The general idea, as stated previously, is encouraging a local food culture connecting local knowledge and local produce. To do this, a *Matrum* in the chosen context of Fjärdingsparken has to include some context-dependent strategic points in its design (see Diagram 6).

The differentiation made between local and traditional knowledge is important in the local context of Fjärdingsparken, since a quarter of its population is foreign-born (Göteborgs Stad, 2021a). This means that the local knowledge on food in the surrounding areas of the project is very heterogeneous, so the *Matrum* has to give space to a wide variety of food culture backgrounds and customs: it should include spaces with flexibility to meet the needs of different users with different backgrounds.

Another point is the location of several schools on walking distance from Fjärdingsparken.

The *Matrum* could work as learning platform for the existing school subject *hemkunskap*, for example. It should take into account the students of these schools and include spaces for educational purposes.

The last two context-dependent strategic points are based on its physical location. The *Matrum* is directly located in the park, which means that it is in direct connection with nature and spaces destined for leisure activities. It is important that the building blends into the features of the park that already exist and it is not intrusive on vegetation and existing biodiversity systems.

The other one is the potential for food production in Fjärdingsparken and its surroundings. Not only there is already an urban farming scheme, but also plenty of garden areas at both public and private level which could sustain more food production for the neighbors. Then, the *Matrum* should focus on encouraging a community-based food production, and giving support and information for maintenance and development.

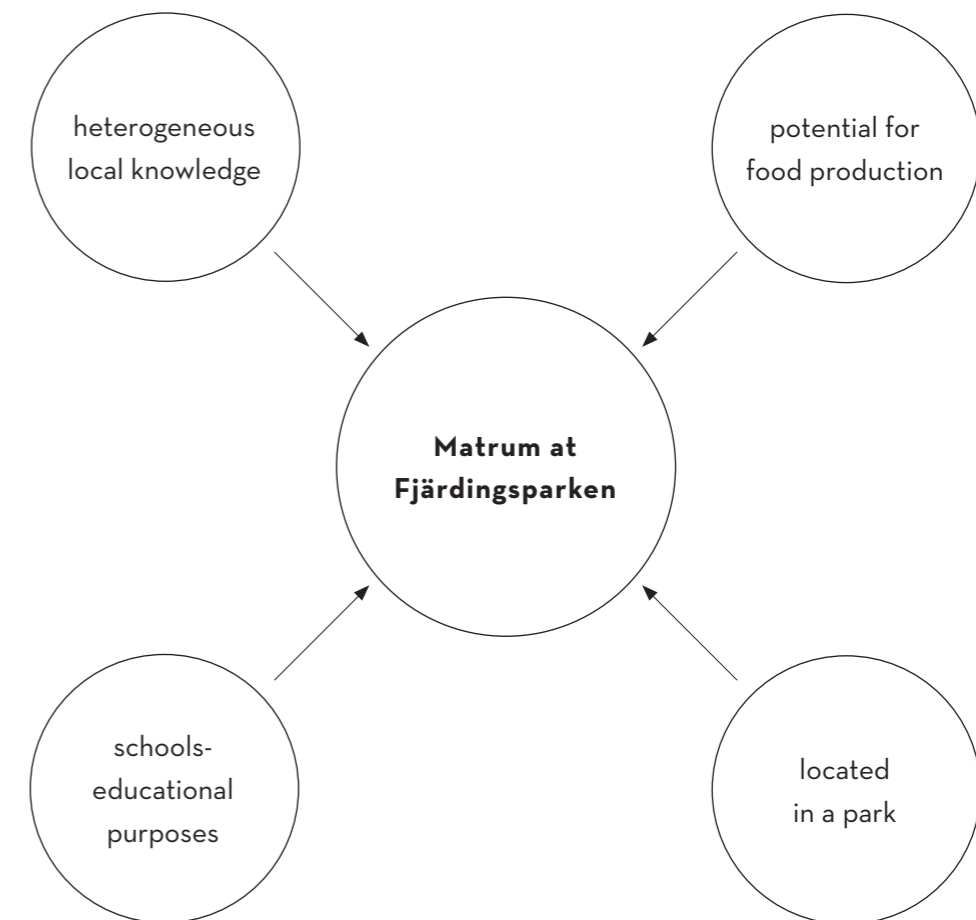


Diagram 6. Aspects that are context-dependent on Fjärdingsparken for the design of the *Matrum*.

Building design strategy

The list of building design strategies (see Diagram 7) is based on the key aspects gathered in the background studies, the site analysis and concept formulation. Through these strategies, it is possible to turn the theoretical aspects into spatial solutions.

These strategies, alongside the context-dependency strategies, are used as guidelines for the spatial configuration of the *Matrum*. They give direction on how the building should be physically, so it fits on the concept.

As seen on the background studies, light and climate are concepts linked with food at all its different stages and are essential aspects on food production. First, since the *Matrum* provides spaces for different food stages, different treatments of light should also be showcased. For example, a big amount of light is needed to cultivate, but darkness is good when storing food.

The climate and connection to nature are also concepts deeply connected to food production, but also connected to people: as seen in the background studies, social structures around food are closely connected to nature and the outdoors. This is why it is important that the physical barrier between inside and outside is treated with as much transparency as possible, so the *Matrum* can benefit from the different seasons and also its direct contact to nature in this case.

The *Matrum* should be welcoming, it should give the same feeling of being a home, since home is where cooking and eating usually takes place. It is a home shared with neighbors and other users with the same interests. This can be achieved using residential features of spaces and furnishings that remind of the comfort and intimacy that a home brings.

Since the *Matrum* is done with the local community in mind, this community should be able to adapt the spaces given by the *Matrum* to incorporate functions that fit into their needs. This means that the building must include flexible spaces that can support different activities. There is a list of possible activities (see Diagram 8) encoded in the design of the *Matrum*, but the users and stakeholders must have the possibility to define its functions. Moreover, the community, and thus the local knowledge, might change over time, so the spaces should be able to change and transform also over time.

To achieve these flexible spaces there must be spaces intended for storage that support this flexibility. Not only to give room to different activities, but also to support the change of needs during different seasons: for example, outdoor furniture that needs to be stored in winter.

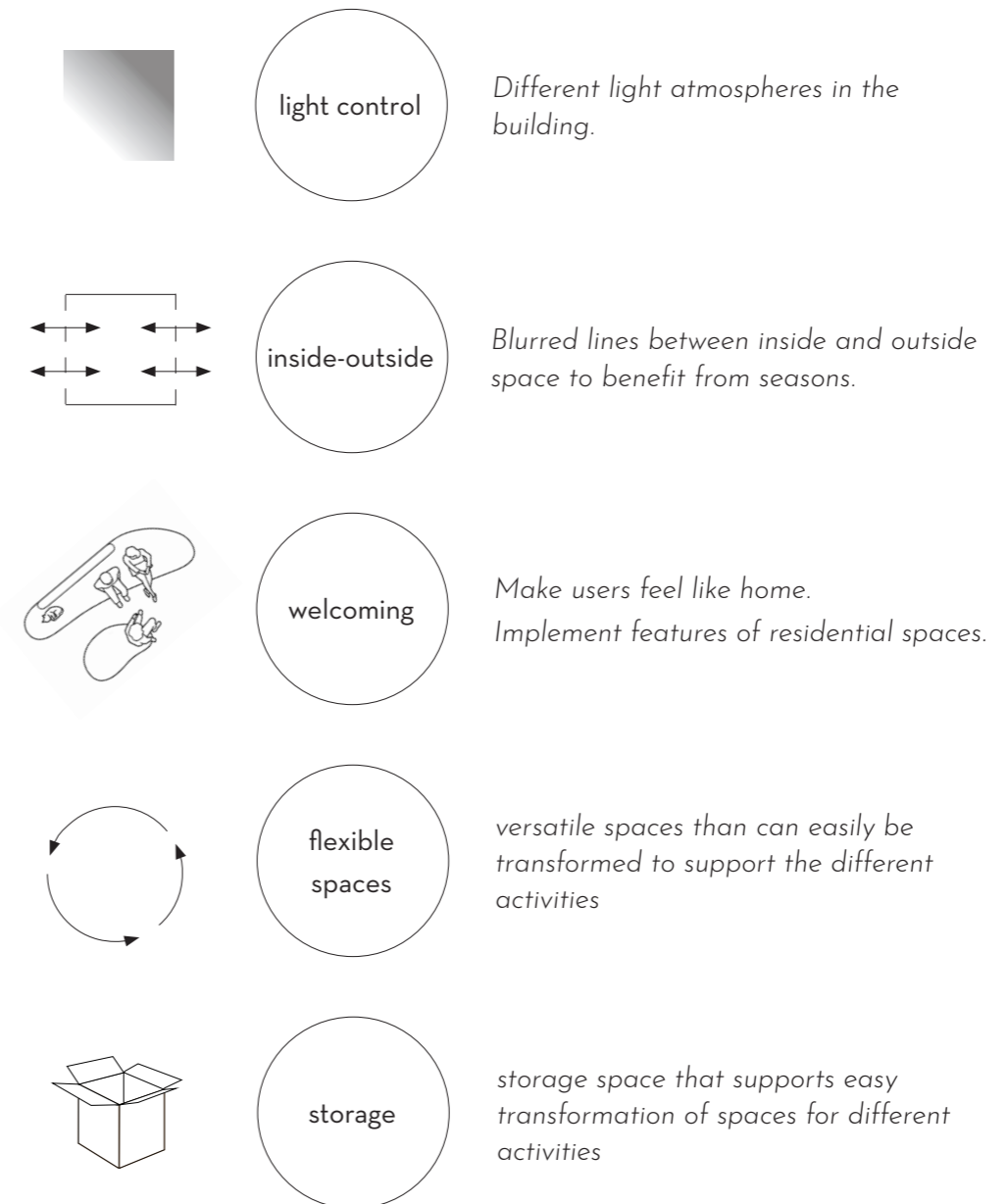


Diagram 7. Features that constitute the building design strategy for the *Matrum*.

Proposed activities

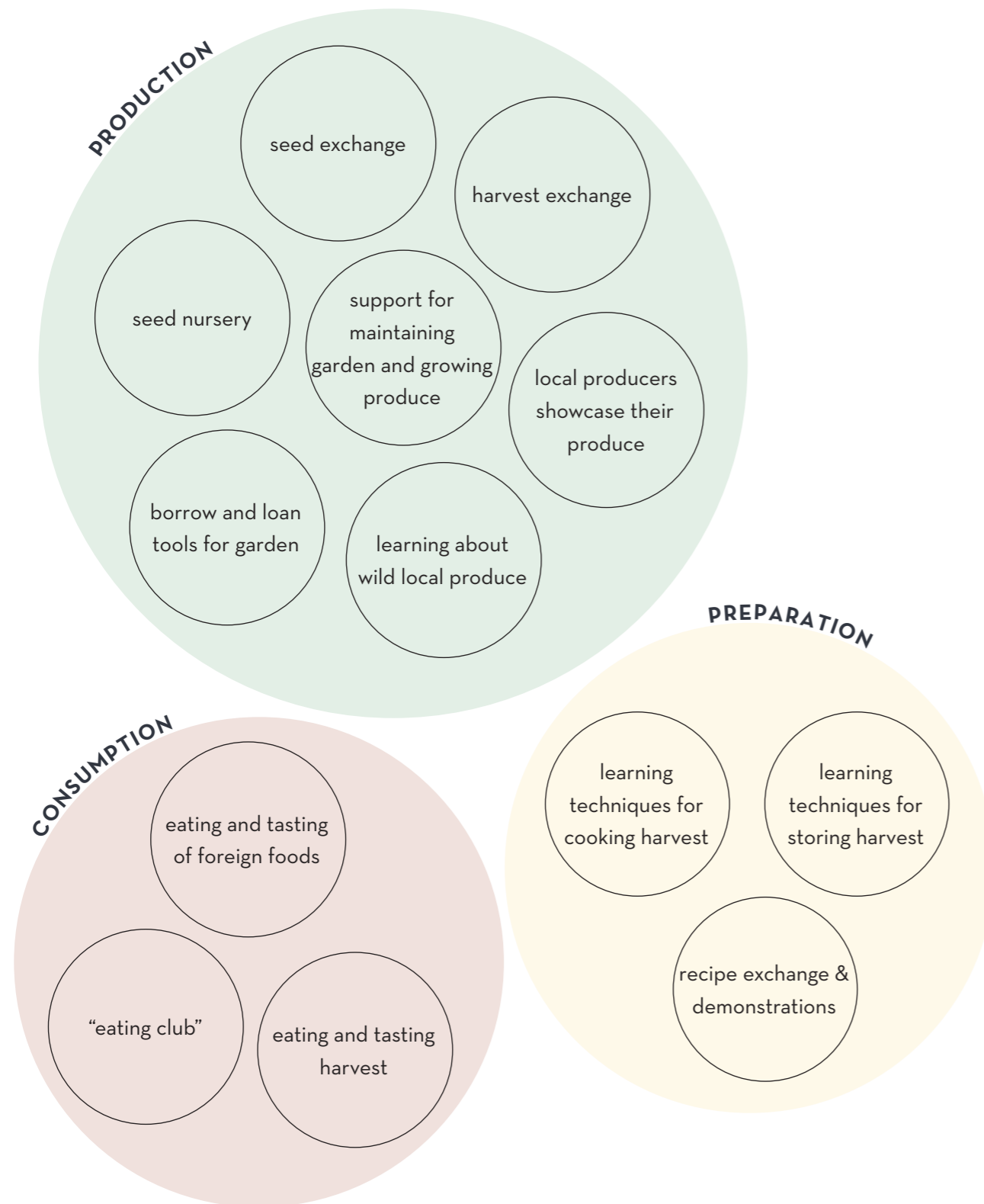


Diagram 8. Examples of activities that could be carried out in the Matrum.

The examples of activities showcased on Diagram 8 can also be used as guidelines for the configuration of a program.

This list of activities help envision the concept of the *Matrum*, and connects the vision with the physical space.

As mentioned, these are only examples related to the different stages of food that can be managed in the *Matrum*, since the users and stakeholders are the ones who decide which activities are carried out in the *Matrum*.

The users and stakeholders are important as part of the local community which the *Matrum* is intended for. It is important to have this idea

in mind, since it means that the *Matrum* needs to be adaptable and flexible.

Communities are always in development and change, and the needs in the present might change in the future. As seen on the site analysis, the local community around Fjärdingsparken is indeed under strong development.

This is why these examples help as a starting point for the program, but it should be considered that they serve the purpose of just giving a hint of the bigger vision included in the *Matrum*.

Program



Diagram 9. Distribution of spaces in the Matrum.

Space	Approximate area	Location
Dining room	100 sqm	inside/outside
Kitchen	30 sqm	inside
Pantry	20-25 sqm	inside
Educational room	50 sqm	inside
Lounge	50 sqm	inside/outside
Storage	20-25 sqm	inside/outside
Garden/terrace	100 sqm	outside, small area inside blended in other spaces
Office	5 sqm	inside
Other	20 sqm	inside

Both concept-dependency and building design strategies, and the examples of proposed activities, help configure a program for the *Matrum*.

The distribution of spaces (see Diagram 9) is a guideline for the physical configuration of the *Matrum*. The approximate areas needed for each space are based on both general standards and the reference projects. Even if the spaces have names that conceive particular activities assigned to them, they are planned to be flexible and should be able to include other activities. Also, the spaces can blend between each other to give even more room for this flexibility (see on Diagram 9, spaces with same color could provide similar activities).

DINING ROOM

One of the main spaces. As its name says, it is the space where users eat and talk over food. It must have direct connection to the outside, so when there is good weather its activities can be moved outdoors.

KITCHEN

The heart of the building, all other spaces surround the kitchen. It is directly linked to storage and the pantries. It is in direct contact with the dining room.

PANTRY

It supports the kitchen and also the educational room. Two different pantries are planned, a standard one and a climate-controlled one.

EDUCATIONAL ROOM

A space available for schools around the area to teach and learn about food (under the mentioned subject *hemkunskap*). It can also be used for workshops and even work as lounge space.

LOUNGE

A comfortable space to relax that encourages talk and connection between users. It could become an educational space in smaller scale if desired.

STORAGE

It supports the need for flexibility of the spaces and their transformation to host different kinds of activities. It also gives support for adapting the building to the different seasons.

TERRACE/GARDEN

Outdoor space for sitting and some food production. It becomes part of the indoors spaces under good weather, such as the dining room or the lounge. There could also be small indoor garden clusters blended in other areas when needed.

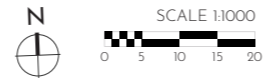
OFFICE

A small office for administration purposes.

OTHER

This includes toilets and room for technical installation.

Site plan



SITE PLAN

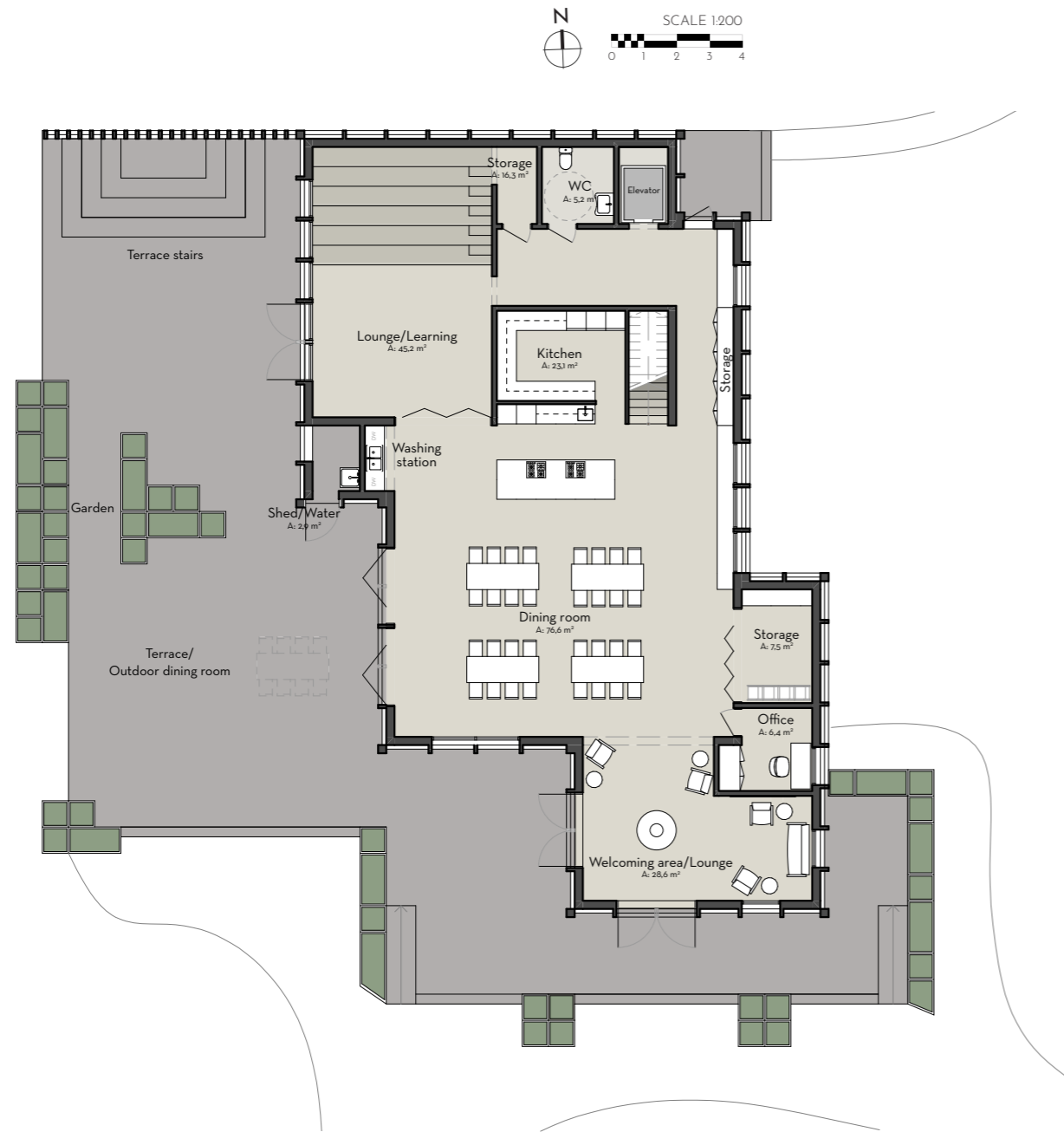
The *Matrum* is located next to a big lawn, directly connected with an open terrace and garden. This terrace gives the possibility of moving indoor activities outdoors if weather allows it.

The building consists of three volumes covered by a weathered-wood lattice which provides both shading to the indoor spaces and serves as climbing structure for vegetation. Both the weathered-wood as façade material and the lattice pattern which can be covered with vegetation make the building blend in its surroundings.



Image 13. Matrum at Fjärdingsparken.

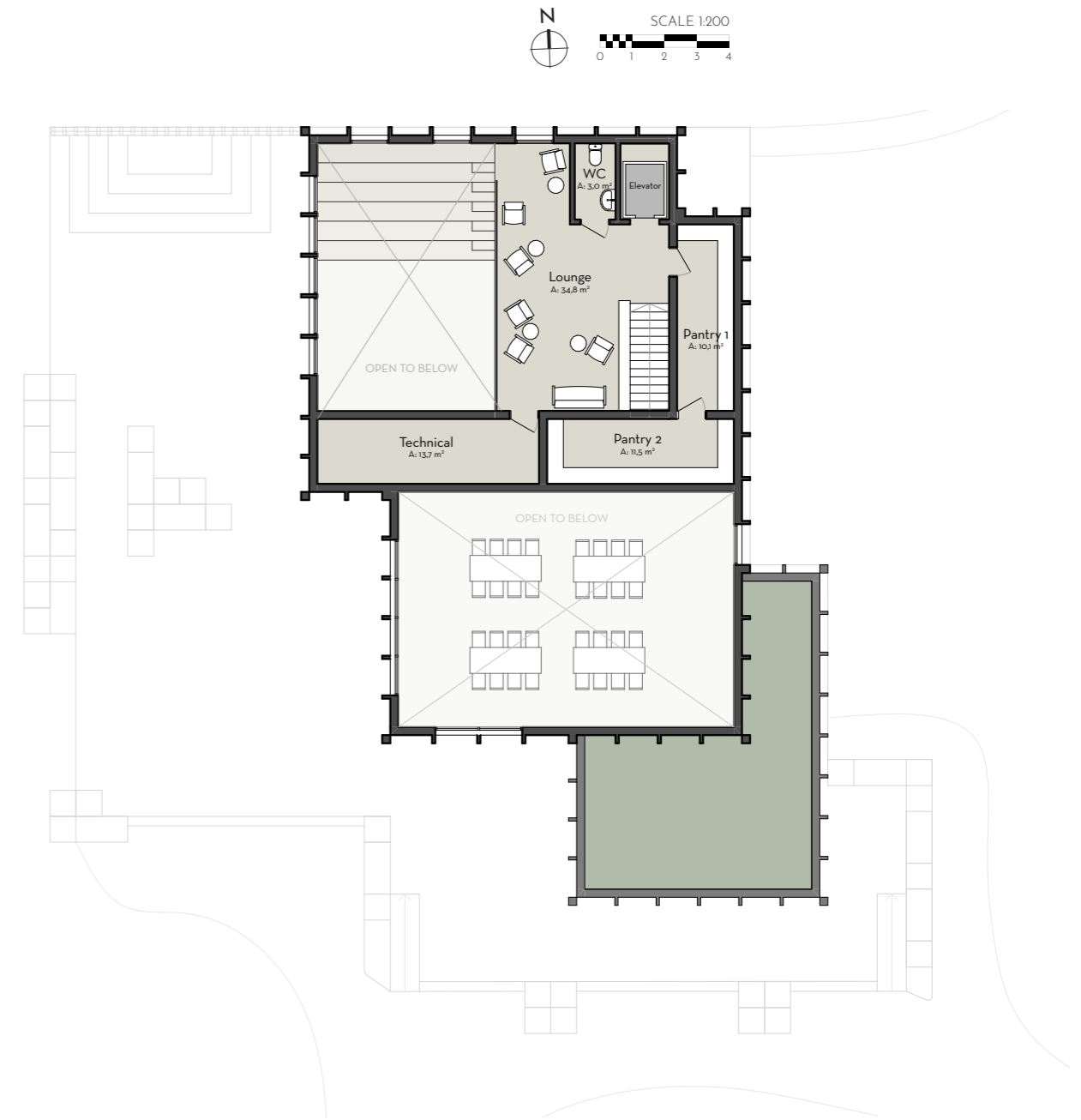
Ground floor



GROUND FLOOR

The ground floor works as an open-plan space, but can also be divided in smaller rooms if needed. Both main spaces, the dining room and the learning space, have double height and direct connection to the terrace/garden: the different activities they can house can be moved outdoors. The kitchen is the heart of the building, directly connected to the dining room and a staircase that leads to the pantries. Several storage rooms and cabinets support flexible room functions.

First floor



FIRST FLOOR

The lounge area, directly connected to the learning space, provides a comfortable and cozy space and benefits from evening sunlight through the glazing towards the terrace. It could also work as an extension of the learning space if needed. There are two different pantries for food storage, which can provide two different kinds of climate atmospheres to store different types of food. The technical room is connected to the main spaces and the kitchen.

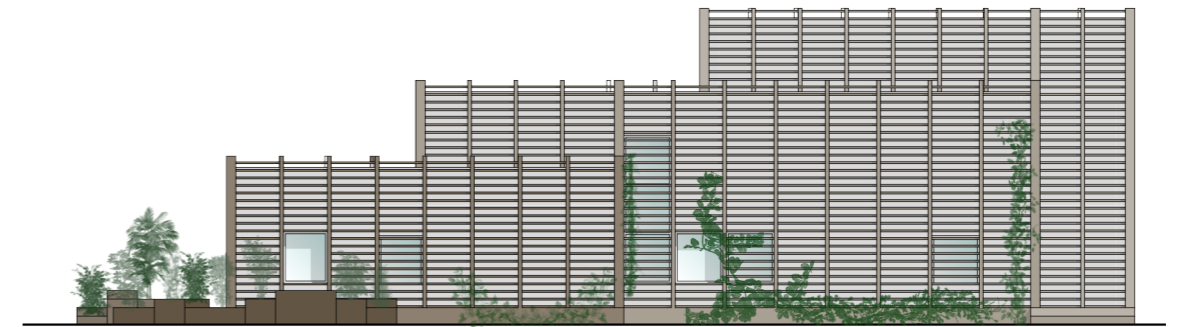
Façades

SCALE 1:200
0 1 2 3 4



WEST FAÇADE

SCALE 1:200
0 1 2 3 4



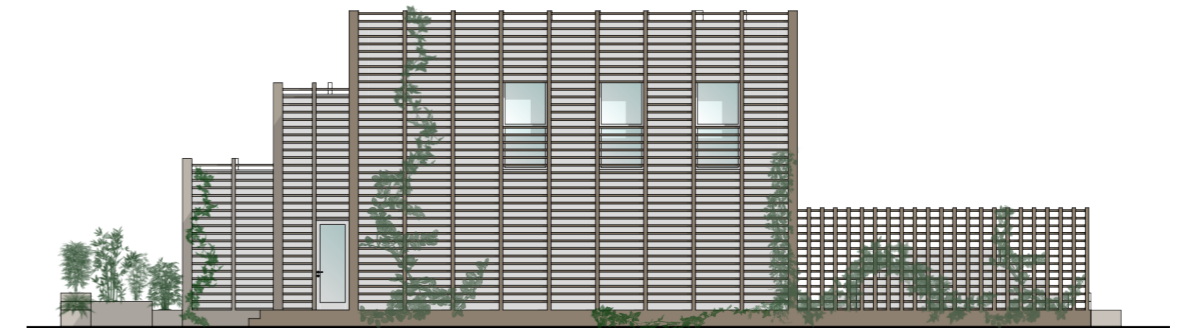
EAST FAÇADE

SCALE 1:200
0 1 2 3 4



SOUTH FAÇADE

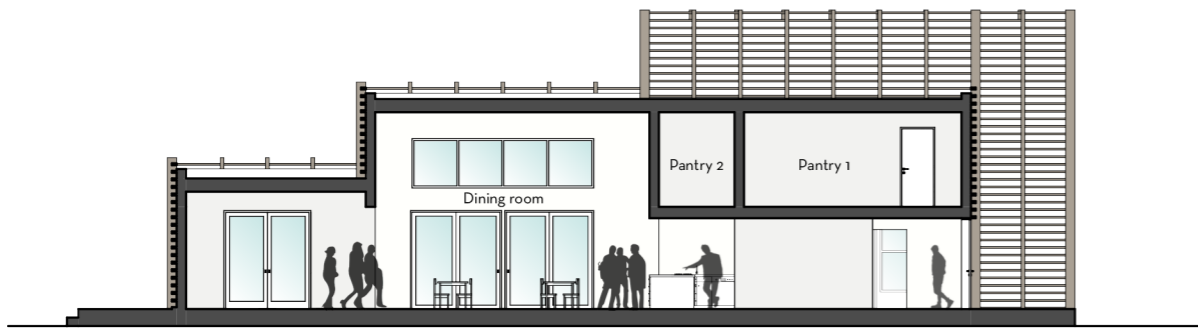
SCALE 1:200
0 1 2 3 4



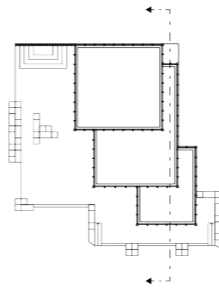
NORTH FAÇADE

Sections

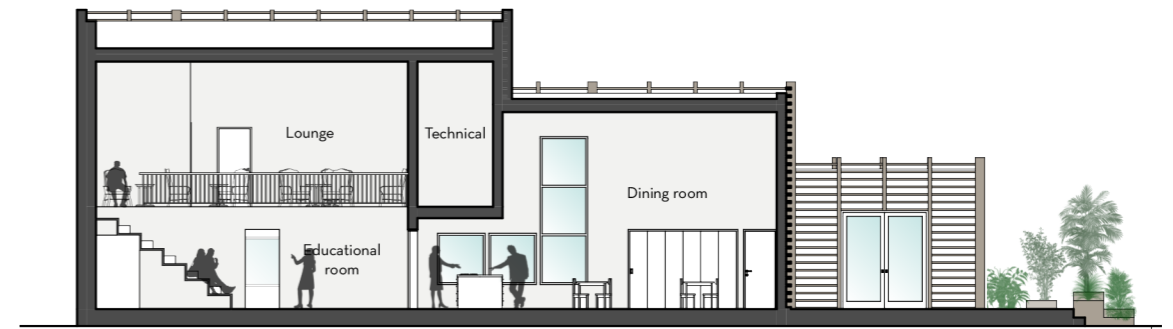
SCALE 1:200
0 1 2 3 4



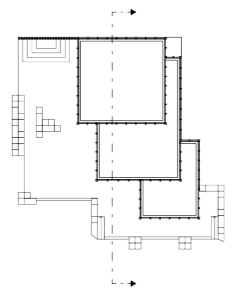
SECTION A



SCALE 1:200
0 1 2 3 4



SECTION B



Images



Image 14. Matrum coming from the West of Fjärdingsparken..



Image 15. Matrum coming from the East of Fjärdingsparken.

A network of rooms

The concept behind the the *Matrum* could naturally lead to the repetition of the same concept in other parts of the city, but this wouldn't mean that the same design could be just moved and replicated to other locations.

As seen before, part of the concept of the building is that it adapts to its local context. As seen in the design of the *Matrum* at Fjärdingsparken, there are some context-dependent strategies that are based solely on its location. So even in the same city, the same process carried out with the case of Fjärdingsparken should be applied to the new location. This means that a site analysis of the context and the local community should be done in parallel with the design of a *Matrum*.

For example, the design of the *Matrum* at Fjärdingsparken is deeply influenced by its direct location to a park and the characteristics of its heterogeneous local community.

Following this process, other *Matrum* could start appearing in different areas of the city of Gothenburg, or even in other cities. These new *Matrum*, each of them adapted its own local contexts, would create a network on a city scale, later even on a region or country scale.

These *Matrum*, since they are based on the same concept, could create a network between them. The concept of sharing local knowledge would then expand between different local communities, creating a connection between local food cultures.

This structure looks familiar to the one seen on the problem statement and the background studies; on the consequences of globalization, such as connection and multiculturality. It goes back to the accessibility to different cultures, but in a small scale such as the city scale.

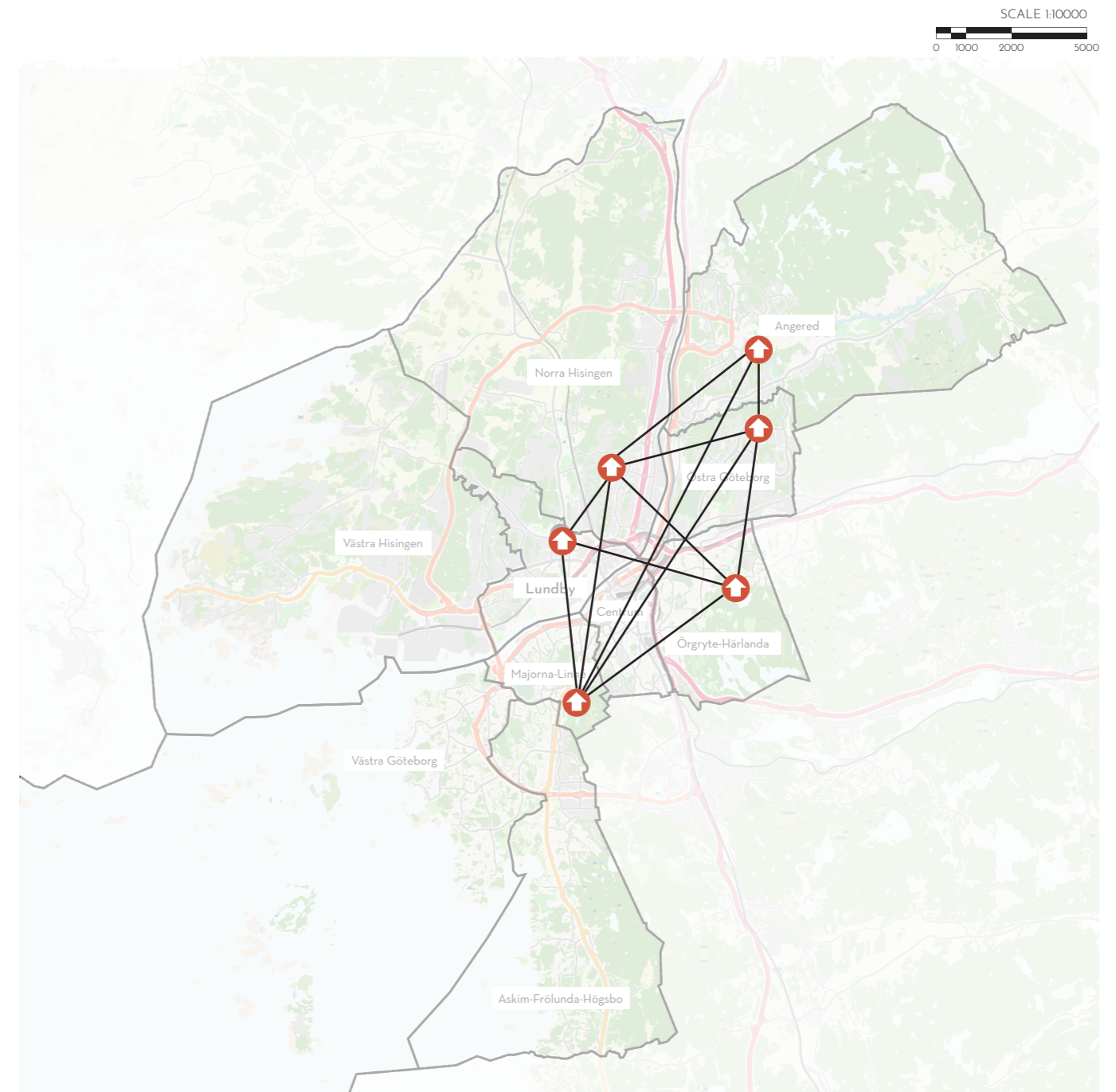


Figure 15. A potential network of *Matrum* all over the city of Gothenburg.

 *Matrum*

5. Discussion & Reflections

Discussion

The discussion aims to take a look back at the accomplished work, reflect and reconnect to the research questions outlined in the introduction.

How can architecture and urban planning strengthen the cultural aspects around food and use it for community development?

Throughout the background studies on food culture in both the Mediterranean and the Nordic countries, it has been established that there is a food culture everywhere; what makes the difference between them is the values they are based on. Both openness to new foods and protection of local food (protectionism) are good mechanisms for community building through food. Also, social structures have been seamlessly built around food for centuries.

But in a globalized world, these social structures are threatened to disappear: since there is instant and direct availability to any food, there is a growing tendency of becoming detached to the food we eat and who we eat it with. However, there is the opportunity of hyperconnection and flow of cultures and people like never before.

Architecture and urban planning can offer solutions that mitigate this disconnection to food through the connection between people with same or different cultures. These solutions can provide a physical space where users can build social structures and connection around food, and one of them can be a space like the *Matrum*.

The *Matrum* is an application on a small scale, giving a local community a platform where its different users and stakeholders can interact and build social structures around food.

For this platform to work, it is important to understand the local community and its needs. It is important to connect the local knowledge with the local food resources. As mentioned, local knowledge on food is not the traditional one linked to the historical identity of a place. The local knowledge is given by the local community, and as said previously, both global connection and flow make this local knowledge be different from place to place and also change through time.

This space where local knowledge and local produce or resources are connected can also be an educational tool: a space where knowledge about local food production is shared, so people can make more conscious and informed decisions about food that lead to more sustainable food choices. It could also be used as an extra classroom for schools and other educational organizations.

To adapt to ever-changing local knowledge, the design of the *Matrum* involves not only an architectural solution, but it is also a urban planning tool: its design must involve a site and community analysis, which makes it deeply connected to its local context.

The *Matrum* does not work as an independent building. Besides being connected to the

local context, its concept also deals with the existence of urban infrastructures on its surroundings that can assist its functions, such as gardens or farmers' markets. It also deals with the possibility of new infrastructures appearing as an effect of its existence.

The *Matrum* activates both the local community and its infrastructures related to food. Since it is connected to a local context, this could lead to other similar spaces emerging in other communities on a city level. Each one of them are embedded to its local context, but also connected to each other, creating a network of *Matrum*. This expansion has only been pointed out but it could be further investigated.

With the *Matrum*, architecture and urban planning give space for human connections around food; a space for learning, sharing and exploring around food. A space that can mitigate loneliness while providing healthier and more sustainable food choices.

How would the concept of a Matrum work as a community development platform in the local context of Kvillebäcken, through a building design?

The concept of *Matrum* does not exist without its local context, Kvillebäcken in Lundby. Through the site analysis, there is a deep exploration of Kvillebäcken and Fjärdingsparken, where the *Matrum* is located. Both this site analysis and the background studies give knowledge that can be transferred

to the concept and design of the *Matrum*.

The building design is determined by building design strategies taken by the previous studies, and context-dependent strategies, which take into account the location of the building. This context-dependent strategies.

The particular characteristics of the local population define the program for the building: the existence of multiculturalism in Lundby can give opportunities for creating new local knowledge around food; or the fact that half population of Lundby lives alone, the *Matrum* is a good initiative to set off a space to coexist within the community.

These characteristics of the local community give some guidelines for the building design: it must be flexible to adapt to the community's heterogenous backgrounds: the users must have the possibility to adapt the different spaces of the building to their specific needs, which might be different depending on their backgrounds. In an area under development such as Kvillebäcken, this is even more important, since the requisites of the community might also change over time.

Its location directly in the park provides connection to nature and the outdoors, and like food structures, the building has a strong connection to both of them: it has to adapt to the change of seasons to maximize this connection. This means that when the weather allows it, the building must have the possibility

Reflections

to grow towards the outdoors, being able to move some of its functions from indoors, such as the dining room, to the terrace. For this reason, different spaces that offer storage for extra furnishing or equipment for the outdoors are included in the design. This storage also supports the building's design strategy of flexible spaces previously mentioned.

The kitchen takes a central role as the heart of the building, and is also supported by some storage and two pantries. These pantries' purpose is to get closer to a system of seasonal produce determined by local products.

These spatial decisions are taken directly from key aspects explored in the background studies: closeness to nature and the outdoors are important aspects in the Nordic food cultures, as is food storage due to the climate conditions. Open and flexible spaces that foment sharing experiences around food, such as the kitchen, dining room, learning space and garden, reflect attributes embedded in the Mediterranean culture, where the food culture has a strong heritage and generational aspect.

The architectural solution for the *Matrum* becomes a seamless part of this park without being intrusive. The weathered-wood façades with lattice pattern have a language familiar to the existing trees and can house climbing vegetation, so the building becomes camouflaged in its surroundings. Its three volumes with different heights make the

design playful and dynamic, with a terrace that connects its indoors spaces directly to the big lawn, and invites people to come in and explore. Natural light is controlled with the lattice façade, which also offers shading. The indoor spaces work as a big connected room that can also be divided in smaller rooms if needed with help of door partitions. Small lounge areas provide comfortable and cozy spaces that make the *Matrum* resemble a home: a home for the local community.

It is worth pointing out that the architectural solution is directly connected to its context of Fjärdingsparken. If other *Matrum* were to appear in other part of the cities, as mentioned in the idea of a network or expansion, they would not necessarily look alike and both their program and their architectural design should adapt to its context.

Even if the design reflects the flexibility and adaptability which the *Matrum* must have in order to meet the needs of the local community and its surroundings, further studies on this matter could be done to obtain a more accurate outcome. These studies could include participatory design processes that involve directly the community, as it was done when the park Fjärdingsparken was renovated.

This master thesis began as a means to use my mixed cultural background and further explore my thoughts on how different the relationship between people and food can be depending on their cultural background.

Through the theory studies, I got answers to questions I had been asking to myself since even before I started this work. These answers gave me knowledge and better understanding on both my Mediterranean culture and my adopted Nordic culture. I realized how both have its own valid values when it comes to food culture and its development.

Applying my interest of food culture into architecture and the local context came very naturally with this thesis. I believe in the power of small-scale progress for better society development at a global level. The design of a simple building as the *Matrum* could slowly trigger the appearance of more spaces of similar nature, that could provide people with more information about sustainable food choices and at the same time allow them to build social structures with their peers.

Globalization is usually seen as a problem rather than a gift, but it is time we realize that its positive effects can outnumber the negative ones if only people make the right choices with the right information. In the case of food, knowing where the food comes from or how it has ended up on our plates makes a difference. In the case of mobility and connection, the multiculturalism that globalization brings can make us more humble and tolerant towards one another, dismantling prejudice.

The *Matrum* is a design concept that can of course be improved, but I think it is already a small step into the right direction. Its aim is to make the reader wonder what could happen if a space like this existed, and also it starts the discussion on the difference between traditional and local knowledge, how communities are always evolving and which tools are needed to help these ever-changing communities thrive within.

References

LITERATURE REFERENCES

- Andreassen, R. (2014). The search for the white Nordic: analysis of the contemporary New Nordic Kitchen and former race science. *Social Identities*, 20(6), 438–451. <https://doi.org/10.1080/13504630.2014.1002599>
- Barjolle, D. and Sylvander, B. (2000). PDO and PGI products: market, supply chains and institutions - Protected Designations of Origin and Protected Geographical Indications in Europe: Regulation or Policy? FAIR – CT 95 –0306, Final Report, European Commission.
- Bergflødt, S. (2012). Snapshots of Swedish food culture. *Anthropology of food*(7). <https://doi.org/https://doi.org/10.4000/aof.7310>
- Bergflødt, S., Amilien, V. & Skuland, S. E. (2012). Nordic Food Culture(s) – Thoughts and perspectives by way of introduction. *Anthropology of food*(7). <https://doi.org/https://doi.org/10.4000/aof.7296>
- Desoucey, M. (2010). Gastronationalism. *American Sociological Review*, 75(3), 432–455. <https://doi.org/10.1177/0003122410372226>
- Duncan, E. (2021). From globalism to localism: How structural economic shifts can support the local food movement. *Journal of Agriculture, Food Systems, and Community Development*, 1-3. <https://doi.org/10.5304/jafscd.2021.102.047>
- Essid, M. Y. (2012). Chapter 2. History of Mediterranean food. In *MediTERRA 2012* (english) (pp. 51-69). Presses de Sciences Po. <https://www.cairn.info/mediterr-2012-english--9782724612486-page-51.htm>
- European Commission (2021a). Quality labels. https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels_en
- European Commission (2021b). eAmbrosia - the EU geographical indications register. <https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/>
- FAO. 2020. COVID-19 and the role of local food production in building more resilient local food systems. Rome. <https://doi.org/10.4060/cb1020en>
- Fournier, L.-S., & Michel, K. (2017). Mediterranean food as cultural property? Towards an anthropology of geographical indication. In K. L. S. Sarah May, Achim Spiller, Bernhard Tschofen (Ed.), *Taste/power/tradition* (pp. 77–86). Universitätsverlag Göttingen.
- Fundació Alicia (2021). La fundació. <https://www.alicia.cat/ca/alicia/la-fundacio>
- Göteborgs Stad (2021a). Statistikdatabas. <http://statistikdatabas.goteborg.se/>
- Göteborgs Stad (2021b). Göteborgs historia och arv. Goteborg.com. <https://www.goteborg.com/guider/goteborgs-historia-och-arv/>
- Hanington, B., & Martin, B. (2012). *Universal Methods of Design: 100 Ways to Explore Complex Problems, Develop Innovative Strategies, and Deliver Effective Design Solutions*. Quarto Publishing Group USA, 2012. ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/chalmers/detail.action?docID=3399583>.
- Hermansen, M. E. T. (2012). Creating Terroir. *Anthropology of food*, 7. DOI : <https://doi.org/10.4000/aof.7249>
- Hilmersson, Anders (2015). Göteborg - Sveriges största hamnstad. Tukan förlag.
- Jönsson, H. (2013). The road to the New Nordic Kitchen— examples from Sweden. In P. Lysaght (Ed.), *The return of traditional food* (pp. 53-67). Lund University Press.
- Jönsson, H. (2020). A Food Nation Without Culinary Heritage? Gastronationalism in Sweden. *Journal of Gastronomy and Tourism*, 4(4), 223-237. <https://doi.org/10.3727/216929720x15846938924076>
- Lăcătușu, C.-M., Grigorescu, E.-D., Floria, M., Onofriescu, A., & Mihai, B.-M. (2019). The Mediterranean Diet: From an Environment-Driven Food Culture to an Emerging Medical Prescription. *International Journal of Environmental Research and Public Health*, 16(6), 942. <https://doi.org/10.3390/ijerph16060942>
- Leer, J. (2016). The rise and fall of the New Nordic Cuisine. *Journal of Aesthetics & Culture*, 8(1), 33494. <https://doi.org/10.3402/jac.v8.33494>
- Lundbypark (n.d.). Lundbypark, den nya kvarteren på centrala Hisingen. <https://www.lundbypark.se/>
- Marshall, D. (2005). Food as ritual, routine or convention. *Consumption Markets & Culture*, 8(1), 69-85. <https://doi.org/10.1080/10253860500069042>
- Merriam-Webster. (n.d.). Anthropology. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/anthropology>
- Merriam-Webster. (n.d.). Culture. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/culture>
- Merriam-Webster. (n.d.). Food. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/food>

Merriam-Webster. (n.d.). Heritage. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/heritage>

Merriam-Webster. (n.d.). Patrimony. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/patrimony>

Merriam-Webster. (n.d.). Terroir. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/terroir>

Merriam-Webster. (n.d.). Tradition. In Merriam-Webster.com dictionary. Retrieved April 26, 2021, from <https://www.merriam-webster.com/dictionary/tradition>

Mintz, S. W., & Du Bois, C. M. (2002). The Anthropology of Food and Eating. *Annual Review of Anthropology*, 31(1), 99-119. <https://doi.org/10.1146/annurev.anthro.32.032702.131011>

Murcott, A. (2005) European food culture: what do we mean by it and where shall we look for it? Presentation at Food Culture Seminar, Ås, 21 - 22 April 2005.

Neuman, N., & Leer, J. (2018). Nordic Cuisine but National Identities. *Anthropology of food*, 13. <https://doi.org/https://doi.org/10.4000/aof.8723>

New Nordic Cuisine. (2008). Copenhagen: Nordic Council of Ministers. <http://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-1007>

REKO Backaplan/Göteborg (n.d.). Home [Facebook page]. Facebook. <https://www.facebook.com/groups/rekobackaplangoteborg/>

Ritchie, H. & Roser, M. (2020). Environmental impacts of food production. OurWorldInData.org <https://ourworldindata.org/environmental-impacts-of-food>

R-urban project (2012). Agrocité. <http://r-urban.net/en/projects/agrocite/>

Stadsplaneringsforum Centrala Hisingen (2021). Stadsodling, Rosenträdgården. Sch-gbg.org. <http://www.sch-gbg.org/stadsodling>

Stadsutveckling Göteborg (2020). Delaktighet med spel och röstning. <https://stadsutveckling.goteborg.se/projekt/flunsasstraket/nyheter/delaktighet-med-spel-och-rostning/>

Stadsutveckling Göteborg (2021). Flunsåsstråket. <https://stadsutveckling.goteborg.se/projekt/flunsasstraket/>

Statistikmyndigheten (2021). Befolkningstäthet i Sverige. Scb.se. <https://www.scb.se/hitta-statistik/sverige-i-siffror/manniskorna-i-sverige/befolkningstathet-i-sverige/>

Thörn, C. & Holgersson, H. (2016). Revisiting the urban frontier through the case of New Kvillebäcken, Gothenburg. *City*, 20(5), 663-684. <https://doi.org/10.1080/13604813.2016.1224479>

Touzard, J.-M., Chiffolleau, Y., & Maffezzoli, C. (2016). What Is Local or Global about Wine? An Attempt to Objectivize a Social Construction. *Sustainability*, 8(5), 417. <https://doi.org/10.3390/su8050417>

UNESCO. (2013, December 2-7). Decision of the Intergovernmental Committee: 8.COM 8.10 [Conference session]. Eighth Session of the Intergovernmental Committee (8.COM). Baku, Azerbaijan. <https://ich.unesco.org/en/decisions/8.COM/8.10>

IMAGE REFERENCES

Image 1. Clotet+Paricio (n.d.). [Ground floor plan]. Arquitectura Viva. <https://arquitecturaviva.com/works/fundacion-alicia-4>

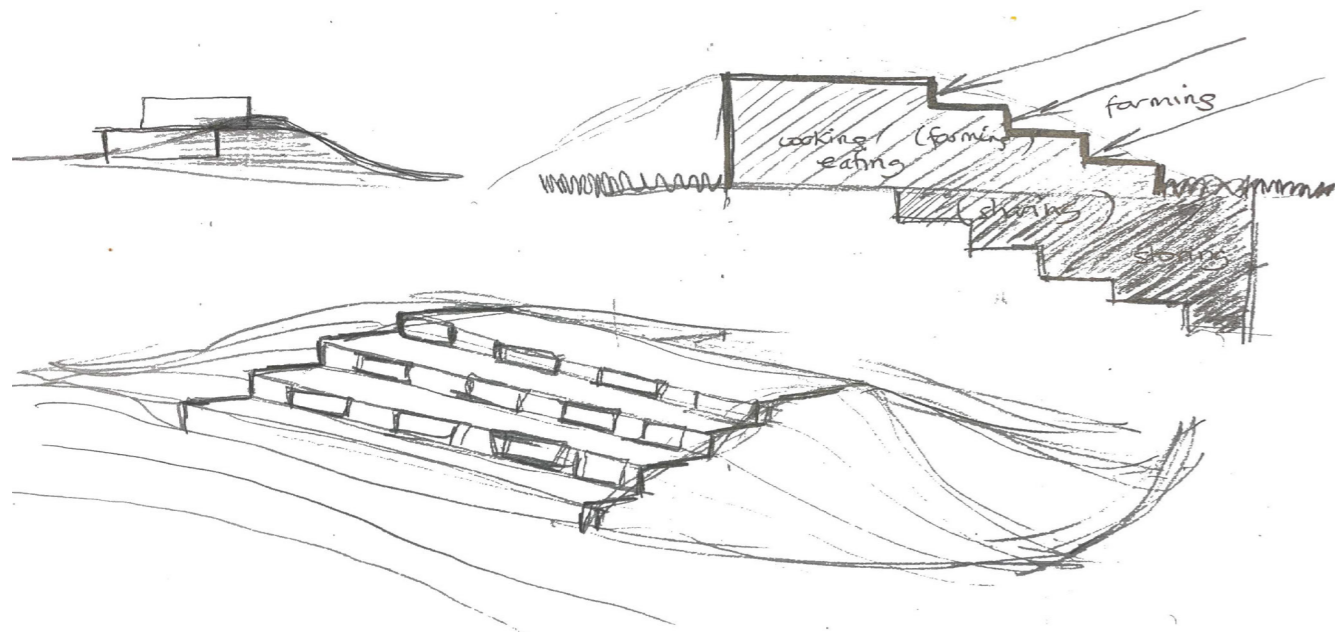
Images 2-6. Lluís Casals (n.d.). [Fundació Alicia building from outdoors and indoors]. Arquitectura Viva. <https://arquitecturaviva.com/works/fundacion-alicia-4>

Image 7. Atelier d'Architecture Autogérée (n.d.). [Agrocité scheme]. <https://www.publicspace.org/works/-/project/j281-r-urban-network-of-urban-commons>

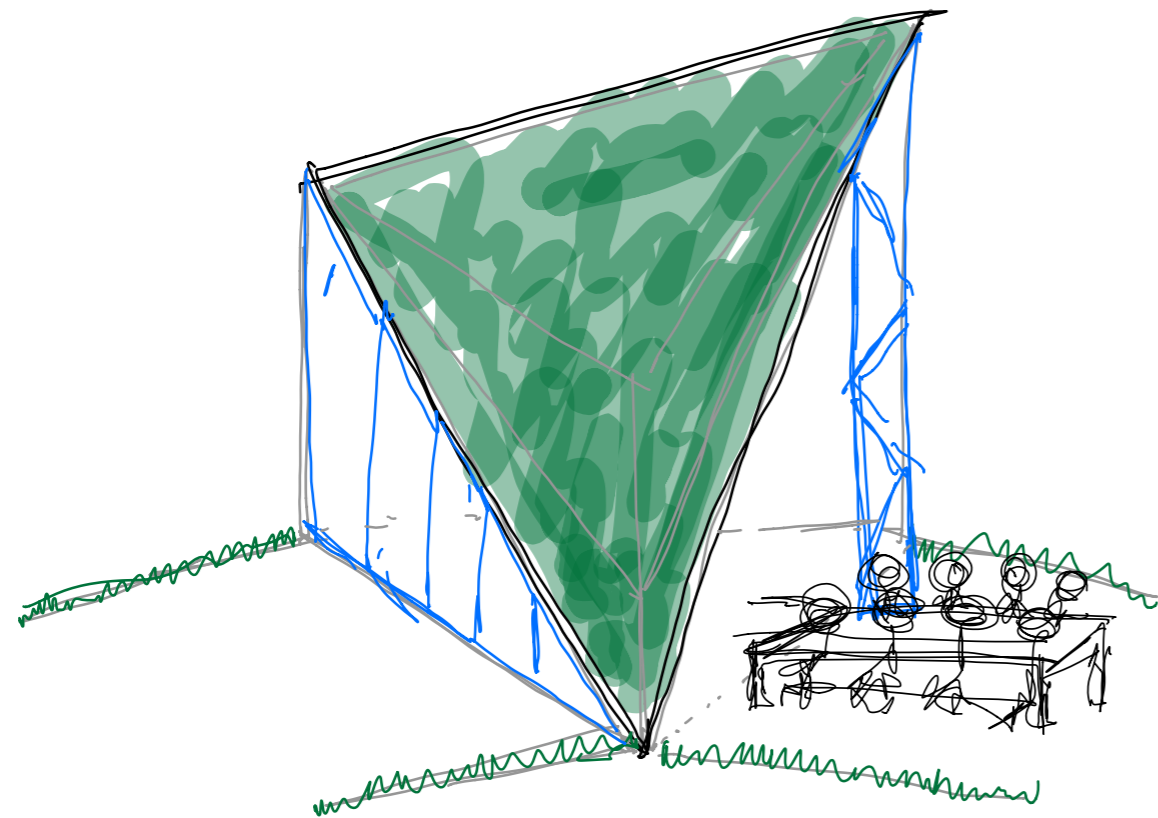
Images 8-12. R-urban project (2013). [Agrocité]. Flickr.

Other images are property of the author.

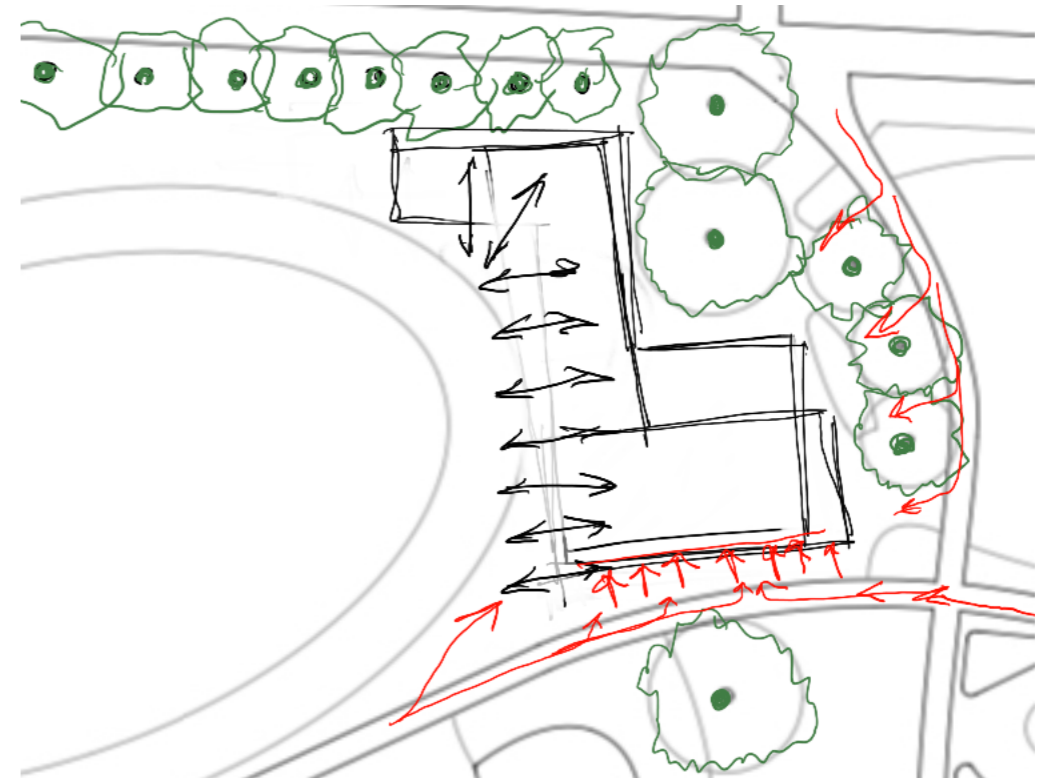
Appendix
(sketches)



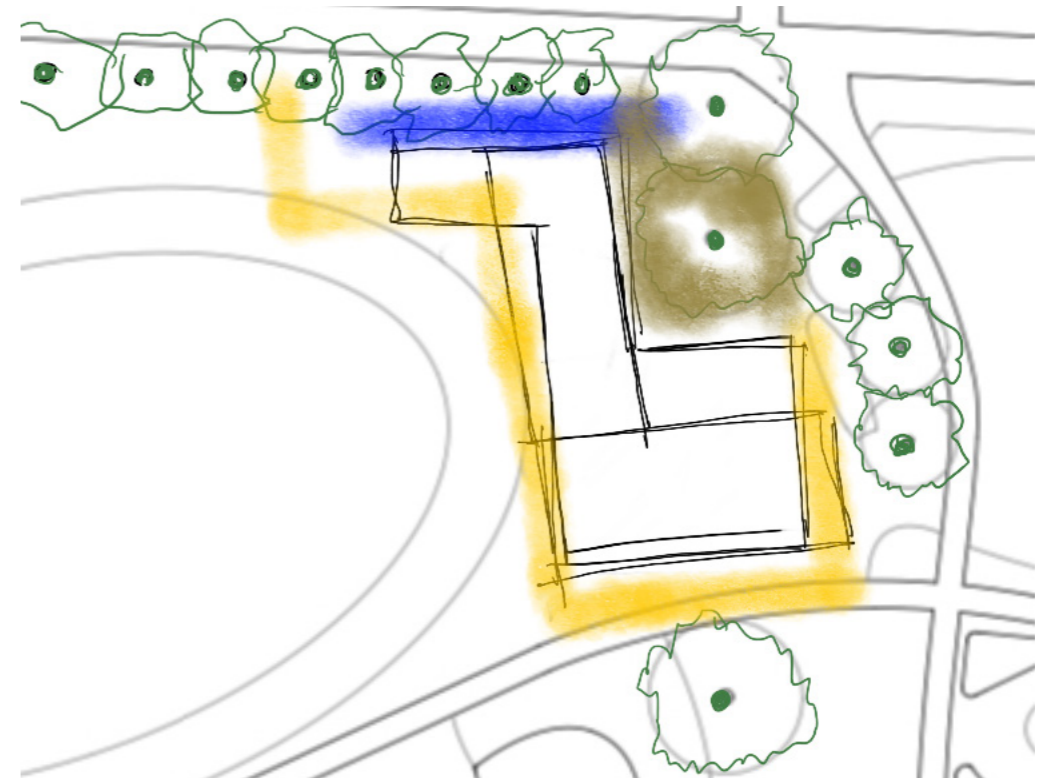
Sketch 1. Exploring the treatment of light in the different parts of the building.



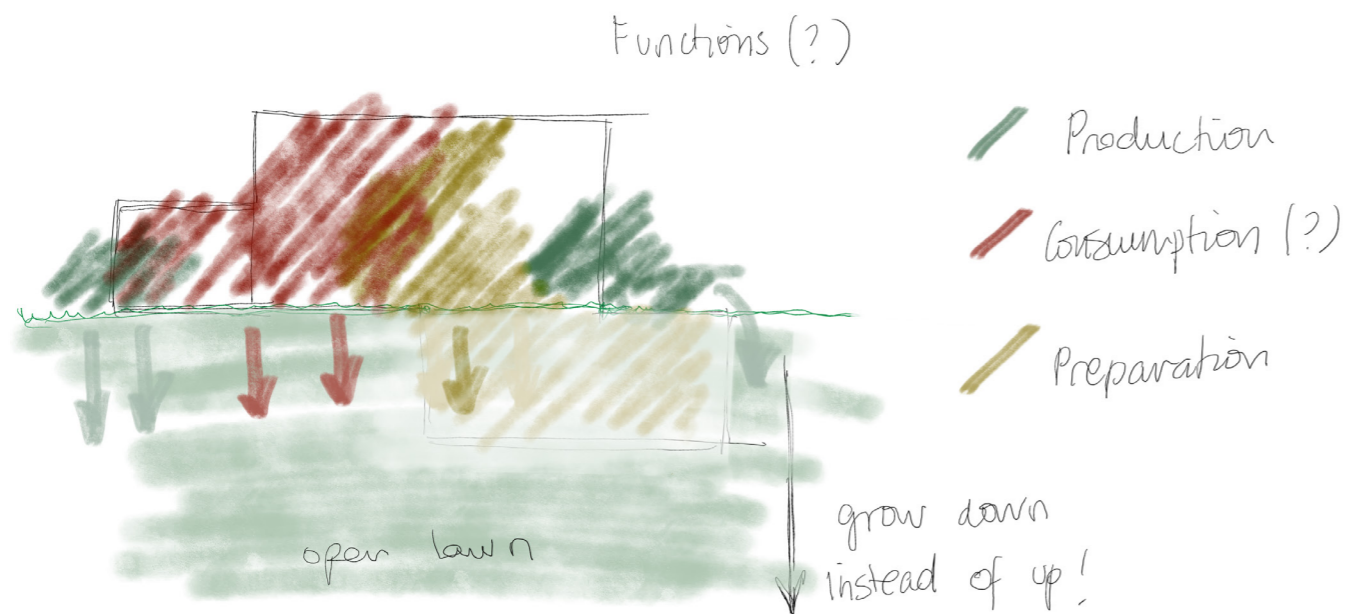
Sketch 2. Connection with surroundings. Limits between inside-outside.



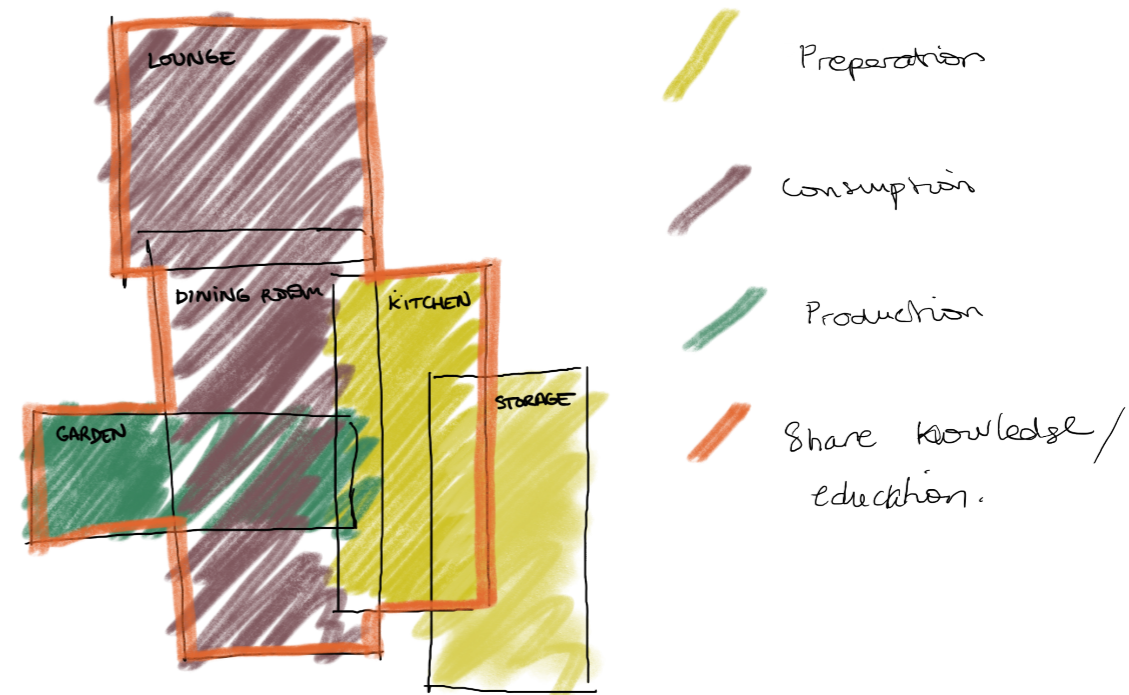
Sketch 3A. Exploring design strategies: accessibility, in-out. Sketching on volumes that fit location and boundaries with existing vegetation.



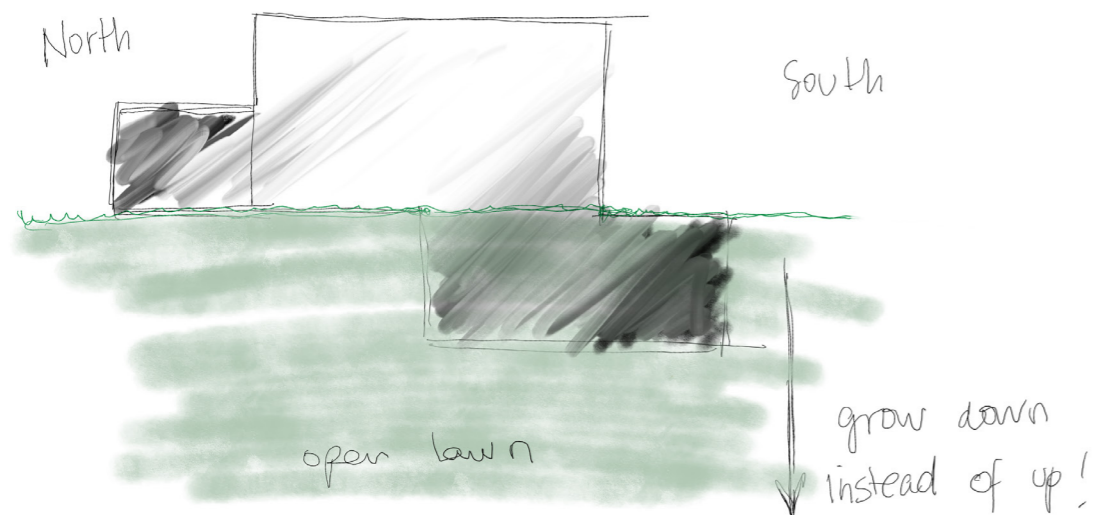
Sketch 3B. Exploring design strategies: visual openness. It can relate to the most-least light façades.



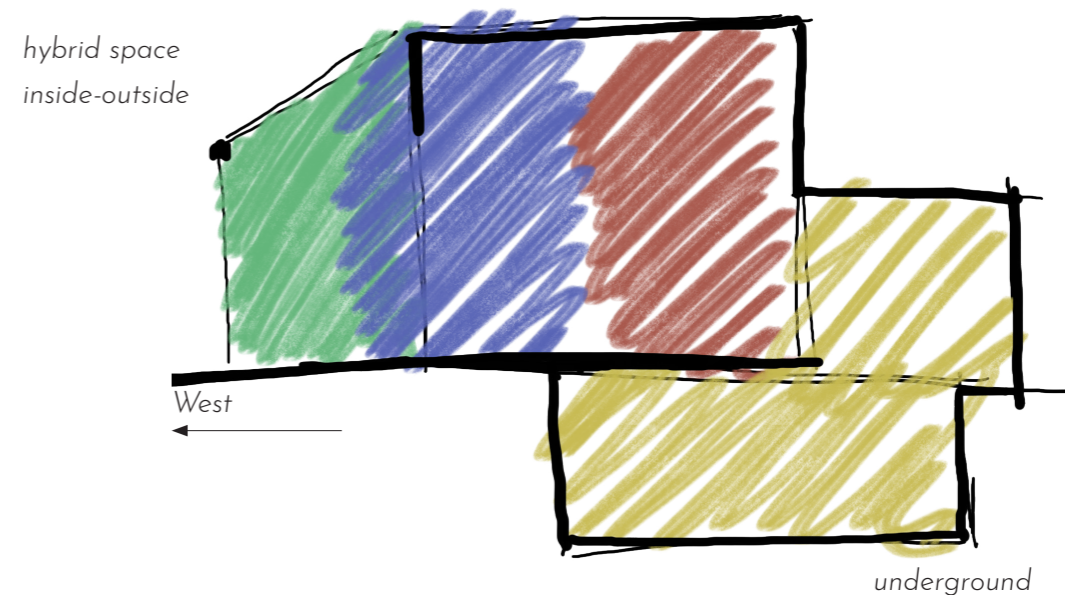
Sketch 4A. Section. Exploring the program.



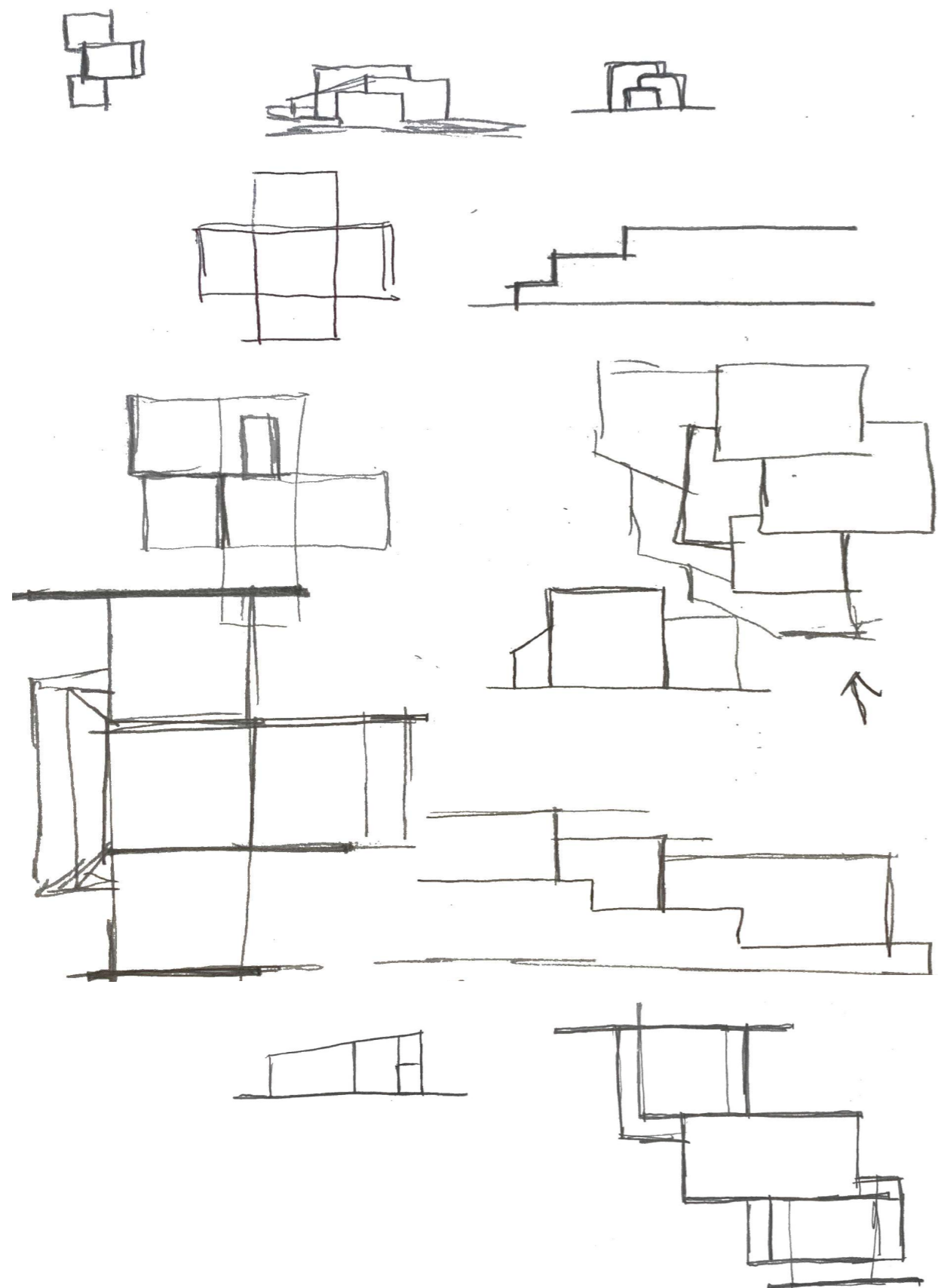
Sketch 5A. Floor plan. Exploring the program. Intersection of spaces (independent from site).



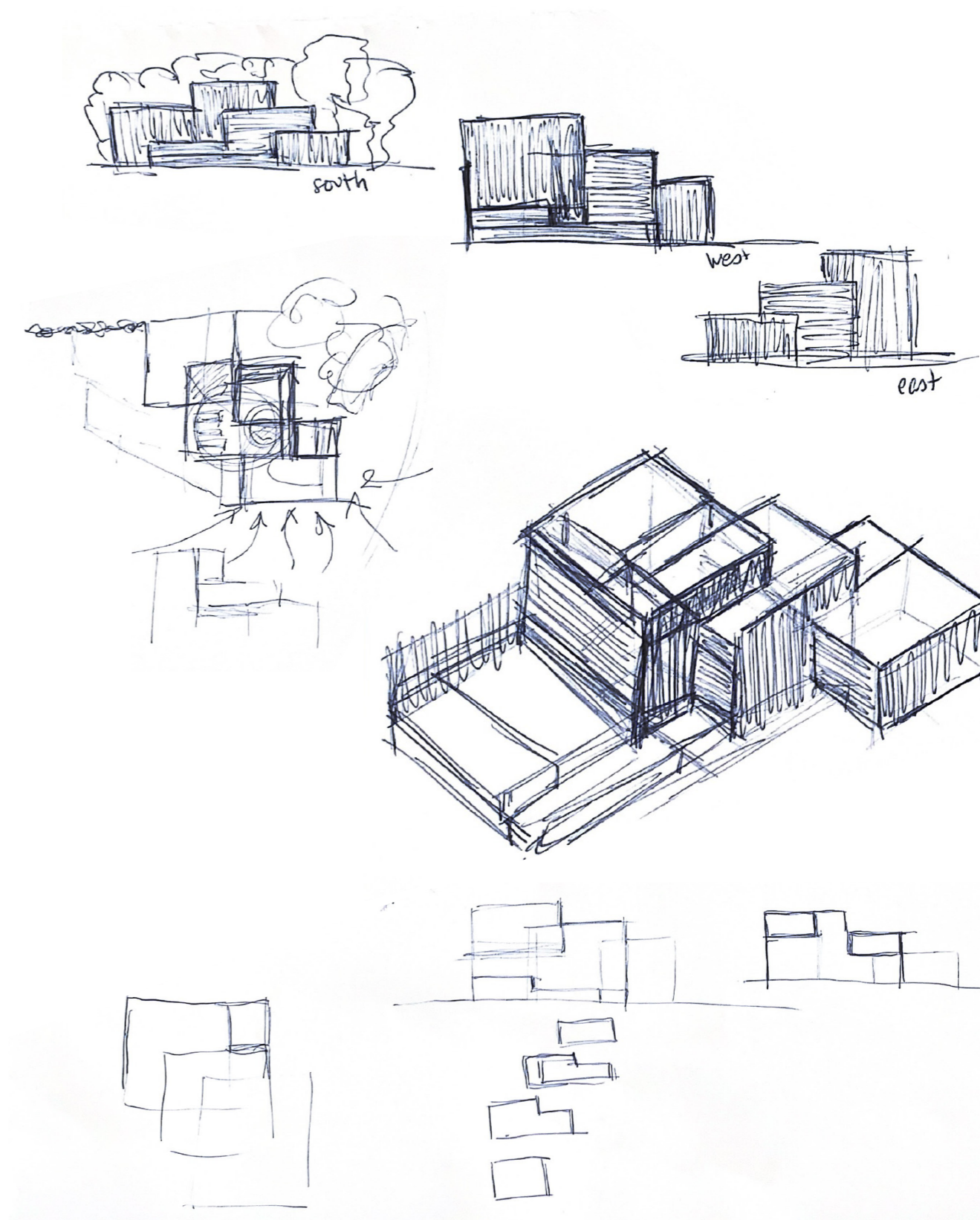
Sketch 4B. Section. Exploring how to treat different kind of light atmospheres. Possibility to make the building grow underground.



Sketch 5B. Section. Exploring the program. Geometry of spaces.



Sketches 6. Shape and module exploration.



Sketches 7. Volume exploration on façades and axonometric view.



CHALMERS
UNIVERSITY OF TECHNOLOGY