



REVIVING THE SCIENCE CITY OF KISTA

FROM VOID SPACES TO A DYNAMIC URBAN LIFE



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Title:

Reviving the science city of Kista
From void spaces to a dynamic urban life

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ABSTRACT

Earth is a big place to live on and people always move around for work, study, better life or other reasons. On the other hand, innovation and technologies are making communication easier around the world and it seems that everything depends on technology and it becomes a huge part of our life. Moreover, innovation and its hubs also provide more than a high-tech that we use and need, but also generate job opportunities. However, our cities play a central role in innovation dynamics. We cannot consider any innovation hub successful if it does not take local conditions as well as resources into account. Public spaces and locals should be a part of any innovation hub.

The fast growing in Stockholm along with high-tech companies that attract more people to live in and work, led to the need for more housing where social life and locals would be part of the innovation and this thesis explores the relationship between locals and high-tech firms, harnesses the innovation hub in Kista, Stockholm for the public realm, adds different activities to create an active hub around the clock and make it more liveable and safe.

Only a better situation and vibrant can come out after applying the urban transformation that is needed. The social life and community that would be proposed in the innovation hub would generate a vibrant outdoor environment and foster the new generation ideas by creating a safe open realm.

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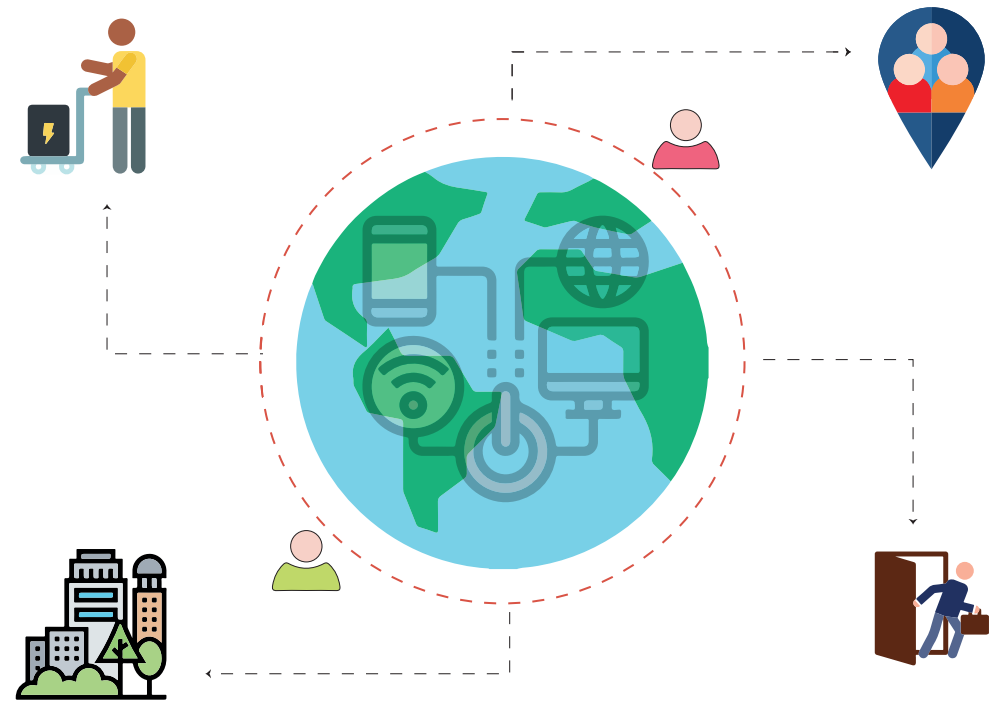
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1. INTRODUCTION

Our world is growing faster than any time before and our daily routine is changing all the time due to the high technologies that are introducing new methods to us. High technologies are one of the main drivers in our urban developments and people's behaviours, who they usually move seeking new opportunities such as; work, study or better life quality, that allows them to explore these new technologies, that might reach some settlements before others. Innovation and technologies are making communication easier around this world and our social life depends increasingly on technology that becomes a huge part of it.

On the other hand innovation hubs do not only provide high-tech that we need and use every day but also generates job opportunities on different levels from cleaning workers in the office to engineers who work in inventions. However, they all need to reach their jobs everyday as well as places, where living nearby with their families, need an urban environment that is also very important to the cycle of innovation in any hub. We cannot consider innovation successful if it does not take local conditions and their needs into account and provide places to strengthen the relationship between the locals and the firms there as well as create a safe community and public spaces where locals are part of function use and foster the new generation ideas along with the public realm.

Some people argue that innovation hubs should not be in a city since their activities always happen indoors and in labs where there is no publicity or where the community is far from being part of it and not open to the public realm. However, most of the innovation centres around the world are located on the edge of the cities and in some places they can even be near the city centre and they are mostly single use as offices or labs. They are busy districts during the day where they get deserted afterwards due to the single use in the area that they become, in many cases, unsafe and dead.



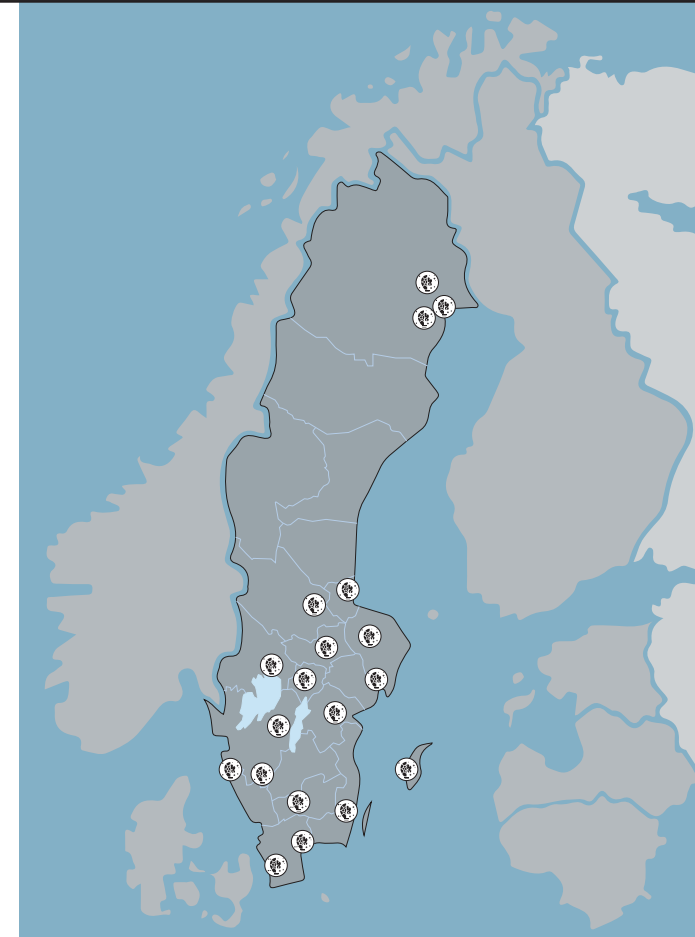
New urban developments are worldwide being planned on providing better life qualities such as outdoor places and liveable urban environment as well as creating communities where innovation hubs are, differently from what most of these centres used to be as a single-use and that is why most of the new strategies, that are proposed to any hub, are aiming to also have a mixed use functions. However, proposing a new master plan for a new innovation hub where all these different qualities, which are definitely needed, have been taken into consideration is not as challenging as making our current hubs better place to live and work as well as providing what they lack from a small bench where you can face the sun to an entire design of a public space plus the need to change current programs in some buildings in order to make an overall more attractive, safe and mixed use neighbourhood for all.

2. TECH CITIES IN SWEDEN

Over the last few decades, Sweden has put itself on the map for its innovation hubs and high-tech cities along with the science parks as well as it is known as an entrepreneurial activity hub. The innovation hubs in Sweden and the nodes are now taking a great part of the new society's infrastructure where they help for a better sustainable growth. High degree of quality and the easy access to governmental support as well as the welcoming community atmosphere are the factors that made Sweden fosters the innovation and entrepreneurship all around the country.

Stockholm, the capital of Sweden, is one of the top European cities that is a birthplace for several tech unicorns and the second globally in attracting talents. Ericsson, Hövding, Spotify and many other companies have been established in Sweden. Around the country you can find more than 20 innovation centres as science parks or cities for different companies' sizes where they spread from north to south and especially in cities where they can collaborate with universities. Sweden has a long-term focus on education and research and this had a major impact on the capacity of innovation. It became one of the innovation leaders in Europe after it was a poor agricultural nation and that started to change in 1842 when the school became compulsory.

Among all these advantages of the innovation hubs in Sweden we could also find some challenges facing the innovation hubs on many levels such as high taxes and labour regulations. Another factor also in the bigger cities is the lack of housing. For instance in Stockholm, Housing shortage prevents young talents from moving to the city. The dark and cold winters can make it a hard selling point if the public spaces design of these innovation hubs are not sheltered enough or provide a fairly good outdoor atmosphere for these talents. Innovation centres should not only be a place to invent indoor where everything happens between four walls. It



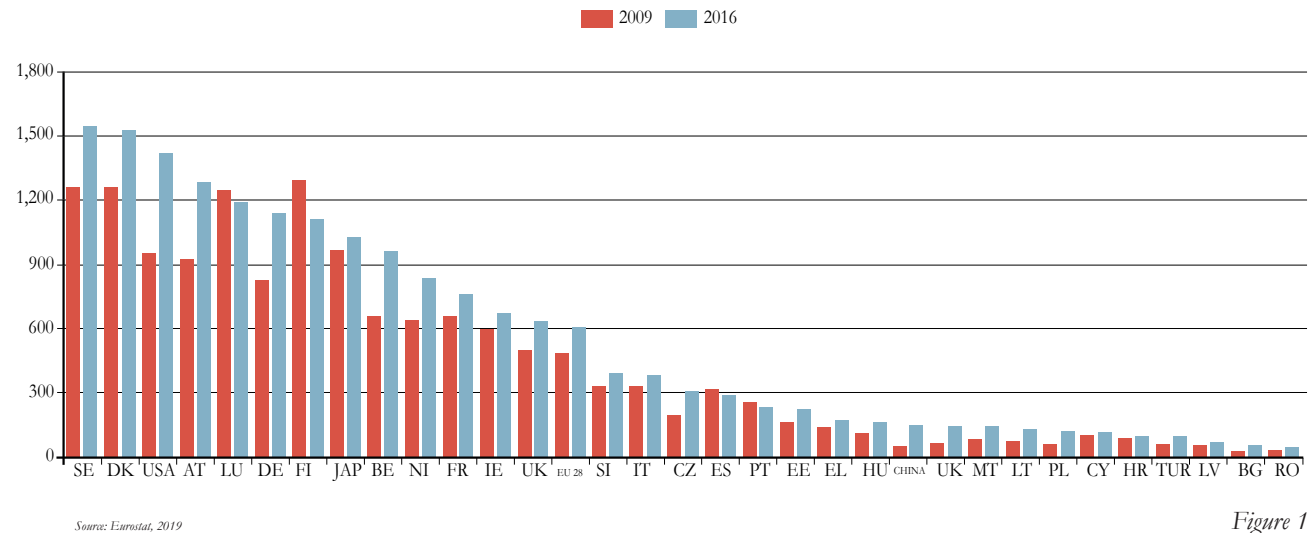
should also be a meeting place between people and public spaces are important to invite the talents or the public to test new ideas. The mutual aspects between all these innovation hubs are the advanced technologies quality and the busy day but on the other hand also the lack of space quality and the location on the edge of a city/town.

2.1 STATISTICS

At the national level, R&D has increased significantly in most of the European countries during the last ten years with the northern countries competing with Japan and the USA where also EU-28 spent on R&D increased by 25.7% (Regional Innovation Scoreboard, Hollanders and Es-Sadki, 2017). *Figure 1*

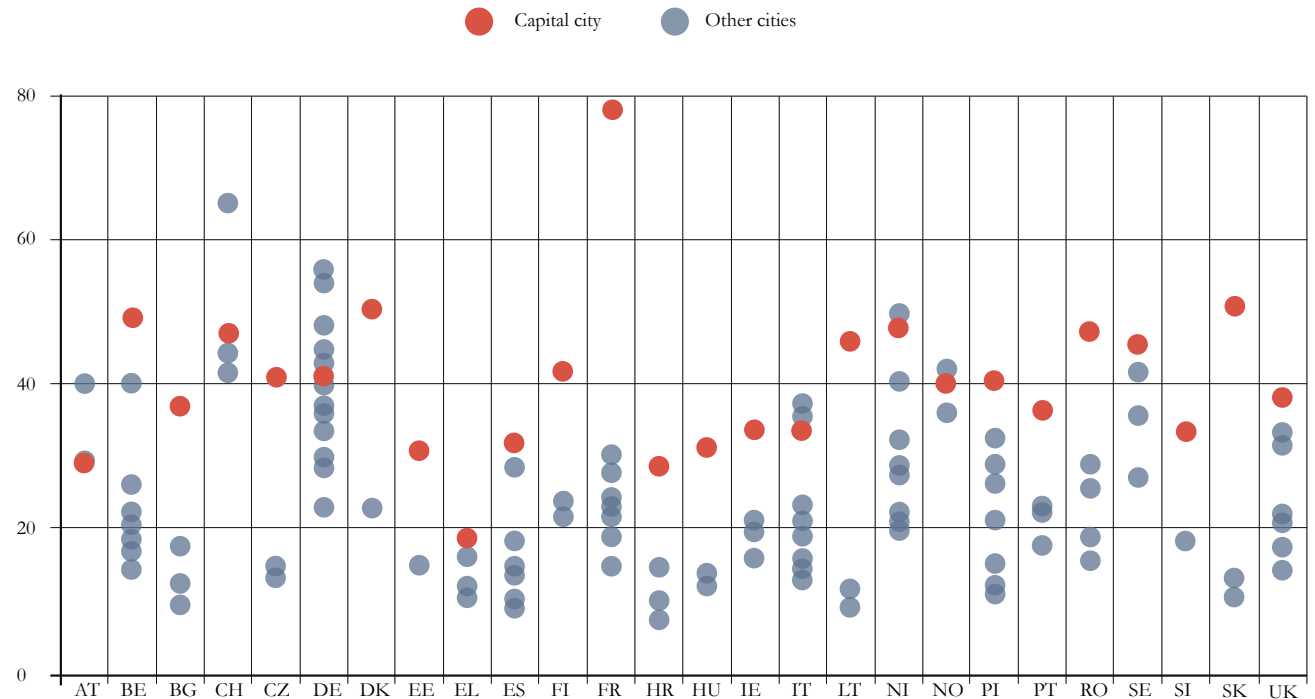
In cities, innovation is being harnessed to deal with specific issues and some cities are bringing together different parties to develop and implement. Statistics show that one in four urban strategies supported by EU Cohesion Funds classified participation and social innovation as well as 40% of them address R&D and ICT and at least half of the European Regional Development Fund (ERDF) 2014-2020 has been invested in urban areas and around 14.5 billion EUR which is 8% of the total ERDF budget has meant to support more than 900 sustainable urban development strategies. In order to see the full picture, there are also other financing from around 134 European Funds as well as other sources that should be taken into consideration.

Some cities are already harnessing innovation to tackle specific issues and bringing together different factors. However, capital cities and metropolitan areas are still the main driver of creativity and innovation where different factors lead and give the grounds for this to happen but it can also be found in small cities where



Source: Eurostat, 2019

Figure 1



Source: JRC | Cultural and Creative Cities Monitor

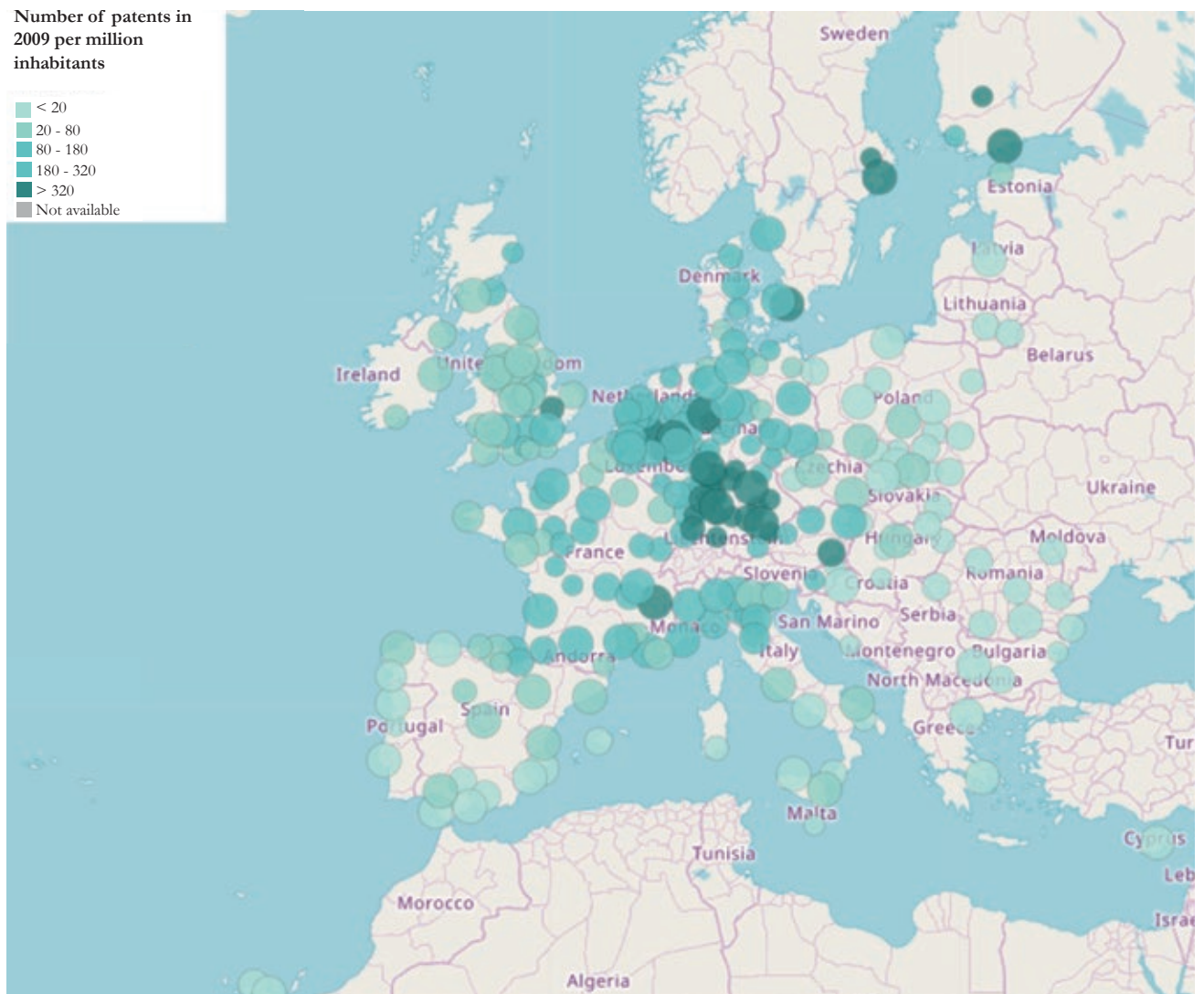
Figure 2

2.1 STATISTICS

innovation and creativity are part of the economy or even culturally welcomed. Creative economy usually puts capitals at first rank in the score, but that is not always the case due to some cities could provide or have a strong economy that puts in ahead the capital. *Figure 2*

Targeted investments efforts in some cities put them before the capitals and when we look at *Figure 2* we clearly see how for instance Linz in Austria where it is described as the creative and innovative ecosystem or Eindhoven that ranks slightly ahead the capital Amsterdam probably due to the high-tech and design-led atmosphere. However, the innovative and creative ecosystem has been able to be created thanks to investment efforts.

The innovative environment, that the capitals mainly provide, helps locals to be more creative which explains why the number of patents is bigger in the capital. Even though population is larger in capital but job opportunities attract more people to live where capitals provide a better education and a high-tech environment. *Figure 3*



Source: JRC elaborations based on Eurostat data (Eurostat, 2019)

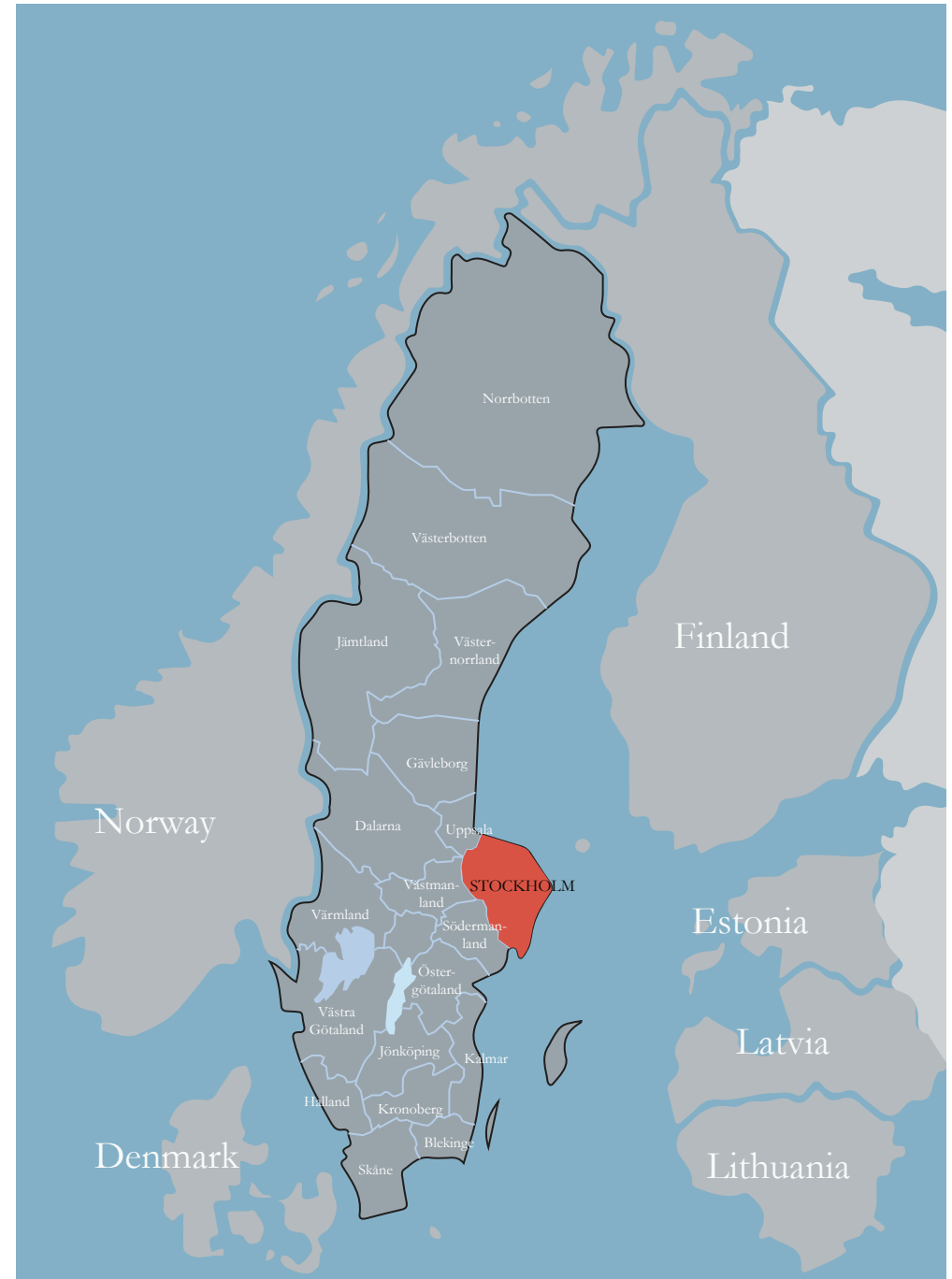
Figure 3

3.1 SITE WITHIN SWEDEN

The site is located in Stockholm province on the east coast of Sweden in Stockholm city, which is the capital of Sweden, of over one million inhabitants living in the city of Stockholm with humid continental climate.

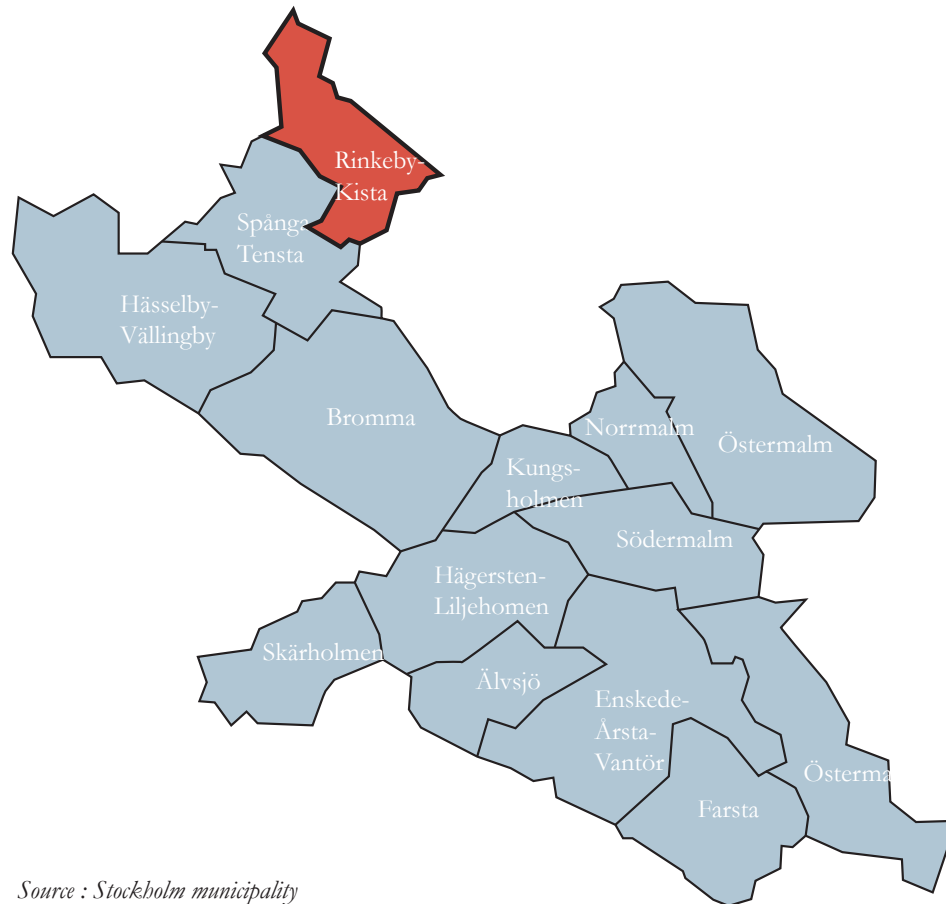
The city itself is the economic, political and cultural centre of Sweden and the region alone accounts more than the third of Sweden's GDP. It is the largest in Scandinavia and home for some of the best universities in Europe such as KTH Royal Institute of Technology, Stockholm School of Economics and Karolinska Institute. It is also known for hosting the Nobel Prize annually and its prized museums as well as the Vasa Museum. The city is known for the metro stations' décor where The Stockholm Metro opened in 1950.

Gamla Stan or the old city of Stockholm was built on Central Island, which is one of the islands that create the chain of Stockholm archipelago and it attracts a lot of tourists every year along with the other landmarks and it is also plays a huge role of the urbanisation in Stockholm as it is the core of the city. Third of the city is made up of green structure as well as another third of waterways.

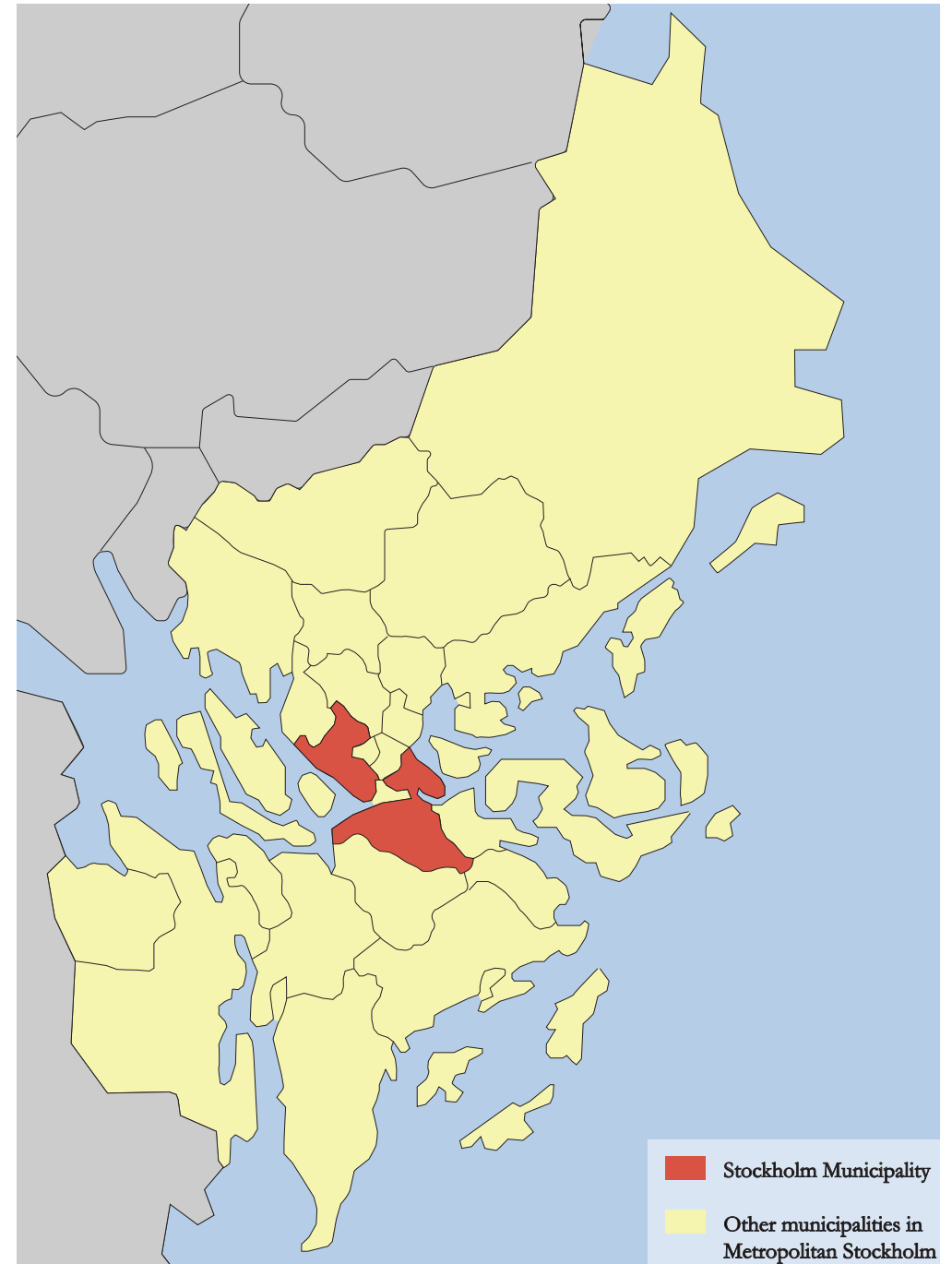


3.2 SITE WITHIN STOCKHOLM

Kista is located in northwest Stockholm, about 10 kilometres from Stockholm's old city, and it is in the borough of Rinkeby-Kista district which is one of the 14 districts in Stockholm. It is a strategic location between the Arlanda airport and central Stockholm as well as along the national road E4. Public transportation connects *Kista* by buses and metro lines where the blue subway's line reaches the site *Kista* where it takes about 20 minutes to the city centre.



Source : Stockholm municipality

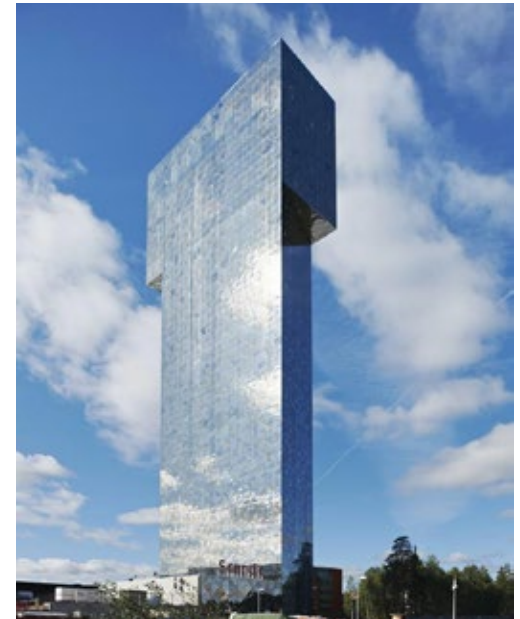


3.3 KISTA HISTORY

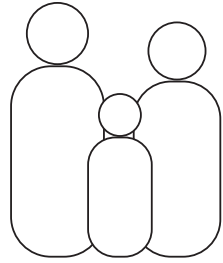
Kista is the newest part in Järvafältet in north Stockholm. It is known as Sweden's IT-Centre where companies that are engaged in data and technologies are taking place. It is the biggest ICT in Europe and the second in the world after Silicon Valley. Kista Science City is where most of the research and development of 4G LTE has been developed. In Kista there are three of Stockholm's highest buildings such as Kista Torn and Victoria Tower where both are 120 meters height.

The area was named after 'Kista Gård' which is an old farm that is still there until this year 2020. The area was largely built during the latter part of the 1970s and consists mostly of apartment buildings and townhouses even though the plan was to create a mixed-use neighbourhood where you live, work and study. In the vicinity of Kista is the Järva field, which is ideal for walking and cycling. There, several sports activities are organized and there is also a disc golf course as well as there are also smaller parks and green areas among several gyms, sports halls and ballrooms. There is also a swimming pool in nearby Husby. Several sports associations operate in the area. In June 1973, the area plan for Kista's residential area and centre was approved. Kista was the last district to be built on the North Järva field. The area was built between 1975 and 1980, and at the turn of the year 1976/77 the first tenants were able to move in.

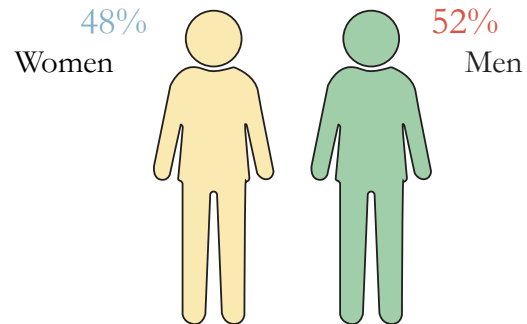
Kista's buildings were completely different from the rest of the Järva field. It was densely built but there were several different types of houses. Between 1978 and 1979, for example, Svenska Bostäder built 280 rental townhouses here. Svenska Bostäder was also commissioned to design, build and manage Kista Centre. It was inaugurated in 1977 by the royal couple.



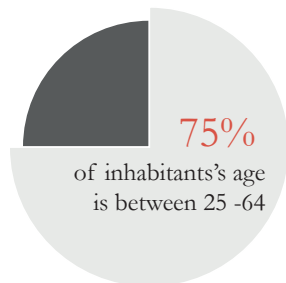
3.4 DEMOGRAPHICS



13,069 Inhabitants live in Kista
in 2017



13,069 inhabitants lived in the neighbourhood of Kista in 2017. 48% of the inhabitants are women while 52% are men and approximately 7800 people are between 24-60 years old, which is roughly 75% based on the population statistics by Stockholm municipality by 13 December 2018 while the other 25% of the inhabitants are kids and elderly.



Source : Wikipedia

3.5 ARE PEOPLE HAPPY IN KISTA?

During the site visit I got the chance to explore the site and the area and also had the opportunity to ask few people, 6 People have been asked randomly in 17 Feb 2020 (age was between 25 - 45) , who live in Kista weather if they are happy or not and it seems that families are fairly happy to live there since they have all their daily needs for them and for the kids also, from playgrounds to good schools but when it comes to security and safety most of the people that I got the chance to ask they feel that the area is not perfectly safe after evening due to the single-use of huge part of the area where the offices are located. On the other hand, job opportunities are one of the advantages that the Kista is known for, and that is what makes locals quite happy about jobs and careers along with the high quality education in the area.

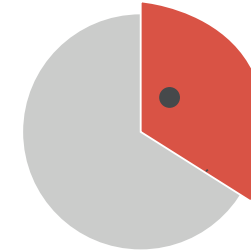
After walking around Kista for one day, you can easily see how 40% of the built fabrics are office while 45% is housing separated by the metro line. However, 15% of the built fabric is different facilities such as malls, schools and sports' facilities. Comparing what locals expressed and the function in the area, you can clearly tell why they are happy when it comes to job opportunities while on the other hand they feel insecure in the evening.



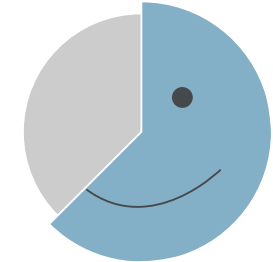
Are people HAPPY in Kista ?



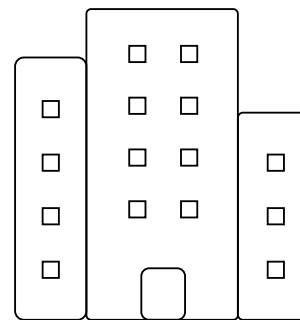
Jobs



Safety

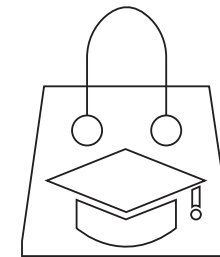


Family



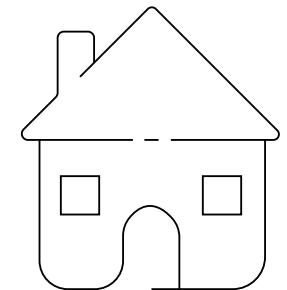
40%

Offices



15%

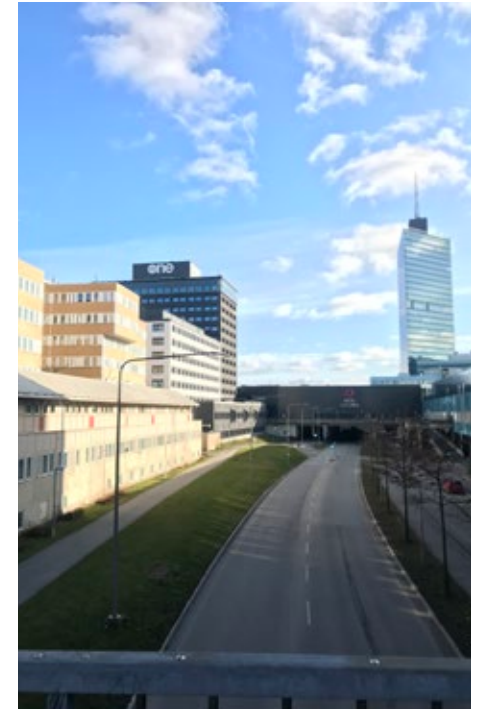
Facilities



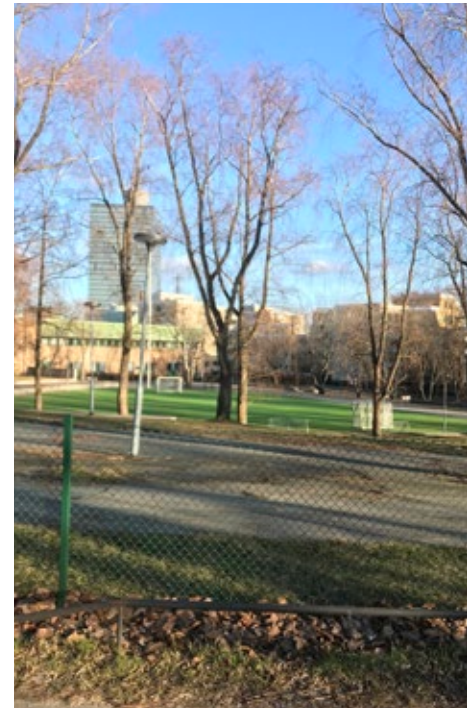
45%

Housing

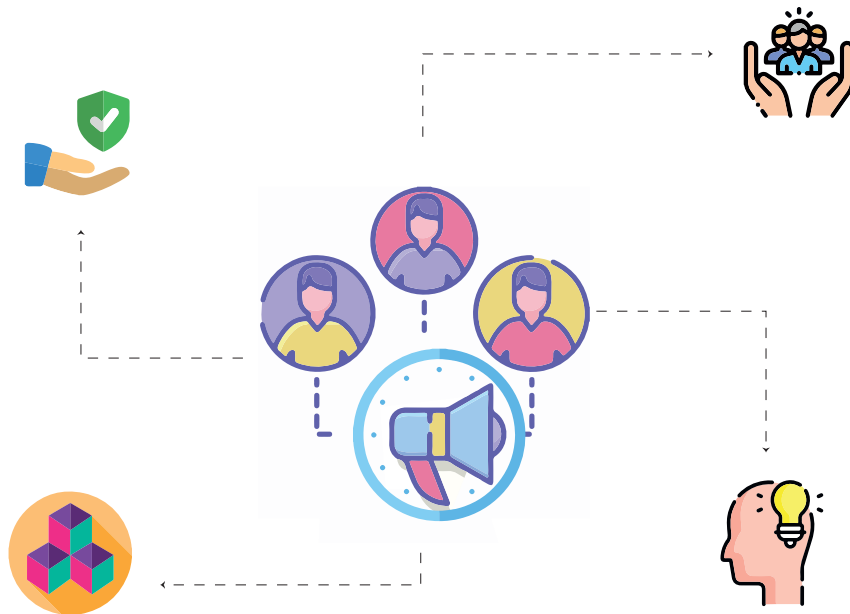
3.6 SITE PICTURES



3.6 SITE PICTURES



4. AIMS & QUESTIONS



This thesis aims to harness the innovation hub of Kista, Stockholm for the public realm, create a safe community to make a better place to live and work, foster the new generation ideas in innovation, make an active hub around the clock, and explore how the urban spaces can be designed for social life to thrive. *The main research questions are :*

- *What are the urban qualities that people need in Kista to feel the space safer and better ?*
- *Why is it important for people to do outdoor activities and be part of the innovation process that is happening in Kista Science City ?*
- *How can the innovation hub of Kista become part of the social life of stockholm and not only exclusive for work ?*

4.1 WHAT ARE THE PROBLEMS ?

In spite of the fact that Kista is the largest ICT cluster in Europe, it has some real urban issues that need to be tackled. The area is not only a place to work, it is also a place to live for some people, and that requires some urban qualities in the urban space. Here I mention the concerns about the area. For instance;

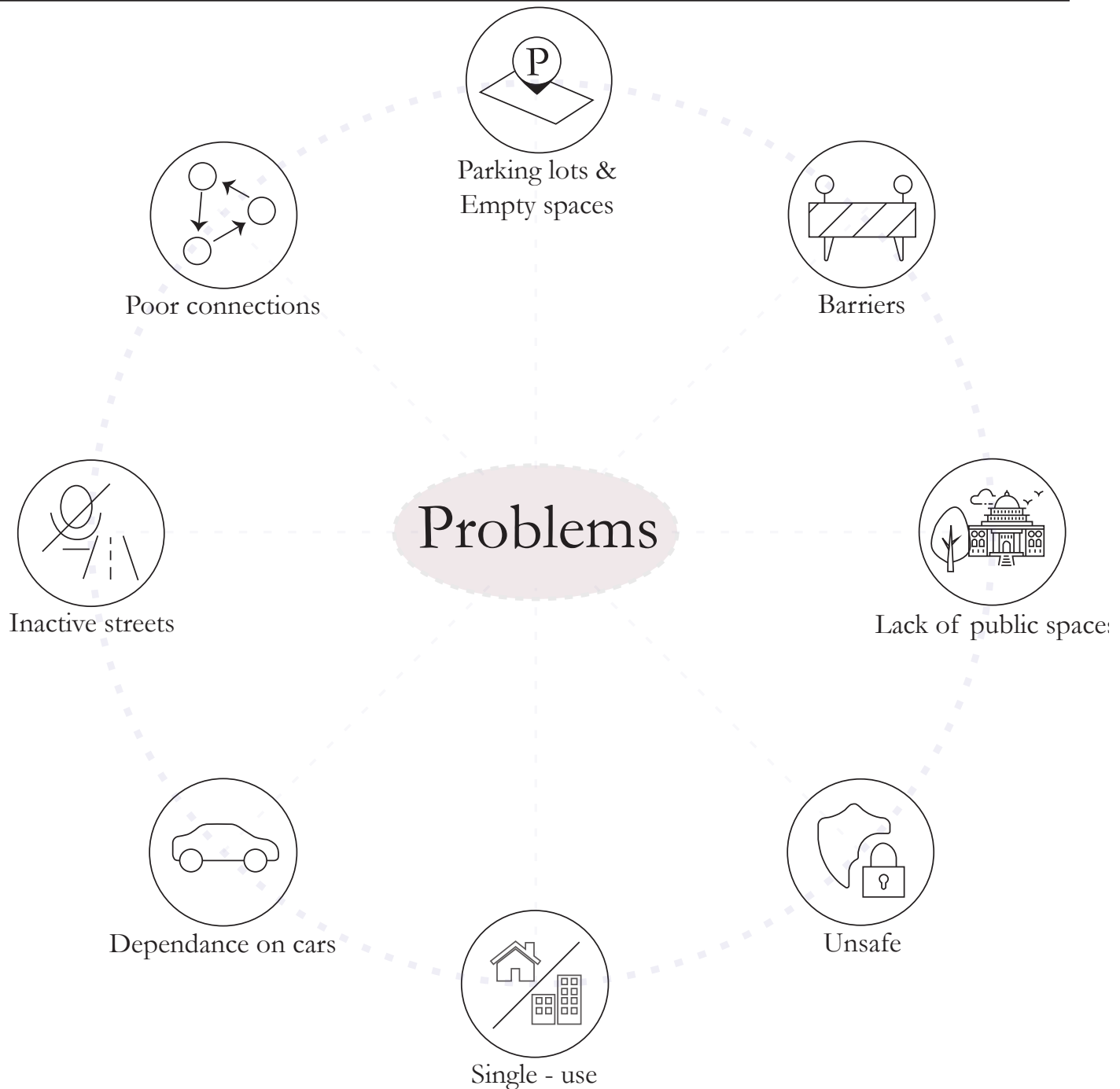
- Kista is separated from the surrounding neighbourhoods with poor connections, inhabitants also suffer from social segregation where the area is separated into two huge parts.

- The lack of public spaces and unused green parks or forests with no proper program.

- Parking lots is a main problem in the area where a lot of empty spaces have been used for parking along with dependency on cars.

- Huge scale buildings with a single-use program where everything happens indoors along with inactive unsafe streets.

- Poor connections with the surroundings and a lot of unused empty spaces, even though Stockholm suffers from the lack of housing.



4.2 WHY DOES THE SITE HAVE THESE PROBLEMS ?

- One of the main reasons for feeling the separation is the metro line that separates the area into two different parts and the division in uses between these two parts where on part is mainly offices while the other is housing.

- The indoor activities lead to unused public spaces, if they exist, as well as the single-use of the area where people are there just for work causes neglected parks where you can hardly find a place to sit or an activity to do.

- Empty spaces with no strategic plan for the area open onto having huge parking lots, and poor connections with the surrounding as well as boring atmosphere causes more dependency on cars.

- Unsafety is one of the issues in the area and that is especially in the evening and night when the area being deserted after workers go home and no activities are happening then due to the single-use.

4.3 PROJECT GOALS

There are many goals lay behind any enhancement in an innovation hub and that is because there are many issues in the exciting hubs that need to be fixed.

However, the first goal in this project is a strategic urban transformation plan for the science city of Kista by providing safety and creating a community.

Increasing innovation and fostering the new generation ideas by creating an open realm is a very important factor in this project to help the desired urban transformation as well as propose innovation plazas and increase the collaboration between the educational system and the high-tech companies.

Adding different functions and proposing a mixed-use setting would also promote an environment for these goals to be achieved. Different functions would help create active streets around the clock and would increase safety.

Connect the site with the city centre and the surrounding as well as promote walkability and biking. It is definitely a main factor to make the previous goals easier to be achieved.



4.4 HOW CAN THESE GOLAS BE ACHIEVED ?

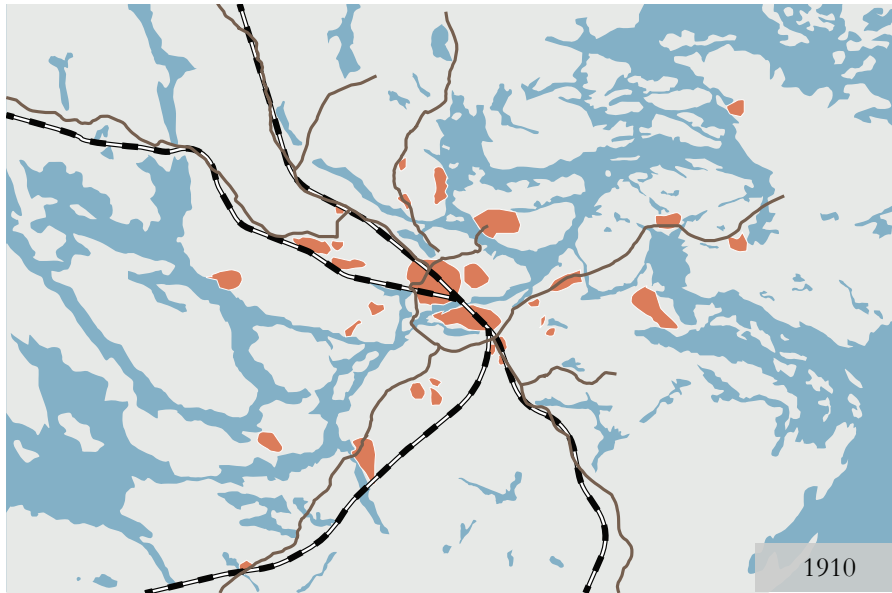
Only a better situation and vibrant can come out after applying the transformation that is needed. Creating a community and a safe environment would only generate a better place for all, that would also bring life to Kista and make it better as well as the different functions would generate a vibrant outdoor environment around the clock. However, all previously mentioned would definitely help in accelerating innovation along with generating new jobs opportunities where there would be a safe community as well as high-tech job generators where good relations would exist between social life and innovation.

Yet the question is, how can the goals be achieved? Any urban transformation plan or strategy needs to analyse the city and site to have a full perspective and propose what is relevant. The upcoming chapters will explain how the goals would be achieved step by step to lead the site proposal.

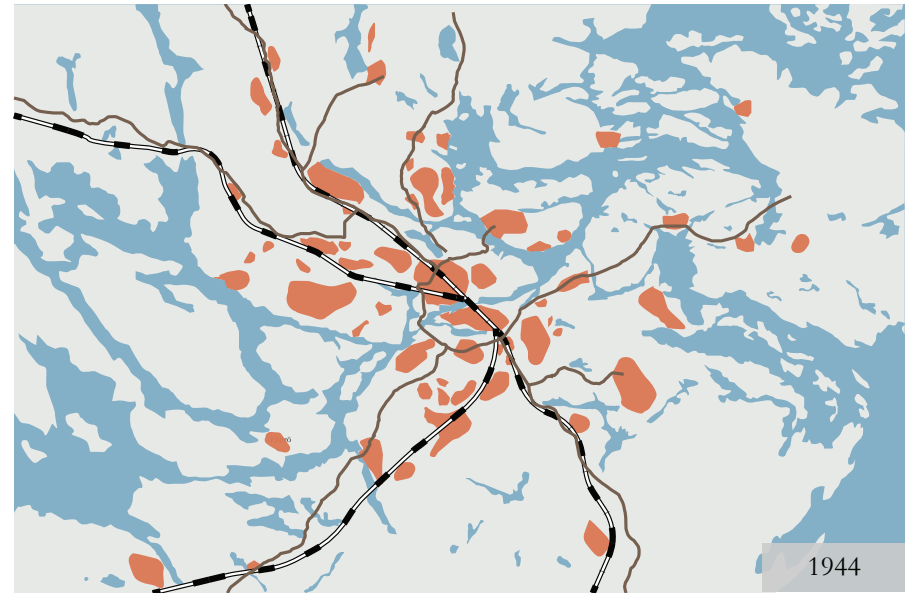
5.1 STOCKHOLM GROWTH

City growth and communities situated along tracks and suburbs linked to the city centre by tram routes have been an essential part of the development since 1910 until after the second world war, however, in the second half of the 19th century the urban developments started to change radically and expand faster. Later, bus traffic in Stockholm and the construction of the metro system, which replaced the suburb tram network in the 1950s and 60s, played an important role in the development. In 2016 the urban developments of Stockholm have expanded largely and the underground metro system has helped to connect these developments to grow bigger and faster. *Figure 4*

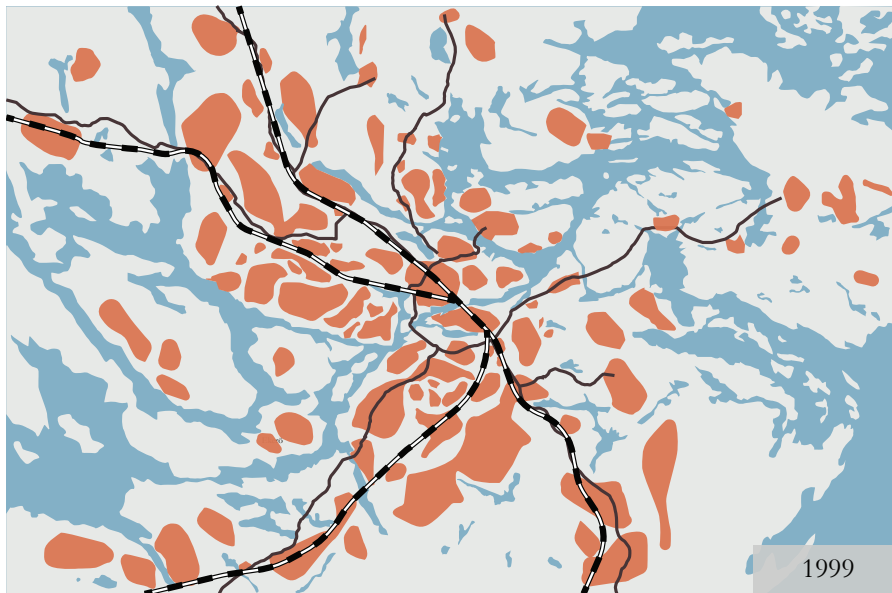
5.1 STOCKHOLM GROWTH



Source : Local Assessment of Stockholm, Revisiting the Stockholm Urban Assessment



Source : Local Assessment of Stockholm, Revisiting the Stockholm Urban Assessment



Source : Local Assessment of Stockholm, Revisiting the Stockholm Urban Assessment

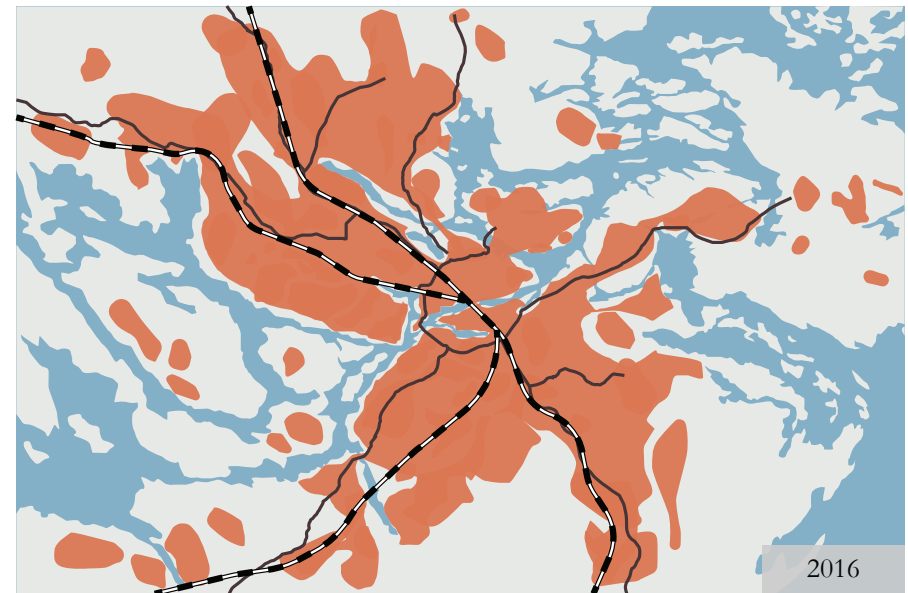


Figure 4

5.2 STATISTICS

Sweden has social stability as well as easy access to governmental support and also the quality between men and women and that helps the capital, Stockholm, to be proved successful in entrepreneurship and innovation.

The World Economic Forum ranks Sweden as one of the top ten most competitive countries in the world, with top grades for innovation capacity, and that Stockholm is among the world's most attractive regions/cities. (Stockholm FinTech guide, Invest Stockholm, 2020). Stockholm ranks among the top four cities globally in different events or occasions. *Figure 5*

Stockholm also is a place for a lot of FinTech scenes in Europe while the country on the other hand ranks as the innovation leader. 18% percent of the workforce in Stockholm work in high-tech and innovation fields.



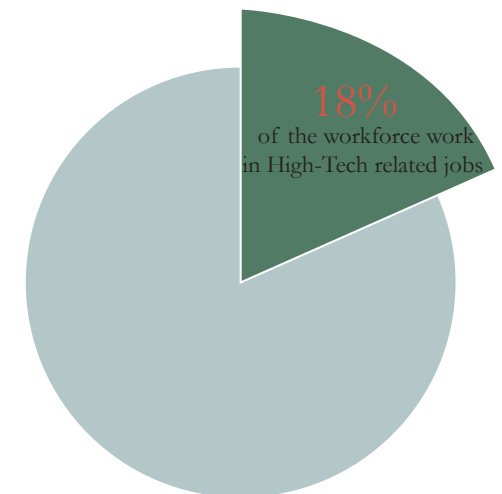
Sweden ranks as the innovation leader in Europe

Rank Top 10 Globally	The World Smart City Award	EU Regional Competitive-ness Index	Generation Z City Index	European Regional Economic Growth Index	Top Ten Startup Hubs	European Digital Social Innovation Index	The Regional Innovation Scoreboard
1	Stockholm	Stockholm	London	London	Silicon Valley	London	Zurich
2	Bristol	London and its commuting zone	Stockholm	Paris	Beijing	Amsterdam	Ticino
3	Curitiba	Utrecht	Los Angeles	Stockholm	Stockholm	Copenhagen	Helsinki-Uusimaa
4	Montevideo	Berkshire, Buckinghamshire, Oxfordshire	Toronto	Istanbul	-	Stockholm	Stockholm
5	Seoul	Surrey, East and West Sussex	New York	Munich	New York City	Paris	Copenhagen
6	Tehran	Copenhagen	Berlin	Dublin	Shanghai	Madrid	Ostschweiz
7	-	Luxembourg	Munich	Luxembourg	Los Angeles	Brussels	Nordwestschweiz
8	-	Oberbayern	San Fransisco	Stuttgart	Seoul	Utrecht	Zentral-schweiz
9	-	Flevoland & Noord-Holland	Amsterdam	Oslo	Boston	Barcelona	Berlin
10	-	Helsinki-Uusimaa	Vancouver	Copenhagen Malmö	London	Edinburgh	Region lemanique

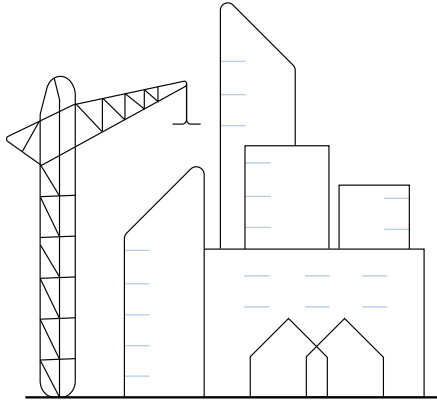
Source : IMD, Euromonitor, Forbes, Transparency International, Cornell, INSEAD, WIPO, European Union

Figure 5

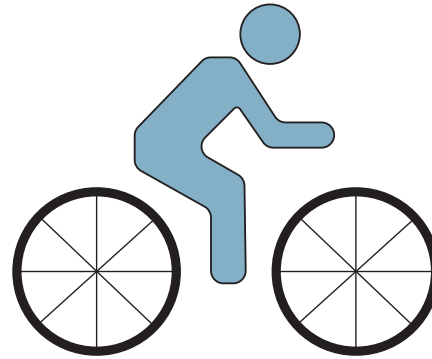
80 %
Out of 381 FinTech companies in Sweden are in Stockholm



5.2 STATISTICS



80,000 homes by 2025
140,000 homes by 2030



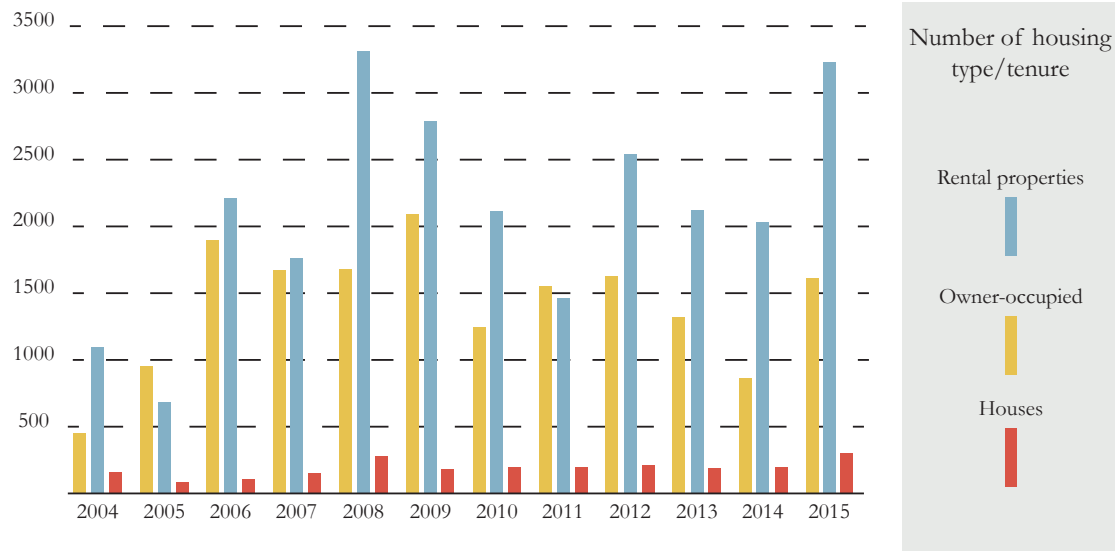
Many Stockholmers
live within cycling
or walking distance of work

88 %

Of Stockholmers feel the city
offers pleasant urban envi-
ronment to live and work

2.85

million are forecast to
be living in the county
of Stockholm by 2030



Stockholm municipality expects that around 2.85 million are going to be living in Stockholm province by 2030 and their plan is to build 80.000 homes by 2025 and 140.000 by 2030.

Many stockholmers live within walking or cycling distances from their work places and that creates the pleasant urban environment where the majority feel it.

5.2 STATISTICS

The inner city of Stockholm has the most proportion of jobs in the city while the surrounding areas of the inner city come second. However, the western suburbs have the least of the jobs' proportion but Kista still fairly has quite a good percentage of the city jobs' proportion and that is because the high-tech companies that are based there.

The table from Stockholm municipality shows the numbers of jobs and the working population divided into three areas. *Figure 6* The number of jobs in the inner city is way bigger than the working population there, and that is why people usually who live in the suburbs work in the inner city. This is not the case in the southern or western suburbs where the numbers of jobs are increasing relatively with the working population. However, Kista is located in the western suburbs and the table clearly shows that during the last 20 years the numbers have slightly increased which means nothing much has happened during this time. No new job opportunities nor increased in the working population where no new urban developments have been planned or constructed to increase these numbers.

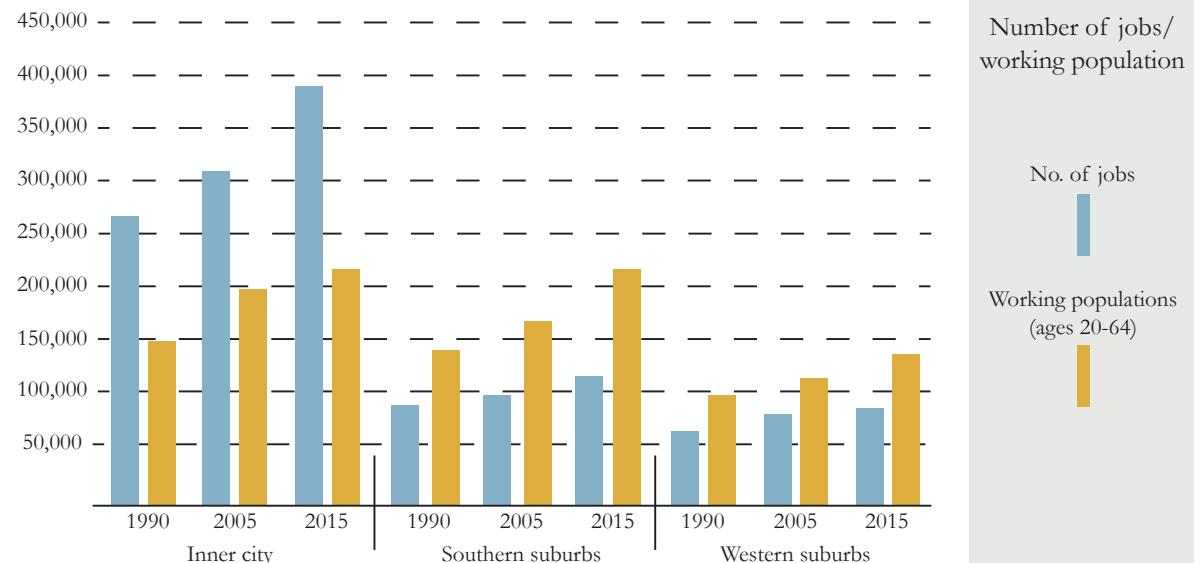
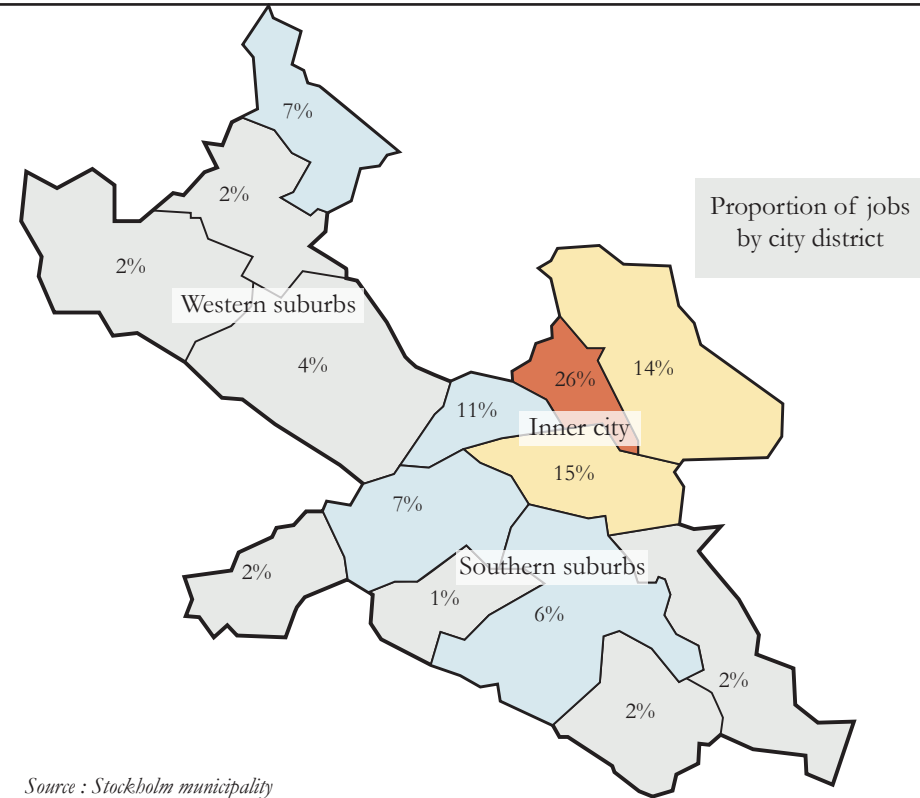
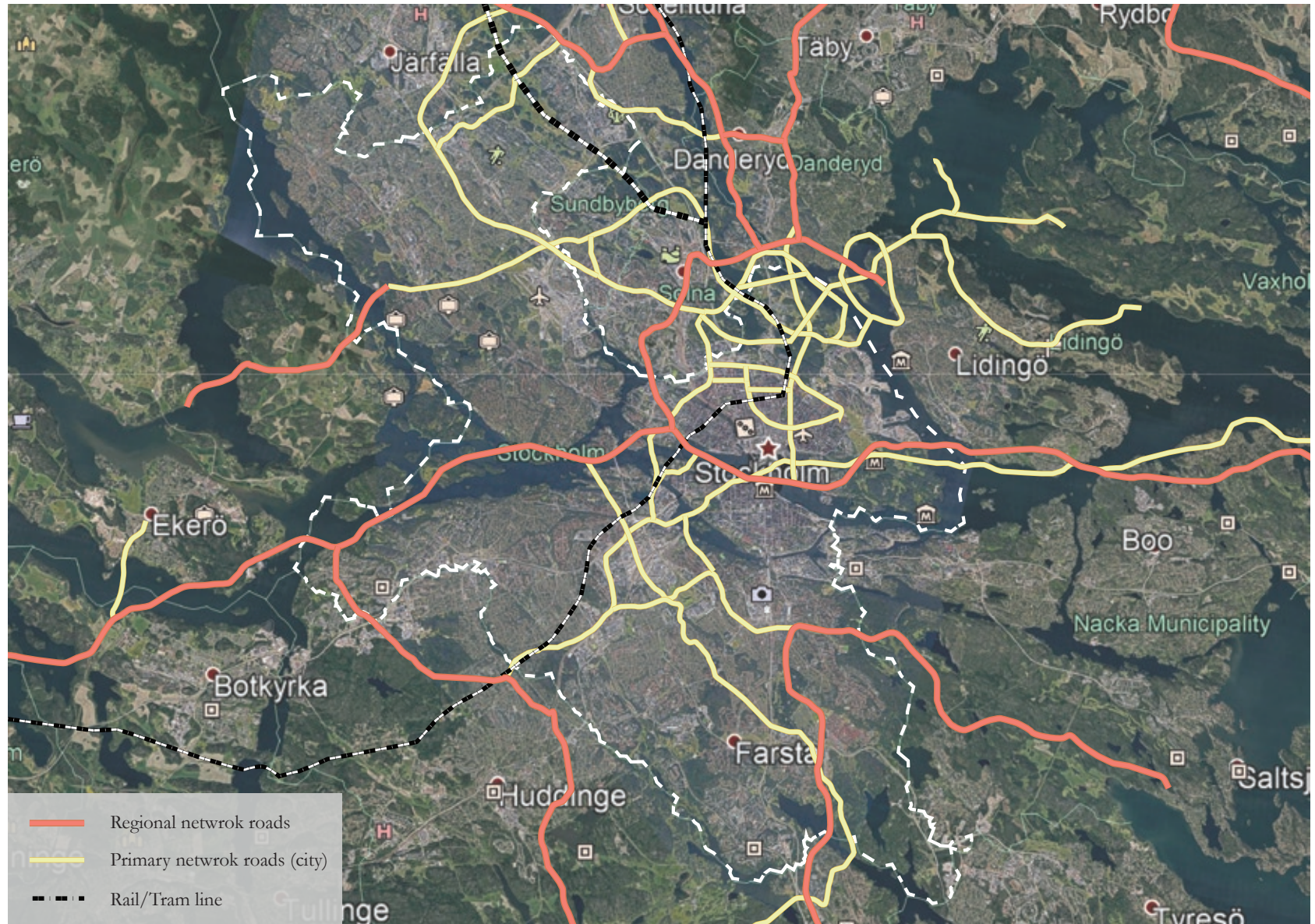


Figure 6

5.3 REGIONAL CONNECTIONS

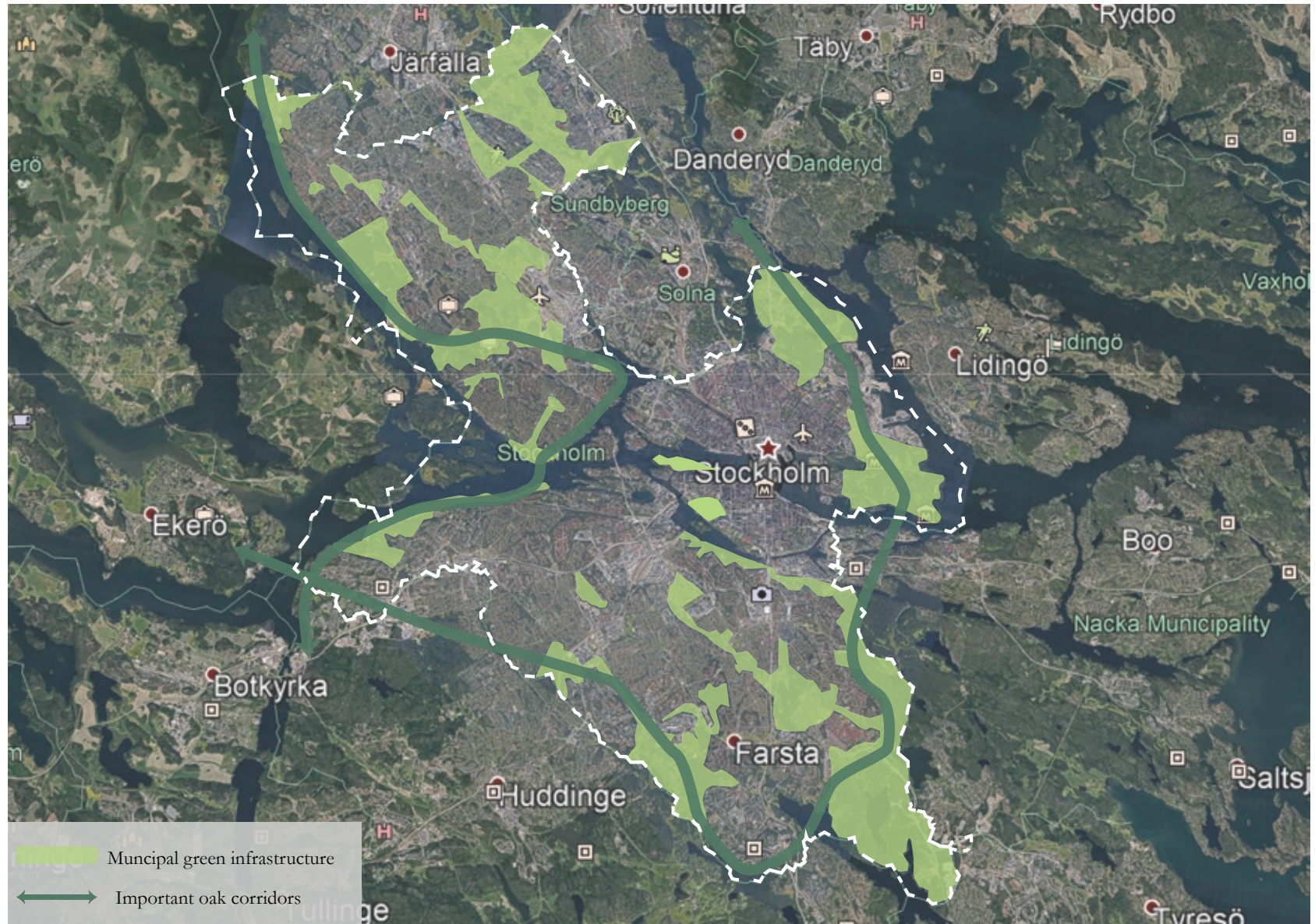
The map shows the regional network roads that connect Stockholm regionally, where it is also an important port on the Baltic Sea, as well as the primary roads network in the city and the rail-ways that translate the importance of the capital.



Source : Stockholm Municipality

5.4 GREEN STRUCTURE

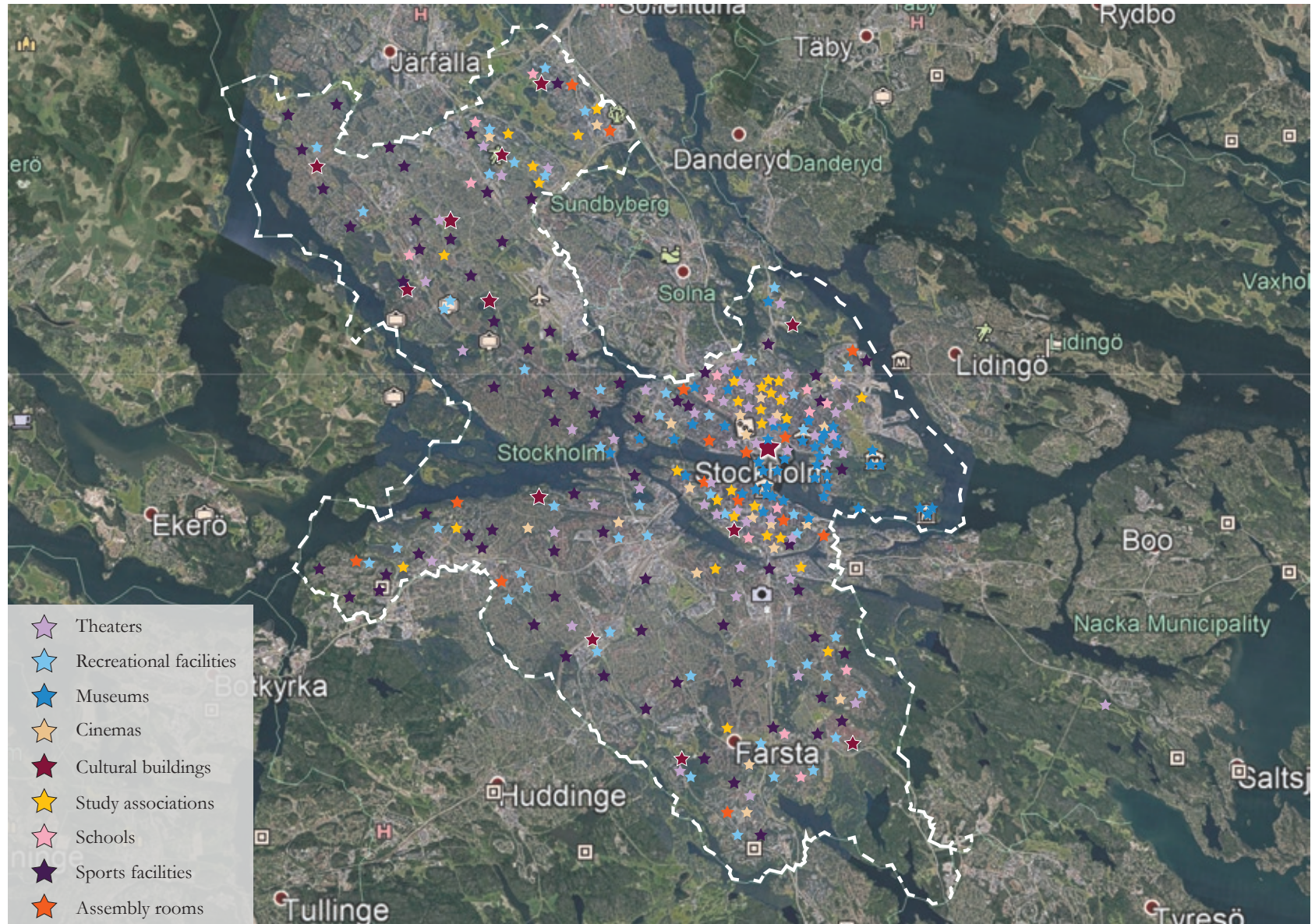
Stockholm has old oak landscapes as well as a big species variety which are protected from farming or any crawled settlements. The municipal green infrastructure is a natural home for oak woods and coniferous wood and wetlands.



Source : Stockholm Municipality

5.5 MEETING POINTS

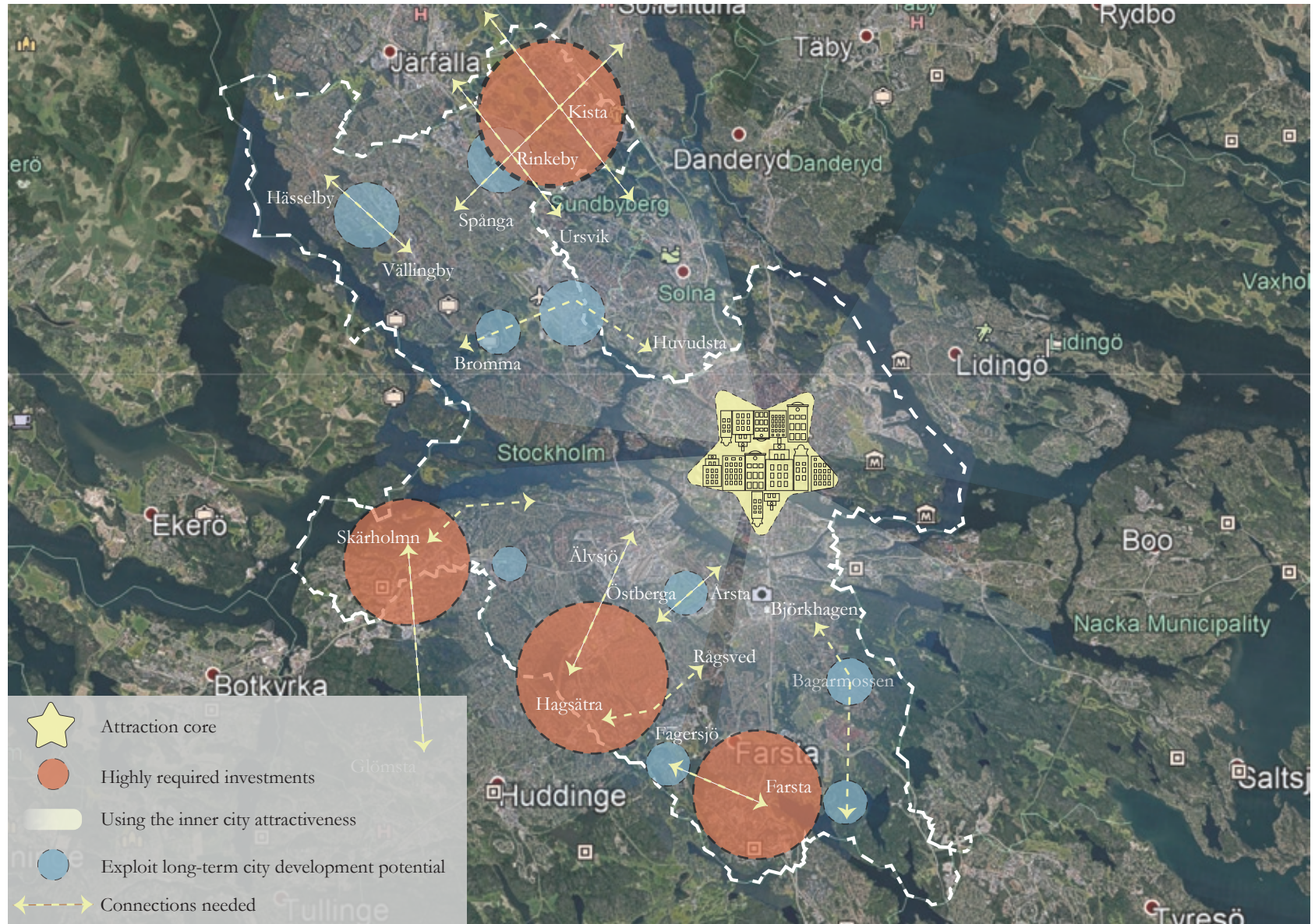
Meeting points and venues in Stockholm are mainly located in the city centre such as cultural centres, cinemas, sports facilities and museums. The studied site Kista has the least portion of the city venues in western suburbs and that is what makes it in need for an urban transformation along the social innovation development..



Source : Stockholm Municipality

5.6 REQUIRED INVESTMENTS

Stockholm's municipality has a clear strategy to keep the city expansion and meet the constant demand of housing in the short and long term, it pointed out where it is highly required investments and the Kista is one of the main four area as well as the need to connect the different neighbourhoods around stockholm to create a coherent city. However, the municipality also explored long term city developments potentials and the strategy behind all these investments or potentials is to use the attraction of the old city in any urban development and provide a good connection to it to come up with a coherent urban design.

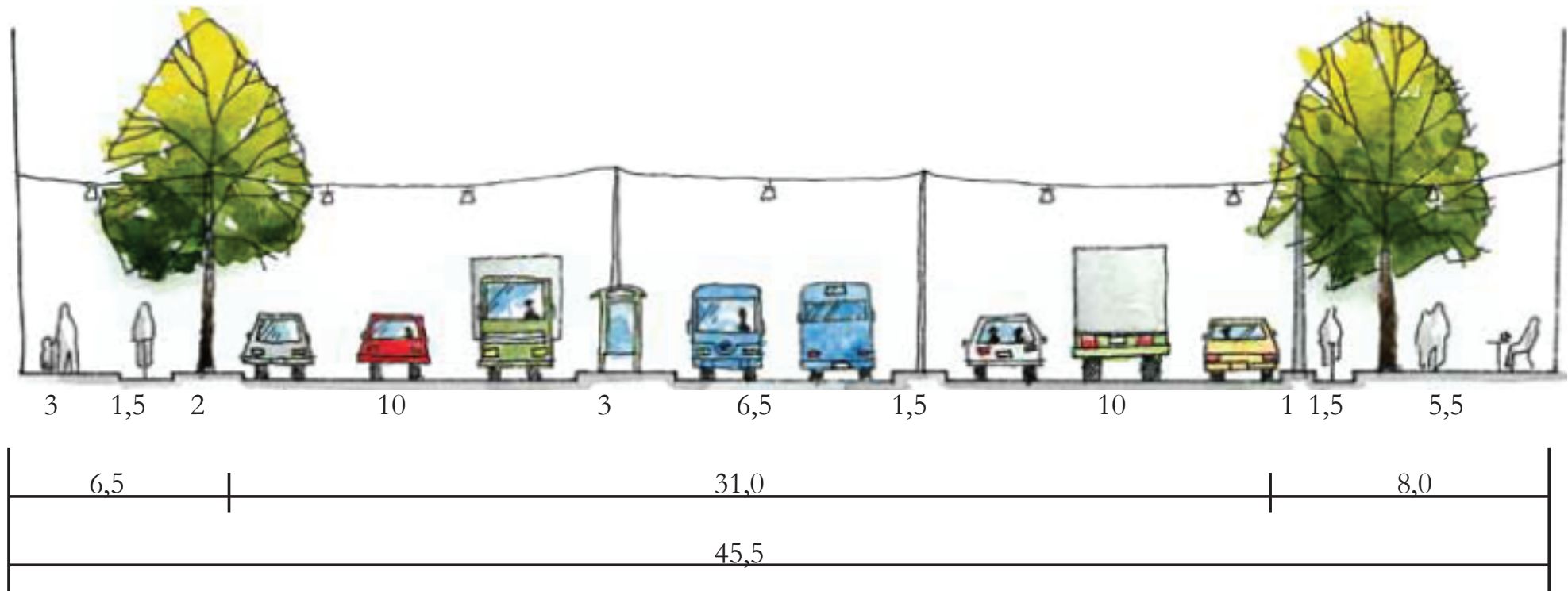


Source : Stockholm Municipality

5.7 SECTION

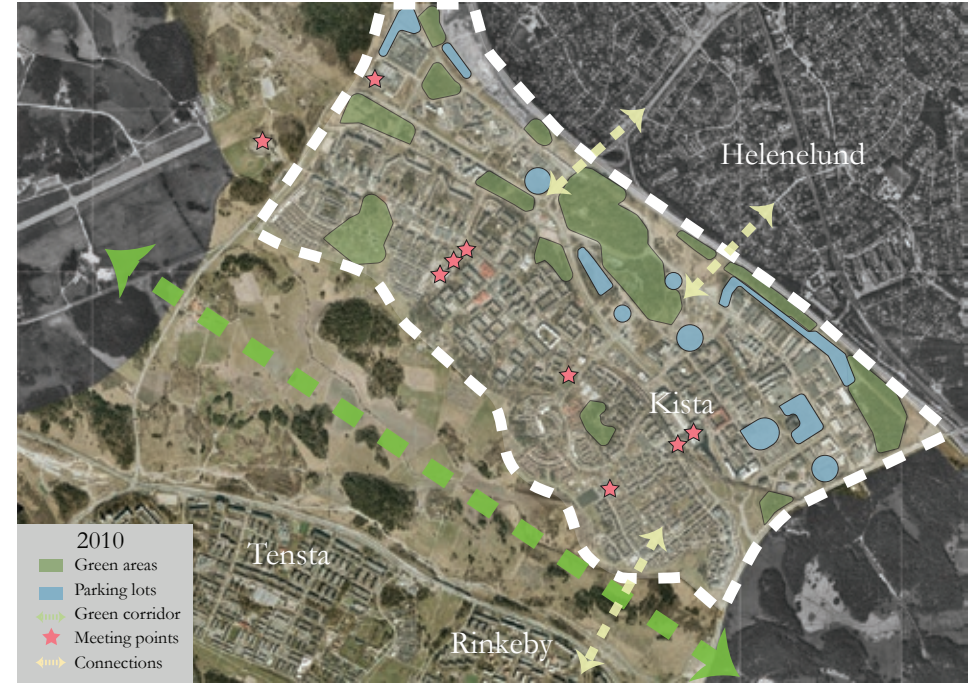
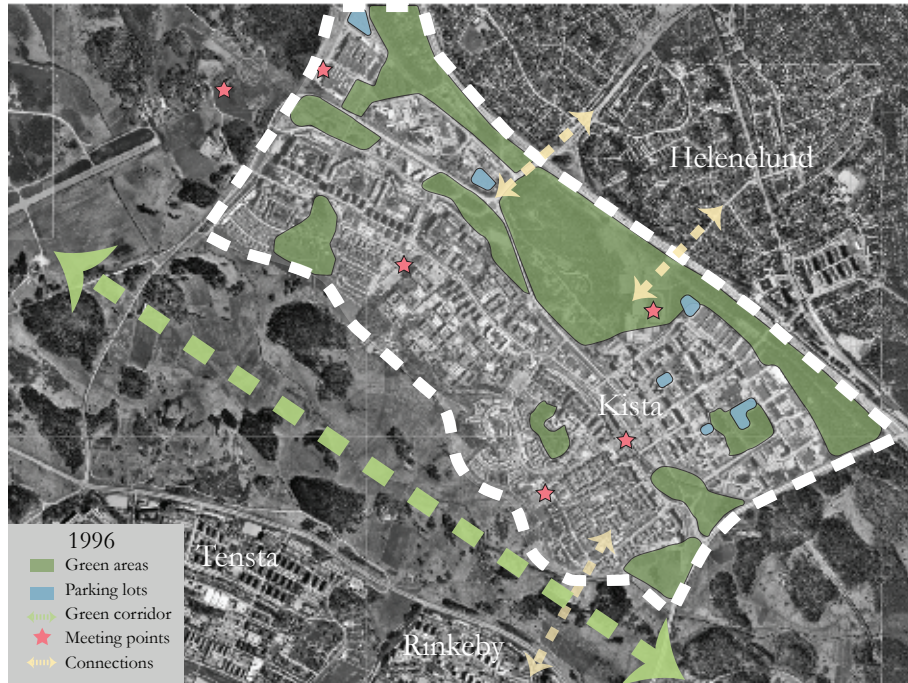
This section, which is one example of many different street types in Stockholm, shows how wide a main street could be in Stockholm to accommodate all the functions that are happening nowadays as a typical width in Stockholm is between 20 and 30 meters. However, an urban design

strategy that provides easy access to public transportation along with well-connected districts will lead to the ability of replacing these streets that are mainly for cars to anchors and axes where it can accommodate a better urban environment for the future that keeps also the people flowing with no cars.



Source : Stockholm Municipality

6.1 THE AREA GROWTH

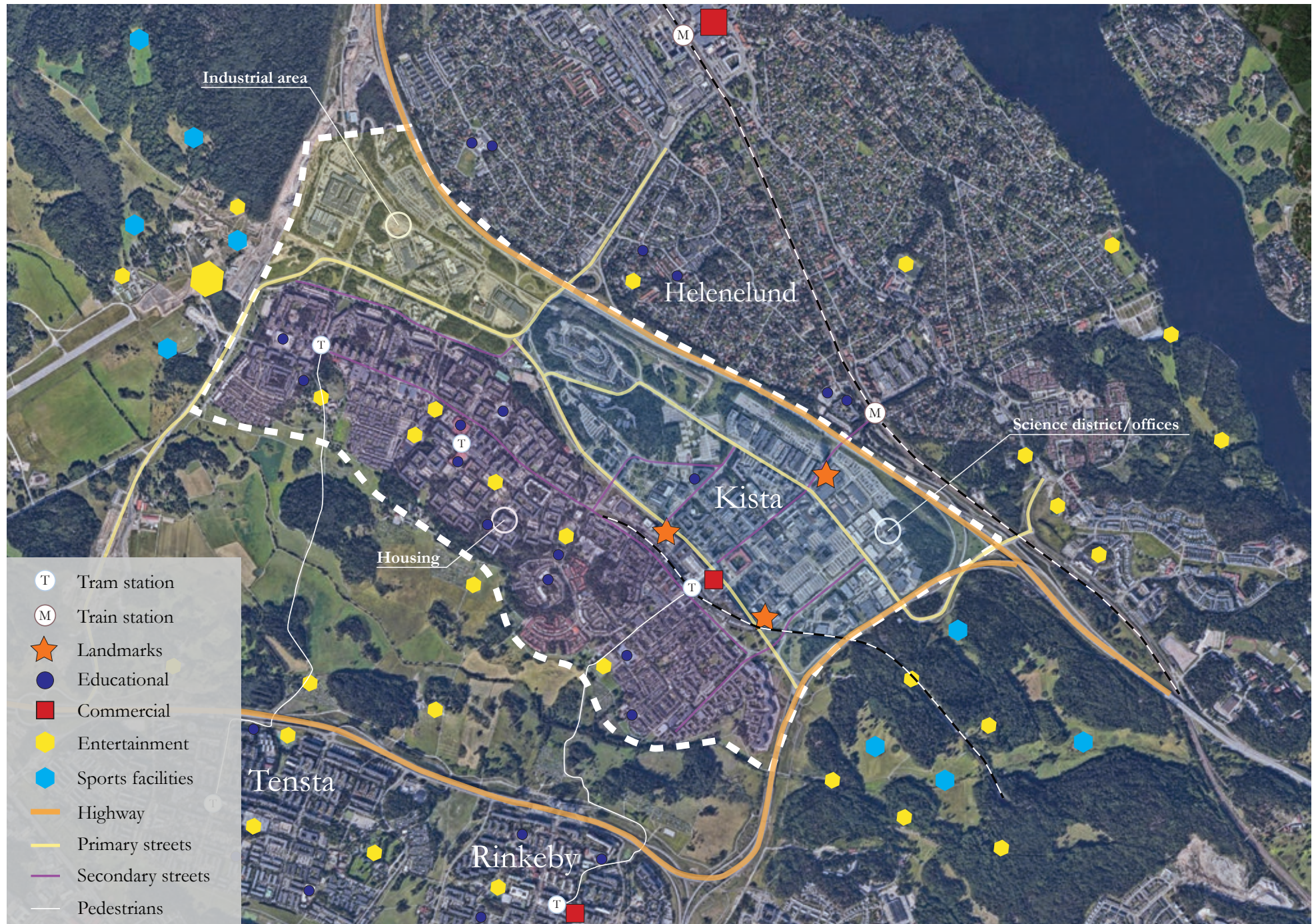


6.1 THE AREA GROWTH

The previous maps compare the urban growth in Kista from the year 1996 until 2016 to understand better the real need and what has been done during these years.

However, during this 15 years nothing much has changed in the area except the significant increase in parking lots where on the other hand the decreasing of green spaces is quite clear in the urban area even though the oak corridor is still protected by the municipality. Meeting points and venues have slightly increased in the surrounding while the connections with the surrounding neighborhoods are still poor and have not been developed since 1996.

6.2 THE AREA FUNCTIONS



6.3 KISTA FUNCTIONS



Figure 7

6.3 KISTA FUNCTIONS

The area is divided into two separate parts by the metro station Kista and its line where they stand as the shared edge between the housing and the offices part.

The functions in the science city of Kista, where the offices are located, are mainly offices or hotels, to accommodate professionals who come for conferences and lectures, as well as education such as the KTH campus.

Moreover, there are some governmental buildings there, but the social life and the urban environment nearly do not exist. The only anchor is the street that is

called Kistagången that connects Helenelund's metro station with Kista's.

Along this street you find big solid buildings that hold indoor activities for the high-tech companies such as Ericsson or educational labs for the KTH with no social life or other uses to keep the area alive when the workers go back home. *Figure 7*

The connection on the other hand is barely there between the housing and the offices, however, that causes lack of communication between the locals where they find no place to create their own social relationship.

6.4 SCALE COMPARISON

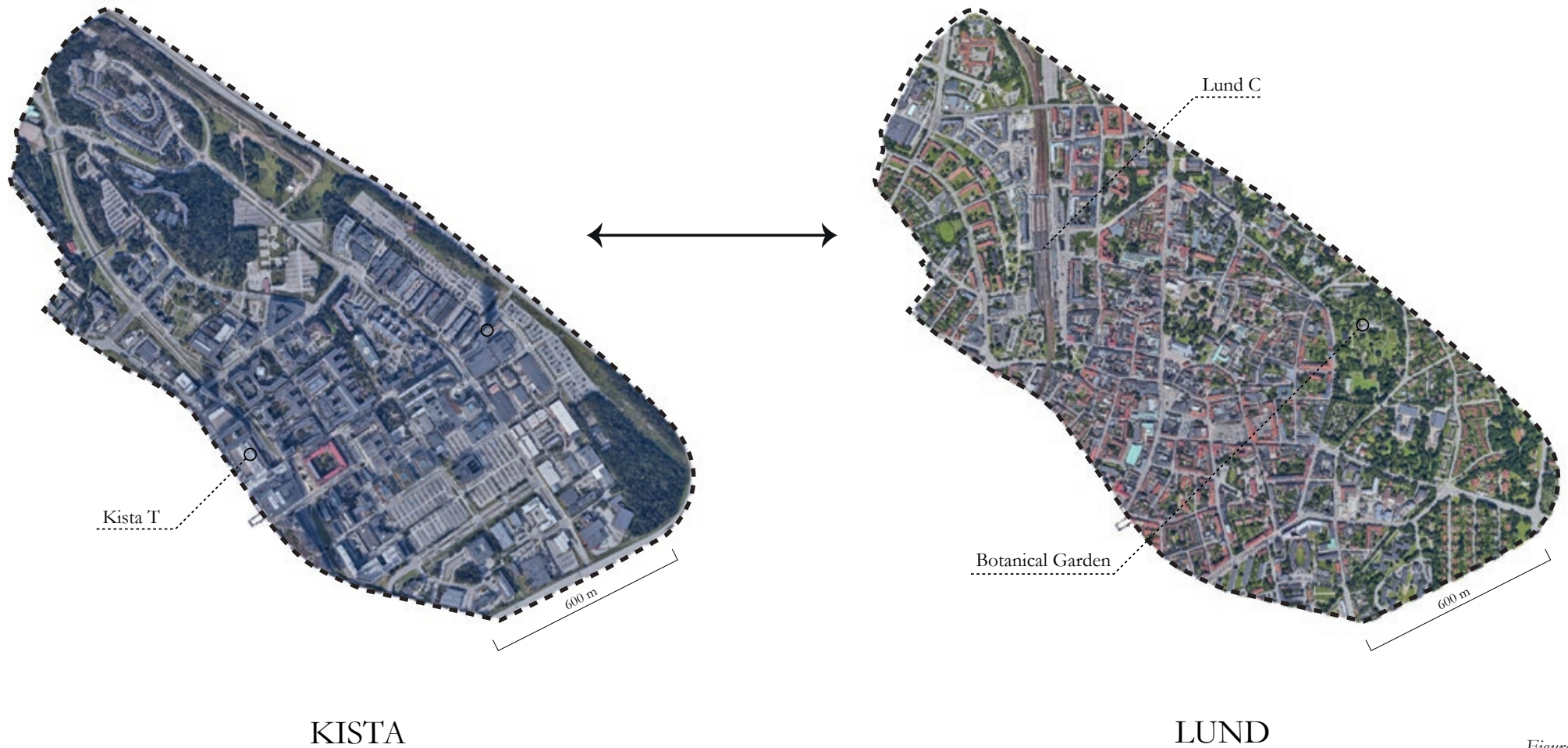


Figure 8

In order to understand the size of the site, I have decided to do this comparison, Figure 8, and tried to fit Lund central station in the site to show the scale of the site compared to Lund as well as how much qualities can have along with the environment that can be provided in Kista.

7. MUNICIPALITY PROPOSAL

The municipality of Stockholm has planned to develop the science city of Kista and has divided the area into different plots with a program for every plot. The municipality will not be the responsible for the construction but the real estate companies will be in charge of that and the municipality will just approve whether they follow their programs or not which brought my attention to their new master plan. *Figure 9* Stockholm's municipality has studied what are the needs in the areas and included that in their new master plan where they require some specific programs to be provided such as housing, schools, commercial

and sport facilities. On the other hand, the new master plan for the area has not considered any of the urban qualities that the area needs or what is also needed on a bigger scale. Moreover, the current buildings have single-use and they cause the major issue in Kista such as unsafe and the lack of human scale but yet the municipality has not taken this into account in their new plan and has not required any urban transformation to provide better environments in the area as well as did not propose any changes in the existing buildings' programs. The design proposal that I worked on and have proposed will take all these points into consideration

7. MUNICIPALITY PROPOSAL



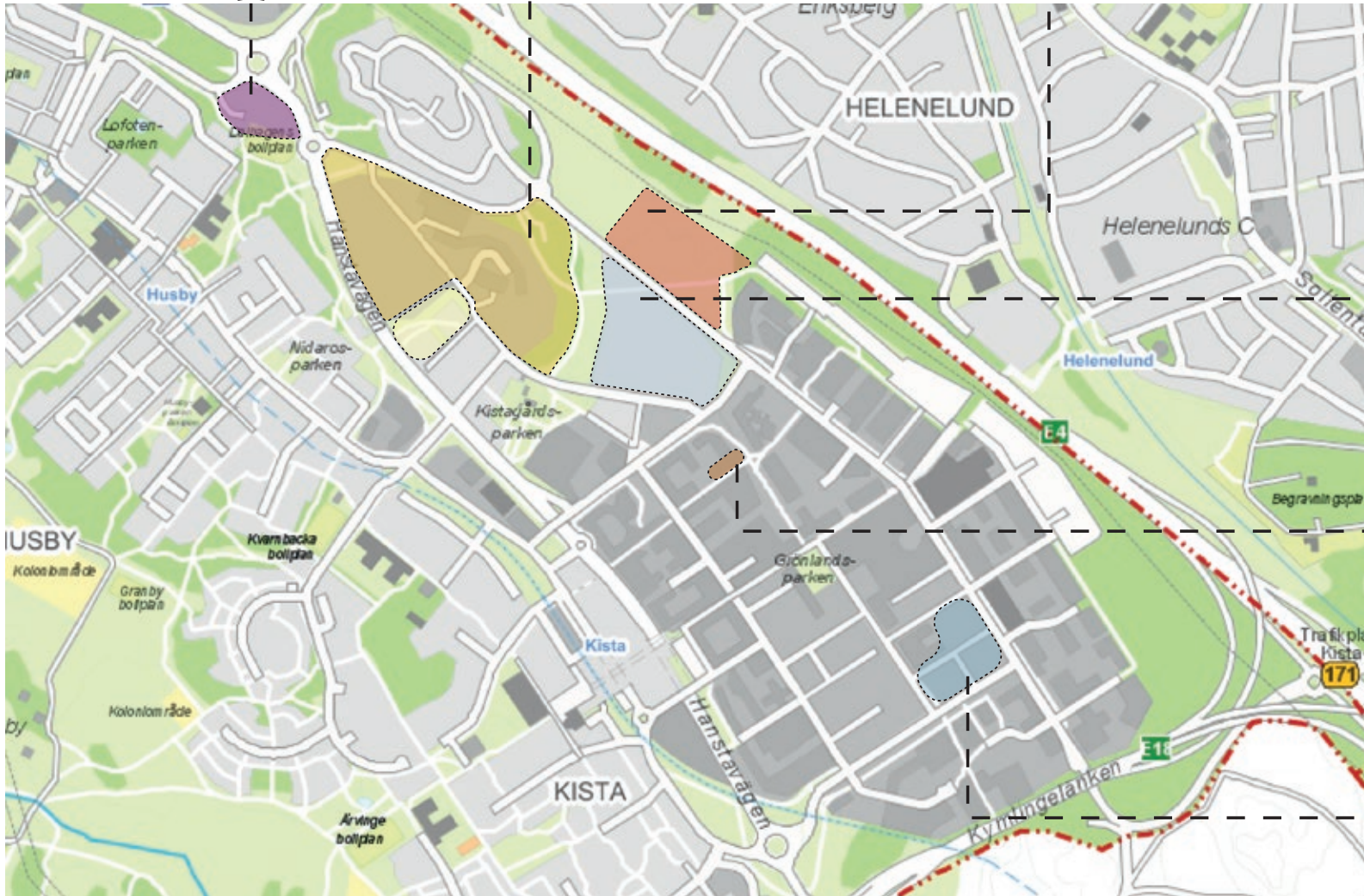
Education and Sports



Housing



Housing, Sports and Commercial



Housing and Education



Housing



Housing and Primary School

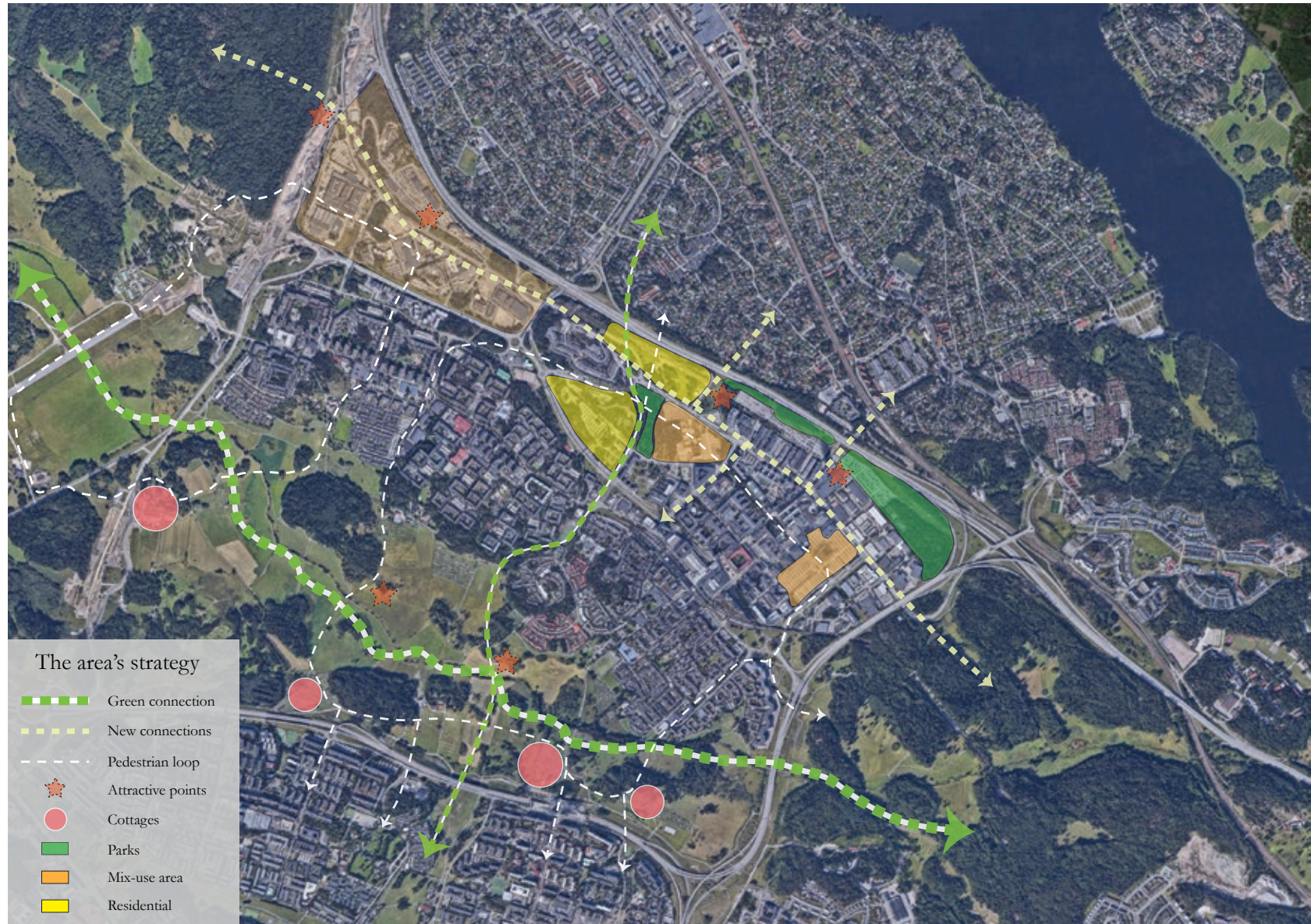


Source : Stockholm municipality

Figure 9

8.1 DESIGN STRATEGIES

The area strategy is an important part of the design proposal where this proposal considers opening up the area and connecting Kista with the surrounding as well as investing in the green corridor small summer/spring cottages. Connecting the areas together with a pedestrian loop, where social events would take part along them, would provide more social life between locals in the area.



8.1 DESIGN STRATEGIES

RESPECT THE EXISTING

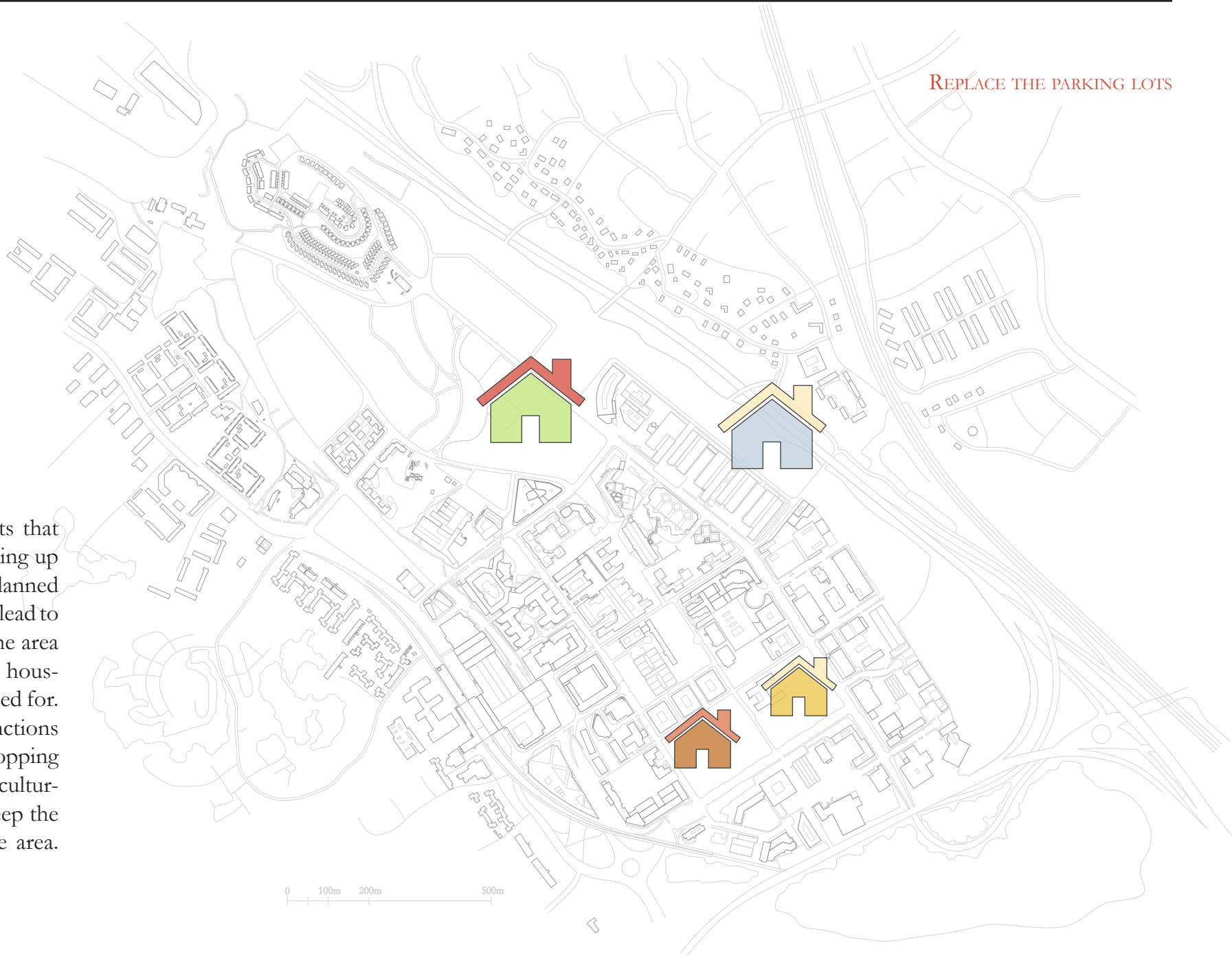
One of the very first design strategy to this project is to respect the current buildings where a lot is happening in those buildings which is mostly high-tech offices: Instead of tearing down any of them to suite the design, the proposal is to change the program of some of them instead and open more for public such as commercial in the first two floors or exhibitions to keep the public flow in the site.

0 100m 200m 500m

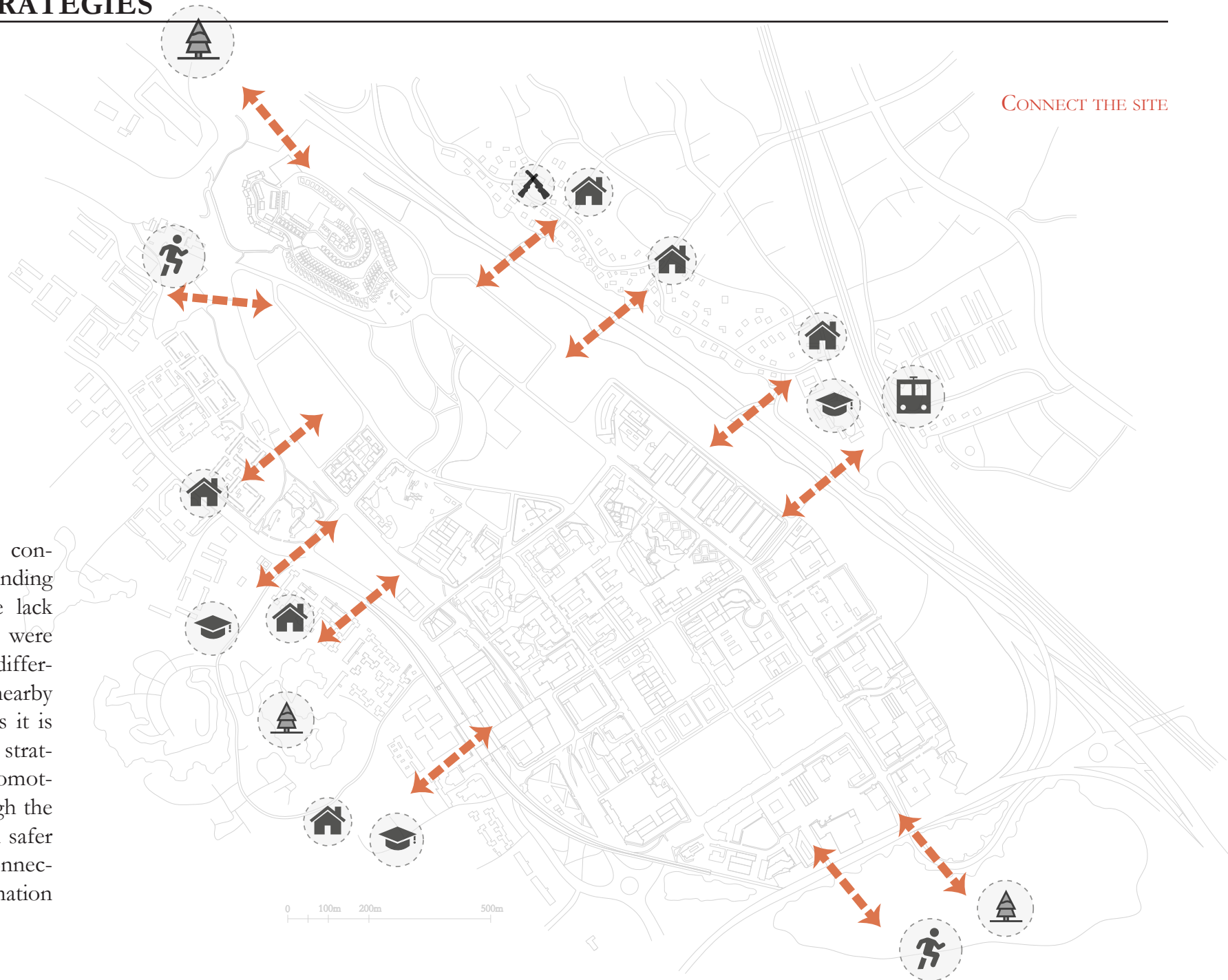
8.1 DESIGN STRATEGIES

REPLACE THE PARKING LOTS

Replace the parking lots that the area has which are taking up a huge space that can be planned to have a function that will lead to better social life around the area as well as providing more housing that Stockholm is in need for. Along providing social functions for the locals such as shopping malls, night activities and cultural centres where all will keep the flow of the people in the area.



8.1 DESIGN STRATEGIES



Another strategy is to connect the site with surrounding since it suffers from the lack of connection and that were strategically placed link different functions with the nearby neighbourhoods as well as it is a part of the bigger scale strategy for the area along promoting the people flow through the site where they would feel safer to go through these connections to their final destination

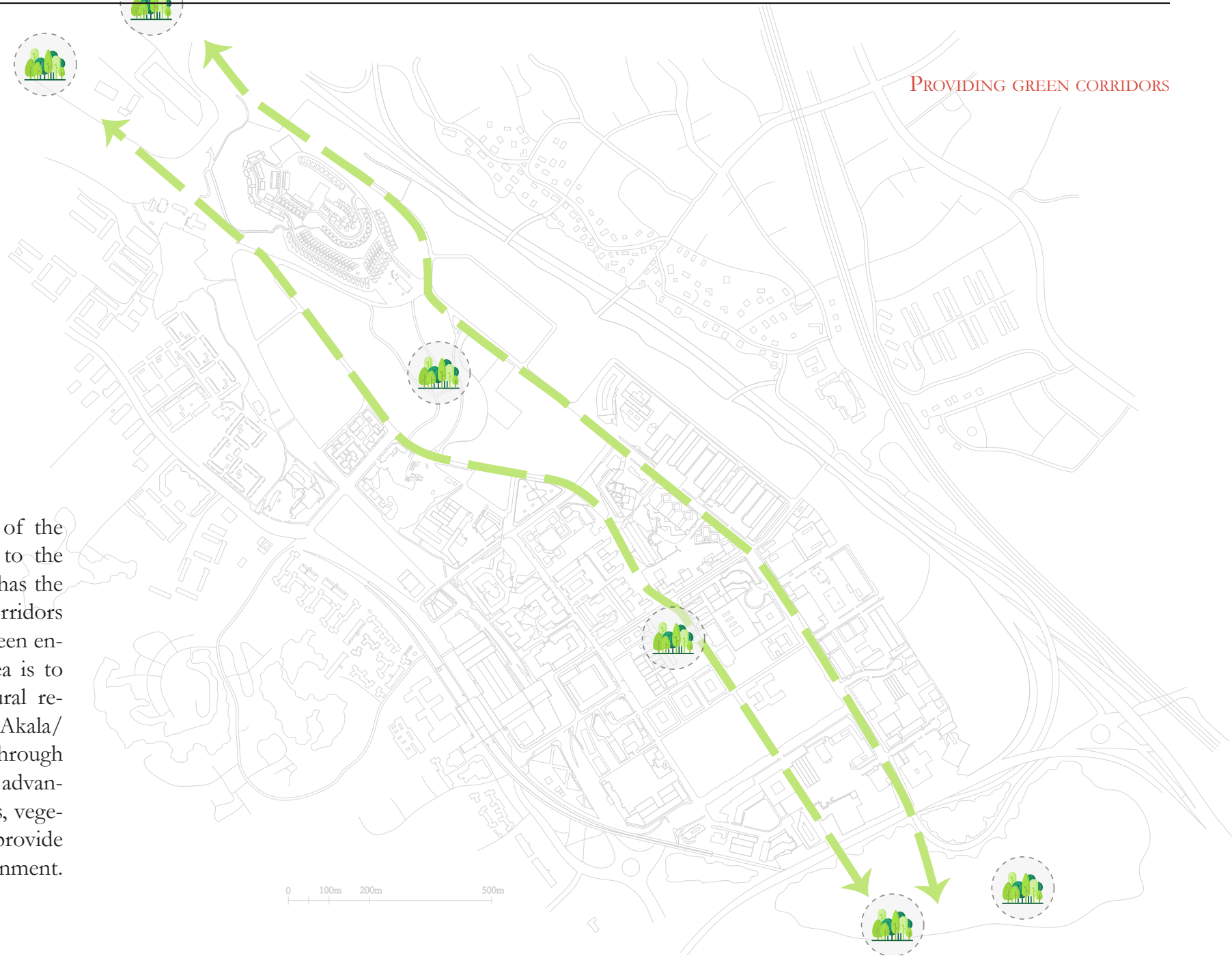
8.1 DESIGN STRATEGIES

INNOVATION PUBLIC REALM

One of the main and important strategies for this project is to provide a public realm and foster new generation ideas in innovation. Public spaces with high-tech urban furniture in the office area would help bring different activities to serve the area, such as bars, shopping and street kiosks, which on the other hand would create around the clock streets among the innovation public realm and the publicity.



8.1 DESIGN STRATEGIES

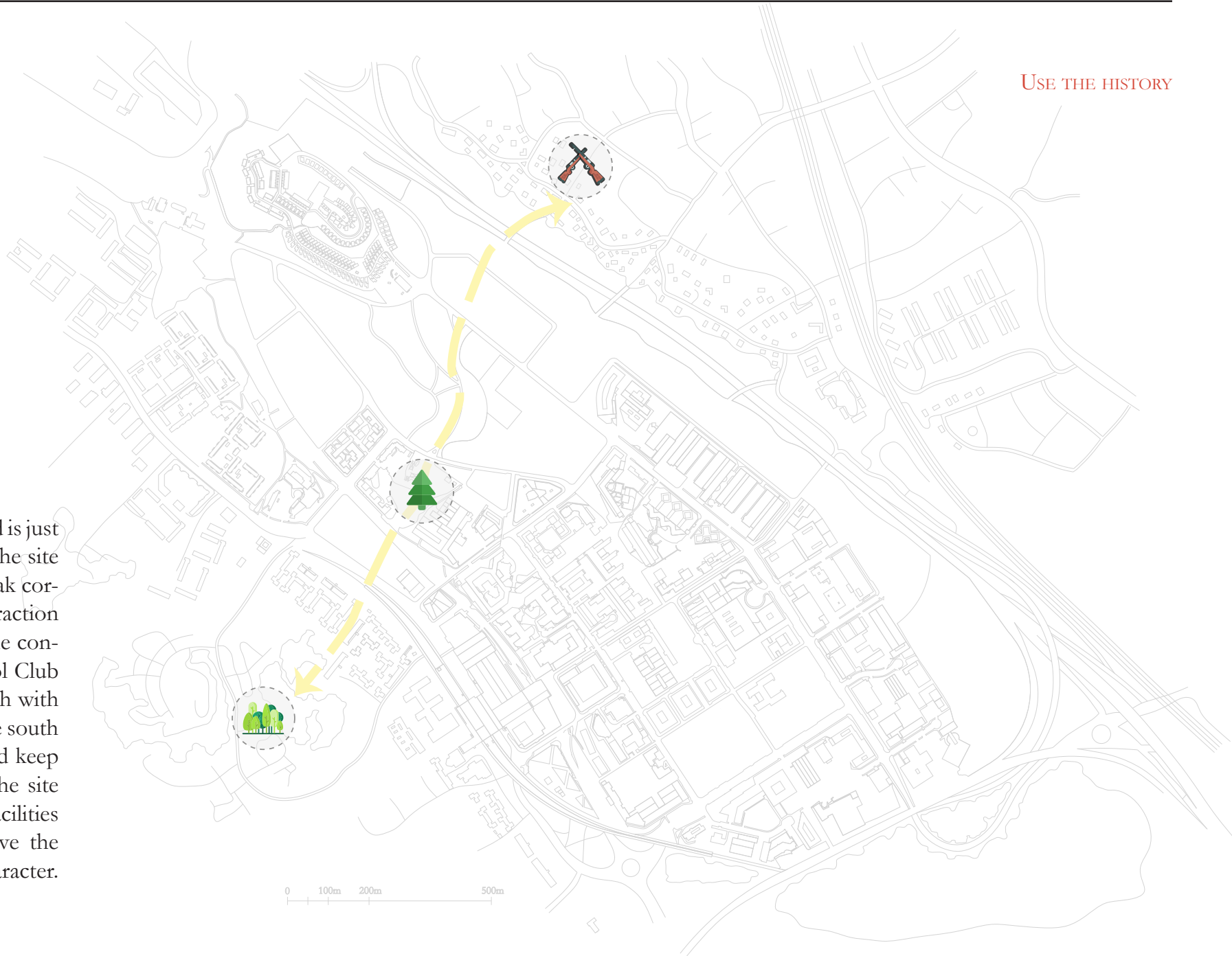


Green corridor is one of the main strategies that led to the detailed design. The site has the potential for a green corridors to bring out the urban green environment where the idea is to link the Igelbäcken natural reserve in the south to the Akala/Jarvafältet to the north through the studied area taking advantage of the existing parks, vegetation and the forest to provide a green outdoor environment.

8.1 DESIGN STRATEGIES

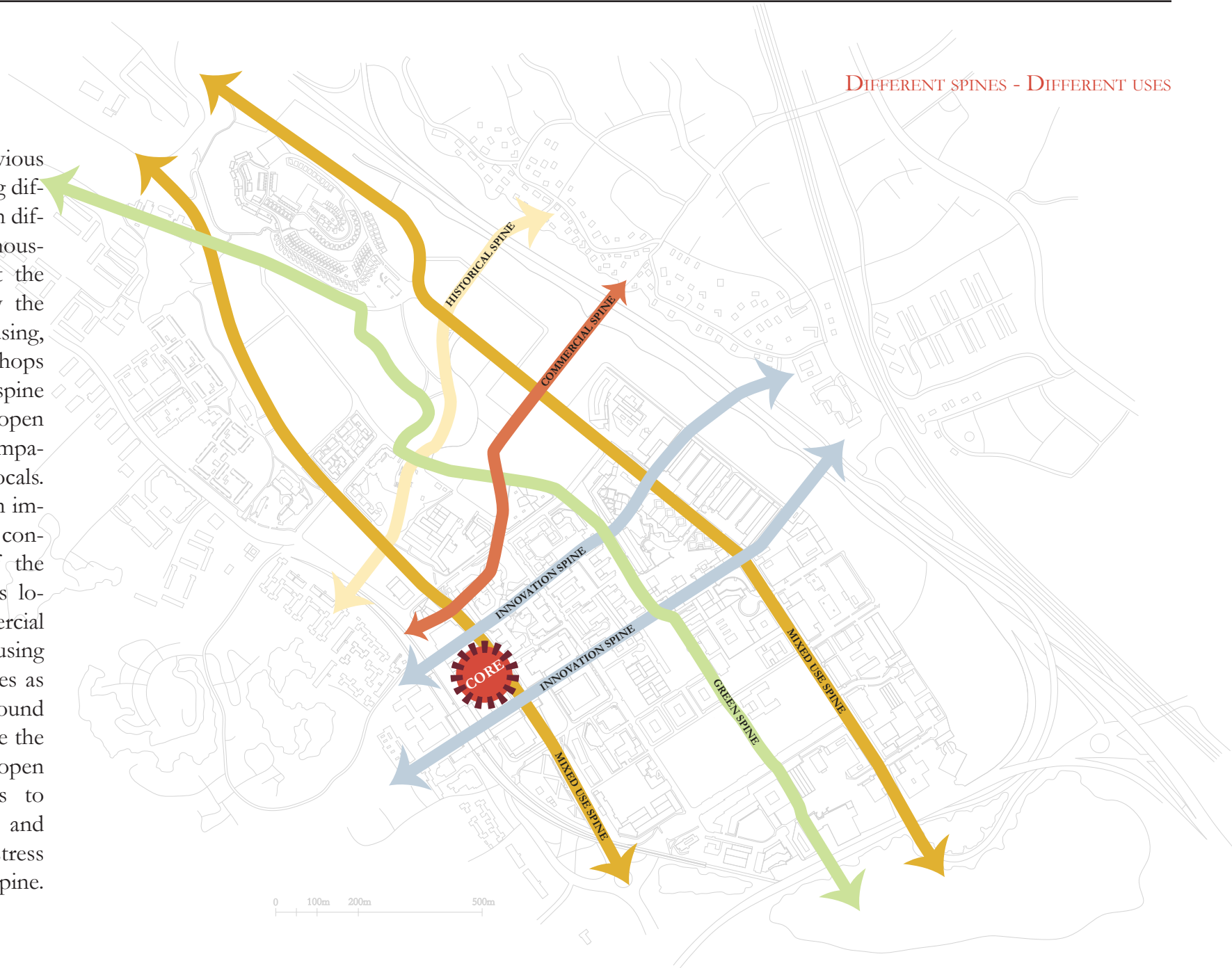
USE THE HISTORY

The historical Kista Gård is just located in the middle of the site which is, along with the oak corridor, would play an attraction point of the site where the connection between the Pistol Club in Helenelund to the north with the old oak corridor to the south through Kista Gård would keep the locals flow through the site where different cultural facilities would take a place to give the anchor the historical character.



8.1 DESIGN STRATEGIES

Overlapping the previous strategies leads to proposing different types of uses through different spines even though housing has a big portion but the mixed-use spine can carry the daily life events such as housing, offices, schools and few shops while in the innovation spine you find tech squares and open shows for the high-tech companies to collaborate with locals. Commercial spine is also an importance for the site that connects through the core of the site where Kista Gallery is located with a fully commercial character along the housing Cultural centres and libraries as well as exhibitions can be found in the historical spine where the sports facilities and the open parks with walking paths to improve the mental health and get away from the work stress will be along the green spine.

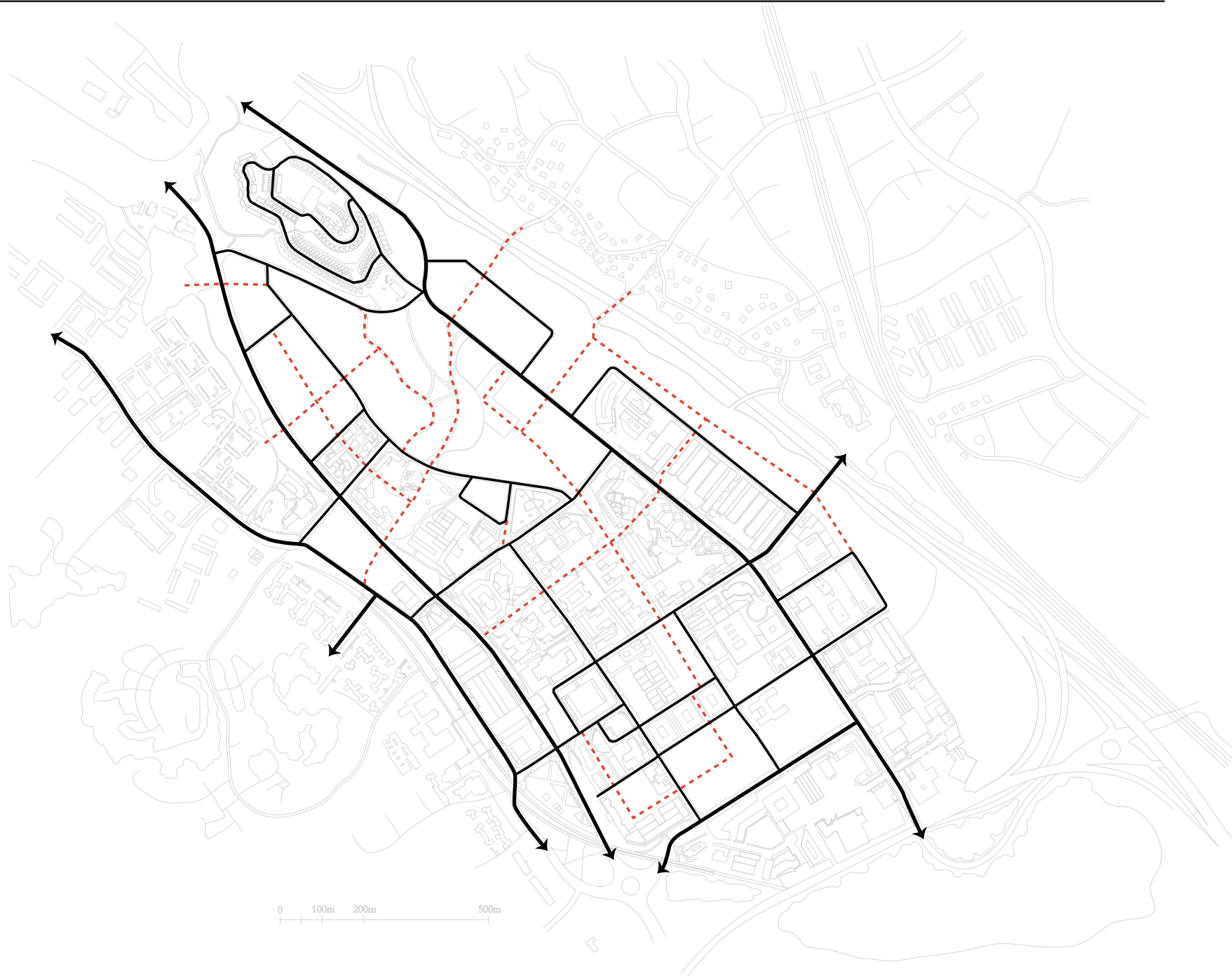


8.1 DESIGN STRATEGIES

A walking distance is a strategy that would help increase safety in the area and promote walkability. Using the previous green spaces to place strategically plazas in the crossing points and create new nodes in the site with a maximum 500 meters walking distance would create an urban dynamic in the area as well as encourage locals to walk or bike more to explore the other plazas where outdoor activities will be..



8.2 STREETS NETWORK

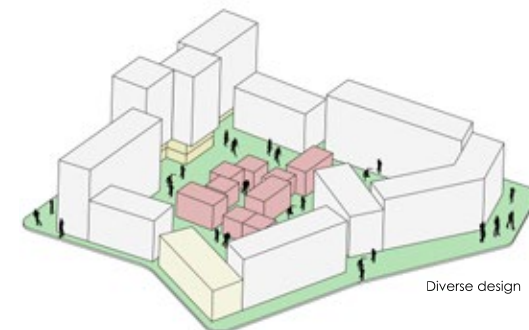
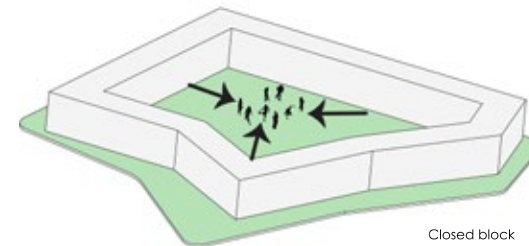
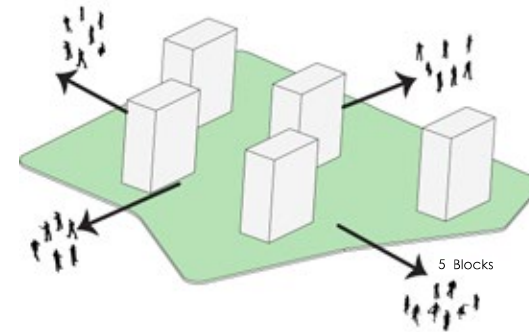


8.3 DESIGN ARGUMENT

This diagram is one of the very first sketches I did when I started the design procedure where I asked myself what is the best set to design a number of blocks?

The argument was if I have 200 people and I wanna build a home for them I could build 5 slums that accommodate all of them but that will not provide a pleasant urban environment for them and they will feel exposed to spend time in that place so they will go somewhere else to spend their time while on the other hand if I just design a closed traditional block that makes them feel the space and that they belong to here will make them totally isolated from what happens outside and will not provide any semi public areas.

That is how finally I came up with a design that combines the two different ideas and work on it more to provide a diverse design and a vibrant mixed-use setting with different buildings' height and different typologies where public and semi public spaces are existed and the block is allowing the people flow across it also as well as a private terrace or a roof park



8.4 MASTER PLAN

The new master plan of Kista, Stockholm has followed the programs from the municipality of Stockholm as well as their guidelines for the comprehensive plan while the proposal of the new plan strengthens the relationship between locals and innovation offices.

A key goal of the design is to provide more access to public spaces and a cozy outdoor environment which is also needed to reduce car dependency and promote walkability and biking in the area. This is achieved through designing pedestrian loops connecting the different blocks together and plazas and squares that have different features as charging benches, display screens and test cubes to create better communications between the folks and workers defined by vegetation and seasonal trees.

The new blocks in the design are based on the traditional swedish designs through

materiality and roof design plus some high-tech features combined such as pv solar panels and trumbine where the orientation of the new blocks placed with short edges to the north to get as much daylight and sun as possible all year around.

Another key design is the different functions and the mixed-use in the area where the proposed master plan has different activities more than housing or offices. Commercial, shopping centres, cultural centres and libraries are part of the design.

Healthcare is another important aspect that has been taken into consideration, relaxing parks and sports hall are great places to escape from a stressful day and have your lunch in peace or for locals it is a place to hang out with the friend of the family where it releases the stress and increase the social relationships between people.



- 1- Commercial
- 2- Educational
- 3- Healthcare
- 4- Sports facilities
- 5- Cultural centers
- 6- Mixed-use
- 7- Seasonal activities



8.5 ZOOM IN



Figure 10

The two zoom in show the spatial qualities of the urban space. The first zoom in, *Figure 10*, shows the different typologies in the new design with the different materials. The buildings have basements parking lots where the roof green is a place to plant as well as the different heights give a harmony to the design. The blocks are car free with enough pedestrian width in case of any emergency where the park has different urban qualities among its location as welcoming point for the existing building to attract them to head north where the forest is. For example, an open theatre for people to get to know each other and have a social life where the path Walk & Talk is to get to know your neighbours and the people that you share with the urban spaces. The entrances also have been placed to keep the area active with people in the streets and avoid having any dead corner.

Another important aspect of the design is the urban points where the old meets the new, placing different facilities than offices is a key goal to provide an urban dynamic design. *Figure 11*. The different uses for the same space will give the desired goal. Green connection is a way to bring the area together where Think Cube will be placed in the green/square as an urban space for locals to get the chance to test their new ideas with the high-tech companies where it is also a place for them to just come down and have an outdoor sheltered event.

8.5 ZOOM IN



Figure 11

8.6 PHASING DEVELOPMENT

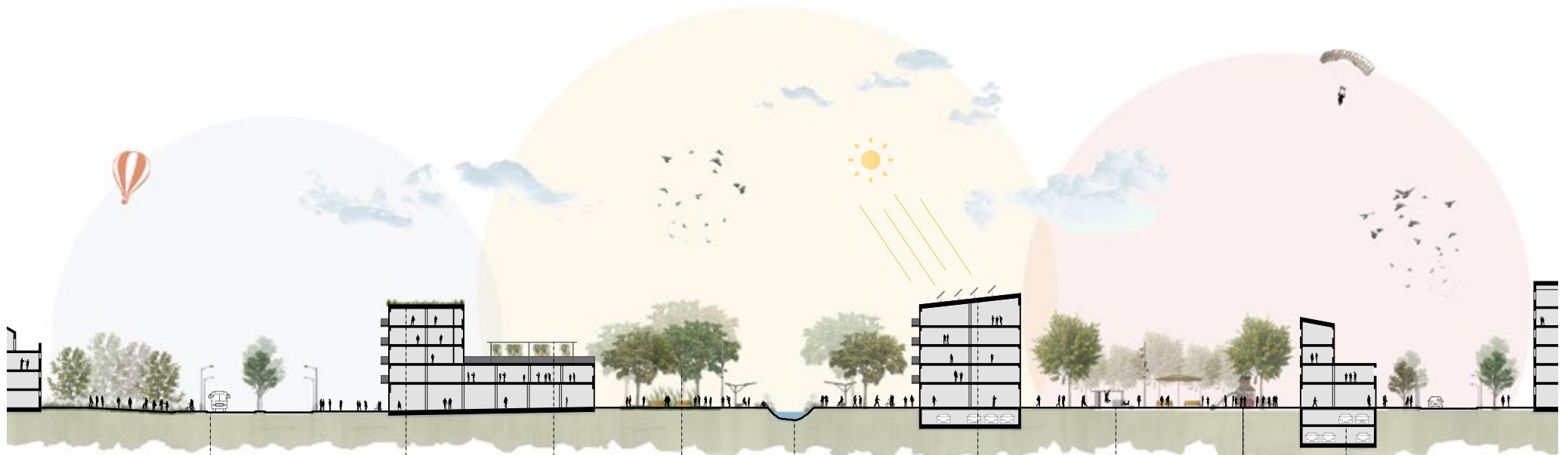
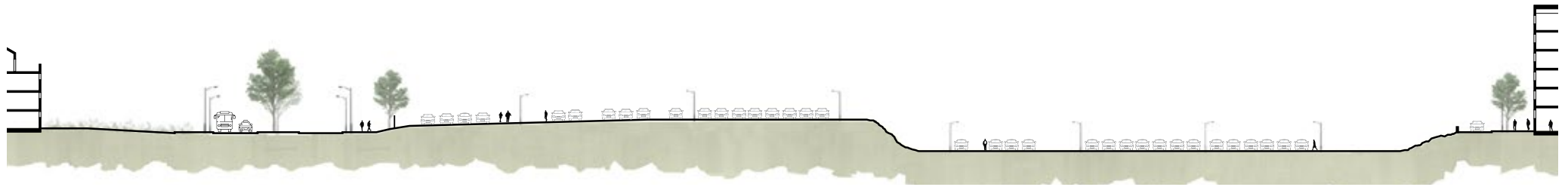


Phasing development is an important factor in this proposal where the plan is to build the area within ten year. It has been divided into three phases where the first phase considers the existing buildings and their program as well as replacing the empty space with housing and other functions in a way to make the current area more inhabitant along with enhancing the connections.

The second phase of the development is to provide more housing and connection in the are where it considers to build more towards the north as well as connect that part with the surrounding in order to make the area more liveable and having different facilities also such as the mall and commercial spine.

The last phase of the project is to build around the forest and link the area with more withe surrounding to make a very good connection to the area overall and make the neighborhood more vibrant and dynamic. Public spaces and greenery have also been taken into consideration due to the important role that they play in the reviving of the area.

8.7 SECTIONS

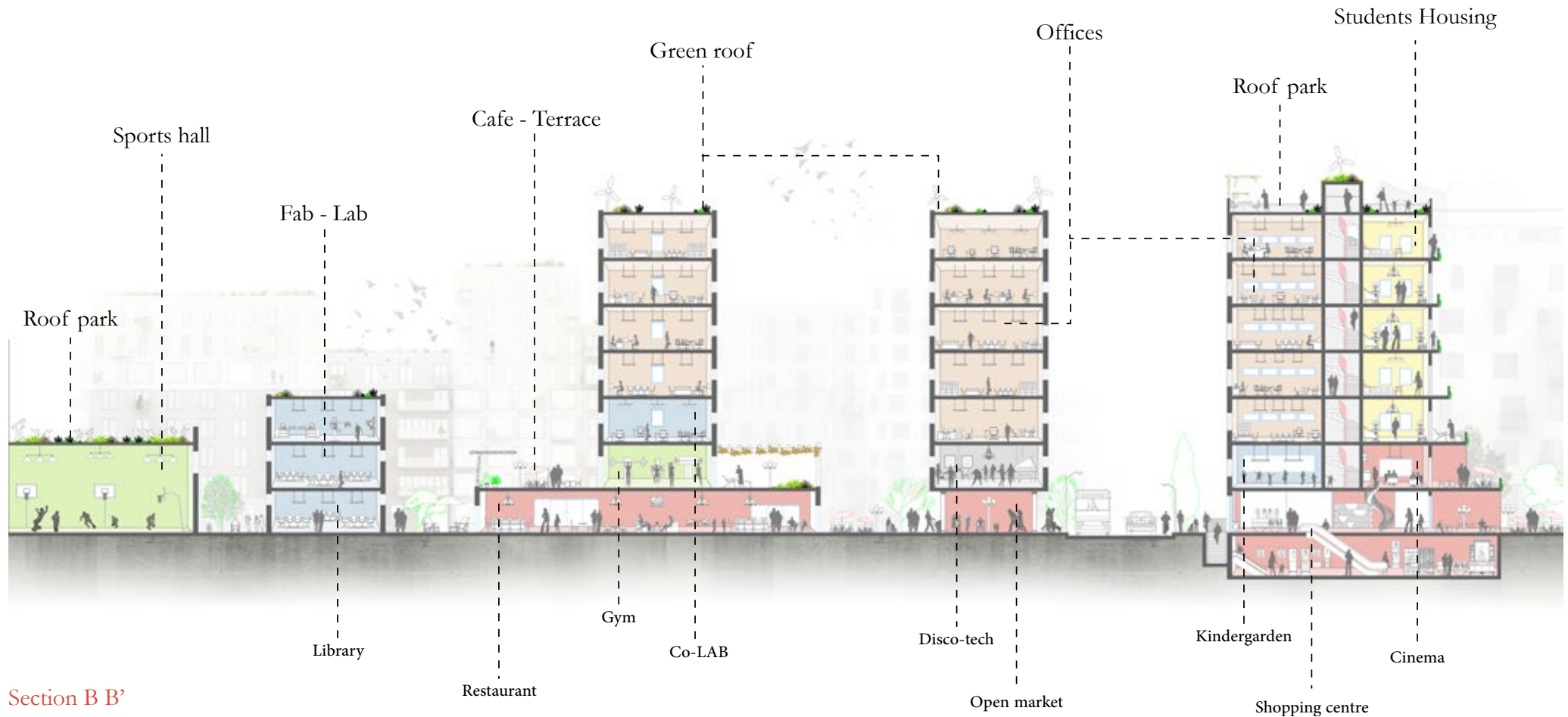


Section A A'



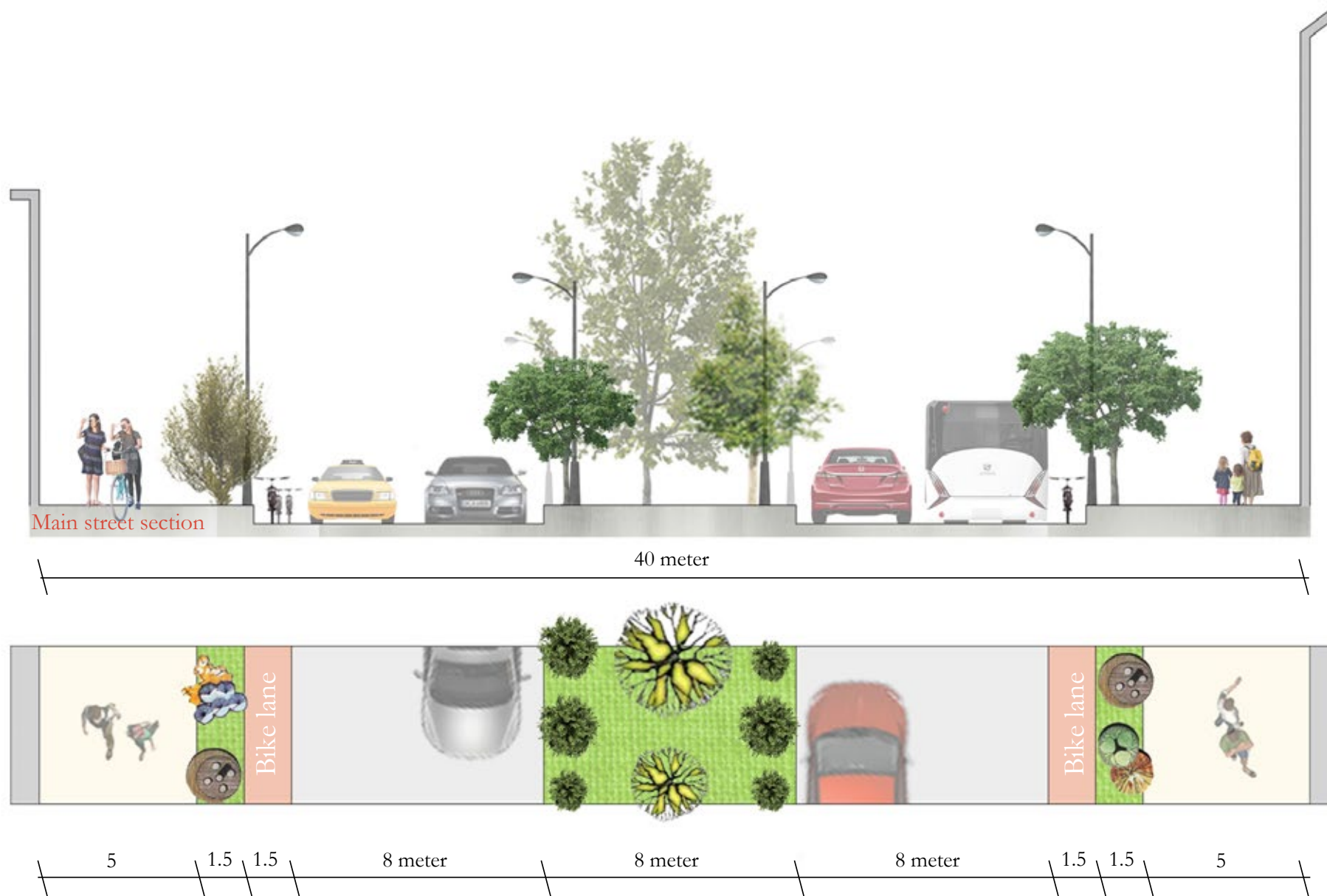
The section shows the transformation of the huge public lots to different uses with high-tech features as well as using the typography in the design

8.7 SECTIONS



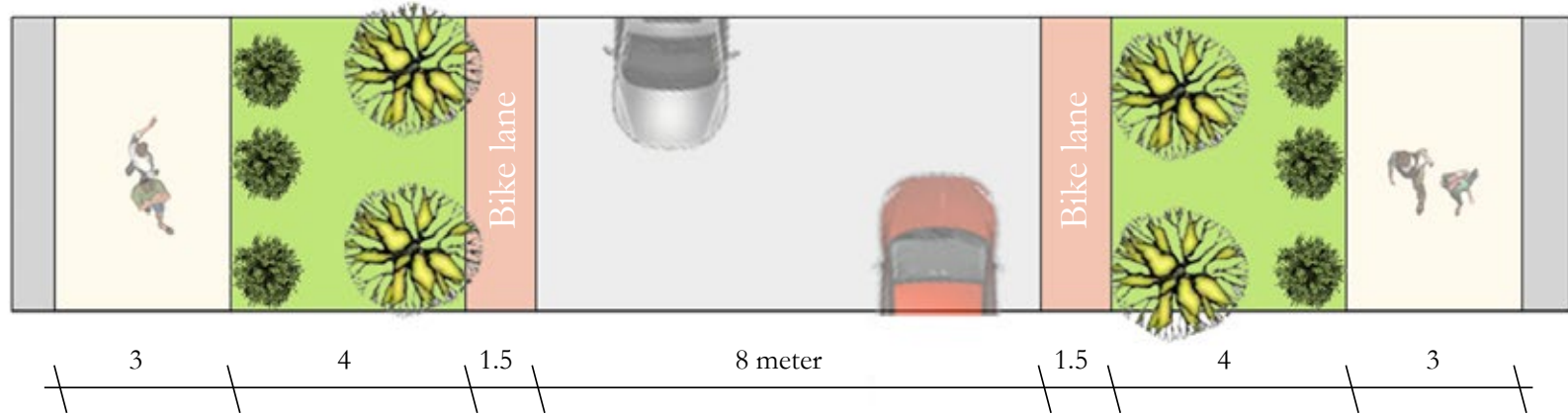
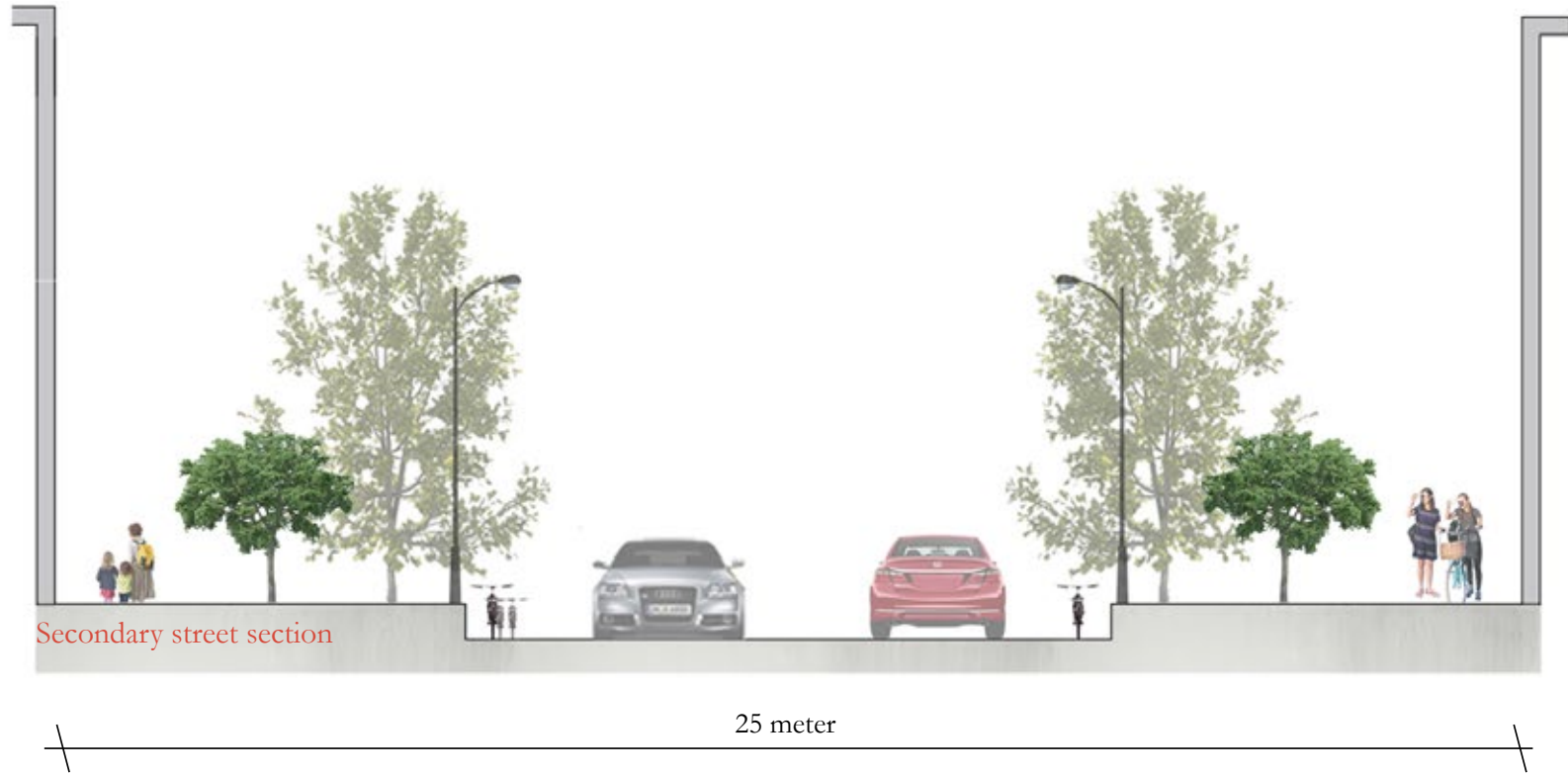
This zoomed in section shows how the different uses of the same building will provide dynamic and active streets as well as attract different people.

8.7 SECTIONS



The main streets in the proposal shows how we can use the same width of a typical stockholm street to be green corridors and promote walkability.

8.7 SECTIONS



This secondary section in the proposal shows how the asphalt surface will be less than 35% of the street.

8.8 RENDERS



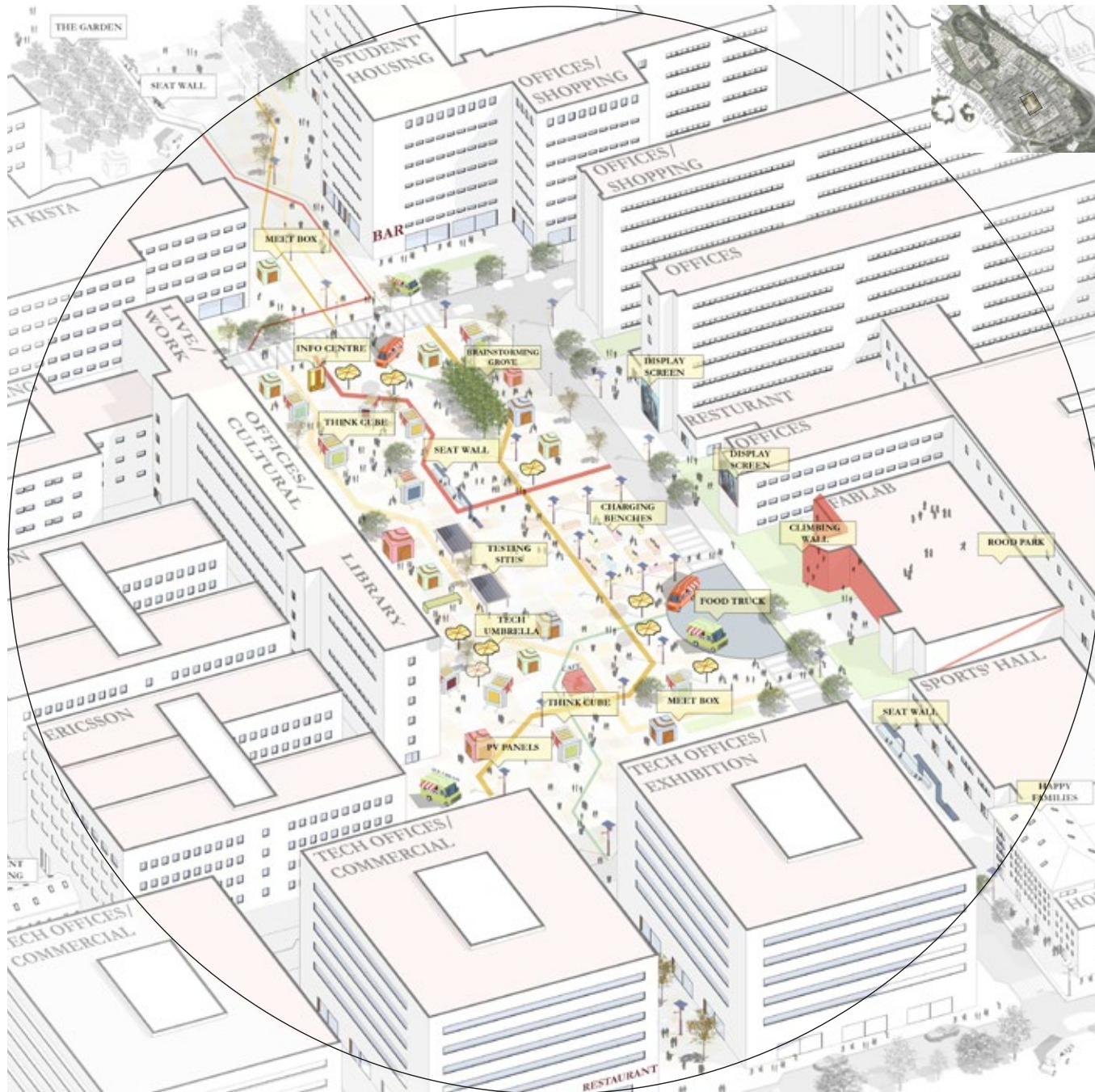
This render shows the life in between the proposed design and the forest from a bird eye as well as the quality that the new buildings would have.

8.8 RENDERS



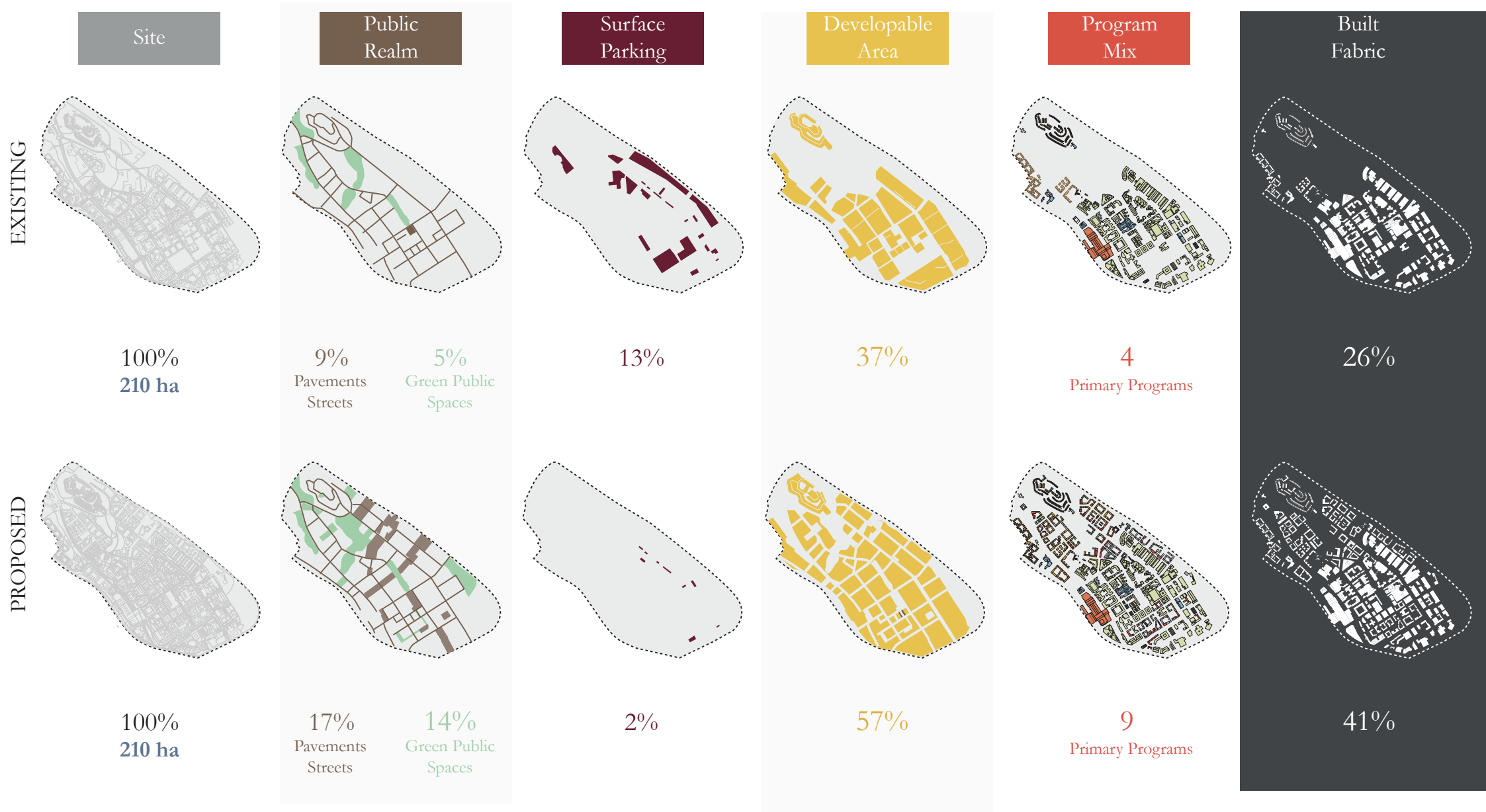
This image shows the spring/winter in the commercial spine and the mixed-use of the buildings.

8.9 AXONOMETRIC



Tech-squares are places where locals and public can have the opportunity to know more about the innovation process and the high-tech from the companies directly. They are in different places in the new master plan and this here is one of the squares that has been transformed to an urban tech square. Small details from charging benches to a big climbing wall or changing the programs of the buildings have been taken into the new design. Display screen where the companies can present their new project where the urban environment would bring people to the square to watch. It is a place to bring the kids to try the new climbing wall and explore the roof park as well as visiting the sports hall which is open until late. Food trucks are there to serve these people with food while they pass by to test their new ideas and present directly to the companies that can be inspired and get to know what the public might need and improve it. Brainstorming grove can also be a picnic area in the middle of the day or the wall seating. The buildings were only single-use (offices) while in the new design the programs for some buildings have been changed to a student housing next to KTH or bars and restaurants in the first floor as well as add housing to the area to make it liveable.

9. COMPARISON



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