New perspectives for NYHAMNEN

From industrial harbor to collaborative neighborhood



Patricio Meneses Quintero Master Thesis SUDes Sustainable Urban Design / Lund University





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May 14th 2020

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Examiner Peter Siöström, assoc. Professor, Architect SAR/MSA, Director of SUDes, Chairman of Ax:son Johnson

Supervisor Louise Lövenstierne, Architect MSA, Senior Lecturer, Course Leader SUDes, Board Member of SUDesURBANLab

Jury Nevena Krilic, Principal at MMX YYZ Jenny B. Osuldsen, partner in Snøhetta, Professor in Landscape Architecture at the University of Life Science

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Introduction

Malmö was founded in the 13th Century as a fortified quay, and was part of the Kingdom of Denmark until 1658. It was one of Denmark's largest cities, and an important trading location for the German Hanseatic League. It is a compact city that during the last decades has been forced to change under the pressure of phenomena such as economic crisis, immigration and globalization.

When the industrial revolution reached Sweden in the mid-1800s, Malmö rapidly became the most industrialized city in Scandinavia. The Kockums shipyard, located in the Western Harbor was one of the largest in the world, and supported the development of significant textiles and manufacturing industries. The 138m Kockums crane – the largest in the world at the time – was a major city landmark and icon for not just its 11,000 direct employees and 6,000 residents, but to Malmö as a whole.

However, major recession hit Sweden in the mid-1970s with the geographical shift of the shipbuilding industry to the Far East. By 1985 the population dropped to under 230,000, and the following year the city's former economic powerhouse, the Kockums shipyard, closed down. The financial crisis of the early 1990s exacerbated the decline even further. The city lost 27,000 jobs, and the flight of the middle- and upper-classes to adjacent rural areas increased. By 1995 the unemployment rate hit 15%, the highest in Sweden, and an emergency restructure of the city's finances was needed to prevent the collapse.

A change in political leadership in 1995 kickstarted the process of reinvention. A new redistribution program for municipal income and expenditure was agreed. 'Value-based Planning' – a more holistic long-term approach for the development of the built environment – was introduced, with the city becoming increasingly smarter in its use of land and property assets and in using competition amongst private investors to stimulate greater planning gain. After initially attempting to encourage the prestigious Lund University to relocate 15km into the city center, Malmö decided to set up a new university in 1998 on part of the site of the former Kockums ship-yard. The city is further exploiting opportunities from its new university and the highly-specialized World Maritime University by developing business incubator spaces and strong linkages with global high-tech industries.

In May 2014, The City Council commissioned the city building committee to begin the General Plan for Nyhamnen. Consultation documents were approved by the local council in December 2015 and consultations were ongoing from February to May 2016. The plan proposal was processed and supplemented based on the feedback of the consultation. The new proposal was approved by the local authority on May 2nd 2018. After the exhibition, which went on from May 2018 to August 2018, the proposal was adjusted from the external comments received. Finally, an In-depth study of the Malmö Overview Plan was assumed in April 2019. After almost two years living in Malmö, I discovered Nyhamnen by reading about the municipality plans for the area in a local newspaper. The mere realization that I was not aware of such a large area, only five minutes walking from the central station was both surprising and challenging. Since then, the aim of this thesis has been to develop an urban proposal that even though it is an academic exercise can help to shed light on Malmö's present and future challenges and offer new perspectives on the ongoing planning process. The stakes for this area are very high, many stakeholders are interested in developing this area and its size and proximity to the city center are going to make Nyhamnen the flagship of Malmö in the years to come.

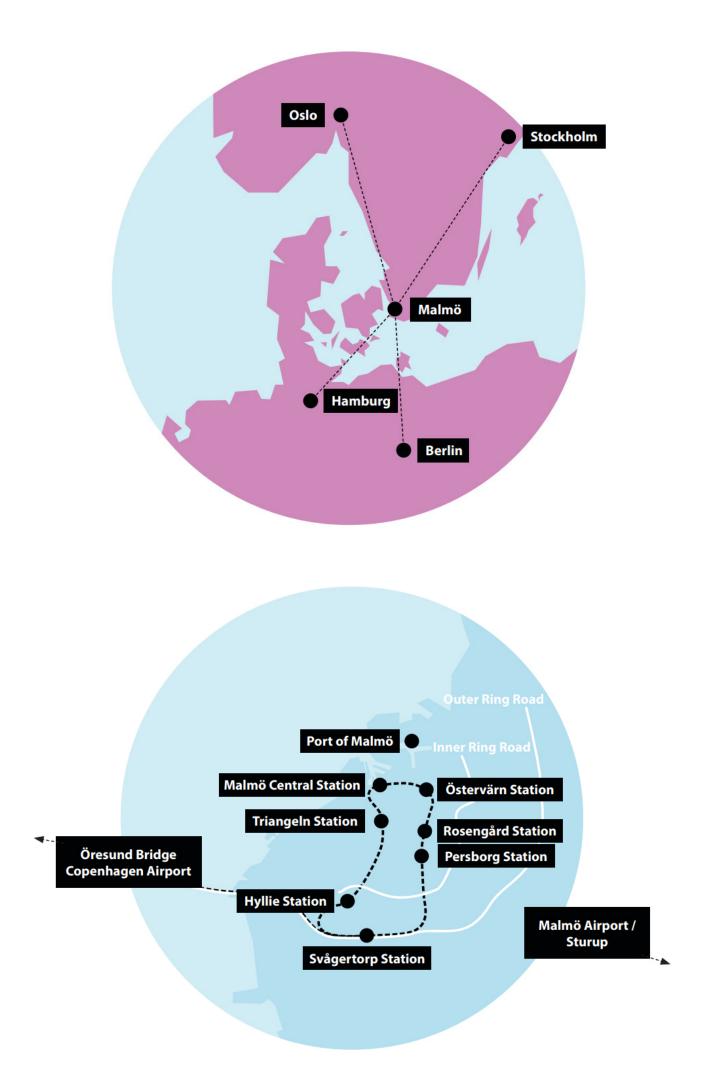
With the worlds current uncertainty, new and versatile solutions are necessary. One such solution is "co-living", a concept that has re-emerged as a viable solution for some social-economic challenges in developing and developed economies. Under this scenario the question that arise for this thesis is: Can co-living in Nyhamnen mitigate the urban challenges of Malmö?



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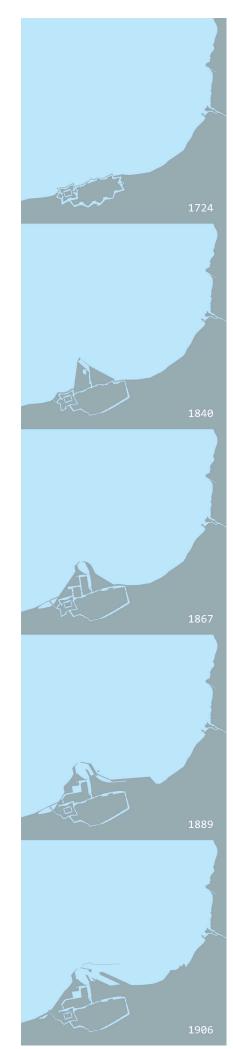
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1.1 Malmö in the regional context

In the late 1990s the city decided to focus on re-creating Malmö as an environmentally sustainable city. The city took the opportunity to bid for and host the 2001 Housing Expo, and constructed the 100% sustainable Bo-01 area at the Western Harbor (former home of the Kockums shipyard) as the anchor for the regeneration of the entire area. The Western Harbor is now approximately 65% developed out and contains the largest single concentration of Passivhaus homes in Europe. Existing neighborhoods have benefitted from extensive environmental retrofitting, and the Value-based Planning system is used to push higher standards of sustainable design and construction. Malmö is now on target to be carbon-neutral by 2020 and to operate 100% on renewable energy by 2030. In addition, the city has been delivering new high-quality public spaces, bicycle networks and leisure facilities for all ages and cultures – such as Sundspromenaden, Scaniabadet, Slottsparken and Stapelbädden (northern Europe's biggest skatepark, built around an old ship slipway) – to ensure that no one is more than 300m from amenity space or waterfront. Architectural landmarks such as Calatrava's 54-storey 'Turning Torso' (2005) provide a highly-visual signifier of the scale and quality of city transformation.

The opening of the new 8km Öresund Bridge in 2000, linking Malmö to Copenhagen city center and its airport has been a significant boost to the city's economy, expanding economic opportunities, generating greater inbound commuting and increasingly attracting more residents from the Danish side. Other major transport infrastructure projects such as the City Tunnel, an underground commuter and freight railway tunnel under the city center, and the planned Northern Loop railway will further improve connectivity and encourage reduced reliance on cars. The new high speed trans-Scandanavian rail link to Oslo and the Fehrnman Belt tunnel will tap into the city's strategically beneficial location and fuel it's re-positioning towards wider Europe.



1.2 Evolution of Malmö's harbor

In the 17th century, the Scanian region came under control of Sweden following the Treaty of Roskilde with Denmark, signed in 1658. By the dawn of the 18th century, Malmö had about 2,300 inhabitants. However, owing to the wars of Charles XII of Sweden (reigned 1697–1718) and to bubonic plague epidemics, the population dropped to 1,500 by 1727. The population did not grow much until the modern harbor was constructed in 1775. The city started to expand and the population in 1800 was 4,000. 15 years later, it had increased to 6,000.

The coastline at Malmö was approximately on the northern side of Norra Vallgatan. In the 1770s, the first port was gradually built. By 1820 the work had come so far that the harbor consisted of two piers , with a depth of 1.5 to 4 meters between the piers. Today, it corresponds to roughly the area of the Inner Harbor, from the pier on the University Bridge and towards the city.

In the 1840s west and east sides of the piers began to be expanded. In addition, the port basin was widened. After further broadening, the newly recovered ground began to be utilized for other purposes. In 1856 the railway station and parts of the railway towards Lund were opened on the eastern side of the harbor. The railway came to have a huge impact on the development of the port as the city was, among other things, the end point on the southern main line. Passengers could get off the train to board the ferries in Malmö towards Copenhagen or the continent. The railway and the harbor also had the advantage of being placed in an undeveloped location far from residential areas and agriculture where it was easy to expand the business by means of new fillings to the sea, which enabled further expansion of the port.

In 1840, Frans Henrik Kockum founded the workshop from which the Kockums shipyard eventually developed as one of the largest shipyards in the world. The Southern Main Line was built between 1856 and 1864; this enabled Malmö to become a center of manufacture, with major textile and mechanical industries. In 1870, Malmö overtook Norrköping to become Sweden's third-most populous city, and by 1900 Malmö had strengthened this position with 60,000 inhabitants. Malmö continued to grow through the first half of the 20th century.

Evolution of the harbor of Malmö. (Produced)

The population had swiftly increased to 100,000 by 1915 and to 200,000 by 1952. In the 1870s, Kockums shipyards established themselves in the western part and a station was built for the railway towards Ystad, Malmö Västra. In the 1890s, regular ferry lines started by steamboat to England and Copenhagen. Nyhamnen was built. Kockums moved all of its operations from Davidshall to the harbor around 1910. The free harbor was inaugurated in 1923. At the same time, the Industrial Harbor was built further east.

In 1964, Sjölundaverket was inaugurated near the municipal border with Burlöv in the port's outer area. Malmö and the neighboring municipalities' wastewater are purified in the works before the water is released into the sea. In 1990 incorporated the local port authority and when the Öresund Bridge opened went Malmö Port AB merged with its counterpart in Copenhagen to the joint company Copenhagen Malmö Port.

As Kockum's operations declined, new operations were established in the port. For a few years there was a SAAB factory in the yard's largest building. The Boom Fair Bo01 was organized in the Western Harbor and a few years later Turning Torso was built.

The era of passenger ferries from the port came to an end as the Flyboats near Malmö C closed down their operations in 2002. At present, the freight traffic line is Nordö Link from Malmö to Travemünde, which mainly transports trucks with drivers.



Evolution of the harbor of Malmö. (Produced)



Malmö port sectors. (Produced)

1.3 The harbor nowadays

Inner Harbor (Inre Hamnen)

The Inner harbor is the oldest part of Malmö's harbor. From Skeppsbron and Ångbåtsbron, passenger traffic went to Copenhagen. Traffic ceased when the Öresund connection was completed in 2001. Malmö Central Station, Malmö University and the Maritime University are located in the Inner Harbor.

Western Harbor (Västra Hamnen)

The Western Harbor is now a residential area. Until the 1970s, Kockum's shipyards were totally dominant in the western harbor, nowadays Kockums still has some operations at the shipyard's basin. In the South Shipyard basin at Malmökvarnen, grain is unloaded (Lantmännen Cerealia AB).

The Free Port (Frihamnen)

The free harbor is located just north of the Inner Harbor. It is used for storage and transshipment of goods, cars and containers, for further transport within the Baltic Sea.

Middle port (Mellersta Hamnen)

In the Central Harbor there are industries and warehouses. Large areas are used for installation of imported cars. Copenhagen Malmö Port (CMP) has its office in the Middle Port.

Northern Harbor (Norra Hamnen)

The northern port is quite deserted. In a large embankment area, the fill masses that arose during the construction of the City Tunnel were deposited. In 2009, an expansion started with a new ferry location and a new container port. E. ON operates a district heating plant based on wood chips and wood waste. In 2004, Lappögatan became Sweden's first track for drag racing and street racing.

Nordö Link has 3 daily departures to Travemünde from its ferry location in the Northern Harbor. Before 2011, the ferry location was in Nyhamnen.

Eastern Harbor (Östra Hamnen)

In the eastern harbor there are companies and heavy industry of various kinds. The tobacco factory is one of the companies in the area. Two schools, Tärnöskolan and Vingaskolan, were located in the eastern harbor. The schools had mecanic and craft programs. They were merged into Agnesfridsgymnasiet and relocated to Yttre Fosie in 2006.

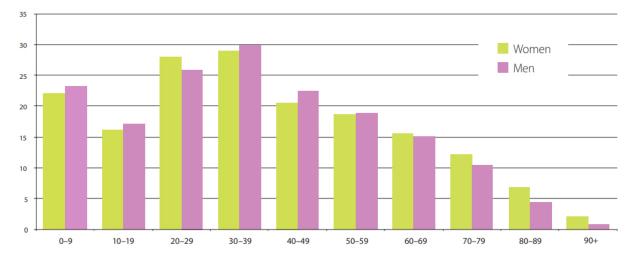
Oil Port (Oljehamnen)

The oil harbor is located in the northeastern part of the harbor. In addition to a large number of oil cisterns, there is some chemical industry in the area.

1.4 Social context

Malmö has been through the biggest multicultural change of any other Scandinavian city. In 1960 only 5% of the city's population were 'foreign-born' (mostly from Finland); now 41% of Malmö's population are first- or second-generation immigrants, against a national average of 15%, with the highest proportion of Islamic residents (25%) in Scandinavia. The largest inflow has come from Balkan and Middle Eastern states, but there are now residents from 186 countries, with 150 different languages spoken. The outputs of the national 'Million Program' between 1965 and 1974, which saw over a million units of social housing built across Sweden in estates of typical mass block units, has been increasingly absorbing the new immigrants to the point where now some comprise of up to 80% ethnic minorities. The change in ethnic make-up of the city's population has contributed to a structural shift in population age too, with 49% of Malmö's inhabitants now below the age of 35, with the average age on trend to fall even further.

The city's motto today is 'A good life for everyone', incorporating good housing, education and healthcare, and states that it wants to be the best city in the world for sustainable urban development by 2020. The city has recognized the need to build a truly socially sustainable society, in line with the Lisbon Treaty definition, and is re-focusing its policies and activities to do so. The physical and economic transformation the city has achieved in a relatively short time span is impressive, and gives confidence that the same positive change can be affected to address the city's socio-economic issues.



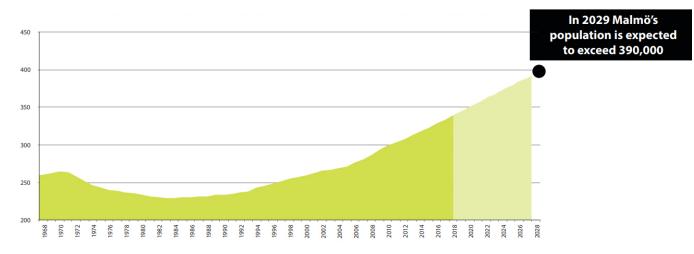
Population by age group and gender in 2018 (in thousands). (Malmö Business)

1.4.1 Demographics

There are 344,166 residents living in Malmö (31 December 2019). It is the fastest growing large city in Sweden. In 2018 the population increased by 5,680 new Malmö residents (1.7%). The high number of births and influx of people are responsible for the greater part of the population increase. Malmö accounted for about 37 per cent of the population increase in Scania from 1990-2018.

People of all ages are moving both to and from Malmö. Migration between larger cities in general and the rest of the country has a clear pattern, where the migration patterns vary in size for different age groups. The largest influx takes place in the age group of 20-25 years. Parents ages 30-45 account for the greatest share of people moving to another municipality. They often settle in municipalities within a commuting distance. Their children often move back to Malmö when they grow older. The domestic migration pattern in Malmö does not differ greatly from the other large cities, Göteborg and Stockholm.

Each year, the City of Malmö provides a population forecast for the next ten years. It is an important tool for the planning for Malmö's future. The 2019 population forecast shows, among other things, that the number of Malmö residents is expected to increase by about 50,000 new residents by 2029.



Population of Malmö 1968-2018 and projected population up to 2029 (in thousands). (Malmö Business)

1.4.2 Employment

The trend for the number of professionally employed persons with a workplace in Malmö is an increase by 53 per cent over the past 20 years. It is an increase of 3.2 per cent over the previous year and 22 per cent over ten years. It is primarily the areas of business services, education and the hotel and restaurant sector that have increased over the past 10 years.

In terms of availability of jobs, the employment rate in Malmö is 67.8 per cent. Malmö's employment rate is lower than the other large cities and the national average (79.5 per cent), but has increased successively since 2009. (RAMS SCB)

Approximately 7,400 Malmö residents commuted from Malmö to Denmark during the third quarter of 2017 (Ørestat). 70,931 people commuted to Malmö from other municipalities, while 34,764 people commuted to other municipalities in Sweden from Malmö. (2017, SCB)

Following a static couple of years due to economic uncertainty in Europe and the wider world, employment figures began to move upwards again after summer 2011 and have continued climbing, reaching what is today the city's highest level to date. A total of 171,839 people was employed in Malmö in 2018, a large increase of 5,344 individuals or 3.2% compared with the previous year.

The number of employees has increased by 17% in 10 years and by 33% in 15 years, with long-term positive development in the areas of business support services, IT and data consultancy, accommodation and food service activities, other services and education.

1.4.3 Security

The percentage of Malmö residents who report that they were not victims of crime in the past 12 months has increased in 2019 (76.7 per cent) in comparison with 2018 (75.4 per cent).

The percentage of people who have been victims of physical crime has decreased in 2019 (1.6 per cent) in comparison with 2018 (2.2 per cent). On the other hand, more people report that they have been victims of theft in 2019 (14 per cent) than in 2018 (12 per cent).

The sense of insecurity among Malmö residents remains high and has increased since 2016. Concerns about being the victim of some type of crime have, however, decreased in 2019 (74 per cent) in comparison with 2018 (75.4), whereas concerns about public disturbances and people fighting, getting into physical altercations and who are generally disorderly have increased.

The accounting of deadly violence with guns in Sweden began in 2011. Since then, the total number of shootings in the country has increased. In Malmö, the number of shootings in 2019 decreased in comparison with previous years.

1.4.4 Education

Since the 2000s, Malmö has had a strong development of the proportion of highly educated compared to Stockholm and Gothenburg. Nearly 50 per cent of Malmö's population has at least 3-year post-secondary education, an increase of 16 per cent from 2000. The corresponding figure for the whole of Sweden is 11 per cent. It places Malmö in 18th place out of 290 municipalities according to Statistics Sweden's (2018) statistics. The average merit rating of 230,5 in Malmö's municipal primary schools is a bit lower than the national average merit rating (231,3). Stockholm has a significantly higher merit rating (257,2) than Malmö. Göteborg has a lower rating (228,1) (excluding recently immigrated pupils and pupils with unknown background).

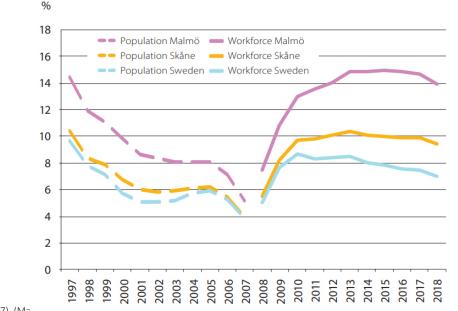
1.4.5 Newly arrived people and asylum seekers

The number of persons who has been granted residence permit with refugee or subsidiary protection status and their reunited family members has varied over the years. Stockholm and Gothenburg have a larger reception in numbers of persons than Malmö. However, in relation to the size of the population, Malmö is the municipality with the largest reception in recent years.

Over the years the dominating groups in Malmö's reception has been persons who arrange their own accommodation during the asylum process (not staying in accommodation centers provided by the Swedish Migration Agency) and persons arriving as a result of family reunification.

Malmö's reception according to the Reception for Resettlement Act is 43 persons in 2019. The Reception for Resettlement Act was enacted in March 2016 for the purpose of evenly distributing newly arrived persons with a residence permit among Sweden's municipalities. The reception of these persons also entails a municipal responsibility to arrange for a place of residence. With consideration to Malmö's large reception of other groups the city has not been assigned any persons for 2020 and will therefore not have any reception according to the act. In the reception according to the Reception for Resettlement resettled refugees are included. There were 1,596 asylum seekers living in own accommodations in Malmö as of 1 August 2019. 37 percent are in the actual asylum-seeking process, 53 percent have been rejected or are in an appeal process and 10 percent are unaccompanied minors or persons who have received a residence permit but awaiting to be registered in a municipality.

The City of Malmö is both responsible for the reception and housing of unaccompanied minors who are seeking asylum and waiting to be assigned to a municipality, and for unaccompanied minors who are assigned to the city of Malmö awaiting decision on their application or who has already been granted a residence permit.



Unnemployment (2007-2017). (Ma.....,

1.4.6 Unemployment

Unemployment in Malmö is decreasing. In comparison with the national level of 7.1 % (percentage of the work force in October 2019), unemployment in Malmö remains at a high level. Unemployment is higher for men at 14.4 per cent than for women at 12.8% (October 2019, Swedish Public Employment Service).

Despite the fact that there are many employment opportunities in Malmö, a large percentage of job-seekers are far removed from the job market. This is due to the discrepancy between job-seekers' competence and the demands from employers.

Youth unemployment is decreasing in Malmö. The overall percentage of unemployed persons ages 18-24 in Malmö is 14.6%. Youth unemployment is higher for men at 17.2% than for women at 12%. Unemployment is higher among youths born abroad and particularly high among young men ages 18–24 who were born abroad. (October 2019)

Compared with other large cities in Sweden, Malmö's rate is high: in Gothenburg unemployment stood at 6.9% and in Stockholm 5.7% (of the workforce, ages 16–64, December 2018).

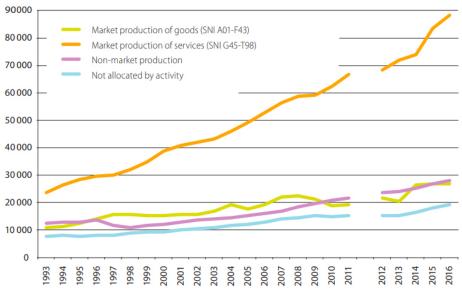
Although there remain significant differences between groups (higher rates of unemployment among young people, those born abroad and men), unemployment has fallen across the board – with the biggest decrease among young men born abroad.

1.4.7 Malmö re-branding

Over the past 10 years there has been a significant increase in the number of new vacancies notified, the activities with the largest positive percentage increase being "arts, entertainment and recreation", "other service activities", "construction" and "transportation and storage"; while demand has decreased somewhat within "wholesale and retail trade".

Information Technologies is playing an important role in Malmö's economical "re-branding". Companies like telecom giant Ericsson and multinational semiconductor producer ARM have had a long-standing presence. There are also market leaders that began as regional companies, like Axis Communications, owned by Canon since 2015 – one of the biggest names in network video.

The global success of Malmö-based companies like Massive Entertainment, the makers of popular computer games, is just one example of the world-class skills that can be found among Malmö-based game software developers. In 2019, Malmö's The Game Assembly was ranked as the 7th best game development school in the world by The Rookies.



Regional gross domestic product per activity (2007-2017). (Malmö Business)

1.4.8 Social segregation

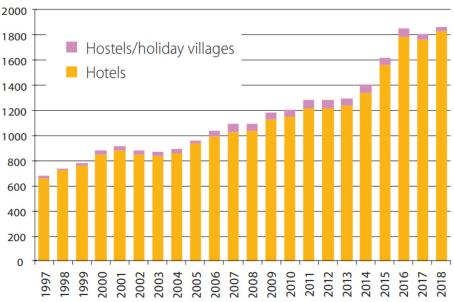
Malmö appears to be a clearly divided city based on socio-economic segregation. The well-off areas are found especially in the west part of the city parts and the concentration of low-income households are located in the eastern and southern parts of the city. But socio-economic segregation is not significantly larger than in the other major cities. The socio-economic division seems to be more a general phenomenon in Sweden than a Malmö problem but studies have shown that socio and ethnic segregation lead to more insecure and violent communities.

1.5 Economy

Malmö has undergone a rapid and significant transformation from severe post-industrial decline into a strong (50%) service-based economy – including in financial & business services, IT and culture/leisure – with a very high-quality living environment. GDP has increased by 61% over the past 10 years, albeit is still a long way behind that of both Stockholm and Gothenburg. There has been a major structural shift away from a few major employers towards smaller businesses.

However, the benefits of Malmö's recent economic growth and subsequent prosperity have not been evenly distributed, and the city has a sharp social divide. Unemployment today is still higher than the national average. Performance on socio-economic indicators such as health equality, child poverty, under-18 educational performance and welfare reliance are poor, and for low-income earners in Malmö their relative income has actually declined since the mid-1990s. Correlation between the poorly-performing neighborhoods and those with high proportions of immigrant residents is high. Public transport, whilst much improved, is not as good as in other Swedish and European cities, which makes connecting areas of economic opportunity to areas of economic need more challenging. Major civil unrest has occurred in recent years and continues to bubble under the surface despite the relative high quality of the physical environment of these neighborhoods, especially when compared to equivalent neighborhoods in other parts of Scandinavia.

To increase momentum in finding a solution, a Commission for a Socially Sustainable Malmö was established in 2011, with the task of developing evidence-based strategies for reducing health inequalities and improving living conditions, especially for the most vulnerable and disadvantaged. More recently a national Forum for Social Innovation was also established in the city, which brings together 19 stakeholders from across Sweden to develop research and expertise in social innovation and social entrepreneurship.



Guests per night (1997-2018). (Malmö Business)

1.5.1 Tourism

Touristic-based activities have showed an important improvement too. Malmö's lodging capacity during 2019 consisted of 1 campsite, 4 hostels and 34 hotels with over 4,833 hotel rooms and 9,396 beds – there has been strong growth in new hotels for a number of years and since 2010 Malmö has expanded its offering by 34% or more than 1 200 new hotel rooms. Guest nights in hotels and hostels increased in 2018, amounting to 1,867,112 overnights in total – a record for Malmö and a +3% increase in the number of guest nights (= +61,454 nights) compared with 2017.

International guest nights were up +13% (+68,713 guest nights), while domestic guest nights decreased slightly at-1% (-7,259 guest nights), excluding figures for camping. 69% of those staying in commercial accommodation in Malmö are Swedish visitors, while 31% come from abroad; among international visitors the largest groups were from Germany, Denmark, the UK and the USA.

In 2018 nine cruise ships docked in Malmö, bringing a total of 14,400 passengers. The void rate is more or less unchanged from 2017: 7.5% in 2018 as against 7.6% in 2017.

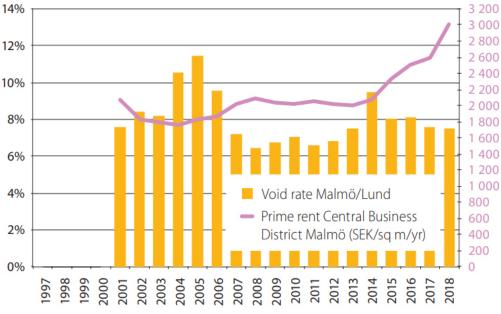
1.5.2 Real estate and housing

Easily accessible locations close to stations have continued to drive new production near both Hyllie Station and Malmö Central Station; the redevelopment of Malmö Central Station is the first phase in the transformation of Nyhamnen, one of Sweden's most central urban renewal areas.

Coworking operators and coworking spaces are on the increase, with property owners continually developing new concepts to meet the market's growing demand for flexibility.

Developments of shopping centers include the expansion and redevelopment of Mobilia to incorporate experiences as well as housing and offices, while Entré has been transformed by the replacement of some retail units with new experience concepts.

During 2018 approximately 3,000 new homes were completed and 3,800 construction projects were begun. Construction in Malmö took place on a greater scale in comparison with other regions in Sweden. Housing construction took place throughout Malmö, but the emphasis was in the expanding areas of Hyllie, Norra Sorgenfri, Västra Hamnen and the Limhamn port area, as well as the small home construction in Bunkeflostrand, Oxie and Tygelsjö.



Commercial real estate (1997-2018). (Malmö Business)

1.5.3 Businesses and startups

Malmö has an entrepreneurial spirit, here are around 2,800 new startups each year (average for the past 10 years) and in 2018, 2,902 new businesses were started up in Malmö, up 4% on the previous year and remaining at a historically very high level-; in Stockholm the numbers were down 2%, in Gothenburg by 5%, and for the country as a whole there was a decrease of 3%.

In Malmö the new businesses employed 3,043 people (around 1.0 per business) and the highest percentage increases in the number of startups during the year were within "advertising and marketing", "wholesale and retail trade" and "education".

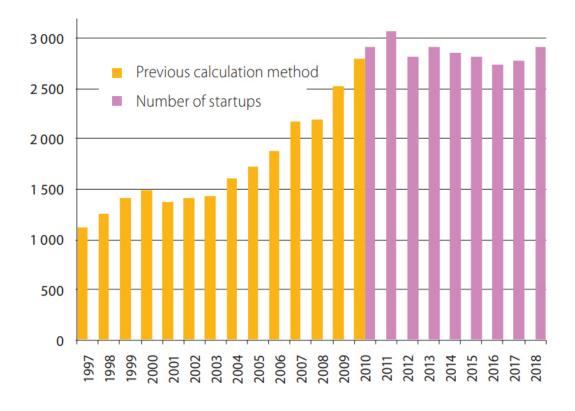
With many new startups and with existing businesses also choosing to relocate to Malmö, there has been a significant increase in the number of workplaces. Today the business structure consists largely of small and medium-sized enterprises.

1.5.4 Need for housing

In order to cover the need for housing for Malmö's growing population, some 20,000 new homes will be needed over the coming 10 years. There is also an unmet need for housing because the pace of earlier housing construction did not match the population increase.

As of 1 October 2019, there were 1,355 homeless adults in Malmö. That is a decrease by 604 people from the same time the previous year. Then number of children in homeless families has been halved from 1,347 to 692.

Structural homelessness is the greatest cause of homelessness in Malmö, i.e. when a person does not have their own place of residence due to economic factors associated with acquiring a residence. Social homelessness is the term for people with substance abuse problems and/or mental illness who are in need of support from social services.



Number of new startups since 1997. (Malmö Business)

1.6 Environment

In 2016, the City of Malmö decided that the UN Global Sustainability Goal (Agenda 2030) was a natural step to adopt in all decision-making instances. Furthermore, the City of Malmö has decided that the UN Sustainability Goal (Agenda 2030) should be integrated into the city's urban development project, since the UN goals have varying degrees of relevance for spatial planning.

Physical urban development is a tool in the effort to strengthen Malmö as a sustainable city. Through good planning and clear sustainability goals, the development can make cities inclusive, safe and resilient, promote economic growth, prosperity and good health for all, preserve the marine resources of the sea and reduce losses of biodiversity. Urban construction has the greatest opportunity to influence the development within the goals of making cities inclusive, safe and resilient, to promote economic growth, for well-being and good health for all, to preserve the marine resources of the sea and to reduce losses of biodiversity.

1.6.1 Blue

Historically water has had a more utilitarian role in Malmö's urban development since the creation of the harbor, which was even strengthen with the construction of the train station, the railroads and the later occupation of the coastline towards the northern part of the city. Access to water for recreation was displaced 3 km away from the old town, to Ribersborgsstranden, which is today the most popular bathing area in the city. The canals running through the city contribute to create a more enjoyable experience of the public space working as thresholds between the different 'ages' of the city and helping to enhance the differences between the old and the modern urban fabric of Malmö.

Other issues that the city has to solve are the eventual sea level rise problem that most of harbor cities are starting to face, the water pollution due to the productive activities within the area, especially those related to oil transportation. Finally, water eutrophication, due to pollution with nutrients (for example, chemicals from fertilizer and sewage) that wash into surface waters from farms and urban areas that can cause oxygen depletion and ecosystem collapse.



View of the Turning torso in the western harbor from Ribersborgsstranden.

1.6.2 Green

Malmö has historically been known as The City of Parks because of a number of key anchor parks that date back to the early 1900's. Despite the city's reputation for open space, Malmö has fallen behind other major Swedish cities in terms of green space within the city. The city currently has 33 m2 per

inhabitant of green space while Sweden's other large cities have an average of 100 m2 per inhabitant. Few new open spaces were added during the industrial age of the city. The area surrounding the city has remained primarily privately owned agricultural land.

Malmö has a number of parks that act as anchors for the larger open space system, including: Kungsparken, Slottsparken, Slottstradgarden, Pildammsparken, and Folkets Park. Water recreation and beaches are also an important part of the anchors, including Ribersborg Beach and Ribbans Kallbadhus.

Malmö, like many European cities, is known for its civic spaces, squares, and plazas. Some of the more famous plazas include: Stortorget, Lilla Torg, and Gustav Adolf's Torg. Many housing developments have courtyards that provide community open space for the residents. An increased effort to involve residents in the design and maintenance of these sites has created better used spaces that residents have ownership over.

Depending on the needs of the residents, these courtyards may provide passive green space or space for active recreation such as playgrounds.

Three new parks were created associated with the new Western Harbor development. Each park was designed with a specific focus on ecological sustainability. Ankarparken, The Daniaparken, and Sundspromenaden each connect people to the water in this newly developed neighborhood.

Malmö has an extensive network of bike trails. The Green Plan for Malmö calls for improvements in the green network of the city. The proposal includes a total of 16 new green corridors. Many of the proposed corridors extend existing corridors into the countryside to develop connections to water courses, ponds, and other habitats.



View of the Casino Cosmopol Malmö in Kunsparken from .

1.6.3 Energy

Sweden has taken part of several climate strategies and targets, the 2020 climate package, the 2030 climate and energy framework and the 2050 long-term strategy. All these aiming for the reduction of greenhouse gas emissions, encourage of use of renewable energies and improvement in energy efficiency.

The 2030 climate and energy framework include EU-wide targets and policy objectives for the period from 2021 to 2030. Key targets for 2030:

- At least 40% cuts in greenhouse gas emissions (from 1990 levels)
- At least 32% share for renewable energy
- At least 32.5% improvement in energy efficiency

The framework was adopted by the European Council in October 2014. The targets for renewables and energy efficiency were revised upwards in 2018. Malmö has taken an active role in the achievement of these goals, by redesign and improvement of older urban areas, such as Augustenborg, the construction of new sustainable neighborhoods in the western harbor, Hyllie, Sege park, Sorgenfri and Rosengård.

1.6.4 Smart transport

Malmö is linked by 490 kilometers of bicycle paths, containing more bicycle pathways than any other Swedish city — in fact even more than its sister-city Copenhagen, famous for its bicycle culture. Bicycling in Malmö is on the rise, increasing steadily over the last decade, with some 25 percent of total transport occurring on a bicycle. At 28 intersections in Malmö a sensor system has been installed to grant cyclists priority. Malmö has also installed special paper baskets designed for cyclists, bicycle tire pumps and bicycle counters along the vast bicycle path system in the city, it's easy to go by bike in Malmö.

1.6.5 Public transport

Every day the city buses of Malmö have some 40 000 passengers, and over the last five years they have increased by more than 25 percent. Several policies and programs have participated to make the buses and local trains operated by Skånetrafiken an even more attractive choice. Such efforts include increasing the frequency of bus transportation, as well as providing special lanes for bus traffic. Additionally, many bus stops now feature real-time displays which accurately shows when the next bus will arrive. Some of the city bus lines in Malmö have reached their maximum capacity and are now being replaced by unique 24 meters CNG/biogas hybrid buses and in the long run by the trams that will be reintroduced in Malmö. The underground railway tunnel City Tunnel connects Malmö's three main train stations: Malmö Central, Triangle and Hyllie.

1.6.6 Climate

Malmö, like the rest of southern Sweden, has an oceanic climate. Despite its northern loca-tion, the climate is mild compared to other locations at similar latitudes, mainly because of the influence of the Gulf Stream and also its westerly position on the Eurasian landmass. Owing to its northern latitude, daylight lasts 17 hours in midsummer, but only around seven hours in midwinter. Summers are mild with average high temperatures of 20 to 23 °C and lows of around 11 to 13 °C. Heat waves during the summer arise occasionally. Winters are fairly cold and windy, with temperatures steady between -3 to 4 °C, but it rarely drops below -10 °C. Rainfall is light to moderate throughout the year with 169 wet days. Snowfall occurs mainly in December through March, but snow covers do not remain for a long time, and some winters are virtually free of snow. The predominant winds come from the West and South-west directions reaching speeds over the 8,0 m/s. Although most part of the year winds fluctuate between 2,0 and 6,0 m/s.

1.7 Malmö municipality's role in Nyhamnen development

1.7.1 Malmö overview plan

At the start of the research for this thesis I revised in-depth all the studies performed by Malmö stad and other private organizations about Nyhamnen, available in the municipality web page. I addition I had contact with Anna Modin and Asterios Tolikas, both involved in the city planning of Malmö, and in Asterios's case directly involved in the detailed plan for Smörkajen in the Inner harbor.

Since 2014 the municipality has performed several consultation and studies regarding Nyhamnen, until April 2019, when the in-depth study of Nyhamnen was assumed. In summary, the main goals for Nyhamnen plan are as follows:

- a. Center/sea: Expand Malmö center keeping a coastal town identity.
- b. People focused: High intensity use and public meeting places.
- c. Business and housing: New housing and job creation opportunities.
- d. Housing alternatives: Wide range of typologies and renting/ownership alternatives.
- e. Gradual development: Development over time.
- f. Malmö wellbeing: Improve public health and links with the whole city.
- g. Sustainable goals: Climate smart construction, public transport and bike.

I think these goals are directly in tune with the challenges and guidelines that I have identified after studying Malmö context in the social, economic and environment dimensions. Something interesting is that in their challenges they identify the importance of incorporating the sustainable goals, the temporary use of land for events and small businesses, the creation of partnerships and networks instead of the traditional hierarchies, and the incorporation of diverse actors.

Is also important to point out that they are aware of the risks and possible problems of applying a rigid topdown planning, for that reason the plan takes into account the importance of having a flexible approach, and a "permissive attitude" to test, in order to use the lessons learned in a continuous planning process.

Lastly, the municipality also aims to a more updated business strategy, making possible mutual understanding between actors, encouraging public-private associations and prioritizing the participation of territorial actors rather than sectorial actors.

One of the reasons I considered the socio-economic factor as one important driver for my thesis topic was the lack of discussion in terms of how the municipality pretended to impulse diversity and affordable housing in the process and therefore resulting in a non-segregated neighborhood. Without a doubt the western harbor among other eco-districts might serve as example of "ecological gentrification", that in some cases during its early stages have driven out low income residents for the proliferation of high-end housing and services.

1.7.2 Malmö stad strategies

Following the study of the general plan of Nyhamnen, we find the strategies that the municipality has set. Some of these strategies can be easily related to some of the strategies of my project. Starting with:

a. Building around the water: New bridges connecting to the western harbor and construction of new islands.

b. Coastal protection: Raising the terrain up to 3,0m above sea level for sea level raise protection.

c. Parks and green roads: Green "loop" on Jörgen Kocksgatan. Planting on streets and meeting places in front of buildings.

d. Connections: New bike lines connecting north and south. Better east-west connection.

e. Visual connections: Views from and to the old town to reinforce identity and reduce barrier effect.

f. City of character: Combination of long and curved Street spaces. Different block typologies.

g. Three directions: East-west streets (Carlsgatan respective Jörgen Kocksgatan), Grimsbygatan (Hullkajen) and North-south.

h. Two parts: West area closer to the sea, central station: denser urban area. East area, greener and more intimate.

After studying the western harbor case, I think that some of the strategies for Nyhamnen, specially the ones related to typologies, character and attributes of the public spaces are product of the positive outcomes obtained in areas such as The European village in Bo01.

Even though the positive outcomes of this area are several, by transforming an industrial area into a new vibrant urban flagship, with focus in sustainability, offering a new alternative to access the sea to all Malmö inhabitants, new housing, and services close to the city center, the turning torso (with all its pros and cons), an important learning can be obtained from the difficulties and problems raised during the implementation of the plan in the western harbor. Some of them are related to the decision of having many developers working in parallel in smaller plots, and the complexity of having different teams working in relatively small areas. Coordination and communication were very important to achieve the project deadlines and plan goals.

Others have criticized the lack of affordable housing in the western harbor, but after doing a short comparation between western harbor's and other Malmö area's renting prices I believe the renting is related to the good quality of the neighborhood in general and most critics in this direction were raised during early stages of the project, nowadays even though prices are high, they are not out of scale. More alternatives of rental and affordable housing could be definitely built, but I would not characterize western harbor as an example of "ecological-gentrification" or a "ghetto" for wealthy people.

Undoubtedly the most evident problems of the western harbor nowadays are the lack of traffic connectivity alternatives and the lack of good quality spaces or attractive in its northern part. I think the plan should have considered an early improvement of the traffic infrastructure in order to prevent the problems we see today. That is one of the reasons I give connectivity and street design in my proposal an important role, because even though the goal is not to encourage the use of car, by proposing wide traffic highways, the wisest decision is to provide the street width and scale in order to be transformed and adapted as required in the future.

The second problem, related to the lack of public life in the northern area is hard to grasp. I think the first decision of building the European village for attracting local and international visitors was really efficient and positive in terms of urban quality. I am not completely convinced if the following decision about building the turning torso was the most positive in terms of urban life. Calatrava's work is very controversial and always seems to attract the attention. And in that sense, I believe that the extreme expectation that the turning torso pushed into this area diminished the importance of the following stages of development. Might be that I am completely wrong, but after Turning torso I cannot find any other project in the western harbor that has caught the public interest.

In my opinion a more organic development, with projects of the scale of the European village built in the sea borders of the wester harbor combined with the recycling of some of the warehouses for public and cultural programs could have helped to scale the development defining a canvas size first, and then filling the gaps. In my proposal I have tried to work in that way, filling the gaps of a puzzle were some pieces have been already placed.

2. THE SITE

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/nyhamnen//

2.1 Analysis: Blue and green

Access to water for recreational purposes within the are is not possible, all borders are very sharp and make no possible to touch the water in any normal condition. In most of the visits to the study site, groups of between 2 and 5 people fishing in the extreme of the Hullkajen were seen.

In terms of sea level rise, studies have shown that the border in the harbor area can resist a rise of around 2,00 mts of the sea level, but above that the negative impact would be tremendous. Because of that future developments in the area will require an increase of 1,1 to 1,2 mts in the terrain level in order to deal with eventual sea level fluctuations due to tides, storm waves, etc.

Future developments will require spaces and facilities suitable for fishing, as well as protection against sea level rise and opportunities for swimming and having contact with water.



Sea-level rise (+2,50 mts) +/- 2,10 existing land level within the area.

The green areas are very poor, the few sectors with plants are the basically grass and low greeneries surrounding office buildings isolated from each other. There is no connection between green areas and they feel very private, not opened for being used by visitors.

Future developments must have in consideration the construction of public green areas, with focus in use flexibility and climate resilience.



Existing green areas.

2.2 Analysis: Uses

In terms of uses, most part of existing buildings in Nyhamnen are warehouses for storage or logistic offices. The most iconic buildings, the silos are no longer in use even though the adjacent warehouses seem to be still working for storage. Most part of the Hullkajen and Frihamnen parking areas are being used for storage of new cars in transit to other destinations.

Surrounding the central station, the main activities are commerce, hotels and offices. Touristic agencies and restaurants can be found in this area. During all the study visits to this area, the streets were almost empty most part of the time. The only exceptions were the two main west-east streets Jörgen Kocksgatan and Carlsgatan. The traffic of people and vehicles was in general very low with the only exception of people visiting Saltimporten at lunch times.

Excluding the office buildings surrounding the station and the silos, the municipality owns most of the area. This means that in terms of future development plans the municipality has total control of the land planning and management.



2.3 Analysis: Remove v/s preserve

Past activities related to transport of oil and other pollutant substances have created pockets of contaminated soil that must be replaced. This should not represent any difficulty considering that there is still available clean soil from the digging works of the Öresund bridge.

Since of the beginning of the planning process, the municipality through consultation of civil actors has defined buildings of cultural/heritage interest that should be preserved in the future development plans. The most iconic buildings are the silos, Saltimporten, the old red-brick warehouses, Smörkontrollen building, Bygliahuset, Slaghuset, the buildings facing Skeppsbron and the Central station.



Heritage buildings within the study site

2.4 Analysis: Connectivity

Connectivity within the site mainly served transportation of goods from the harbor to the train station or to the silos. There are extensive asphalt parking areas and areas where pedestrian walkways and bicycle lanes are broken or nonexistent.

There are also traffic problems in both west and east borders, due to the poor design of streets and the lack of traffic alternatives.

In terms of public transport, the 31 and 32 buses connect the central station with the western harbor and the eastern part of the city, but areas such as Hullkajen and Frihamnen are quite isolated and only accessible by car, bicycle or by foot. Nowadays, extensive areas used for storage of cars are closed to public access, making the actual public areas much more limited.

2.5 Analysis: Materials

The predominant materials within the area are related to the past industrial activities. We may find the iron railroads, red-brick warehouses, eroded concrete by the sea border, paving stones and iron elements. We may also find some modern buildings in steel and reinforced concrete such as the silos and some warehouses built after the 80.

Concrete and asphalt pavement are predominant in the extensive parking areas. The sea is only visible from the Hullkajen and the Smörkajen areas.

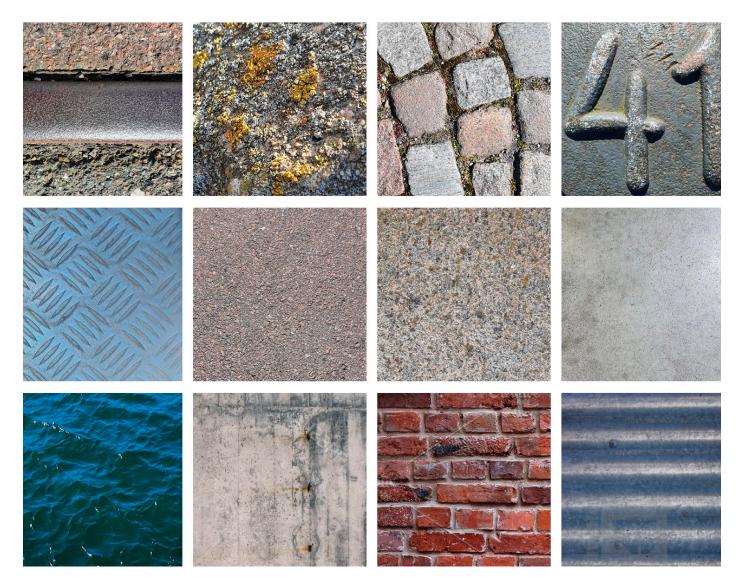


Photo gathering of materials from the study site.

3. STRATEGIES

notography-in-malmo/

3.1 Guidelines

In order to respond to the challenges defined in the previous points of this thesis, I have developed six guidelines for my proposal:



3.1.1 Social life

A place where people can come to meet each other. An active and permeable ground floor linked to vibrant public spaces.

We humans are social animals, we need to have contact with other people, we need to talk to see and to interact with each other, not only in our daily activities, but for our health and the resulting creation of neighborhoods. The proposal will explore the intensive use of the ground floors, for reducing secluded areas within the site and for maximizing the access to services and businesses in all blocks.

3.1.2 Positive synergies

Association of diverse actors for improving life quality.



We know now that team-work makes everything easier. The collaboration of actors towards the achievement of a goal makes the process more rewarding and the product more complex and with a higher level of quality. The association also means diversity of actors, creating more resilient environments. The proposal seeks to stretch the possibilities of interaction, between public and private actors. Many institutions, organizations, "Malmöits" and businesses have shown their interest in participating in the planning of Nyhamnen. I have tried to considered most of them or at least the ones that I am aware of for the activation of specific areas of the proposal.

3.1.3 A place to settle down

Job opportunities and lower cost of living. Accessibility to services, education, health care and recreation.

As David Sim wrote in his book "Soft City": "Neighborhood is a state of being in a relationship. More than anything, the human environment is about relationships: relationships between people and planet, relationships between people and place, and relationships between people and people... In this way, neighborhood is not a place; it's a state of mind". I want to bring to Nyhamnen's future inhabitants that state of mind that we call "neighborhood". It is not an easy task, but by providing the services for making people life's simpler, such as: nurseries, daycare, grocery stores, workplaces, a nice park, a playground, and all those things that we need handy.



3.1.4 Business diversity

More medium and small-sized enterprises and self-employed people.

Diverse communities have proven in nature to be the most resilient against menaces. In economy the actual situation is showing the same trend, economies with diversity in actors and sizes are more suitable to resist financial crises and to quickly recover from them. New technologies are making easier the creation of new businesses. More startups with new ideas are being created than ever before, as well as new occupations, specially related to mass media and content creation: podcasts, independent news, entertainment youtubers, etc. With the current corona virus situation, the transit from "traditional" job to distance working is going to be pushed forward even more rapidly, changing the way we plan, build and use working spaces. The proposal tries to consider more flexible working spaces, exploring co-working and the possibility to mix working spaces with other activities.

3.1.5 Urban resilience

Efficient use of existing infrastructure, access to green and blue areas, sea level rise and storm water response.

The feasibility of this large-scale project strongly depends on the capacity to ensure the results in future scenarios. Those scenarios must consider the risks, specially the ones concerning the social and political context. The planning process of Nyhamnen started in 2014, and since then has followed several revisions, public consultations and political criticism. As result the actual "Overview plan for Nyhamnen" with the incorporation of the comments received on the exhibitions, seems to summarize the wider perspectives, concerns and visions about this area. In addition, we must consider the economical perspective of doing business in this area, investing public and private resources in a way that the proposal is sustainable in the future. Recycling existing buildings in a way that makes the proposal more sustainable and preserves some iconic characteristics from the old harbor. Finally, we must ensure ecological factors, providing a safe environment for many species, fishes, sea and migratory birds, insects, etc. And to deliver public and free access to green and blue spaces, taking into consideration the sea level rise, and stormwater risks.

3.1.6 CO2 reduction

Encourage use of renewable energies for energy and transport.

During the last decades Malmö stad has strongly invested in bicycle infrastructure and real state projects have considered the bike as part of daily activities incorporating the use of bicycles in the design of the interior spaces and residence facilities. The importance of linking Nyhamnen to the existing network of transport, has been showcased by the preliminary project released in 2016 for building 3 bridges over the canal and the railroad, connecting Nyhamnen to the old town in Centralbron, Bagersgatan and Exercisgatan. My proposal explores it as a way of weaving old and new together. This makes this isolated part of the city more accessible for the inhabitants, allowing the people of Malmö to get to know this area and make it their own.





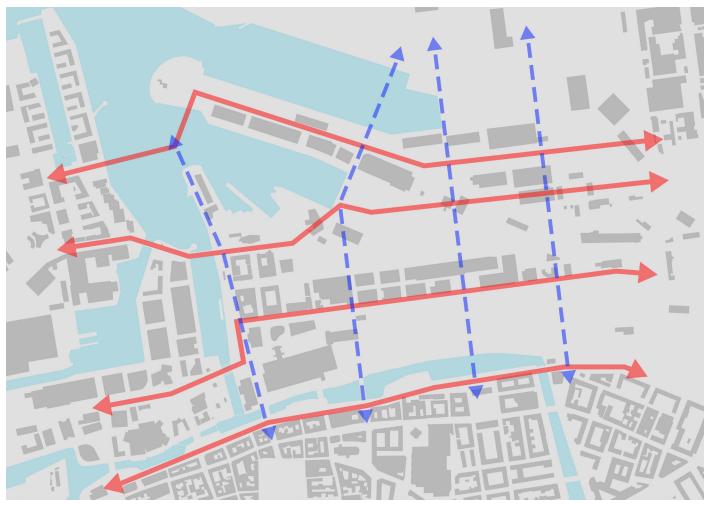


3.2 Macro-strategies

In order to guide the decision-making during the design process and have a more coherent proposal I have developed a more specific set of strategies in the big scale.

3.2.1 Built environment

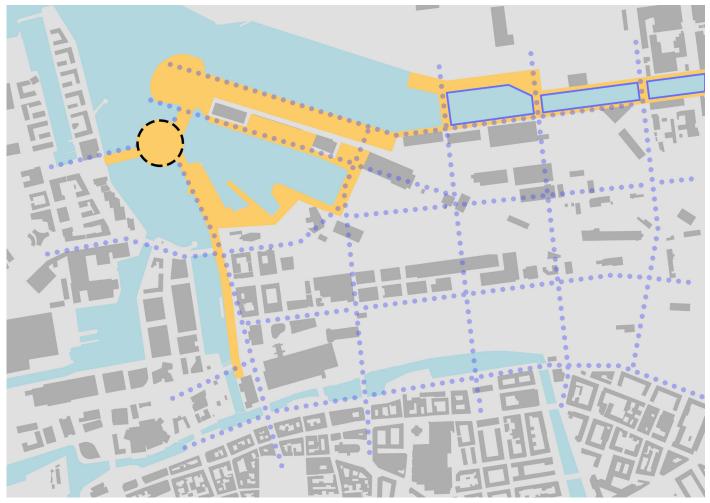
The first big scale strategy consists in improving traffic connectivity in the east-west direction and improving bicycle and pedestrian connectivity in the north-south direction. The new connections are traced in a way that they connect important landmarks and improve the quality of existing streets. The north south connectivity is linked to the existing plan of the municipality that consists in the construction of 3 bridges over the canal, connecting Malmö's old town to Nyhamnen.



New connectivity for Nyhamnen.

As an additional strategy, I want to create a new and softer coastline, allowing people to touch the water and creating more opportunities for recreative activities by the water. At the same time the new border must be built in a higher level in order to prevent the negative impacts of the eventual sea level rise.

According to studies carried out by the municipality land fillings of between 1,0 and 1,5 meters will be required to solve this. As an additional strategy to help the movement of freshwater between the docks, I propose the opening of a new canal on the northern side of Nyhamnen in order to create a new waterfront and to provide a buffer zone towards Norra hamnen.



Soften borders and new landscape for Nyhamnen.

Finally, a new system of bridges coming together in an island, will connect Hullkajen to the inner harbor and to the western harbor. According to studies made for the architecture office: Spacescape in 2016 for Nyhamnen among others, this solution aims to mitigate several problems. First a new bridge in this location is highly required due to the lack of connectivity between the western harbor with its neighbouring areas. Secondly it is required for making the whole harbor area infrastructure more robust, connecting both areas, Nyhamnen and the western harbor to the city center and the eastern part of Malmö. And lastly it is important for contributing to the protection of the inner harbor from storm waves and windstorm events, working as a kind of flexible barrier.

3.2.2 Urban intensity

In terms of green and blue, I propose a new green infrastructure connecting long green belts along the main streets, and providing access to public green areas never more than 200 meters away from where people will live or/and work. Additionally, I am going to give to the city a new green boulevard in the center of Nyhamnen, a new landscape park and viewpoint linked to the cruises in Hullkajen and a sport park in the southern border by the railroads of Malmö C.



New blue and green for Nyhamnen.

The green areas will be designed for flexible uses, as for example: street markets, concerts, expositions, etc. and will help to collect the stormwater in order to prevent floodings and to slowly discharge the water back to the sea.



New activation/attraction nodes for Nyhamnen.

Finally, I will focus on recycling as much as possible of the existing buildings in order to reduce the resource consumption. I want to recycle and transform the existing heritage buildings into activation/attraction nodes, with public programs or uses, inviting people from Malmö to visit Nyhamnen. In this way Saltimporten can become a new food court area, lodging gourmet food stores and restaurants. The silos can be re adapted to lodge workshops and labs for technology startups. The red-brick warehouses can be transformed into culture hubs, such as a new Nyhamnen museum, and a new content creator hub.

3.2.3 Microclimate

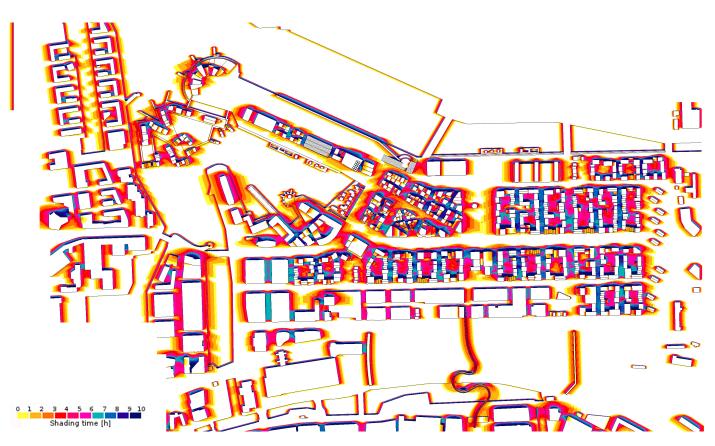
More than half of the people in the world now live in cities and this proportion is expected to continue to increase. Global Climate Change (GCC) and Urban Heat Island (UHI) intensification are making cities hotter places to live. In other cases, strong winds can become a real problem for the use of public space, especially during the cold seasons. Uncomfortably hot or cold microclimates discourage people from spending time outdoors, resulting in negative physiological and mental health issues.

As part of the development of this proposal I have performed simulations for study the influence of solar access and wind conditions within the site in order to design a more comfortable public space.

3.2.3.1 Solar access

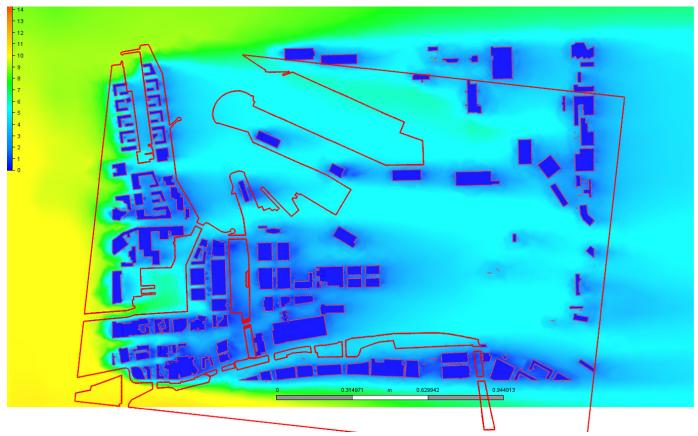
Solar lighting is crucial in many biological functions and is an important component in our perception of the environment, our metabolism and our psychological wellbeing. In terms of access to natural lighting the proposal focuses in total access to the main public spaces and parks, providing distances between the higher buildings and the green areas. Linked to the solar access design is the street design, where I have tried to bring the more active and outdoor uses to the facades facing south.

The courtyards have been located with the elongated direction north-south in order to reduce the shady facades. The heights of all buildings surrounding the courtyards allow a good level of solar access.

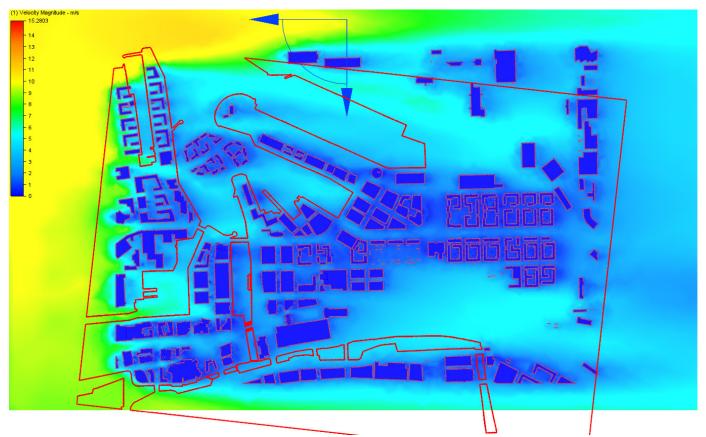


Shading time simulation for spring equinox (September 22)

3.2.3.2 Wind speed control



Wind simulation of the existent situation in Nyhamnen.



Wind simulation for the proposed situation in Nyhamnen.

A sensitive problem for public space use in Malmö is related to strong cold winds hitting the city during the transition seasons. Wind storm events happen several times during the year and even though they produce minor damage to infrastructure they may become a real problem for people using the public space.

The challenge during the design process has been to develop a proposal capable of combining both, a good level of access to solar light and a good level of shelter for strong winds. In order to achieve this, I have made use of the north-south arrangement of the blocks in order to create a system of soft barriers for slowing down the predominant wind coming from the west.

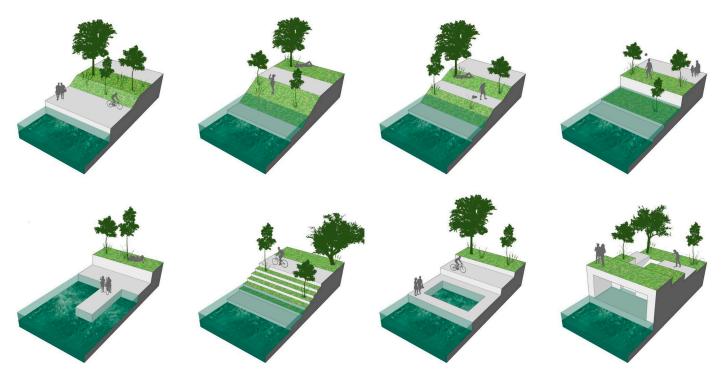
The more problematic areas are the main west-east streets. Since they are the main transit connection through the site, I have decided to keep them but inserting more trees and making the facades more textured, for helping to slow down the winds. Additionally, the main "wind entrance" at the western part of the new proposed green boulevard has been "twisted" in order to make the windflows more difficult in this part.

3.3 Micro-strategies

In order to guide the decision-making during design process and to have a more coherent proposal I have developed a more specific set of strategies in the small scale.

3.3.1 "Shorescapes"

I want to create different ways to deal with the sea border. From a sharper line, to a softer slope that can be used for recreational purposes, such as fishing, swimming, strolling and relaxing. This solution takes care of the eventual sea level rise, adapting the uses according to the situation.



Alternatives of sea border morphology/uses for Nyhamnen.

3.3.2 Co-housing and Co-living

3.3.2.1 First cases in Sweden

"Cohousing" is defined as housing with common spaces and shared facilities. Nowadays this concept is mainly used for projects where each household has its own private apartment.

In Sweden, the word kollektivhus (collective building) is the most frequently used term for housing with shared facilities. When the term was used for the first time in the 1930s, the aim was to reduce women's housework in order for them to be able to retain paid employment even when they had children.

The first collective project in Sweden was designed by architect Sven Markelius and built in 1935 at John Ericssonsgatan in Stockholm. The ideal of rational living led to the construction of food lifts providing meals from a central kitchen to the individual apartments. The first collective housing units of Sweden were based not on cooperation between the tenants, but on the division of labor. The tenants were to be served by employed staff, even for laundry and room cleaning.

The John Ericssonsgatan project was followed by others based on services through employed staff. One of them was Hässelby Family Hotel, built in the middle of the 1950s. It consists of 328 apartments, all connected through indoor communication and with common facilities such as a restaurant, a cafeteria, a big party room, a day-care center for children, a gym hall, a small shop, a reception, a hair-dresser, a laundry and a meditation room.

In 1969 the owner of the family hotel started to close down the common services. A group of active residents objected, but after several years of struggle they lost the battle about the meal service. The restaurant was closed. In this situation the activists started to cook for themselves in the restaurant kitchen. They found this work attractive. Subsequently, the purchase of food, division into cooking teams and the selling of meal tickets were organized on a long-term basis among those who participated in the new activity. The self-work model was born.

3.3.2.2 Invention of the self-work model

During the 1970s the idea of communal living developed explosively when young people started to live in smaller communes in Berlin, Boston, Copenhagen, Stockholm and other university cities of industrialized countries. This alternative living movement challenged the nuclear family ideal. However, while official society deplored the communal way of life, others saw the advantages of sharing household work and letting both men and women share the responsibility for housekeeping and child care.

The first example of the new model was Stacken, built in Bergsjön, Gothenburg in 1979. In this low-status area quite a few apartments were empty because of the housing crisis. Therefore, the responsible municipal housing company accepted an experiment when the architect, professor Lars Ågren, asked if he could turn one of the ten-storey tower blocks into a cohousing unit. In the building a central kitchen, a dining room and a nursery for children were arranged on the 5th floor, showing that communal facilities were for tenants, but not for outsiders. The inhabitants formed a new type of administrative set-up in order to get full control of maintenance, recruitment of tenants and use of communal rooms.

Another example of this model is Prästgårdshagen in southern Stockholm. The unit was a new construction, and tenants were recruited early enough to be able to influence the design of the building. The sizes of the 31 apartments were somewhat reduced in order that communal spaces could be provided without increasing rents. New tenants to Prästgårdshagen are requested to join the co-housing association of the unit, and also to agree to do compulsory work such as cooking or house cleaning. Tenants have also taken over maintenance tasks such as the cleaning of communal rooms, gardening and lawn cutting, snow-clearance and minor repairs. In this way they have managed to reduce their housing costs and to make new investments in communal facilities.

3.3.2.3 The second-half-of-life model

While during the 80' cohousing development in general declined in Sweden, yet another model appeared, namely the one called "second half of life", for people 40 and above without children at home. The idea was elaborated and concretized by a group of seniors who started this work in 1987.

The first case of this model is Färdknäppen in Stockholm, built by the municipal housing company Familjebostäder in 1993. The building is an apartment block with two stairwells in four and seven floors respectively. It consists of 43 apartments; all are provided with a kitchen. The common spaces consist of a central kitchen, a dining room, a living room, a weaving room, a hobby room, a workshop, a gym, a sauna, three guest rooms, and two rooms with computers.

A special agreement with the housing company stipulates that the cohousing association manages the common spaces and is in charge of certain maintenance tasks. Persons with disabilities get support in their homes from the municipality and county council, while the cohousing members often provide human support to their neighbors in ways that do not exist in conventional housing. Working groups are in charge of care of common spaces and for gardening.

3.3.2.4 Cohousing and the birth of Co-living

During the last decades several generations of students have lived in student residences, a good combination of cheap housing and close coexistence with classmates, friends and colleagues. For a reasonable amount, it is possible to obtain a single room and share some common spaces. However, it is not only university students who currently live this way, at some point after the economic crisis of 2011 the crestfallen real estate business brought back the cohousing concept under the Co-living label in various parts of the world. Co-living can be understood as a re-branding of the self-work model in a contemporary context, where it is being explored as an attractive and effective solution for nowadays challenges.

High real estate prices, and an increasingly lonely and independent lifestyle, are leading people to seek new ways of life. Despite the similarities with a student residence, coexistence encompasses many other factors, such as a sense of community, sustainability and the collaborative economy. Today, coexistence encompasses a multitude of possibilities, ranging from people who simply live together, sharing only physical space, to communities that also share values, interests and a philosophy of life.

Today, an important niche market for coexistence are the recent graduates, for whom the appeal is usually financial. Unable to pay the expensive rents of big cities, the solution is to share. An increasingly common option in this niche are co-living spaces, designed and managed by shared housing companies. Instead of looking for partners or friends with whom to share an apartment, and having to deal with contracts and shared accounts, you simply rent a bedroom in one of these buildings. Most offer furnished and decorated rooms, kitchens, living rooms and shared work spaces, as well as professional cleaning services and even social coordinators to help residents adapt to their new neighborhoods.

The so-called 'digital nomads' and 'global citizens' also adapt well to this exchange. Many of these coexistence companies have units distributed in the main capitals of the world. Instead of jumping from Airbnb to Airbnb, you can choose one as a base and move around the others as needed.

Another niche market is made up of slightly older people, with more money, looking for more space and privacy. The majority are over 30 years old, single or married, have no children and just moved to a new city. For them, coexistence is not so much a financial solution but rather a search for a sense of community. The Node company is a pioneer in these types of companies and has several worldwide. Each apartment here includes a kitchen and living room and is furnished with the curatorship of designers. The exchange is in charge of the events promoted by the company, such as wine tastings, friends' dinners, Christmas tree decorations, theater shows, and outings to film festivals. Another example of co-living is the Oosterwold Co-living Complex project in the Netherlands, designed by bureau SLA architects, who work with this concept. With a budget constraint to build the house, but with a spacious plot, the idea of its owners was to invite their friends to generate a new life experience. In this case, the internal spaces are fully configurable by the residents. The concept is still new and should gain more adherents for a freer lifestyle and without the need to settle in a city.

3.3.2.5 Co-living in the contemporary context

The PhD thesis by architect researcher Karin Palm Lindén shows that the location of common spaces has an important role for the spontaneous use of these spaces. In addition, the nature of "transitional zones" (entrances, elevator and stairs) are crucial for social interaction and also important for the cohouse to function as a whole. An interesting observation is that the residents may be attracted to these spaces in tower blocks with common rooms on the ground floor, when they pass the entrance, but not when they have reached their private apartments. The previous examples of cohousing projects tend to reinforce this observation; community spaces located above de ground floors are generally used by the tenants adjacent to those spaces.

The Swedish experience shows that municipal housing companies often build cohouses as a result of demands from independent groups. It may be concluded that the Swedish model is a combination of bottom-up and top-down approaches. In terms of benefits of co-living, Dick Urban Vestbro studies show that the aims have been achieved to a great extent: a moderate level of community in everyday life, increased safety and a certain degree of collaboration between neighbors.

In Swedish cohousing, sustainability issues have not been as prominent as in Denmark, Germany and the US. The ecological argument has become more prominent in recent years, however. Common meals in cohousing constitute a powerful instrument for saving resources. In the cohouse of Tullstugan in Stockholm, for instance, Vestbro estimated that communal cooking replaces the number of food shopping trips by 1000 per year and that the use of private stoves is reduced by 2500 use occasions.

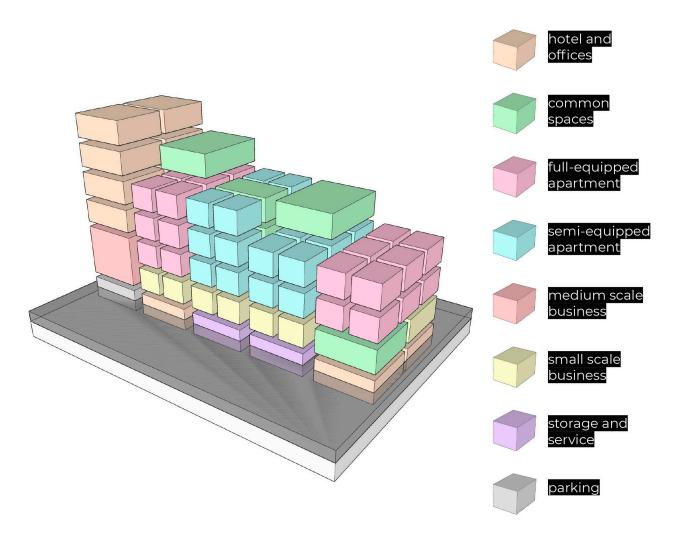
Ordinary Swedish housing is all but sustainable. One reason is that the average size of households is lower than elsewhere in the world. Young people move from their parents at an early age and divorce rates are high. Long life expectancy is combined with independent partner loss at high ages results in many single-person households among older people. The number of one-person households has more than doubled over the last 25 years, while households of more than four persons are much less common. Today, about 75% of Swedish households are one or two-person households. In co-housing spaces and facilities may be shared.

3.3.2.6 Layered uses

A survey conducted by Space 10, the innovation laboratory of IKEA, sought to understand the tastes and preferences of people living in a co-living, understanding what things they are willing to share, and what things are not. The objective was to base better design decisions when creating the living spaces of the future, taking into account people's concerns before designing the project. The results, published in 2018, showed that the majority are attracted to shared housing to socialize with other people, not the financial economy. Most also say they prefer to live in small communities of four to ten people, something that goes against what co-living companies have been designing: living spaces for hundreds of people (like Old Oak in West London, which it has 550 beds). Another interesting finding is that most prefer to live with people of different backgrounds and ages. Most also prefer to live with couples without children and single women; The least popular members of the household were young children and teenagers.

Coming back to David Sim's book, in the chapter called "Layering Life" he reflects on the characteristic of the forest. As he describes: "The life around the ground is different from the life in the tree tops. There are different physical realities-dark places connected to the earth. Light spaces connected to the sky.... The layering of these different micro-environments enables different forms of life to exist and even thrive in the same place."

Diversity in the broader sense is easier to obtain in a diverse environment. An environment that provides different spatial, ecological, light, sound, connectivity and affordability qualities. The challenge is to create neighborhoods where residential buildings offer an open ground floor, open for common spaces, some public, some private. Small businesses and services are also good for making ground floors more active.



Layered uses in an urban context diagram.

3.3.2.7 Stretching the possibilities

Some new examples of co-living can be found in Malmö, such as the new project to be built in Segepark, located in the eastern part of Malmö. Many of these new complexes are using the co-living as a marketing tool for attracting young professionals from well funded families, instead of offering a more affordable housing solution for the groups that cannot afford "normal" housing neither.

When thinking on how to integrate diverse people in a co-living neighborhood considering the social and economic challenges previously described, the possibility of reaching other relatively new concepts such as "collaborative economy" or "shared economy" and "co-working", cannot be discarded.

In many business areas all around the globe, co-working is transforming the way companies plan their office spaces and infrastructure investments, and local communities trade amongst themselves using their own currency for solving their daily life needs exchanging labor or time for other products or services. Considering this the possibility of combining co-living, shared economy and co-working for transforming the way we plan and live cannot be dismissed.



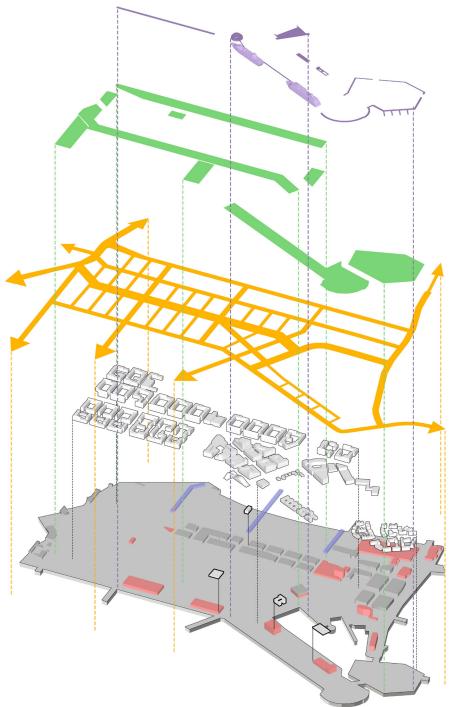


4.1 Concept

The first stage consists in the activation of the existing landmarks, such as Saltimporten canteen, the silos and the warehouses, transforming the old buildings into attractive cultural places. Simultaneously the construction of the 3 bridges will be required to weave the old and the new, making it easier for Malmö residents to visit and reclaim this new part of the city.

The harbor infrastructure requires to be updated as well, building the land fillings required to reach a safer terrain level for preventing sea floods and building a new cruise terminal station for improving the touristic potential of the city.

Then, when the attraction nodes start to bring more visitors, the improvement of the streets, bicycle and pedestrian infrastructure is required. Finally, but not less important the green areas will be planted according to the plan of development, weaving public and private spaces.



Elements for Nyhamnen urban proposal.

4.1.1 Sea-border

The historical relation of the city of Malmö with the sea and its relatively new education profile is going to be reinforced by creating a new campus of the World Maritime University in the new island proposed between the western harbor, the inner harbor and Nyhamnen. The new campus is going to offer public facilities for recreation purposed by the seam such as bathing areas, fishing areas, sea sports, etc.

In addition, the tourism is going to be reinvigorated through the improvement of the cruise terminal station. The new terminal is going to be integrated into the landscape creating attractive viewpoints overlooking the coming cruises towards the north and Malmö's old town towards the south. Malmö has nothing like this today and I believe it is going to serve as a new attraction node for tourists and family.

4.1.2 Green areas

New green areas are highly needed in Nyhamnen. The tendency of deficit of green areas that Malmö is facing must be reverted in Nyhamnen. The new parks within the site are going to serve for the rest and relaxation of residents and visitors, and is going to enhance the micro climate conditions, specially mitigating the west-east winds and contributing to make the pedestrian experience more enjoyable.

Green areas surrounding public and cultural buildings are going to be flexible, in order to support different uses, promoting outdoor life and to make people meet and observe each other, such as open concerts, festivals, markets, etc. In addition, green areas will provide better infrastructure for managing storm water during extreme climate events.

4.1.3 Physical connection

The east-west connectivity is going to be enhanced by improving the quality of existent streets (Jörgen Kocksgatan and Carlsgatan), and by adding two new streets: Magasinsgatan, facing the recycled warehouses and Nyhamnsvägen, the main axis of my plan. The goal is to reduce the use of cars, for that purpose, all streets in Nyhamnen are going to have bicycle lanes and Nyhamnsvägen in the center of the site is going to connect by public transport Nyhamnen to the rest of Malmö.

4.1.4 Weaving old and new

The first limitation to overcome is the lack of pedestrian connectivity between the old town and Nyhamnen. In order to solve this the first step, consist on opening three north-south bridges for pedestrian and bicycles. These bridges were already planned by the municipality in 2016, as part of the development plan for Nyhamnen. The bridges along Norra Vallgatan are going to connect from west to east: Malmö Central Station to Slaghuset, Drottningtorget to Carlsgatan and Exercisgatan to Kocksgatan.

4.1.5 Heritage

Important part of the characteristic heritage in Nyhamnen is still preserved in Hullkajen, specially Saltimporten, the former warehouse built in 1961 that received the salt imported from overseas, nowadays converted into an office building that is home for companies related to art, graphic design, photography, furniture design and advertising. Saltimporten has the potential to lodge new uses related to creativity, food and restaurants. The silos also play an important role in the industrial character of Nyhamnen and for that reason the municipality has considered it important to preserve them as part of Malmö heritage. Considering their scale and massiveness they are going to be recycled, as other examples in the region. In my plan they have potential to be recycled and transformed into workshops and offices for new startups.

Other characteristic buildings in the site are the red-brick warehouses. One of these warehouses, located in Hans Michelsegatan, has been already recycled and used as office building for several companies. The other two brick warehouses left, located on the northern edge of the site are going to be converted. The one closer to Hullkajen into a Museum of Nyhamnen, in order to show the importance of the harbor for Malmö's history. The other, in the eastern side of the future museum is going to be transformed into a new content creator hub/incubator.

Finally, other examples of modern architecture in the site must be preserved, such as Bylgiahuset business center and the Smörkontrollen office building,

4.2 Materials

The proposed materials are intended to produce new sensitive experiences, bringing more grass and vegetation in general and making water a more active actor in the perception of the public realm. For the streets, more textures and color will be added, colored pavement and brick will make streets more enjoyable. Materials such as colored steel, glass and textured facades will recall the old industrial spirit of Nyhamnen.

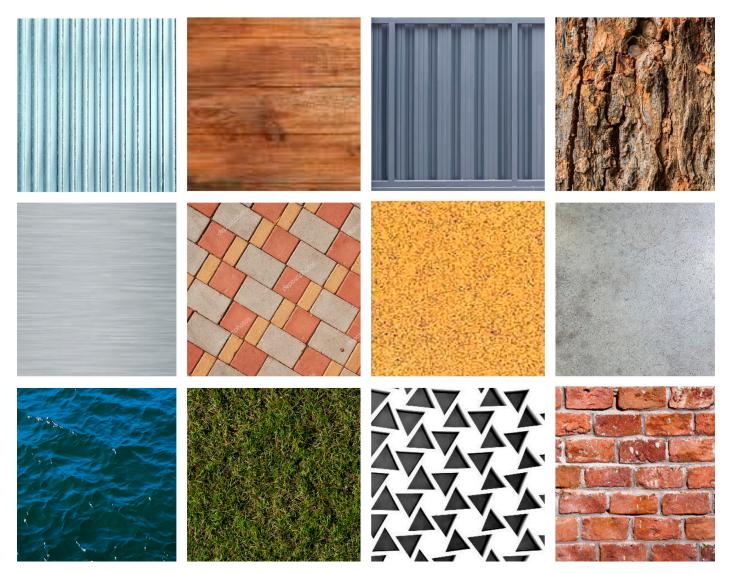
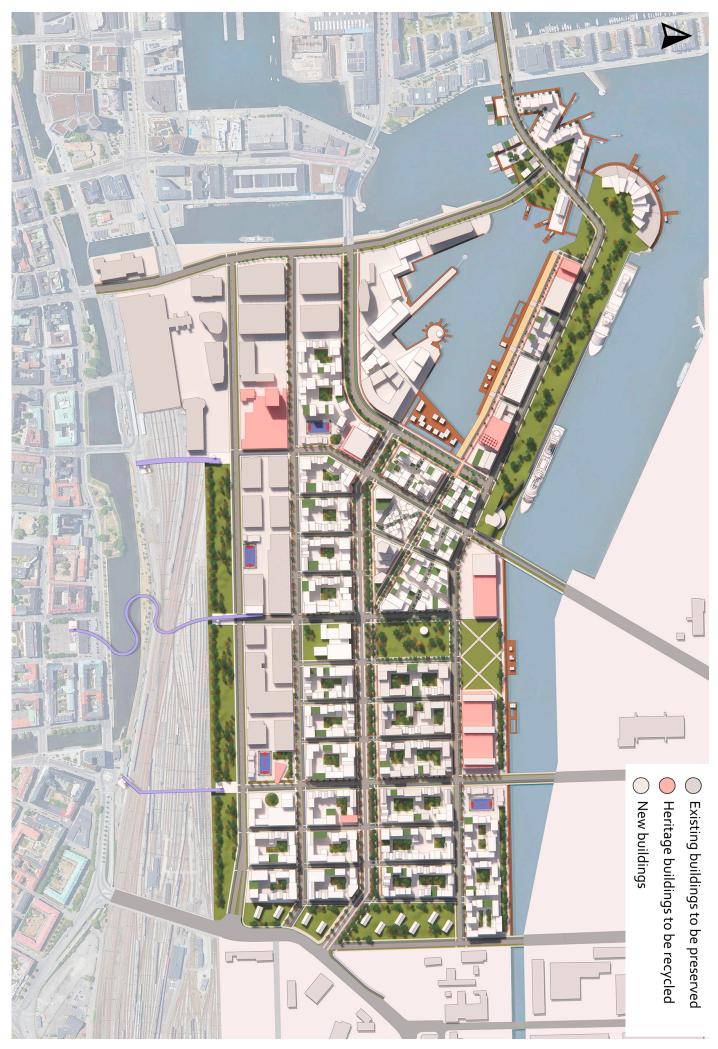


Photo gathering of materials for the proposal.



4.3 Master plan

The total ground area of the municipality development plan for Nyhamnen is 93 hectares (930.000 m2), with a new housing area estimated between 700.000 and 900.000 m2. In terms of number of dwellings Malmö stad estimates between 7.000 and 9.000 units.

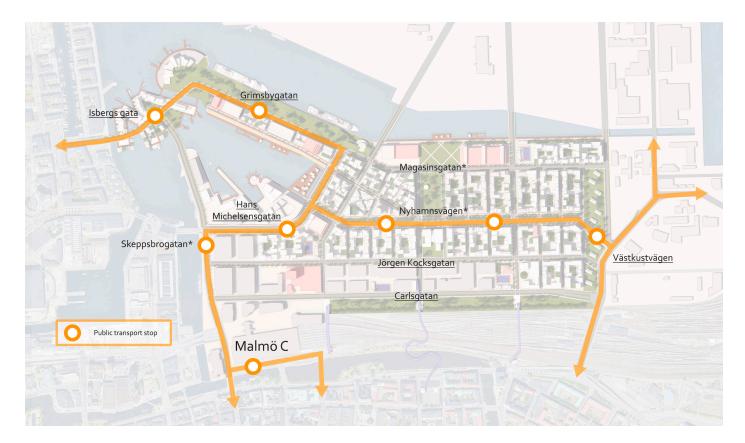
According to my calculations, my proposal covers approximately 56 hectares (560.000 m2), with a new proposed housing area between 520.000 and 420.000 m2 and between 6.500 and 7.000 dwellings.

In terms of workplaces, the Malmö municipality goal is to build between 300.000 and 400.000 m2 for offices and commerce. For the same concept my proposal considers 294.000 m2.

For education and indoor recreation, the proposal considers 46.000 and 28.000 m2 respectively, plus 130.000 m2 for new parks and outdoor recreation areas excluding the sea.

4.3.1 Public transport

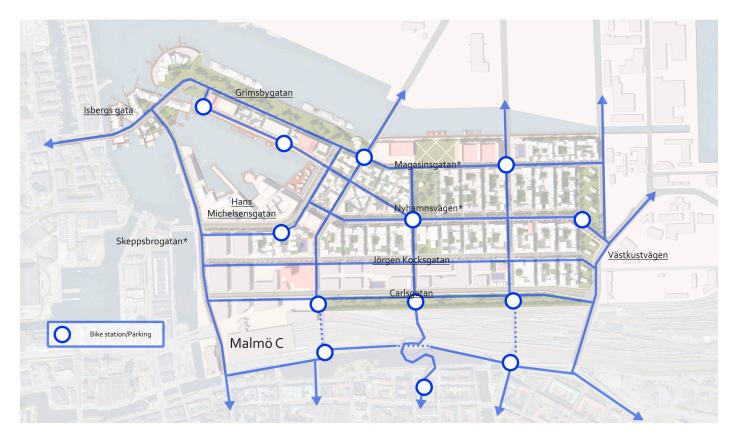
The proposal considers the opening of 3 new streets, starting from the north Magasinsgatan facing the 2 recycled warehouses. In the center of the area, Nyhamnsvägen is the main axis, this street was designed taking as references, Vasagatan in Gothemburg and Kungsgatan in Malmö. According to Malmö municipality's guidelines this street must consider the eventual construction of a tram. In the western border Skeppsbrogatan is opened for activating that border and connecting the traffic coming from the old town in a smarter way.



Public transport proposal for Nyhamnen.

4.3.2 Bicycle infrastructure

An important part of the transport within and surrounding the area is considered by the use of bicycles and electric bicycles. According to the Swedish national travel survey, in Sweden travels by bicycle are more predominant than by using public transport. The goal is to reduce the use of cars, by improving the affordability of the electric bike. The proposal considers the construction of multiple charging stations, in order to encourage the use of electric bikes and electric scooters.



Bicycle infrastructure proposal for Nyhamnen.

4.4 Streetscapes 4.4.1 Street S1_Public corridor

Corresponds to the street for public transport connecting Hullkajen to the Inner harbor. Includes segregated bus stops and a pedestrian boulevard in the eastern side of the walkway facing the sea.



4.4.2 Street S2_Green boulevard

Corresponds to Nyhamnsvägen, the new main transport axis. Includes segregated bus stops and a wide pedestrian boulevard in the northern side of the walkway.



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3.0 3.0 1.5-4.5 3.0 6.0 3.0 3.0-6.0 2.8 3.0 3.0 3.0 3.0 3.0
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4.4.3 Street S3_North-south connectors

They serve as secondary traffic connections and provide good solar access along the street. They connect the bridges coming from the old town to the magazine in the northern area of Nyhamnen.



4.4.4 Street S4_Car-free boulevard

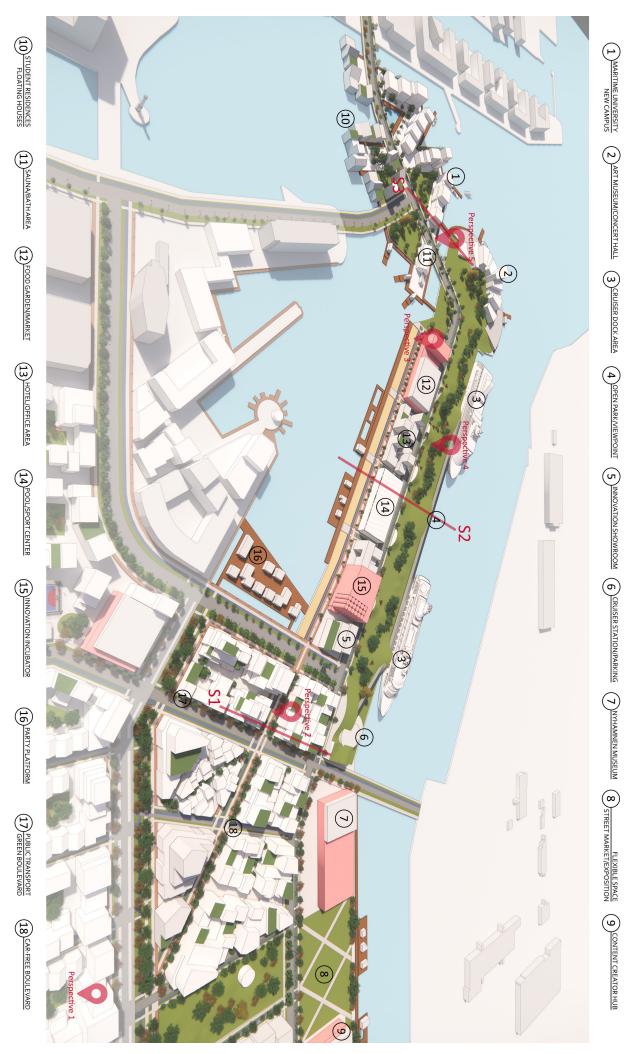
This is a prolongation of the street that comes from the boulevard in Hullkajen and goes into the city. This is the main pedestrian street and has active ground floors, and as its name suggests this is a pedestrian-exclusive street.



4.4.5 Street S5_Local street

The local streets are pedestrian focused but they will allow the traffic of one vehicle and bikes. The main purpose of these streets is to provide good solar access and accessibility to all housing blocks.





4.5 Detailed area

4.5.1 The courtyards



Perspective 1_Courtyard

The courtyards are connected and opened to the local streets and provide independent access to the buildings defining the block. Depending on the location and/or use, the buildings are located in a way that allow solar access into the courtyard and work as shelter for the winds coming from the west. All courtyards are green, and have a mixture of soft and hard pavements. The courtyards will hold a slow pace of lifestyle, promoting activities such as relaxing, play and rest, and are going to be the place where most part of the neighborhood daily life will occur. For that reason they must have a good quality of lighting, seats, benches, bushes, water, garbage bins/recycling centers, etc.

Now imagine that you are enjoying the morning sun in one of the courtyards and you want to visit the new island. You start walking from the courtyard located in the bottom right side of the aerial perspective in the previous page, towards the island located on the upper left part of the same image. Your tour goes through the Nyhamnsvägen, up to the car-free boulevard, when you meet the first stop, the section number one marked in the aerial perspective.

4.5.2 Car-free boulevard

You arrive at the car-free boulevard which has intense use in both facades, with terraces protected by a canopy of trees. The galleries of both sides are permeable, connecting the boulevard with the passages on both sides of the main pedestrian promenade.

Walking down the street you can find medium-sized stores with diferent international brands mixed with local stores and door offices with direct entrances from the walkway. Most of the buildings have wider entrances to interior galleries with smaller stores and service offices.

Restaurants, cafes and bars have outdoor tables, some are covered with pergolas and other protected under the trees. The bicycle lane has a diferent pavement material and goes through the middle of the street divided from the promenade with two stripes of greeneries.

After walking for some minutes you reach the Hullkajen area, where you may see the sea water and feel the fresh coastal wind. Eventually you reach the second pause, in the middle of Hullkajen, nearby the sport center and the new cruise terminal station.



Perspective 2_Car-free boulevard



4.5.3 Hullkajen

You stop at the southern side of Hullkajen, facing the city center and you see different activities along the border. Starting from the silos, a new innovation incubator showroom open to new startups. Then the sport center with an olympic pool and then an hotel and business area related to the cruise station.

At the end of that border Saltimporten is located, where a new food garden and market offers a more public and intense use of the street and the sea border.



Perspective 3_Saltimporten



Section 2_Hulkajen

Walking to the northern side of Hullkajen, you find a long park with a new "hilly" landscape, the green hills are full of kids and families playing and watching the cruise docking in the terminal hidden under the park.

A festival of local food trucks makes possible to stay longer and enjoy the amazing views over the sea, the cruises and the tourist coming from different corners of the world. Walking through the park and looking to the south you may see fragments of Malmö's old town appearing in between the buildings.

You decide to turn around the new sport center, where a group of swimmers train in the olympic pool, and walk towards the island. When you get closer to the end of Hullkajen you find the new Malmö Art Museum.



Perspective 3_Park in Hulkajen

4.5.4 The new island

Finally you reach the far end of Hullkajen. The island is facing the open sea, welcoming the cruisers docking in Malmö. From the Malmö Art Museum and Saltimporten two small wooden pedestrian bridges and one bridge for vehicles connect to the new island, where the new World Maritime University Campus is located.



Perspective 4_World Maritime University



Section 3_World Maritime University

The campus is surrounded by hard and soft public promenades connecting to smaller wooden docks. In the southern part of the new platform the student residences are located in floating houses. In this part of the island a bathing area and public sauna are located. A street market, open every weekend, is located in the park facing the University. You end the tour by sitting down in the grass looking at the pedal boats slowly passing by.



Perspective 5_Wooden bridge connecting the new Art Museum and the World Maritime University



5.1 Conclusions

During the research for this thesis and after several visits to the study site I started to notice more and more participation of local people in the construction of the new vision of Nyhamnen. The more people I talked to about my proposal, the more ideas and suggestions I received. The local newspaper also published cases of Malmö residents sending ideas and suggestions to the authorities for possible uses to be included in future plans. The debate also brought positions against the plan, political tension and sectors against the possibility of transforming Nyhamnen in a new exclusive neighborhood.

The concept of studying the site from a very objective perspective, without pre-made values, or personal interest in the broadest way possible has been my sincere intention with this study. This has given me the opportunity to develop a proposal capable of putting together the interests of the wider groups of people and the Municipality goals expressed in their general plan for Nyhamnen.

Some of the co-living cases showed in this thesis, plus others studied during the process have demonstrated different levels of success, in terms of harmony between the tenants, administration finances, life quality, duration of the collaboration, etc. but in general the more remarkable ones are those based on good levels of coordination and communication among the actors involved.

Co-living cases around the world show a diverse catalog of examples, in terms of management. From totally self-empowered neighbor groups that have created their own regulations for funding, and administrating their living complexes, other intermediate examples, where an organization or company recruit the tenants under certain conditions that they must accept in a contract in order to be accepted in the community. To examples closer to the hotel format, where tenants rent a room and have to pay for all the amenities offered in the complex. That diversity of administration modalities can be explored, in order to satisfy the demand of an also diverse group of people open and willing to live in a "non-traditional way".

I believe that co-living has the potential to become the "new traditional way" in the sense that it could be accepted as the most positive and normal way of living due to the current context. Sharing spaces for living, can be also strengthened with sharing spaces for working, in times when home-office and distant working are more common than ever before, and when transportation from our residences to our working places is starting to be criticized, not only in terms of sustainability and time efficiency but also in terms of healthiness. The actual health crisis with the Covid-19 is starting to show that societies should consider different approaches about how to produce, how to work and how to live.

Although it is difficult to know, it is possible that in the medium term, distance working would become the normal way of working, and massive office buildings would not be required anymore. In that case, flexible buildings with working spaces adaptable to become a game room, meeting room, cinema, etc. will transform the way of living and designing the cities.

In order to make housing more affordable, the service work required for some of these buildings and communities could be carried out by people living in those communities, and in that way offer a place to work and a place to live in the same complex. Solutions along that line could also be explored for making these communities more diverse.

In the case of Nyhamnen, located in the most diverse city of Sweden, we have to be capable of embrace what means to be diverse, and to be able to understand it as a tool more than a challenge. Nyhamnen has the potential to become the paradigm of social integration that is so needed in a context of constant segregation and diferenciation. Nyhamnen has the opportunity to set the ground bases to that new city where we all aspire to live.

Co-living seems to be a powerful tool to overcome challenges laying on the surface of the debate such as elevated housing prices, and the need of denser cities in cases as Sweden. However, living in a more collaborative context can also really make a difference in matters that normally do not gain so much attention in the urban discussion, such as mitigating depression, loneliness, to promote and ensure women equality, to make people look after each other. I believe that all this can make possible the creation of a sensation of safety that eventually can provide that "state of mind" called neighborhood.

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6.2 Model images

Photographies of the study model made before the safety reccomendations instructed by the Swedish authorities and LTH administration due to COVID-19. The model corresponds to the project presented in the Midway seminar.



