

 LAB University of  
Applied Sciences



University for the Common Good

# VILKAS NIEMELA

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GROUP 2

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Cover photo credit: Members of group 2; during the Heinola field visit.



# CONTENTS

1. INTRODUCTION .....	4
City Profile .....	4
Swot Analysis .....	5
2. LITERATURE REVIEW / BACKGROUND RESEARCH.....	8
Case Studies.....	11
3. ANALYSIS & CRITICAL THINKING.....	13
Conceptual Plan Development .....	14
Urban Design Principles .....	15
Design Approach .....	15
4. RESULTS: DEVELOPMENT PROPOSAL.....	18
Transportation .....	18
Blue-Green Infrastructure.....	19
Placemaking .....	19
5. CONCLUSION AND RECOMMENDATIONS.....	26
Recommendations .....	26
Vilkas Niemela Waterfront Development Timeline.....	27
6. REFERENCES .....	28
7. EVALUATION OF TEAMWORK .....	31

Special mention: Cover photo credit: Members of group 2; during the Heinola field visit.

# REDEVELOPING A VIBRANT LAKEFRONT



“

*Cities seek a waterfront that is a place of public enjoyment. They want a waterfront where there is ample visual and physical public access – all day, all year - to both the water and the land. Cities also want a waterfront that serves more than one purpose: they want it to be a place to work and live, as well as a place to play. In other words, they want a place that contributes to the quality of life in all of its aspects – economic, social, and cultural.*

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**Remaking the Urban Waterfront, the Urban Land Institute  
(Seattle Department of Planning and Design, 2012)**



# 1. INTRODUCTION

*'A Lake is a landscape's most beautiful and expressive feature. It is Earth's eye; looking into which the beholder measures the depth of his own nature.'*

-Henry David Thoreau, Walden

## City Profile

Heinola is a beautiful town of picturesque lakes, great bridges and ridges located in the Eastern Part of the Päijänne Tavastia region of Finland. The lasting image of a huge waterbody merging into a horizon lined with the vibrant green forest is one such picture-perfect landscape synonymous with Heinola. Clearly, the lakefront and forest have become the socio-cultural identity of this scenic town for generations together.

Given the prime location of Heinola across lake Ruotsalainen and lake Konnivesi, the town earned the reputé of a major Spa Town of Finland up until World War II. The reputation brought brisk tourism, infrastructure and development opportunities to the town. Proximity to serene nature inspires deep, Nobel philosophical thoughts and Heinola is no exception to the rule. The place came to the limelight for 'Heinola Seminary for Spiritual Preachers' that was active between 1899-1972 and this place of deeper spiritual discourses gave an intangible sense of peace and pride to Heinola. The bounty of nature has helped Heinola grow in the Industrial Domain post the second World War. The large forest cover of Heinola region became the base of the Wood Processing Industry and that gave Heinola a distinct identity of an Industrial Town and Economic Centre until recently. The growth of Industry also led to the migration of skilled and unskilled labour force towards Heinola, thus contributing to the development of the real estate sector in Heinola.

In the last two decades, the economic trends have changed, there has been a shift from the manufacturing sector to the service sector. While change is the only constant, Heinola is witnessing the changes and gearing up for newer challenges, with abundant bounty of nature as it's socio-cultural capital. One of the major aspects of Heinola's socio-economic transitions is the demographic changes. As per the last census and latest demographic projections, Heinola shows a declining trend of population growth. The population in the age group '0-20', '20-39', '40-59' is declining significantly while there is a growth in the population '60-79' and '80 Plus'. A careful analysis of the trends shows that changing demographic trends and changing socio-economic trends influence each other. Against this backdrop, while one looks at the future of Heinola one needs to think more about retaining the population in the city and engaging the population with the city. The city needs to offer something unique and innovative for many people so that it will make people feel like staying back in Heinola or will keep on inspiring people to visit Heinola again and again.

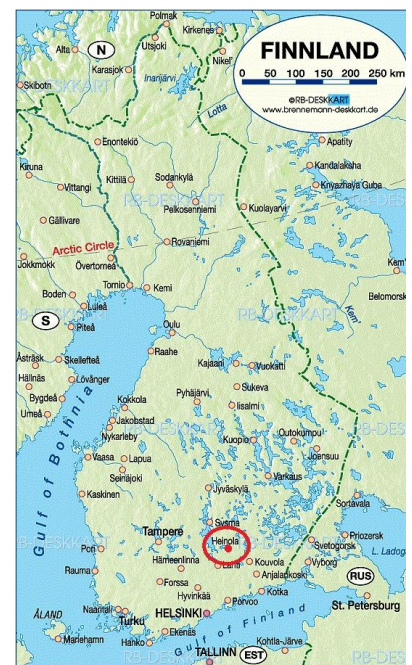


Figure 1: Finland showing Heinola.  
Wikipedia modified by author, 2022

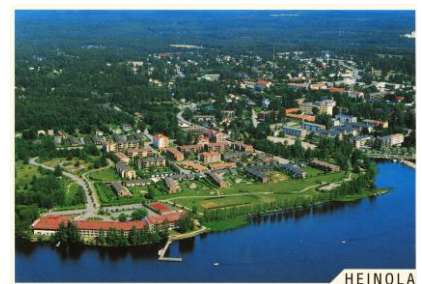


Figure 2: Aerial view of Heinola.  
Wikipedia 2022

The situation calls for branding the city of Heinola in newer light for the ‘Ret-Engage’ strategy to work to its best potential. A closer look at various features of Heinola and understanding the strengths-weaknesses-opportunities and threats the place has to offer will immensely help strategize the rebranding exercise.

## Swot Analysis

### STRENGTHS



- Heinola has a prime strategic location with all major Finnish Cities of Economic, Industrial significance within a radius of 150 km.
- Heinola is well-connected with major urban and rural centres towards west, north, east and south by efficient transport links like E75 Highway, National roadways E5 etc. Lahti-Heinola railway offers wider connectivity through rail networks.
- Heinola has rich cultural capital and reputation as Finlands Spa Town, blessed with serene natural beauty. This has already created an image and trust amongst tourists that need to be explored more and rebranded.
- Availability of Forest Areas, Green Zones, Waterbodies like rivers, lakes and significant biodiversity are considered great assets for sustainable blue-green development and sustainable economy.
- Existing socio-cultural infrastructure and Local attractions like Heinola City Museum, Heinola Art Museum, National Urban Park, Bird Gardens, Port of Heinola, and Fishing-Boating Activities add great value to the strengths of the town.
- Heinolas Industrial Heritage is indeed a strength, that needs to be highlighted.
- Due to demographic changes, Heinolas population the age group '60-80' is going to increase. With the kind of experience and zeal for a better life, the senior citizens could bring a whole new perspective, purchasing parity and spending capacity to Heinola.



### WEAKNESSES

- Despite the presence of abundant soft capital, Heinola's Economic, Environmental and Cultural potential is underutilized.
- Heinolas strengths like nature and culture can be perfectly explored through pedestrian movement and cycling activities. However fragmented green corridors and unsynchronized cycling tracks fall short of meeting the expectations.
- The wonderful waterfront of the city needs to be better connected with the rest of the city and regional centres of attraction through seamless public transport. At the moment public transport does not provide much connectivity with the waterfront.
- Heinola is beautiful but the lack of street furniture across the waterfront and across the city doesn't let one sit, relax and enjoy the beauty of the place.
- Declined public engagement with the waterfront

## OPPORTUNITIES



- Vierumäki Business Park and Vierumäki Sports Complex hold a great promise of sustainable business opportunities, eco and sports tourism opportunities as well as new entrepreneurship opportunities for the Heinola Micro-region.
- As we near a Post-Pandemic or Post-COVID world, the economic trends have changed a lot and businesses have transformed to a great extent. Freelance Economy and Gig-Economy have become the new feature of Europe and platform-based work has gained roots in Finland. As per various reports, more and more Finnish people are entering the Gig-Economy and freelancing. The Free-lancers and Gig-Economy professionals are a dynamic population in search of peaceful yet vibrant workplaces. Heinola can seek the opportunity to attract the Gig-Economy professionals to work in the lap of nature.
- The ripple effect of Vierumäki Business Park and boosting the local economy of Heinola
- Availability of a huge waterfront area that can be maximized for various socio-cultural activities as well as peaceful commercial engagements
- Availability of land spaces for development
- Good Scope for enhanced water transport network.
- Heritage promotion and Tourism
- Heinola had been a centre of spiritual education. Vierumäki Sports Institute offers training and educational qualifications in sports education. The same legacy of training and education can be continued to impart deeper discourses in industrial and skill enhancement training, sustainability education, climate change education etc to a wider section of stakeholders. Heinola can be an education hub again from a newer perspective.



## THREATS

- Heinola is a serene, calm city. The vibrant life coming to the waterfront, the increased footfall of tourists and real estate development may appear a bit noisier for the old residents of the waterfront and other citizens in Heinola.
- New developments may lead to a surge in real estate prices.
- The Large number of young and dynamic people moving away from Heinola may decline the vibrance of activities in the city.
- Basis the SWOT Analysis we would like to propose our vision for the development of an Eco-smart and sustainable lakefront through vibrant placemaking, in the Niemela neighbourhood of Heinola.

This report discusses a sustainable approach to redeveloping the Niemela waterfront area to promote vibrancy and interaction amongst the residents and visitors. An introduction about Heinola and Niemela (the case study) is made with a detailed SWOT analysis carried out to understand the site better. Then relevant literature was consulted, and background research was done with different case studies to understand global best practices for waterfront development. A critical analysis of our conceptual development plan and master plan was then carried out after which the different suggestions concerning transportation, blue-green infrastructures and placemaking to improve the area were put forward. Then the report was concluded, and relevant recommendations were made to ensure a successful and sustainable project. Lastly, an evaluation of teamwork was provided to describe the roles of different group members.







## 2. LITERATURE REVIEW / BACKGROUND RESEARCH

Coastal areas are amongst the most densely populated areas around the world and are the places of intensive economic development supporting hundreds of millions of livelihoods serving as a direct link between marine resources and seafood supply chains, especially in coastal countries and island states (Lam et al., 2020). Presently, about 44% of the global human population lives within 150 km of the coastal zone (Cohen et al., 1997). The pressure on the population and economy in the coastal region will continue to increase especially in the light of projected global climate change (IPCC, 2007), it is therefore very important to comprehend the long-term and large-scale evolution of the coastal zone for sustainable coastal management and related coastal impact assessments (Brommer & Bochev-Van Der Burgh, 2009). The UK Government, for instance, presented a sustainable “vision” of the coast which provides a 100-year forecast of coastal evolution (DEFRA, 2004).

During the transition from post-industrialization to the late twentieth century, coastal zone management gained ground as a panacea for newer urban evolution and many cities have embraced such development in the former industrial regions and docklands located along their inner waterfronts (Davidson, 2009). During the 1960s and 1970s, coastal zone management and planning created solutions to urgent problems in coastal areas. These developments have experienced increasing effects on the management planning process, especially during the 1980s and 1990s Kay & Alder (2005). In recent years, this has become a medium of revitalizing cities through new waterfront developments that showcase mixed-use and outstanding culture-based projects. Even cities facing severe socio-economic problems have embraced this act (Xie et al., 2018).

According to Dong (2004), waterfront developments have different interpretations depending on the characteristics of the sites and the cities and Hoyle (1999) suggests that waterfront redevelopment is an inevitable global phenomenon for sustainable development in major harbour cities and even small towns. In the 1950s, Boston and San Francisco pioneered waterfront developments, transforming docks and quayside into booming recreational and commercial areas. The success of Baltimore’s inner harbour renewal in the 1960s became a model for countries across Australia, East Asia, Africa, and Latin America after the industrial revolution. This model introduced the rational planning approach where the issues, goals and objectives, possibilities and limitations and the alternatives are determined. Within 15 years, waterfront redevelopment projects had gained ground in North America and beyond, and redeveloping seaports and inland waterfronts had become a major industry. Waterfronts developed at all the focal points within these areas became central to the social and intellectual life of cities (Fisher et al, 2004). Since the early 1990s, the accommodating planning approach was used in planning coastal/shore areas in different countries, and this model has become widespread in Europe. Today, for the successful development of the coastal areas, a sustainable planning approach in which community interest groups and stakeholders, non-governmental organizations and the public is added to the planning process is accepted as a prerequisite (Yildiz, Senlier & Güzel, 2015).

Sustainable waterfront development as an urban transformation technique results from the present trends and thinking in planning – *exploitation of waterfronts and sustainable policies* (Amola, 2009). As such, ‘good’ waterfront development considers community engagement, environment, diversity, safety and security and sustainability. Aside from the economic, social, and environmental attraction, the awareness of the natural environment and preservation of ecosystems and resources has increased the public demand for sustainability. Yassin, Ramlan & Razali (2017) highlighted the special Characteristics of a waterfront zone.

Characteristic	Description
Ecological	<p>The waterfront zone is a dynamic area with frequently changing biological, chemical and geological attributes.</p> <p>The waterfront zone includes highly productive and biologically diverse ecosystems that offer crucial nursery habitats for many marine species.</p>
Economic	The waterfront contributes significantly to human welfare, both directly and indirectly and, therefore represents a significant portion of the total economic value of the planet.
Social	The waterfront zone is socially important for global transportation, open access and common property and is a unifying element in the cultures of each country.

Table 1: Special Characteristics of a waterfront zone (Yassin, Ramlan & Razali, 2017).

Sustainable waterfronts are becoming one of the most celebrated aspects of urban design in sustainable cities. As argued by Hussein (2014), a sustainable waterfront generally aim to:

- i. Promote high-quality urban design standards and regenerate all environmentally degraded areas
- ii. Rehabilitate and re-use cultural heritage.
- iii. Plan beyond the waterfront while identifying areas of public interest like parks, open spaces, plazas, public access and view corridors) to sustain social well-being
- iv. Create opportunities for revitalization by improving the visual image of any city.
- v. Reduce energy use and reduce consumption of material resources to sustain economic vitality.
- vi. Improve air quality and reduces the urban heat island effect.
- vii. Improve community liveability.

Sustainability assessment rating systems like the Leadership in Energy and Environmental Design (LEED), the Pearl Rating System developed by the Abu Dhabi Urban Planning Council in 2010, the German Sustainable Building Council System (DGNB) based on the concept of holistic sustainability, and the Building Research Establishment's Environmental Assessment Method (BREEAM) sustainability assessment method helps to assess environmental sustainability and provide a recognized standard for the construction of sustainable waterfront communities and cities while balancing the social, environmental, economic and cultural pillars of sustainability (El.Deeb, AbelGalil & Sarhan, 2015; Estidama 2016). Using the indicators under the Sustainability Assessment Rating Systems as a guide, different cities have experimented with new ways of tackling a particular challenge of waterfront development/redevelopment. 'Successful' waterfront development has been able to bring citizens and visitors back to the water's edge and provide tangible evidence of the continuing vitality of the cities (Hoyle, 2001). It has also been able to create better places for present and future residents. Therefore, sustainable revitalization strategies can help the waterfronts to re-energize the communities and public spaces (Sairinen & Kumpulainen, 2006; Da & Xu, 2016).



Gaffen (2005) ) in his web article on “Cities finding waves of success with well-planned waterfront restoration” highlighted some of the several factors attributed to the growing focus on restoring urban waterfronts. They include Environmental Awareness and Smart Growth, Preservation and Adaptive Reuse, Tourism and Recreation/Fitness. López-Bonilla, López-Bonilla & Sanz-Altamira, 2010; De Rosa & Di Palma, 2013 further asserts that Waterfront revitalization will play a vital role in tourist attraction. This will directly benefit Heinola as a historic and tourist site and subsequently, help create a strong connection between the tourism spots and the cultural/heritage values of the place. Ultimately, this will help to grow abandoned housing areas, restore cultural and historical values due to the destruction and rebuilding of old buildings, rejuvenate the economy due to the new and modern marketing in newly developed areas; and reduce unhealthy social lifestyle and less interaction with the environment. Therefore, the sustainability of the waterfront development is an important factor in determining how successful the city will be.

Logo			
Developer	Building Research Establishment (BRE)	U.S. Green Building Council (USGBC)	German Sustainable Building Council (DGNB)
Country of origin	United Kingdom	United States of America	Germany
Release	2009	2009	2011
Groups of Criteria	<ul style="list-style-type: none"> <li>- Climate &amp; Energy</li> <li>- Resources</li> <li>- Place Shaping</li> <li>- Transport &amp; Movement</li> <li>- Community</li> <li>- Ecology &amp; Biodiversity</li> <li>- Business &amp; Economy</li> <li>- Buildings</li> </ul>	<ul style="list-style-type: none"> <li>- Smart Location &amp; Linkage</li> <li>- Neighborhoods</li> <li>- Pattern &amp; Design</li> <li>- Green Infrastructure &amp; Buildings</li> <li>- Innovation &amp; Design Process</li> <li>- Regional Priority Credits</li> </ul>	<ul style="list-style-type: none"> <li>- Ecological Quality</li> <li>- Economical Quality</li> <li>- Sociocultural &amp; Functional Quality</li> <li>- Technical Quality</li> <li>- Process Quality</li> </ul>
Rating System	Outstanding Excellent Very Good Good Pass	Platinum Gold Silver Bronze	Gold Silver Bronze

Table 2: Overview of the sustainability Assessment Rating Systems Hamedani & Huber (2012)

Conclusively, Breen & Rigby (1996) highlighted the various types of waterfront developments below

- i. Commercial Waterfronts that encourage outdoor life on the waterfront for working, shopping and recreation. Examples include the V & A waterfront, Boston Harbour (Rowe's Wharf) and Baltimore inner harbour.
- ii. Recreational Waterfronts that focus majorly on spending leisure time in the water area through the provision of recreational activities Examples include Wales- UK and Swansea.
- iii. Residential Waterfronts that promote waterside living and provide solutions to the housing demand. This is a significant driver in the push for “the new waterfront”. An example of this is Entrepot West- Amsterdam
- iv. Cultural, Educational and Environmental Waterfronts that provide teaching and education about the natural world. These developments are among the most intriguing and fascinating features of modern cities. An example of this is The Osaka Aquarium located at the edge of Osaka's Harbour
- v. Working Waterfronts that provide access to working ports, industries and transportation facilities. An example is the Harumi Passenger Ship Terminal in Tokyo.
- vi. The Historic Waterfront that ensures the preservation, restoration and adaptive reuse of historic buildings and sites. An example is The Rocks in Sydney, Australia.

## Case Studies

Some case studies that served as models/guides for the proposed Niemelänranta waterfront area redevelopment include:

- a. **The Waterfront Toronto development** which is the biggest revitalization project in northern America (Niemann & Werner, 2016) followed the LEED rating system across all categories ensuring that sustainability framework and principles are integrated into all facets of the waterfront (Urban Design Associate, 2005). The Waterfront Toronto project has won more than 100 awards for design excellence, earning recognition in categories ranging from water management to neighbourhood development (Waterfront Toronto, 2022). The sustainability benefits include brownfield regeneration and new cities development, air pollution reduction, reusing/improving existing infrastructure, development of high-efficiency green buildings, prioritising public transit, cycling and walking as the primary modes of transportation, increasing opportunities for economic development, increasing the number of parks and other public spaces, engaging the community as an active partner in revitalization, and improving access to the waterfront area Hussein (2014).



Figure 3: Toronto waterfront (Waterfront Toronto, 2022)

- b. **HafenCity urban waterfront redevelopment in Hamburg, Germany** aims to create a new city with mixed uses and also solve the occasional flooding problems using smart solutions (Timur, 2013). To achieve that, the entire area (except for the waterfront promenade) is being raised by about 8m above sea level, creating a new and distinctive topography while preserving access to the water (Erkök, 2009). The former inner-city port is being revitalised with more than 3000 new residential buildings already completed and new facilities like office buildings, hotels, and shops already employing over 14,000 people while placing a strong focus on public spaces (KCAP, 2022). Elevated footpaths and waterproof parking basements were incorporated to ensure the safety and spatial quality of urban spaces. HafenCity was awarded the HafenCity Ecolabel, with gold being roughly equivalent to LEED's Platinum and it won the Green City of the Year award as well as the Green Good Design Award for 2021. It is considered the largest urban redevelopment project in Europe (KCAP, 2022).



Figure 4: HafenCity urban waterfront, Hamburg, Germany. (The Guardian, 2020)



c. **Nordhavn Copenhagen's harbour front** aims to provide residential buildings for about 40,000 inhabitants and workspace for another 40,000 inhabitants. It will offer direct access to the sea, as well as a multitude of recreational urban spaces and public facilities (UrbanNext, 2021). Although ongoing, it has received platinum ranks from the German Sustainable Building Council (DGNB). Nordhavn prides itself as a city of sustainable mobility, where walking, biking or public transport is promoted over driving. It incorporates a public transportation loop serving as a green corridor for bikes and connecting Nordhavn to the larger biking network of the city. The green Metro and bicycle loop connect the islets and makes for an integrated city. Every corner of the island is envisioned to have less than a five-minute walk to public transportation (UrbanNext, 2021). Also, it promotes and enhances access and proximity to the water through efficient planning of blue and green infrastructures with strips of green spaces running from east to west with "urban green" and "natural green" areas. With an extra loop on the Metro city ring which will connect Nordhavn with the city centre, the development addresses transport as well as recreational space (UrbanNext, 2021).

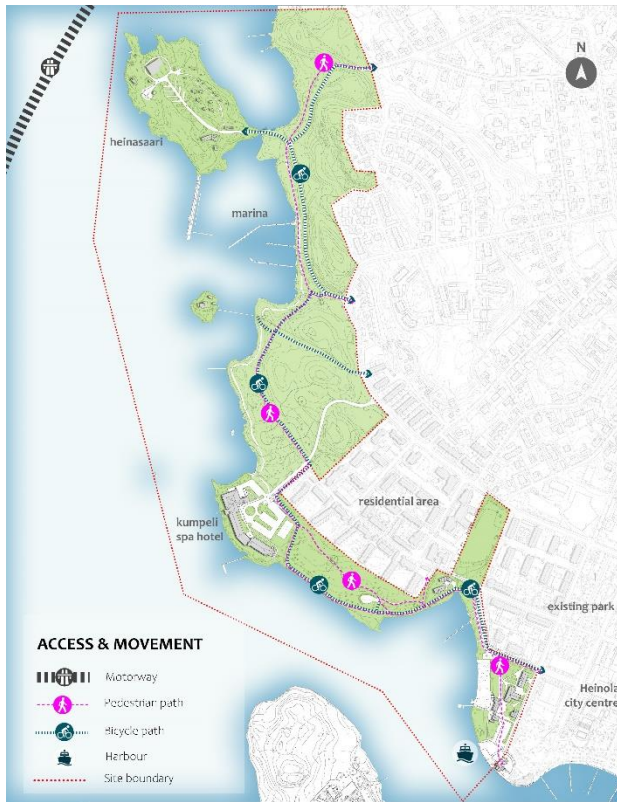


Figure 5: Nordhavn, Copenhagen (UrbanNext, 2021)

### 3. ANALYSIS & CRITICAL THINKING

A critical analysis to develop a knowledge of the lakefront was done by analyzing its physical traits, main destinations, and movement of people within the region as a significant component of a placemaking method.

#### ACCESS AND MOVEMENT



#### LANDSCAPE & NATURAL ENVIRONMENT



Figure 6: Access & movement analysis, author 2022

Figure 7: Landscape and Natural environment analysis

#### Site photographs



Figure 8: Heinasaari island (Google search)



Figure 9: Existing built environment



# Conceptual Plan Development

## Vilkas Niemela

‘Vilkas Niemela’ is our vision for a vibrant waterfront in Heinola. Lakes and the waterfront have been the national identity of Finland, known to be a ‘Country of Lakes’. So Heinola’s prime identity, the lake and waterfront, needs to be highlighted, rebranded and made popular nationwide through provocative placemaking across the edge of the lake that would witness the prime thoroughfares of the city, would connect with the people and would instill a place of pride, every given moment. People share an intimate bond with the water's edges, as it transcends them to a different world, it offers them time to reflect, time to recreate and time to relax. With the help of Sustainable Technological Interventions, we would want to enhance the same intangible bond and moments woven around the history, heritage, culture and nature of Heinola that forms the identity of the people and the city. In this backdrop, the objectives, and guiding principles of Vilkas Neimela are as follows:

### OBJECTIVES



#### PLANNING

Promote sustainable and low-impact development in the neighborhood.



#### TRANSPORTATION

Create an integrated transport system that priorities walking, cycling and use of public transport.



#### AFFORDABLE HOUSING

Provide affordable housing for tourists, such as hostels and for young families moving to the city.



#### WATERFRONT ACCESS

Create a vibrant and interactive urban waterfront.



#### PUBLIC SPACES

Develop a network of distinctive green parks and unique public spaces



#### RECREATIONAL ACTIVITIES

Provide a wide range of recreational activity options for people to experience both in winter and in summer seasons.

## Urban Design Principles

Several approaches were used to guide a well-designed physical environment and its impact on quality of life. Attractive and accessible mixed-use urban areas with easy access promote recreational activities. The philosophy of quality of life, sustainability, and placemaking is a multidisciplinary philosophy that encompasses many different disciplines. To achieve great placemaking, it is necessary to take into account sustainability and quality of life criteria which are implemented by various concepts. To design a great waterfront area, the following principles were established.

### ***Quality of life indicators***

In the process of urban planning, social and environmental considerations in the place, we live, greatly influence the quality of life. To determine the high quality of life, several indicators were taken into accounts such as natural and living environment, overall life experience, health, education, economic and physical safety, governance and basic rights, leisure and social interactions, productive activity and material living conditions.

### ***Placemaking criteria***

To achieve a successful and efficient public space it is important to consider measures like access and linkages, uses and activities, comfort and image and also sociability. A well-connected area to its surroundings, provision of street furniture for comfort and availability of various well-managed activities for all age groups throughout the year is crucial. These placemaking criteria facilitate creative patterns of use and support its ongoing evolution.

### ***Sustainable development principles***

The principles of sustainability involve the economic, social, environmental and preservation aspects of the waterfront development.

## Design Approach

The main goal of the project is to integrate the green and blue networks to create a vibrant waterfront. This was done by dividing the project area into 3 theme nodes according to their specific strengths. The conceptual development seeks to reconcile three themes: sauna and spa island, nature and recreational area and the vibrant foreshore. In addition, dedicated walkways and cycle paths will link all key destinations including the city center, residential areas and the island.



## THE VISION - GREEN – BLUE NETWORK INTERGRATION



Figure 10: Conceptual plan development (authors 2022)

### ***Sauna and Spa Island***

This area will be allocated at Heinasaari island in the northwest part of the project site. The island celebrates its geographic uniqueness as well as the cultural node of the site. A vision for Heinasaari island is to preserve the culture of Finnish sauna and spa by creating spa hotels and hostels. There will be a range of hostel choices for larger and smaller families. The island has a road connection that will have a bus route that will increase its accessibility to the area.

### ***Nature and Recreational area***

The mid-section of the site is seen as the forest and part of the National urban park of Heinola. It begins from Kumpeli Hotel and stretches along to the northern part of the site. The existing forest area will be largely retained and enhanced. A vision of this area is to provide outdoor recreational activities that involve nature and the lakefront.

### ***The Vibrant Foreshore***

The southern part of the project site bordering the city centre is seen as the area with existing parks, open spaces, existing beach areas, cafes and restaurants surrounded by residential areas. It is generally flat and stretches along the waterfront to the forest area. It provides an opportunity to of an ideal place that links the city centre and the lakefront. The vision of this area is to provide a diversity of use and a place where the whole community could come together. This area will be a focus for gatherings, events, markets, shopping, and local employment.







## 4. RESULTS: DEVELOPMENT PROPOSAL

### Transportation

With the city centre well connected to public transportation, Vilkas Niemela focuses on the use of sustainable transportation options including bicycling and walking along the main streets of the waterfront areas.



Figure 11,12 &13: various forms of sustainable mobility (source: google search)

It proposes the provision of a greenway (bike lanes and walkways) connecting the city centre to the waterfront. This will reduce conflicts, increase cyclist safety and comfort as it separates bikes and pedestrians from moving vehicles and encourage physical activity – recreational bike rides, walking and jogging. The greenway provided a connection to 0.85sq miles of a recreational path for biking and jogging. The proposal provides direct access to the parks, recreation and waterfront destinations supported by green loops with activities situated within a 5-min walking radius.

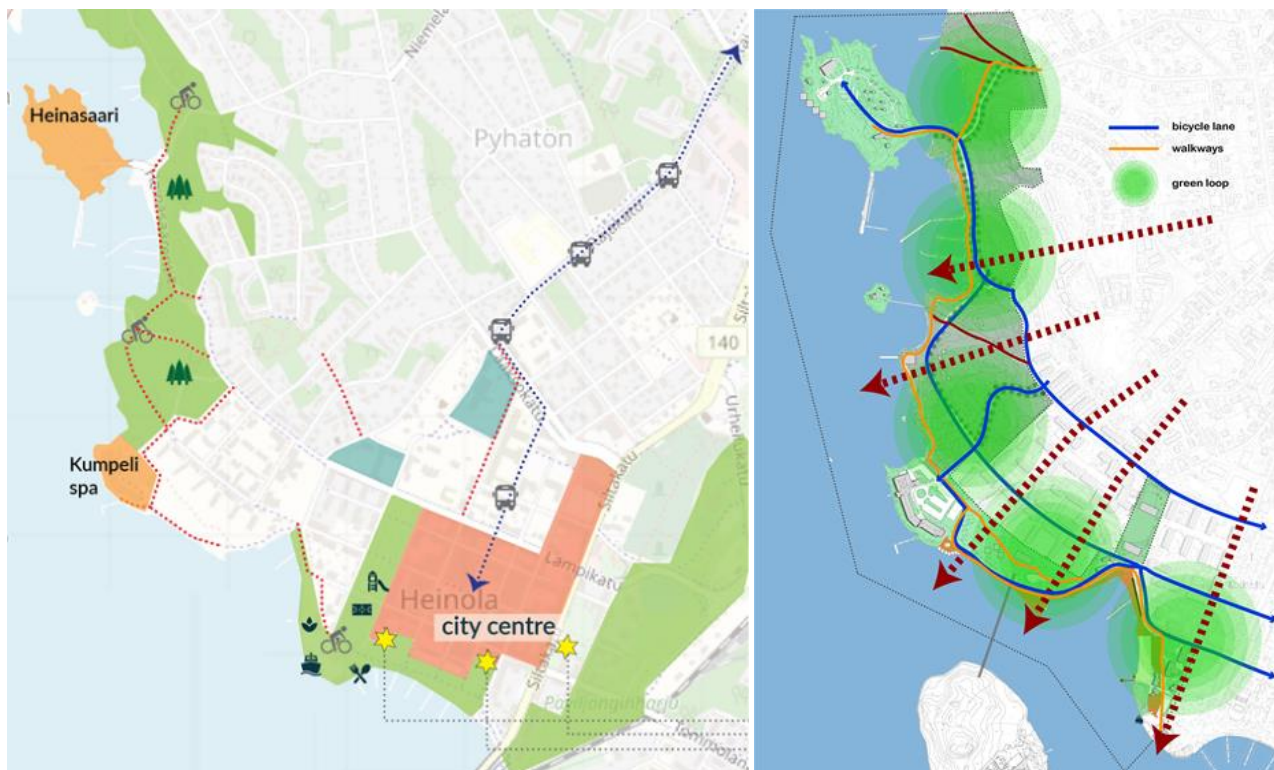


Figure 14: Existing transportation situation

Figure 15: The proposed transportation network. Author, 2022



## Blue-Green Infrastructure

The proposal aims to establish a healthy green edge to the waterfront by increasing waterfront access and diversifying transport options. The integration of green infrastructure such as shrubbery and trees along the promenade will create a pedestrian-friendly path and an attractive public space. The existing green infrastructures are fragmented and not thoroughly connected so 'Vilkas Niemela' suggests the defragmentation of the green corridor from the city centre to the shore area as well as the integration of blue-green infrastructure. This incorporates ideas of a living shoreline and the establishment of native plant communities. Also, it provides unique opportunities for residents to access the park and water as well as engage in sailing activities and water sports. This blue-green engagement with the water will showcase advances in green infrastructure highlighting these systems and their importance as they relate to the sustainability of Niemela Lake and the environment. These sensitive solutions will promote a vibrant and interactive waterfront and appropriately connect the lake area to its greater ecosystem.



Figure 16: Fragmented green connections in the study area



Figure 17: The proposed green connection. Author, 2022

## Placemaking

Vilkas Niemela proposes the creation of new destinations, facilities, and amenities in the waterfront area to increase the attraction of local visitors and residents. The proposal identifies locations for significant new attractions and extends the vibrant and interactive experience throughout the waterfront area and surroundings. The new destinations include opportunities for new housing development for hostel and short let accommodation, harbour point, lake saunas and sauna boats, boutique and Spa hotels, floating restaurant and library centre, camping sites with tree houses, cafeteria, exhibition centre and wooden museum for wood arts, playground/sports ground/open park space, Wi-Fi park and outdoor activity area, working stations for the Gig community, promenade for a leisure walk, pedestrian bridge connections with aerial restaurant, spa kiosk, swimming area/active beach area and festival area. As much as possible, the materials to be used are either sustainable or recycled materials to achieve sustainability.





- 1 Playground/Sports Area
- 2 Active beach/swimming area
- 3 Harbour
- 4 Spa Kiosk
- 5 Cafe/Restaurants
- 6 Exhibition centre
- 7 Wooden Museum
- 8 Festival area
- 9 Aerial restaurant
- 10 Smart park
- 11 Working pods (Eco-Capsules)
- 12 Camping sites
- 13 Floating Library/Restaurant
- 14 Tree houses
- 15 Boutique & Spa hotels
- 16 Hostel accomodation / Housing
- 17 Sauna by the lake
- 18 Market/commercial centre








## Detailed description of the major proposed destinations, facilities, and amenities

1	Maaherranpuisto Governor Park already exists as a Playground/Sports Area with a modern garden with tennis courts from the south and a pedestrian/bicycle path running through the park between the two sections. The path is lined by small squares where people can sit and relax. The park has been classified by the National Board of Antiquities among the built cultural sites of national interest in Finland	
2	The 'Active Beach' / Swimming area will be in a well-sheltered area to offer public swimming where residents and visitors can experience and feel the water while building endurance, muscle strength and cardiovascular fitness. Given the proximity of private properties and harbour on the south side of the beach, the active beach area will serve as a picnic area while also providing some wading opportunities in the water.	
3	Habor point to serve as shelter for ships and boats.	
4	Spa Kioski to promote the culture of Heinola as a traditional spa town	
5	Café/Restaurants for family and friends to have a good time and learn more about different people and places around with additional floating panorama restaurants to dine on the water.	
6	An exhibition centre to act as a diverse cultural meeting place combining exhibitions and events.	
7	A wood Industry museum to showcase the industrial heritage of wood processing industry and preserve the cultural heritage of Heinola as a prominent wood processing industrial town post World War II.	
8	A festival area to serve as the location for the proposed Heinola lake festival at Niemela which will offer a warm embrace of music, art boutique and an exceptional array of world spanning cuisine around the waterfront. This annual event is proposed to hold during the midsummer public holiday usually around June 25. It will attract Rock artists and talents from Heinola and neighbouring cities/countries. It will also be the location for the ice festival which will hold to engage residents in outdoor activities during the winter period. This will ensure that the waterfront is fully exploited as an entertainment axis.	 
9	Aerial, Suspension Restaurant for experiencing and enjoying a unique aerial view of the vast expanse of the Lakewater. Adventurous Gourmets may have a memorable intangible,	



	<p>visual connect with the lake from a different perspective. Same Restaurant Platform could alternatively be used for Stargazing activities.</p> 
10	<p>A smart park/ Wi-Fi Park which will provide enhanced visitor services, increase visitation and ultimately get people to spend more time outside. This will also increase the likelihood of locations and experiences being marked and discussed via social media, which could in turn encourage economic and tourism development. Therefore, there is a strong indication that Heinola would benefit from the implementation of a Wi-Fi Park for visitors to Niemela. Some of the elements will include:</p> <ul style="list-style-type: none"> <li>• <i>Interactive games, maps, and navigation boards at strategic points to highlight and filter attractions, services, and food venues so visitors can easily find their way around the park</i></li> <li>• <i>Wooden outdoor seats that look like a tulip which stay folded up like a tulip bloom when not in use, and then fold down to provide a place to sit.</i></li> <li>• <i>Smart solar benches for people to relax, enjoy 4G Internet and simultaneously charge their phones or tablet. It functions solely on clean solar energy; this energy gets stored and is available to you 24/7. Working, studying, or just relaxing, it can all be done on this modern bench that features both wireless chargers and USB ports.</i></li> <li>• <i>Portable solar flowers which track the movement of the sun to provide free Wi-Fi access and power to charge cell phones, laptops, and other gadgets. These beautiful, attractive, and eco-friendly statuettes will provide an intoxicating effect to get closer to nature accompanied by your gadgets.</i></li> <li>• <i>Swings to draw audiences from across the city and bring a renewed vitality to the waterfront through inspired, high-calibre programming and events. This innovative private and public space is designed to activate and engage the community and foster creativity.</i></li> </ul>     
11	<p>Shared open spaces (passivpods and self-sustainable eco-capsules powered only by solar and wind energy) as workcation pods for the</p>  

	gig workers anticipated to be attracted from neighbouring regions/countries.	
12	Individual and family campsites for an overnight stay using tents, campervans, or caravans	
13	Floating library to create organized but informal space for personal exploration, maintaining the national reading habit and promoting the status of Finland as the world's most literate nation (Ford, 2016). At night, the platforms will be used as night-time coffee shops with a monthly pass for students/residents/and visitors to access the platforms.	 
14	Treehouses for camping, recreation, habitation, hangout, and observation. This will improve the connectivity with nature.	 
15	Boutique and Spa hotels for commercial services and to also promote the culture of Heinola as a traditional spa town	
16	Multiple mixed-use housing structures with courtyard and green roof for accommodation (Residential on top and commercial below)	

<p><b>17</b></p>	<p>Lake/Boat saunas for residents and visitors to enjoy relaxing, refreshing and health-boosting adventures with a lake to cool off. Saunas are a substantial part of Finnish culture and are inscribed on the UNESCO Intangible Cultural Heritage Lists (Finnish Government, 2020)</p> <div data-bbox="860 153 1557 359">  </div>
<p><b>18</b></p>	<p>A market / commercial centre to serve as a hub of excitement and activity presenting the opportunity to play, live, shop, dine and work in a mixed-use neighbourhood and working waterfront. It will offer the opportunity to locate retail units for food and beverage outlets as well as an outdoor shopping experience. It will also help boost local market economies.</p>
<p><b>Blue-Green Elements</b></p>	<ul style="list-style-type: none"> <li>• Hammocks to relax between the woods and feel the nature and the birds <div data-bbox="1352 695 1557 898">  </div> </li> <li>• ‘A Path in The Forest’ for people to walk above the ground amidst the trees in the urban park designated area, looking at the park and the surroundings from a different angle. This will provide the experience to perceive the changing nature, how the trees were changing colour and eventually dropping their leaves altogether. <div data-bbox="1198 932 1557 1190">  </div> </li> <li>• Sailing and water sports activities including kayaking, water skiing and boating <div data-bbox="802 1255 1557 1438">  </div> </li> </ul>
<p><b>Other Elements</b></p>	<ul style="list-style-type: none"> <li>• A waterfront Promenade to knit together the public open spaces and the waterfront thereby increasing the quality of connectivity and providing a consistently high-quality experience. Lookout points will extend to the revetment at intervals with interpretive signage and benches to provide seating. <div data-bbox="943 1497 1549 1755">  </div> </li> </ul>



- Bridge connector to connect Möljän puisto park and Sepänniemi solely to provide pedestrians and cyclists with a new way to experience the waterfront and inject new life into Niemela and the adjacent neighbourhoods. It will also serve as an anchor point for the aerial restaurant.



- Smart bins to compress and store the same amount of refuse as twenty traditional 60-litre street bins. It automatically reports accurate fill level information to waste management (FINBIN, n.d)



- IoT-powered collecting bins to improve the recycling rate of domestic waste.



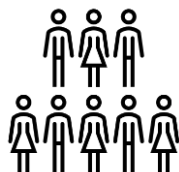
## 5. CONCLUSION AND RECOMMENDATIONS

Vilkas Niemela will greatly improve the identity of Heinola as it will revive the place with a new vital life and turn it into a region of an international destination. The optimal use of sustainability principles like sustainable community involvement, access to public spaces, sustainable mobility and streetscape planning, conservation of heritage values and historic environment and open space design in the aspect of the physical environment, economic, social, community, cultural and functional will be considered to make a sustainable, vibrant, and interactive waterfront. Our proposal followed leading models under the Sustainability assessment rating systems as a decision support tool to revitalize the waterfront for users, particularly, tourists and visitors. Vilkas Niemela will provide an unparalleled canvas for waterfront imagination with creative, and innovative green solutions. This will boost Finland's strive to consistently support the implementation of the 2030 Agenda and commitment to becoming a forerunner and achieving the UN's Sustainable Development Goals (SDG) by 2025. This development will therefore help to achieve the 'SEEC' benefits by making Heinola **socially, economically, ecologically, and culturally** sustainable.

### Recommendations

The vision behind 'Vilkas Niemela' is a vibrant, lively lakefront realized through sustainable planning and design principles. As the heart and soul of Social Sustainability is an engaged citizenry, we propose to seek public participation at various phases of planning, design, and implementation as follows:

#### Inform and Consult



- People can engage constructively only if they are well-informed about the project. It is highly recommended that **Focused Group Discussions, Group Workshops, Public consultations** or **'Coffee and Conversation' Sessions** with various stakeholders like the youth groups, children, senior citizens, the tourist companies, local entrepreneurs and businesses, Industries in the manufacturing and service sector, artists and artisans be conducted to understand the public perception and expectations about various social amenities proposed in the plan.

#### Involve and Collaborate



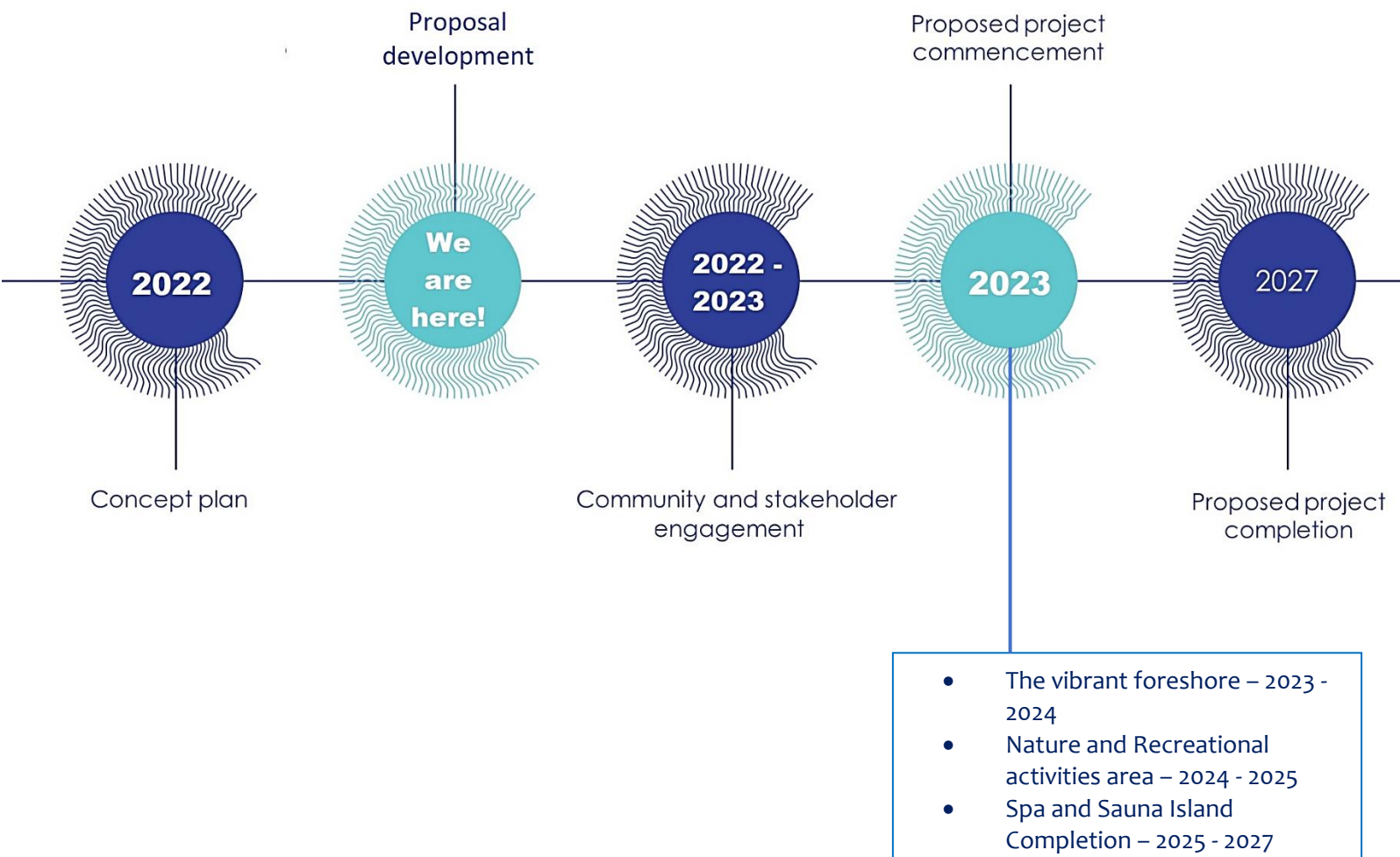
- While public consultations with identified stakeholders can ensure informing and consulting the citizenry, it is advisable to go the extra mile to involve people and collaborate with them in later phases.
- The City Council may seek the best practical ideas from citizens for making the waterfront active and lively. It would involve conducting **Idea Conclaves** with lakefront users, **Innovation forums** with youth groups, and small-scale **Essay & Poster Competitions** to address a certain bottleneck.
- The City Council may use tools like **'Industrial and Cultural Heritage Walks', 'Nature & Biodiversity Trails', 'Local Food Tours', 'Yoga by the Lake'** in the vicinity of the lakefront to collaborate with the local population more actively. The city council may work as a facilitator for the same and economic incentivization involved in these activities will help seek more engagement at the local level.
- **Collaboration with the Corporate Sector** may bring richer dividends. Finland has a great **'Corporate Social Responsibility' Policy** and corporate firms, Multinational Companies with local presence may collaborate with the City Council for the skill-

training of local people for the ‘Industrial Heritage Walk’ or may contribute towards setting up and running the ‘Wood Processing Museum’

- It is highly recommended to organize on-site **‘Workcation Camps’** or **‘HR Training Sessions’** for the Gig Community and Platform based Workers associated with Large Corporate Firms or Service Sector Industry to attract the new and dynamic workforce towards lakefront’s co-working places.

## Vilkas Niemela Waterfront Development Timeline

### An exciting future





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## 7. EVALUATION OF TEAMWORK

We- Najma, Olutayo and Mayuresh- are three students of the MURCS Programme and we became part of a group to work on this project along with our Finnish Friend Tuomas Johansson. As Tuomas could not join us, the three of us continued working on the project, with strategy and execution details.

The group members brought in sectoral knowledge and expertise from different disciplines. Najma and Olutayo are 'Urban and Regional Planners' so they brought in detail oriented urban planning and sustainable design practices with sound knowledge of planning theory, planning norms and placemaking. Mayuresh is an Urban Researcher and Development Practitioner, so he brought in ideas from Socio-cultural Identity of the place-people, Meaningful Community Participation and Inclusive Planning. The individual core strengths within the group were complimentary to each other and we divided the group work basis on the same.

We did not divide the work in the beginning because we did not want to have mechanical and compartmentalized exchanges, very specific to what has been assigned to everyone. We wanted to make it more creative to bring out the best of thoughts after our initial visit to the Heinola site. We began by using the 'Huddle' sessions from the word go for brainstorming and idea formation. We had 2 to 3 long sessions of intense discussion and debates before coming with the basis of our conception: '**Vilkas Neimela**'. Once the idea was more tangible to everybody, we divided the tasks equally among members.

All the group members worked on Conceptual Plan Development by giving valuable suggestions and ideas. However, for practical purposes the work was divided amongst us as follows:

- **Mayuresh** was assigned to research and conceptualize more about the Site and the City, its social, economic, cultural significance from the point of view of Finland, Pajanne Tavastia, the changing business, economy, economic dimensions of the place and need for rebranding the city all again. He was made to present it in SWOT Analysis, Placemaking proposals, Modes of Public Participation and Recommendations.
- **Olutayo** was assigned to review the literature, look up various case studies of global and local significance, part of analysis and development proposals, planning practices and designs and to sum it up aptly in conclusion section.
- **Najma** was given the task of working mainly on Design Approach, Masterplan, and Development Proposals. Najma worked on turning our verbal ideas into brilliant visual presentation, in the form of master plan drawings, design drawings etc. She also took up the responsibility of structuring the report in basic workable format.
- Najma was requested to be the **Official Group Leader**, which she gladly agreed to.
- The group met in person for more binding and then continued on Platforms like Zoom, Meet and MS Teams. We met in person a few times.
- Our report appears to be in union but before coming to the format, we had a few debates on ideas as well.
- We had a **lengthy discussion and debate** on usage of 'Smart Principles' for planning and designing the waterfront. **The word smart was hotly debated** because while in Global North it has a positive connotation of taking help of IoT technology to ease life, in Global South it has been used manipulatively for moving towards technocratic governance with tokenistic participation or no public participation at all. Ultimately, we agreed upon replacing the word 'Smart' with more inclusive, participatory, collaborative and sustainable urban design

principles. **The idea about creating visual connections with waterbody under the water, over the surface and above the water** was equally debated and for practical purposes as well as keeping affordability of idea in mind, the idea of creating underground, glass tunnels for underwater experience was dropped. We had difference of opinion about conceptualizing a space in Neimela Waterfront, that exhibit of properties an open public place and a closed place with unrestricted public access. While the planners were more fascinated with a public place, the development practitioner was of the view of offering a closed/ covered place keeping the winter season in mind. The planners gave in to a closed space with improved public access.

- **The healthy debates were an enriching experience for all the group members** and that helped us think beyond our assigned tasks. Finally, everybody contributed to almost every section of the report, and we are glad to present our labourious work to our University and the City Council of Heinola.