

# How We will Live Together in the North



Msc thesis report  
Student Paulius Kliucininkas  
First mentor Marcin Dabrowski  
Second mentor Birgit Hausleitner  
Studio mentor Verena Balz  
Studio Planning complex cities  
Urbanism track  
2021 2022  
TU Delft

## Cooperation among Port Cities in the Baltic Sea Region



To my parents Renata and Linas  
who brought me up in the Baltic Sea Region

MSc thesis in urbanism - report

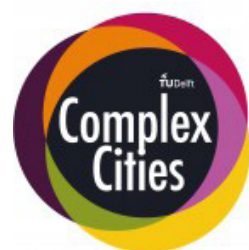
title\_How We will Live Together in the North  
subtitle\_Cooperation among Port Cities in the Baltic Sea Region

key concepts\_ soft space, meta-governance, neo-medievalism,  
port cities, macro-region, sustainable development

author\_Paulius Kliučininkas  
student no. 4906276  
contact\_P.Kliucininkas@student.tudelft.nl

first supervisor\_Dr. Marcin Dabrowski  
second supervisor\_Birgit Hausleitner

education\_Delft University of Technology  
Faculty of Architecture and the Built Environment MSc. Architec-  
ture, Urbanism and Building Sciences\_Department of Urbanism  
research studio\_Planning Complex Cities  
Delft, the Netherlands, October 2022  
copyright ©author  
cover: the world map with the marked BSR, author  
Sonata V, M. K. Čiurlionis, [https://ciurlionis.eu/wp-content/up-  
loads/2010/09/Juros-sonata-Ct14.jpg](https://ciurlionis.eu/wp-content/uploads/2010/09/Juros-sonata-Ct14.jpg)





# table of contents

<b>I exploration</b>	6	cluster in focus image of places planning documents potential historic perspective references and take aways existing spatial qualities public and green spaces functional structure towards qualitative zoning new spatial qualities patterns applied stakeholders new development strategy implementation: stage I. skeletoning framing stage II patching up inflation stage III illustrations timeline cooperation in meta-territory
<b>II methodology</b>	14	
motivation problem fields problem statement aim and objectives research questions		
theoretical framework conceptual framework notes on the war locations of case study methodological framework methods timescale scale matters abbreviations		
<b>III research</b>	28	
what the BSR is policy of the BSR ports history. Hanseatic league levels of cooperation manufacturing		
<b>IV SWOT analysis</b>	37	
SWOT Blekinge SWOT Klaipėda region SWOT Karlskrona port SWOT Klaipėda port SWOT Karlskrona SWOT Klaipėda stakeholders focus		
<b>IV patterns</b>	50	
pattern use strategic patterns physical design patterns action patterns		
<b>V planning and design</b>	55	
planning process design process SWOT synthesis regional vision cities in focus spatial typological zoning street network analysis city strategy. Clustering		
		<b>VI upscale</b> 130
		stages of integration cooperation program among port cities among port cities vision statement actions: planning and governance actions: politics actions: finances actions: communication recommendations
		<b>VII conclusions and reflection</b> 140
		answering the research questions reflection
		<b>VIII acknowledgment</b> 147
		<b>IX bibliography</b> 148
		<b>X appendixes</b> 149
		Pattern cards

# introduction

The integrated, cross-border, cross-territorial and macro-regional planning paradigm is recalibrating the world and planning practice all around the globe. The Baltic Sea Region (BSR) has become one of the exemplary models of macro-regional practice in the European Union (EU) context. It is recognized as a flexible entity due to its activities, actors and informal institutions (Purkarthofer et al., 2021). Since the first initiatives of the Helsinki Commission for integrated Baltic sea management around 1980, many strategies and organizations have been developed. Also, the spatial vision for the Baltic Sea Region is being updated. Indeed, the BSR has entered a new chapter of development with a new generation of Interreg projects.

However, the planning of the BSR is pictured as the highest authority conformative planning. On the one hand, there is a struggle to integrate different stakeholders, planners, ministries and citizens, to name a few. On the other hand, the linkages between the strategic documents and their local implementation could be stronger and more visible in a surrounding environment.

The project aims to carry out the planning framework for the BSR. The patterns for cooperative planning, design and principles inform what systemic solutions and actions are required to achieve the region's performative, integrated, cross-scalar planning. The framework is applied in 4 scales: district, city, regional and macro-regional strategies and visions. The emphasis is given to the ports, cities and their regions as the main catalysts for cross-border cooperation. These units are crossed by sustainability, manufacturing and shipping lens. Here the macro-regional planning meets local target design and implementation.

The framework of Meta-territory is introduced as a synthesis between theories of soft space and territoriality. Meanwhile, strategic-spatial planning frames the project, so these theories inform the cooperation framework. Moreover, a mix of scientific methods has been used to determine the complexity between different scales, time-frames and society. The exploratory research is based on semi-structured, static, dynamic and proactive methods. Finally, the method of pattern language defines the cooperation framework.

The project is expected to inform and inspire planners, decision makers or citizens about their capacity to act and the necessity of complex and integrated planning. Nevertheless, geopolitical uncertainty might occur if the macro-regional planning practice is sufficient enough to ensure the presence of public goods and safety and sustainable development simultaneously.



Figure 1: Satellite image of the Baltic Sea Region. Source: <https://upload.wikimedia.org/wikipedia/commons/thumb/6/65/BalticSea.A2004093.1120.250m.jpg/466px-BalticSea.A2004093.1120.250m.jpg>



# I

# exploration

a brief introduction to the subject and definition of the further research pathway

## motivation

There is an emerging tendency to integrate the spatial dimension into the overall strategies in the EU policy due to the “softening” boundaries of the countries and difficulties in managing the territorial units (Noferini, 2019). The current state is an opportunity to enhance and inform the planning in the EU and to encourage the community of spatial planners and designers to become more proactive in the more extensive scale processes.

The BSR spatial vision is currently in the process of updating. This project is the experimental space to inform the decision makers and test different scenarios or approaches before they are adopted in the main strategic plan. The lessons learned might become an excellent example for the other macro-regions of the EU and macro-regions around the world.

Finally, the author has participated in several workshops, organizations and projects since a very young age (the Baltic Sea University Program, Young planners' contests in the BSR organized by VASAB and others). These communities and experiences have coached the author about the Baltic Sea Region and the necessity of planning and design.



Figure 2: One of the first detailed Medieval maps of the Baltic Sea Region. Source: <https://assets.bwbx.io/images/users/iqjWHBFd-fxIU/iYMt1LWkFO7k/v0/-1x-1.png>



# problem fields

The extensive territories contain extensive problematization. Hence, the problem field has to be observed in an effectively structured way. The following sub-chapters can be expressed as gaps of knowledge. They present different trend aspects from different planning perspectives and factors. As a result, together, the problem fields encompass the observation of sustainable planning and design and responsibility for it.

## struggle for sustainability

Generally, the EU strategic documents correspond to the three main sectors of sustainability: environmental, social and economic or other thematic aspects. (Barca, 2012) After that, the problems are usually structured the same way. The thematic problematization of the BSR has been overviewed analogously. Every new spatial strategy since 1994 has systematized the trends in the same aspects. (The VASAB 2010 Report, 1994) The following most evident trends in the macro-region will be chosen as the main problems for investigation and design sections.

The environmental pillar appears the most fundamental in this region since the spatial core of this macro-region is the Baltic Sea. The first initiatives in Helcom - Baltic Marine Environment Protection Commission was based on the trends of the severe pollution and deterioration of the sea. (Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974) Additionally, water-related challenges are evident in the context of climate change. Despite the projected moderate effects of climate change in the BSR, rising sea levels might damage most of the lowest lands. Finally, the water-related challenges will become more evident in the polar region, where the melting snowscapes will stimulate the streams of rivers (Pettersson et al., 2020).

The expected migration marks the social tendencies in the BSR flows in the coming 30 years. The east side of the macro-region is visible as one of the most depopulating regions in the world. However, the West side of the BSR does not expect similarly drastic growth. The number of inhabitants would increase gently (Territorial Scenarios for the Baltic Sea Region, 2019).

The economic progression of the East and West sides of the BSR is similar to the migration scenarios. The GDP and economic growth differences would stay the same. Also, the difference might increase according to some scenarios. (Territorial Scenarios for the Baltic Sea Region, 2019).

However, the particular aspects need to express a macro-region's complexity comprehensively. The documents regarding spatial dimension are only emerging in the EU context. So, spatial and territorial decisions require more focused and synthesized problem perspectives.

## technology and politics

The responses to the nuanced problems might be answered only if the problem fields are more commonly integrated. The study 'Looking towards 2030: Preparing the Baltic Sea Region for the future suggested the four main problem fields: "changing demographic pressure", 'renewing industries and innovation', 'deepening environmental conversations' and 'changing democratic decision making". (VASAB Long-term Perspective for the Territorial Development of the Baltic Sea Region 2021) The two fundamental aspects were introduced here: the political and the technological. Both are usually considered external factors that fit the definition of challenges. In order to come to specific problems, integrated and place-specific conclusions must be drawn. The table of the factors and trends from the Long-term perspective explains the interconnected social, economic, environmental and technological relations well. The aspects are specifically based on the regional context and external influences. Surprisingly or not, the leading factors start from Urbanization following climate change, technological breakthroughs and shifting political power.

The integrated problem field helps to conclude with a list of chosen problems which might be regarded in a planning or design way the most.

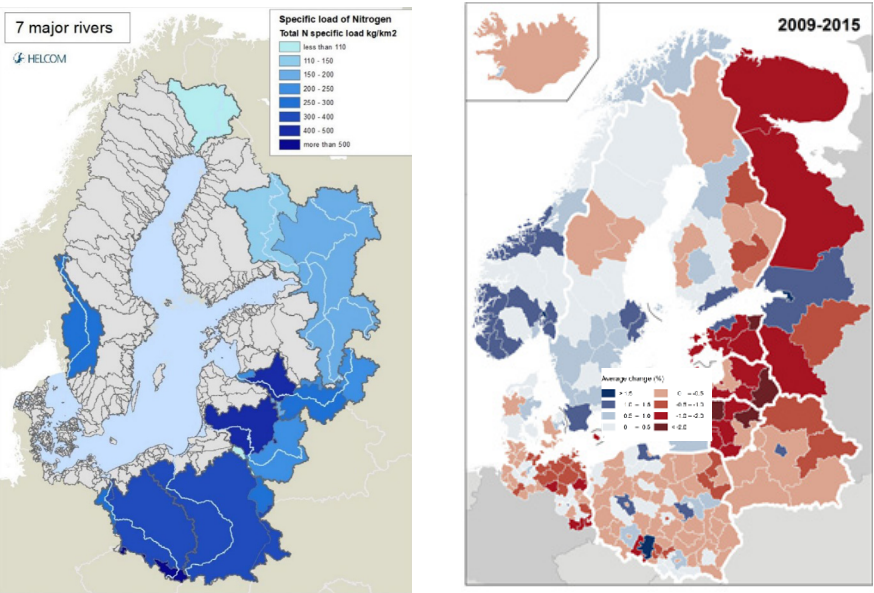


Figure 3: Map of the pollution level of the biggest river basins in the BSR. Source: The sixth pollution load compilation (PLC-6), Helcom, 2018.

Figure 4: Map of the total population change 2009-2015. Source: <https://nordregio.org/maps/total-population-change/>

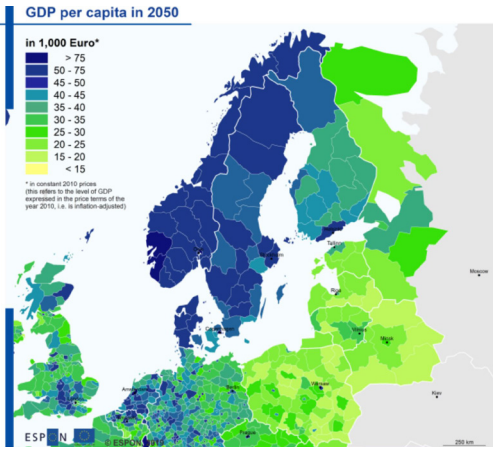


Figure 5: Map of GDP per capita prognosed in 2050. Source: Territorial Scenarios for the Baltic Sea Region, 2019.

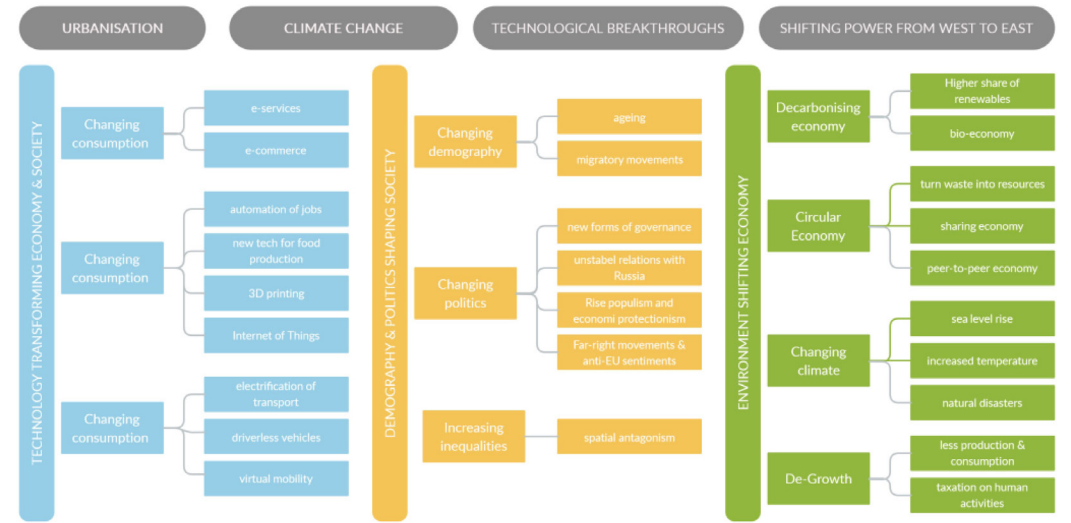


Figure 6: The scheme of trends and factors influencing the Baltic Sea Region Source: Source: Aguiar Borges 2020, ESPON 2019a.



# problem statement

## planning and implementation

The wide-ranging scale of the BSR is a challenge in the planning field. Many local, smaller-scale plans, decisions, places or projects might be overlooked. Despite the democratic and participatory planning initiatives, the top-down planning approach is still the leading practice in the BSR. (Ringbom, 2018) The democratic social environment in most countries grows with the small scale initiatives and ambition of sectoral cooperation. There is a vital need for integration.

Nonetheless, these two perspectives of governmental or intergovernmental planning and municipal or district size design must be conjoined. As a result, the highest authority planning, agreements, and action plans usually need to be more spatial. They do not have direct links to the other region-size plans. The planning and design system is even more complex in the scale of the territory of 10 countries. Therefore, the documents' hierarchy and interdependencies must be considered. Meanwhile, the regional or urban design is not informed by the overall macro-regional strategies and follows the same path of its own. The absence of a specific site or object does not create a visible connection to the BSR. The implementation aspect is closely tied to the challenge of shared identity in different places. Strategic projects are the tools to build and visualize commonness and grand strategic spatial plans.

## responsibility for the plan

Political decisions have always been spatial throughout the history of Europe. However, the XXth century trends have detached spatial planning, strategic planning, implementation design, and political decision making. The soft territories macro-region planning is government-driven, primarily in the EU. It is mostly "top-level" planning. It segregates informal, non-governmental actors, spatial planners, and local decision makers. The methodology of spatial strategy is also separated from the political agenda. This institution results in different financial priorities and resources. Complex spatial and political problems are not appropriately addressed in a spatial or territorial way. As a result, stakeholders and decision makers have become strangers to each other. This relationship has become more complex in the context of different scales and responsibilities of planners and designers. The distance between stakeholders is evident in spatial or urban planning and other fields. The previously mentioned tendency of formal planning by the highest authority illustrates this notion. As a result, the stakeholders are not aware of each other's actions and decisions or can hardly integrate other principles into decision making.

On the other hand, there are bottom actors, including citizens, non-governmental organizations, small businesses, small municipalities and others who usually need to be made aware of the planning processes in the BSR. The spatial plans become abstract spatial interpretations with specific spatial tasks. Nevertheless, they are not informed by political agenda, specificity and opinion. On the other hand, political agreements and strategies became non-spatial and could hardly be implemented without spatial information.

The situation is affected even more by EU-financed projects. The terminated process and engagement of stakeholders might discourage actors from engaging for a short period. The end of the project sometimes cuts the relations among integration processes as well.

The current planning process divides the goals of sustainability and political agendas from spatial planning and its implementation.

This process is accelerated by dividing the plans and specific projects in particular places. Therefore, society does not feel the visible outcomes and is unaware of such macro-regional planning.

Additionally, the stakeholders and decision makers work separately in the context of strategic spatial planning. This tendency results in the gap among the actors, their knowledge and comprehensive decision making. The gaps between design and planning and the stakeholders have to be closed to have the necessary integrated BSR planning.

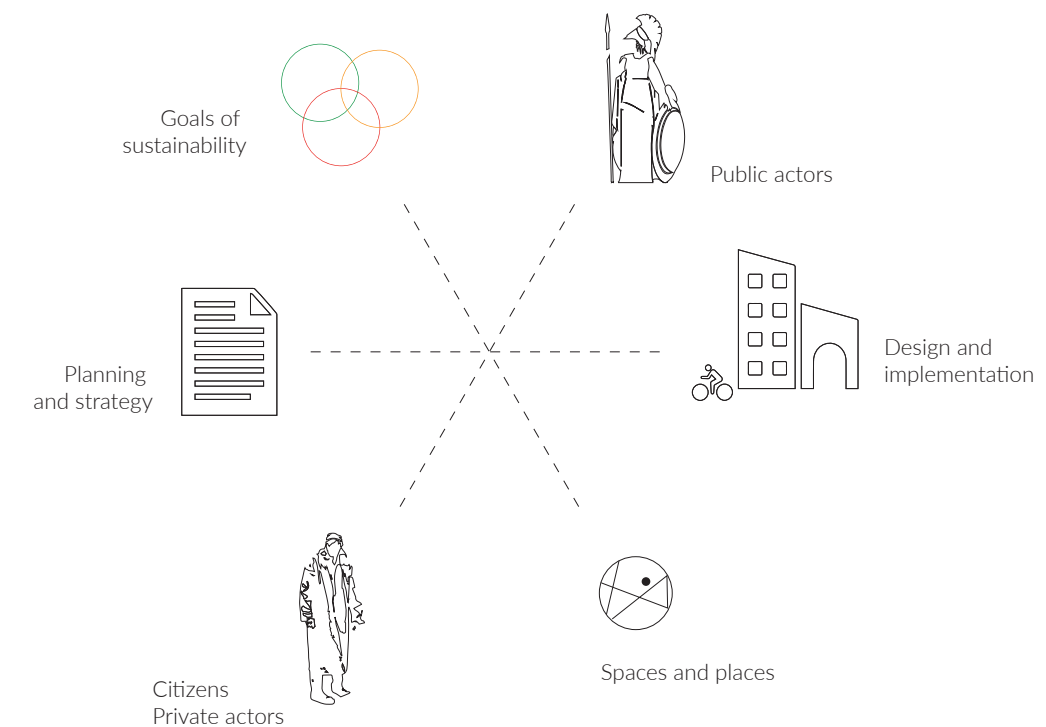


Figure 7: The interrelations and 'gaps' among spheres in the problem field Source: author



# aim and objectives

The main aim of the thesis is to develop a comprehensive planning framework for the BSR. The outcome should consist of principles, rules and toolboxes necessary for the planning process. The framework would be applied in three levels: the macro-regional, regional and port city. Therefore the design proposal, regional strategy and macro-regional vision would illustrate the framework's application in a specific coastal context. Finally, the products should be concluded with an evaluation system to measure the quality of the implementation projects.

The case study of design should explain the development possibilities of port cities and the regions around them. The testing would reveal how port cities can perform towards integrated regions and be more proactive in initiating it.

The results and conclusions are expected to raise the planners' and decision makers' awareness of possible scenarios and complexity in decision making. Also, the outcome is foreseen to inspire the decision makers and other actors or even unorganized citizens to take action or initiatives in the Baltic Sea Region.

# research questions

**Q0** How would cooperation among the BSR port cities catalyze the transition towards a more sustainable future in the macro-region and ensure the fair distribution of common goods?

## fundamental

**Q1** What are the public goods currently available and could be developed in the macro-region?

## sustainable

**Q2** What are the factors and determinants in the economic shift and performance of the port cities?

**Q3** What are the possible futures of social, cultural, and identity issues concerning a shrinking population?

**Q4** What are the most significant environmental, water pollution, climate change and coastal erosion accelerators?

## performative

**Q5** How to organize decision making and implementation processes between different stakeholders and territories to ensure the fair distribution of common goods over time?

**Q6** How to operationalize the soft space by integrating local places, stakeholders and resources?

# II

# methodology

thesis framework and background for the research, planning, design and upscale

## theoretical framework

### Neo-medieval spatial planning

Professor Andreas Faludi mainly developed the notion of neo-medieval spatial planning in his book “The poverty of territorialism” (Faludi, 2018). This planning concept considers “overlapping, rather than delineated spaces” as the objects of spatial planning and governance. They cut across legal and administrative boundaries like land and the sea. Those boundaries are performed beyond the comprehension of one overall authority responsibility. (Faludi, 2019) This notion might be mistakenly associated with medieval historical urban principles or other tendencies. However, the pre-modern period is underlined here. The author claims that “the pre-modern order was different, paying less heed to territory and more to functional relations between overlapping centres of authority” (Faludi, 2018). The core of this theory is the shift from territorially defined planning and identity to an integrated and ever-changing space. The current planning tendency of rescaling territories and borders in the EU is evidence of this practice. Therefore, the author suggests that this planning path is not imaginative.

On the contrary, “we were practicing neo-medieval planning all the time” (Faludi, 2018). The complexity of shifting territories and appearing fuzzy boundaries result in relations which are “less hierarchical and thus more diffuse” (Faludi, 2018). This approach requires an overview of the system of governance. Despite the scientific discussions of relations among soft space, soft governance, conformative planning and complex governance, the position of Prof. Faludi is taken as the base. It is expressed as the soft spaces that must be planned with the actions of meta-governance. However, one direct relation to Neo-medievalism might be observed through the legacy of the Hanseatic league. The territorial union of trade and political integration was an exemplary league which was developed by the end of the 13th century. The traditions, effects and governance of the Hanseatic league must be observed and concluded in the research framework.

### Soft space

The theory of soft spaces is considered more a practice-based concept. Nevertheless, it accords with neo-medievalism in spatial planning. Soft spaces might be described as “the creation of new geographies that transcend existing political-administrative boundaries. As such, they represent specific social constructions of space that do not correspond to the political territorial boundaries and internal divisions of the nation state.” (Allmendinger et al., 2015) These territories might have different geographical approaches and undefined boundaries, yet they correspond and overlap with traditional territories. It creates another informal layer of territories, borders and governance processes. The processes are closely linked with the institutions of territories. Still, the concept of soft spaces implies that there is no formal institution for governing the space. It is exceptionally voluntary and informal. We face “emergence of new, non statutory or informal planning spaces or processes. They exist alongside but separate to the spaces and scales of elected government bodies such as local, regional or national government” (Walsh et al., 2012). The soft space concept is not a utopia-driven theory but rather the answer to the limits of statutory territorial planning and formal governance, which cannot deal with contemporary challenges. This tendency is observed in other sectors as well (Chilla et al., 2014).

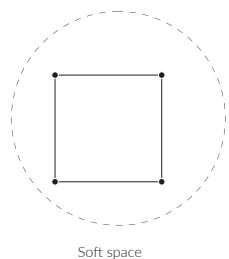
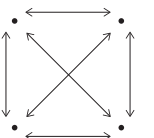
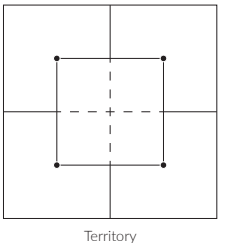


Figure 8: The conceptual schemes depicting the theories and their spatial features. Source: author



Figure 9: The map of pre-modern territorial geography without borders. Source: <https://www.archaeology.org/images/News/1702/Baltic-first-farmers.jpg>



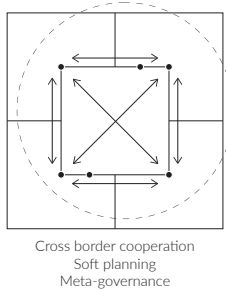


Figure 10: The conceptual schemes depicting synthesis of the theories. Source: author

# Soft planning

As mentioned before, soft spaces require soft planning. (Faludi, 2010) Soft planning is an operation-based approach opposite to conformative static planning. The main elements of performative planning encompass stakeholders, actors, and relations among them throughout the time and performance in a specific space. The soft planning concept can be observed in modern history, where claims on territories were the essential decision making paradigm (pictures on page 17). However, this institution must be adopted to current times by combining dynamic spatial aspects with formal decision making.

# Cross border cooperation

The concept was developed by governmental institutions and EU spatial planning programs. As a result, it is more legislation than a theoretical concept. Cooperation is described as “any type of concerted action between public and/or private institutions of the border regions of two (or more) states’ (Sousa, 2013). This is the “key element of the EU policy towards its neighbours. It supports sustainable development along the EU external borders, helps reduce differences in living standards and addresses common challenges across these borders.” (European Neighborhood Policy and Enlargement Negotiations, 2014) The central concept is closely tied to the theories mentioned above. Therefore strong commitment and ownership are considered essential features of cross-border cooperation in the EU. This aspect is a significant value concerning voluntary trust in building and governing soft spaces. The complex spatial problems, the interdependency of territories, water-related challenges, and limits of statutory planning call for neo-medieval planning practice and meta-governance of soft spaces. The operationalization of the soft spaces requires the soft planning practice over conformative planning. This process can be projected through cross-border cooperation among secondary cities located in the region.

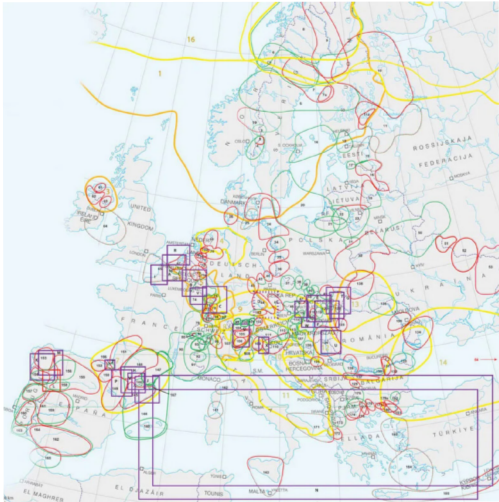


Figure 11: Cross-border and transitional soft spaces in Europe. Source: <https://i1.wp.com/www.aebr.eu/wp-content/uploads/2020/08/AEBRmap2011finalversion.jpg?w=924&ssl=1>

Figure 12: Actions and spheres on territory. Source: ??

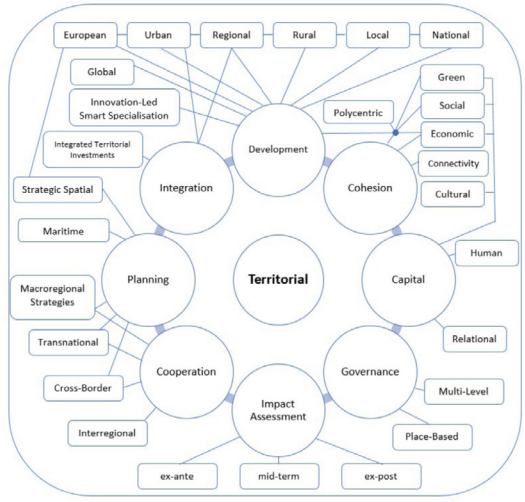


Figure 13: Image of Verona congress, 1822. Source: <https://images.tineartamerica.com/images-medium-large-5/-the-congress-of-verona-mary-evans-picture-library.jpg>

Congrès de Vérone (20 octobre-14 décembre 1822). (Page 131, col. 2.)



Figure 14: Image of Treaty of Paris, 1783. Source: [https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty\\_of\\_Paris\\_by\\_Benjamin\\_West\\_1783.jpg](https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty_of_Paris_by_Benjamin_West_1783.jpg)

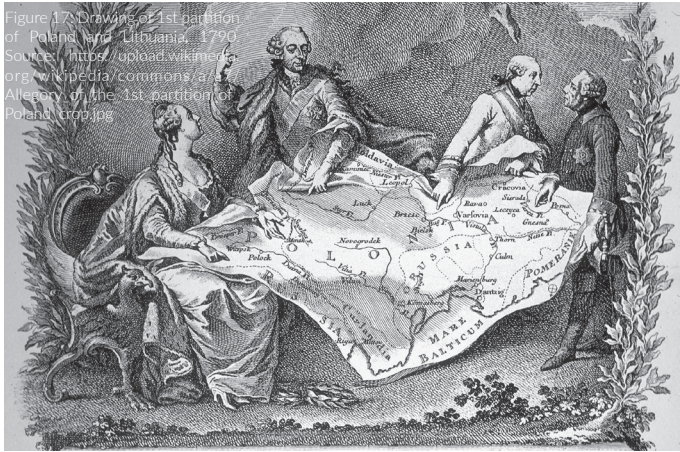


Figure 15: Image of congress of Vienna, 1815. Source: [https://www.britishmuseum.org/collectiion/object/P\\_1868-0808-8201](https://www.britishmuseum.org/collectiion/object/P_1868-0808-8201)



Figure 16: Drawing of The signing of the Peace of Edge Hill, 1642. Source: [https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty\\_of\\_Paris\\_by\\_Benjamin\\_West\\_1783.jpg](https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty_of_Paris_by_Benjamin_West_1783.jpg)

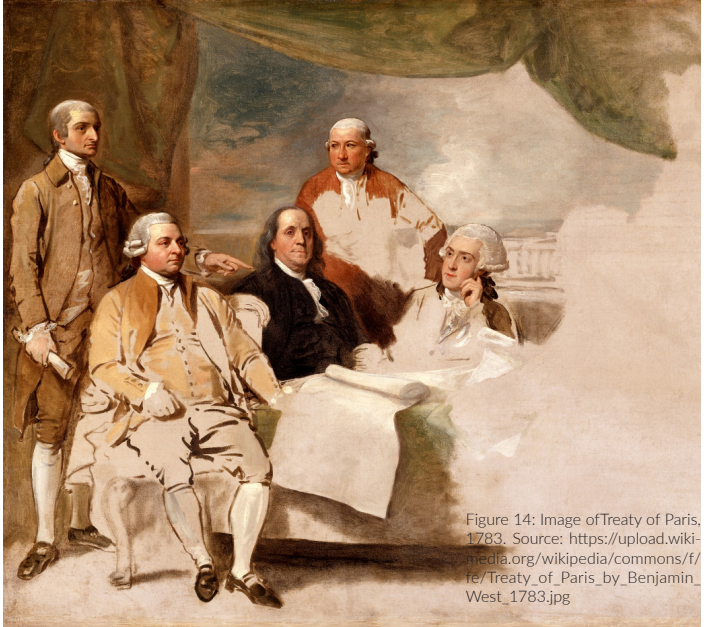


Figure 17: Drawing of The signing of Peace in the Hall of Mirrors, 1919. Source: [https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty\\_of\\_Paris\\_by\\_Benjamin\\_West\\_1783.jpg](https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty_of_Paris_by_Benjamin_West_1783.jpg)



Figure 18: Drawing of The signing of Peace in the Hall of Mirrors, 1919. Source: [https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty\\_of\\_Paris\\_by\\_Benjamin\\_West\\_1783.jpg](https://upload.wikimedia.org/wikipedia/commons/f/f7/Treaty_of_Paris_by_Benjamin_West_1783.jpg)



Figure 19: Drawing Setting the boundary. Source: <https://images1.bonhams.com/image?src=Images1&live/2015-01/23/94582468-2-1.jpg&width=640&height=480&autoresize=1>



# conceptual framework

The current planning approach is voluntary driven and might be affected by inner and outer factors like changes in political cadences or financial resources shifts. Therefore, more substantial involvement and attitude from the involved states are needed. Therefore, the flexibility of soft planning is:

## meta-territory

It is the synthetic concept between “Soft space” theory and the traditional understanding of the “Territory”. The meta-territory defines integrated and practical aspects of both mentioned notions. There are 3 core conceptual aspects:

The core principle is the integrated performance of stakeholders in a strategic area throughout the time space. The process is oriented towards design and technological interventions. The performance becomes a leitmotif. Meanwhile, the spatial and time aspects are considered frames for it.

Meta-territory is a performative planning concept with the significance of coordinated strategies, actions and interventions. The governance of meta-territory should integrate different stakeholders, subjects of planning, and comprehensive outcomes.

The concept is potential or emergency driven. There is a need for a defined target subject and two territories. (e.g. the refugee crisis, flooding, storm or heat wave damage, water-related issues, the share of natural resources, integrated production line, pandemics, economic crisis).

### other principles: governance and space

- The spatial approach does not impede a meta-territory anyhow. It can overlap other territories and meta-territories or have very distant boundaries from each other.
- The time frame of the performance of meta-space is flexible. It can be temporal (e.g. 1-2 years in the context of crisis management) and change the boundaries throughout time.
- It can encompass distant and separated spaces and geographies and cover both as one space - meta-territory. (for e.g. two distant cities as a one meta-territory. The physical and digital twin cities both as a meta-territory).
- The scale of this performance can vary. It can be enclosed from the city region to macro-regions.
- Meta-territories appear as 4-dimensional spatial units. It incorporates land as surface, space above surface, space down the subsurface and time measures. It is highly relevant in subsurface and subtraction politics, space politics, maritime spatial planning and other spatial dimensions.
- There is strong emphasis on secondary cities, territories, places and coordination among them.
- Meta-territories might be transformed into traditional model of a “territory”. Also, they can be restored to the primal position. This action is mainly affecting the changes in governmental structure.
- There is no urgent necessity to restructure formal territories. Instead, the meta-territory concept can act as a uniting structure for the common cases leaving the formal governance in the same structure.

There is evidence of a benefit from the terminated EU program funds or political cadences affecting decision making. However, there are some disadvantages to the concept. On the one hand, this method can legalize the invasion approaches and help soften territory occupation outcomes. On the other hand, the territories can agree on soft power like meta-territorial status and avoid direct overruling from another country.

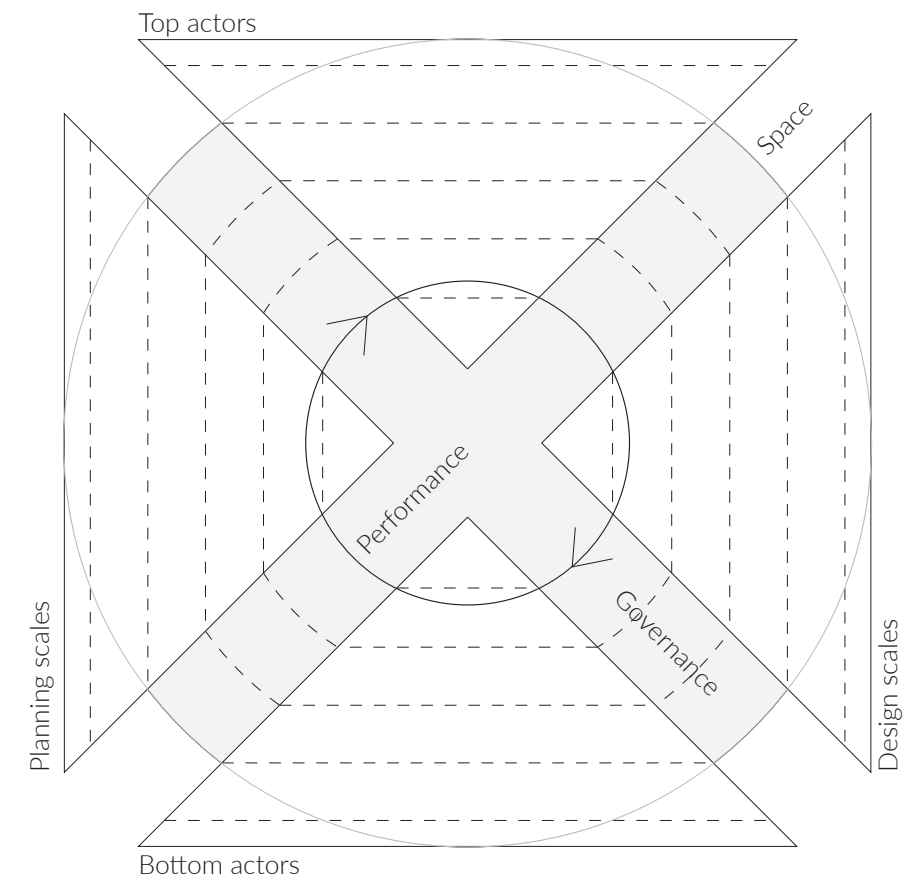


Figure 20: The conceptual framework and the main elements. Source: author



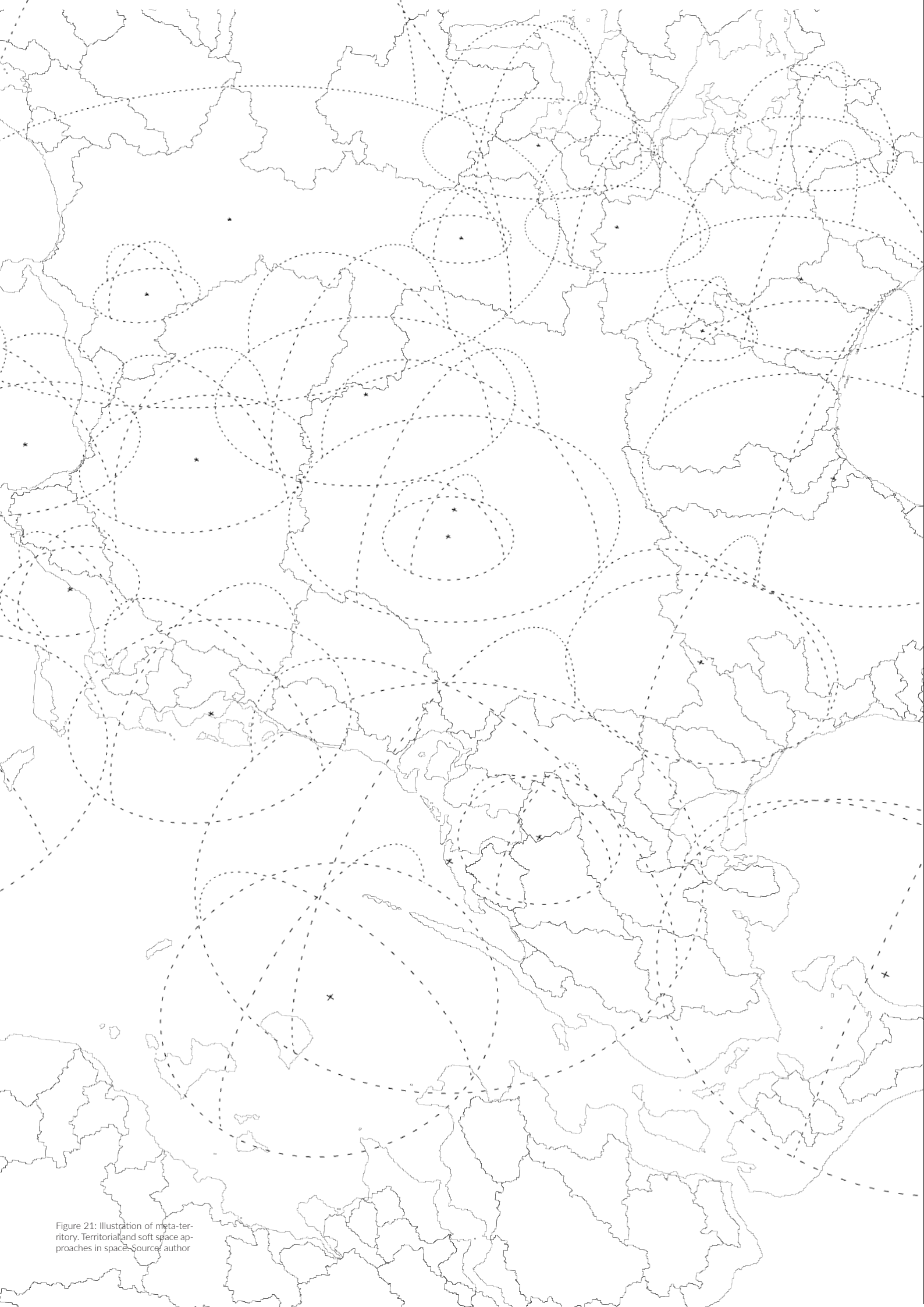


Figure 21: Illustration of meta-territory. Territorial and soft space approaches in space. Source: author

## notes on the war

Due to the Russian war actions in Ukraine, the position of this thesis has to be articulated more. This is momentous, considering Russia is a member of the Baltic Sea Region. The current position lays the future decisions on values, safety and possibilities of cooperation in the BSR.

Russia started the war in Ukraine in 2014. It took a turn in February of 2022 when intensive military actions started in the entire country.

The member states of the BSR expressed their position both formally and informally. The Russian state was suspended from legal participation in cross-national agreements, organizations, meetings and decision making. (Ministry of Foreign Affairs of Norway, 2022) Additionally, Belarus has gained observer status due to its role in the attack.

The legal position informs about the status. Yet, the actions towards the goals of safety and shared values have to be activated. They are taken into account in further research and design sections (section "actions: planning"). However, there are still open questions about the safeness of energy infrastructure (gas leak) in the sea for the time being (Declaration by the High Representative on behalf of the European Union on leaks in the Nord Stream gas pipelines, 2022).

The joint concept of the BSR became impossible when the war started. The different values of the states cannot sustain common space, territory and governance. Therefore, the concept of the BSR and its territoriality should be revised. Moreover, the dynamics of soft spaces and territoriality in the macro-region have to be reconsidered.

2022 September 22

# locations of case study

Klaipeda and Klaipeda region, Lithuania

Karlskrona and Blekinge, Sweden

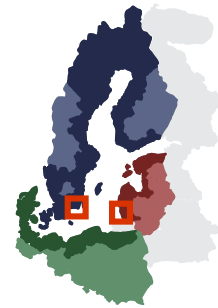


Figure 22: The map of the chosen thesis project sites. Source: author

## problem output in space

The planning for cooperation is an essential element in this research project. Clear and physically evident objects are needed.

Two locations are chosen to observe and design the performance between them. The locations are chosen based on the first investigation. Due to the expected outputs, they consist of 3 levels: the macro-region, the region and the port city. The choice was based on the most different spaces according to 4 aspects: the current level and potential to cooperate, local resources and geographic conditions, planning and design context and familiarity with a place.

## potential to cooperate

Both cities formally signed the partnership agreement in 1991. However, no active actions are publicly in recent years. Also, very few fruitful meetings have taken place since 1991. Yet, no spatial or strategic evidence would declare the active partnership and its value. Despite the internationally recognized potential for cooperation of the cities, this possibility still needs to be used.

## local resources and geographic conditions

Both regions face the coast of the sea, yet the natural coastal conditions, landscapes and climate trends are different. The coast of Karlskrona has rocky granite surfaces. The westerly winds of the Baltic Sea tend to erode the coast of Sweden and bring the soil to the Eastern coast of the sea. Therefore, the coast of Klaipeda is a landscape of sandy beaches. Lithuanian coast is urbanized systemically, yet ports and industries are concentrated around the most significant coastal city. The Karlskrona region is developed in a contradictory way with several similar-sized cities on the coast.

## planning and design

The planning culture is rarely co-operational in Lithuania. There still exists strong governmental-centred planning practices. As a result, the port and the city of Klaipeda are separated territories and authorities. The planning context of Sweden is reversed. Regions have much power in planning themselves. The trend of cooperation is dominating.

## familiarity to the place

Klaipeda and its region are located in Lithuania, the author's country of origin. The working experience helped the author to feel the pulse of planning and design in Lithuania. There is basic knowledge about the planning culture and system, stakeholders and trends in the city, port and around them. On the contrary, the author is not familiar with Karlskrona and Sweden's planning and design context as much as Klaipeda.

# scale matters

The gigantic scale of the research subject requires a clear definition of scales and their relations to reach the project's goals. The definition of the problem field helped to identify the gap between different scales. Therefore the relation between specific scales is the core of this research project. 6 scales: Block - District - City - Region - Macro-region - Global.

The main three scales will be used as a measure for the project. Meanwhile, the first and the last scales would only inform the project and help to check the decisions in the context.

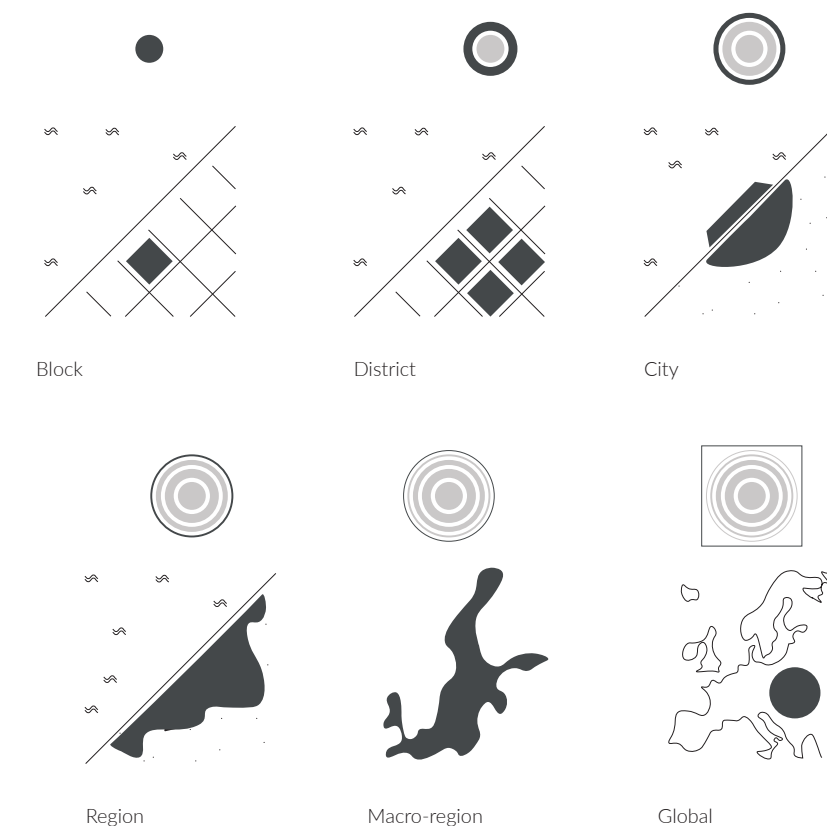


Figure 23: The schemes depicting the scales. Source: author

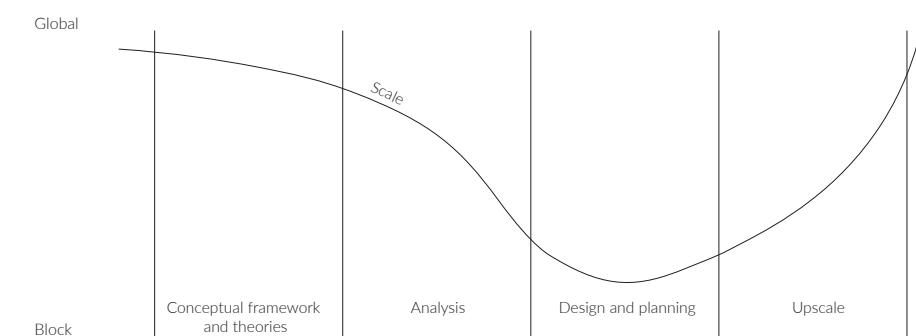


Figure 24: Scale focus throughout the thesis sections. Source: author

# methodological framework

The methodology consists of three frameworks: theoretical, research and design. The first part was presented before this methodology. The main narrative line in the research framework is divided into three alternative “what if?” questions: environmental, social and economic. The scope encompasses the investigation of the analysis of spatial, procedural, legislative and stakeholder-related fields in two strategic places. The strategy building is expressed by a 3-dimensional policy framework - space, subject, performance and measurement. Finally, the design framework will finalize the project by applying the policy framework to the strategic locations. The three steps will be expressed through the three scales: acceptance, embracement and repositioning.

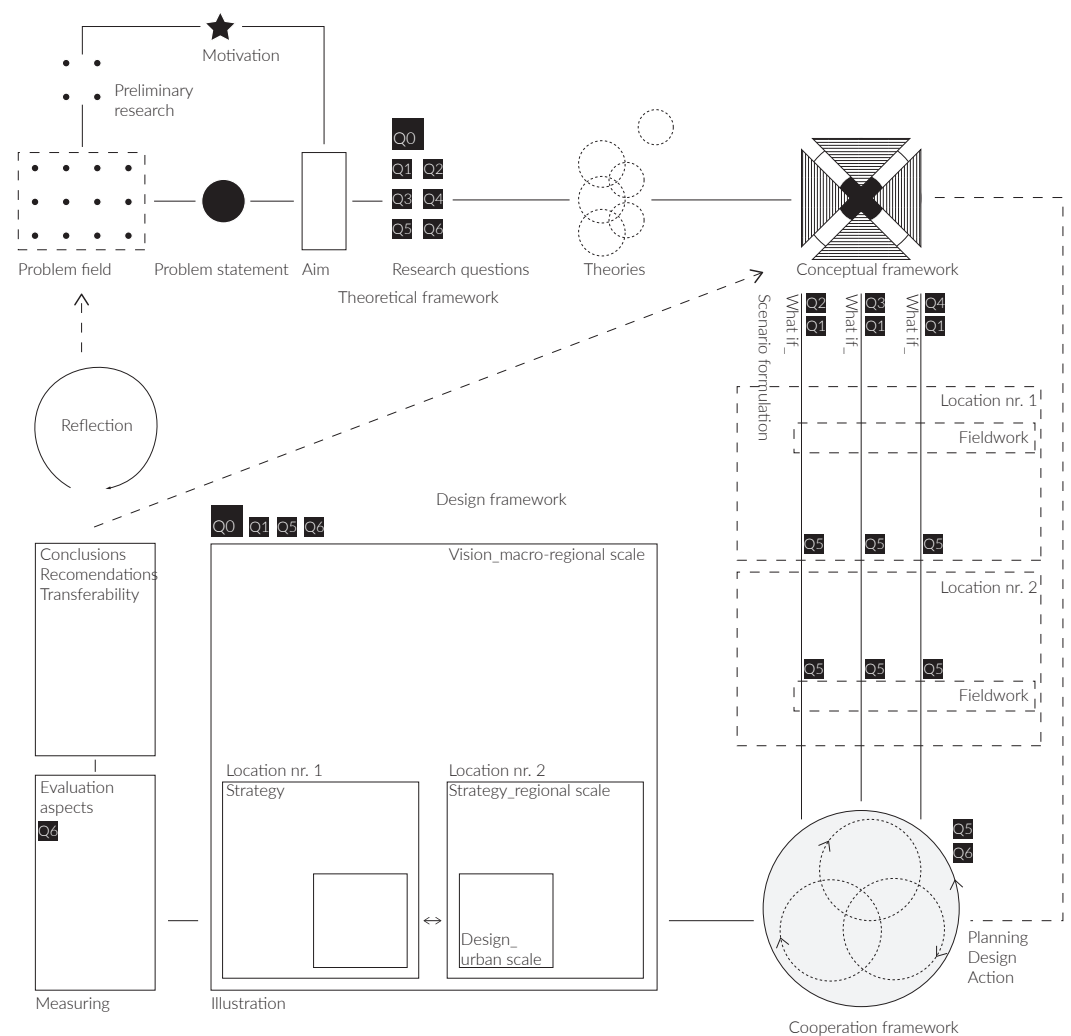


Figure 25: The scheme of methodological framework. Source: author

# methods

## static

### Academic literature review

It provides the conceptual knowledge, tendencies and critical themes for the project. It draws mainly on academic literature concerning the general territorial and spatial notions, spatial planning in the EU and the outcomes and trends from the BSR. It is crucial to uncover the current fundamental paradigms of spatial planning. Later they will be combined with smaller scale subject-based research like coastal erosion, water management, pollution and others.

### Strategic planning policy review

Separating the policy and academic literature reviews is crucial since they might oppose each other. The policy review should be targeted to the goals, strategic preferences and processes of implementation. Meanwhile, the academic review might reflect on the policies and their outcomes. Additionally, the review will help to understand how the aimed strategy should be included in the existing policy field.

### Multiple layer analysis

Map-based analysis of taking two or more layers of thematic spatial information with the exact spatial coordinates and overlays them. This method will be helpful in the regional and local scales with specific spatial information. Also, it will help to formulate critical reflection on spatial issues.

### Stakeholder analysis

The method of collecting the list of stakeholders and grouping them according to the need and focus of the project. There is the model of 2 axes table. Afterwards, the stakeholders might be linked to the other layers, problems and responsibilities for solutions.

### Statistical data

The method is based on the gathering of statistical data and comparing them for the same or two different places. The outcomes will be used for the fast perception of a problem field or trends. This method might be used mostly in the macro-regional and other scales as a fast tool of comparison.

### SWOT analysis

The Analysis consists of two stages. Firstly, the conclusion statements must be structured into four categories: strengths, weaknesses, opportunities, and threats. Secondly, the statements from weaknesses and threats must be interconnected with the other groups to identify the dependencies. This method will be used as the conclusion of the subject. interactive.

## interactive

### Semi-structured interviews

The interviews will be structured around specific subjects or topics and questions. However, the time limits and the specificities of a subject will depend on the interviewee. There will be space for free opinion, advice or other information exchange and discussion. The interviews will help to shape the framework of the thesis. At the same time, they will inform about more critical aspects of the field.

Figure 26: research methods are interconnected with the research questions. The question number is aligned to the method. (\*research questions) Source: author

Q1 Q2 Q3 Q4 Q5

Q1 Q2 Q3 Q4 Q5

Q2 Q3 Q4

Q2 Q3 Q4 Q5 Q6

Q2 Q3 Q4

Q2 Q3 Q4

Q2 Q3 Q4 Q5



Q2 Q3 Q4

### Intuitive mapping

Intuitive or visual mapping is a more interactive and design-based approach applied without being conscious of the results. The chosen theme will be depicted on a map during the fieldwork or the academic analysis. This method will help to raise hypotheses which other methods might later answer. Also, it will help the author to make choices in the thesis project.

Q1 Q2 Q3 Q4

### Observatory fieldwork

A method is an approach to fieldwork and site visiting. This approach is similar to the semi-structured interview since the merge of the prepared program of fieldwork and openness for discovering the local, informal and unstructured environment. It will be the primary fieldwork method since the project's goal is related to the specific zones sparingly. proactive.

### proactive

Q5 Q6

### Research by design

It is one of the most popular methods in the planning and design fields. The design process is considered research. As a result, the research will be combined with the solutions, which will be concluded as the research outcome. It will be adapted to the design framework and the research part with hypothetical questions.

Q2 Q3 Q4

### Critical mapping

Mapping is the essential method. This method will help to spatialize political, environmental, social and economic themes. It will also inform the state of stakeholders. However, the critical approach leads to the chosen information. This method will be used throughout the entire process of the thesis.

Q2 Q3 Q4

### Scenario building

It is the process of creating different storylines for future development. The stories have to be concluded with the main forces and outcomes. The different realities and results might visualize the amplitude between possibilities and show the most stable elements in the subject. This method is the base for the research framework.

Q2 Q3 Q4

### Pattern language

A pattern language is a method to identify the elements in the system and their interdependencies. The theory was developed by the architect Christopher Alexander. According to the author, the systems are more complex than typical hierarchies. Therefore, the elements' links are diverse and guide to other dependent elements. This method is used as the main base for the co-operational framework. The links connect elements of planning and design through different scales and spaces.

# timescale

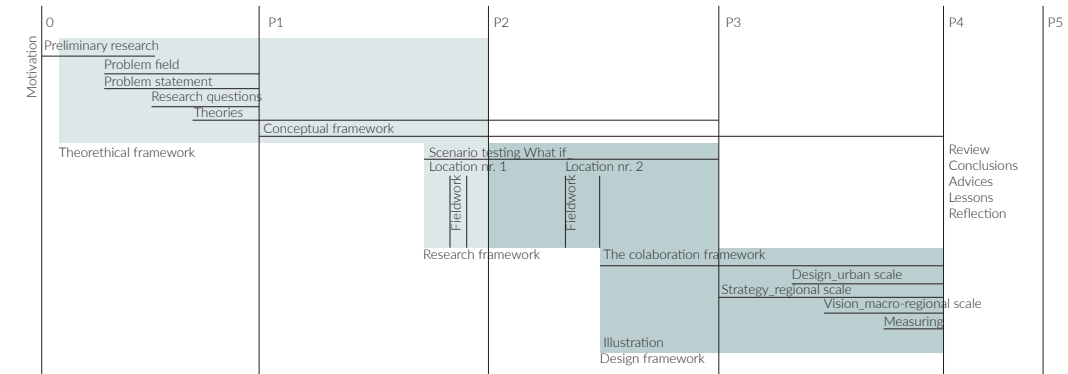


Figure 27: The timeline, the periods of the project and the outcomes. Source: author

# abbreviations

BPO	Baltic Port Organization
BSR	The Baltic Sea Region
BSSSC	Baltic Sea States Subregional Co-operation
CBC	Cross Border Cooperation
CBSS	Council of the Baltic Sea States
ESPO	The European Sea Ports Organization
ESPON	European Spatial Planning Observation
EU	The European Union
EUSBSR	European Union Strategy for the Baltic Sea Region
GDR	Germany Democratic Republic
HELCOM	Helsinki Commission
ICZM	Integrated Coastal Zone Management
LTP	Long term perspective
MSP	Maritime Spatial Planning
USSR	Union of Soviet Socialist Republics
VASAB	Visions and Strategies around the Baltic Sea

# III

# research

This section is dedicated to understanding the current state of the leading research elements of the entire thesis. Additionally, it is focused on three hypothetical questions 'What if'. They are related to the three pillars of sustainability: environment, social and economic. The section will focus on cooperation, ports, cities, the Baltic Sea Region and manufacturing as a connecting aspect of all the previous elements. Also, the review of the three questions:

01. What if: The sea ecosystem is balanced and it becomes a non-polluted water body internationally?
02. What if: The BSR is acknowledged as a unity, and citizens constantly migrate within the macro-region?
03. What if: The region becomes a self-sustaining platform for sharing resources and knowledge?

SWOT analysis in 3 scales will conclude the research chapter. Finally, the representation of stakeholders and focus topics will lead to another chapter where the research and analysis will be used for design and planning solutions.

## what the BSR is

### history

Legal cooperation among countries around the Baltic Sea was established in 1978. The main reason was the natural environmental issues and exploitation of the Baltic Sea. There was acknowledged that all the influencers of the Baltic Sea whose actions directly affect the common and shared natural resource have to take action jointly. The countries which signed the petition were Sweden, Finland, Denmark, Poland, USSR and GDR. Since then, the political and geographical conditions have changed drastically. The documents, strategies and culture of cooperation have evolved. However, the main issues stay the same. They are related to the sea conditions, energy, safety issues and relations among countries.

### water approach

The initial intention of the cooperation was based on the territory of water bodies and the inflowing rivers. It forms the catchment area, which is the territorial projection of the BSR. This is why a country like Belarus is a part of the BSR macro-region. Meanwhile, only the Northern regions of Germany cover the catchment of the BSR. In order to legalize this agreement, it had to be applied at a political and territorial level.

### political approach

Catchment area and administration borders crossover each other in territorial approach. That is why territorial legal evidence is based on some countries' local regions, counties and regional governments. This approach is vital in delegating the issues to stakeholders.

### the BSR in the research

The broadest definition and territory are considered as the BSR in this research. It encompasses 10 countries and the Baltic sea itself. This approach will help identify the complexity of the entire macro-region, which is one of this research's goals. Therefore, all parties of the BSR are considered, yet they are positioned differently in the thesis.

### governance

The core macro-regional plan was published in 2009 by the EU. This document involves only the EU member states. Nonetheless, the leading organizations formally cooperate with other member countries of the macro-regional community and sustain the BSR. Around 600 different organizations and initiatives from different stakeholders overarching the entire BSR. However, the formal institutional ones are only 11. They focus on particularly governmental (rarely regional authorities) policy decision making and governing. Consequently, the thesis will be based on elaborated documents and approaches, which are EU-related politics.

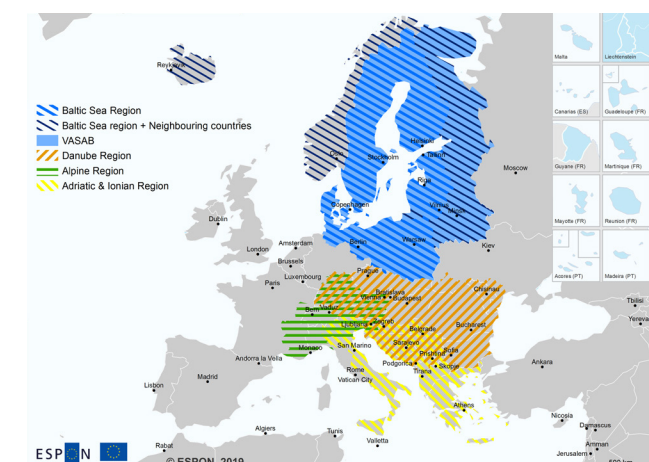


Figure 28: The Baltic Sea drainage basin. Water system approach. Source: <https://www.grida.no/resources/8293>

Figure 29: EU Marco-regional strategies' perimeters. Political approach. Source: [https://mrs.espon.eu/assets/img/MRS\\_perimeters](https://mrs.espon.eu/assets/img/MRS_perimeters)

# policy of the BSR

## EU strategy for the BSR

The policy of the EU macro-region is based on the leading document called “European Union Strategy for the Baltic Sea Region” (EUSBSR). It was published in 2009 and is linked with the Action plan. The last Action plan was updated in 2021, containing governance aspects, goals, tasks and specific projects. However, all the elements are based on mainly 4 governing groups, which cover the actions in the same spatial and governance scale. The planning system is legislative and top-down.

3 main objectives tie all actors and governance: “Save the Sea”, “Connect the Region”, and “Increase prosperity”. The interest and expertise in these three aspects connect the institutions around the BSR. Nevertheless, all the representatives focus on their own strategic goals and tasks.

There are 14 policy areas which separately cover different policy areas. These policy areas are covered by a specified public institution, ministry or organization from a different country of the BSR. There are several exceptions where international organizations take the lead. Spatial planning is one of them. VASAB and Helcom organizations are responsible for spatial decisions on territorial and Marine planning, respectively. Nevertheless, the planning is spatial, and the main output is vision macro-regional projection. The complexity and interconnectedness among Policy areas are weakly evident.

The strategy is based on open and transparent participation, inclusiveness and multi-level governance. Therefore, the planning obligations depend on stakeholders' ambitions and activeness or passiveness.

## Council of the Baltic Sea states

One of the leading and noticeable organizations is the council consisting of ministries. The new “Vision for the Baltic Sea Region by 2030” was carried out in 2021. This document highlights priority fields: Regional Identity, Safe & Secure Region, and Sustainable & Prosperous Region. These aspects broadly represent further actions and loosely correlate to the 3 fundamental objectives. On the other hand, it concentrates well on highlighting cross-border politics for 5 years. As a rule, any direct funds are not linked to this strategy. Nonetheless, the main stakeholders, prime ministers, are also expected to act financially on these goals.

## other organizations

There are many other organizations and strategies which they carry out. Some of them are more relevant to this project due to spatial implications. One of the more essential strategies is the sub-regional South Baltic region strategy and organization.

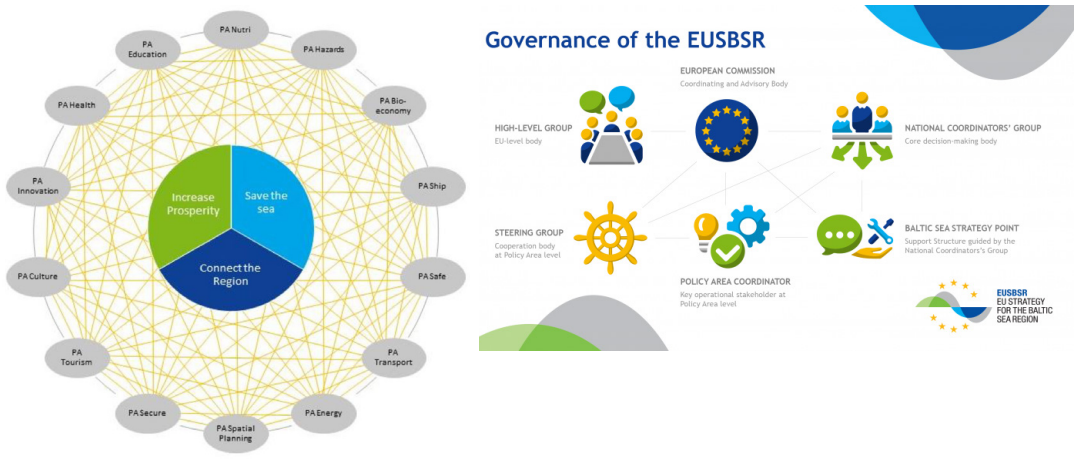


Figure 30: EUSBSR objectives, policy areas and their interrelation. Source: EU Strategy for the Baltic Sea Region. Action plan, 2021

Figure 31: Governance structure and institutions of the EUSBSR. Source: [https://www.balticsea-region-strategy.eu/images-x/EU-SBSR\\_Governance.png](https://www.balticsea-region-strategy.eu/images-x/EU-SBSR_Governance.png)

## Policy Area: Spatial planning

Due to the spatial focus of this thesis, the policy area of spatial planning will be investigated in a broader sense. The organization “Visions and Strategies around the Baltic Sea” (VASAB) is responsible for formulating a macro-regional spatial vision. Therefore, the focus is territorial, involving the countries of the EU and neighbouring ones (Figure X). The intergovernmental organization focuses on 4 main themes: Urban-rural linkage, Accessibility, MSP and Territorial monitoring. These themes partially cover the core objectives of the entire macro-region.

There has been carried out 2 spatial visions and frameworks for spatial development in the BSR. (Figure 32, 33). The new vision plan is being updated according to a new methodology. However, several development patterns can be observed through all three vision updates.

The methodology is based on the main spatial typologies. The current methodology entails 4 spatial categories: “pearls”, “strings”, “patches”, and “system”. These elements represent urban nodes, infrastructural interlinks among them, countryside landscape typologies and the functional synergies among them accordingly. Additionally, all plans highlighted cross-border cooperations or functional regions (Figure 34).

Despite the jointly accepted vision, there are several open questions which have to be answered in order to empower the vision. The vision map mainly highlights urban structures. However, the updated plan introduced non-physical links and countryside landscapes. Still, it is a very abstract spatial perception..

The scale of the maps is another specific aspect. The observed top-down approach justifies the continental scale vision images. It does not include implementation strategies, so there is no scaling down. The plans stay abstract enough to interpret throughout time.

Finally, there is an unidentified link with other policies, including the vision of the Council of the Baltic Sea states and other non-spatial strategies. The linkages among policy documents are limited in practice (Figure X). Therefore, integrated actions towards the 3 main objectives become inefficient.

The next step of the updated vision is an Action plan. Stakeholders are addressed in the final stage. However, the plan mainly introduces public sector actors which systemically follow the sequence of public sectors: national and regional authorities and organizations.

Helcom is an equally important actor in spatial decisions. Nonetheless, the initial concept of the commission was focused on Sea issues. The monitoring is a successful example of complex analysis and representation. Nevertheless, the pieces of advice are poorly intervened in other policies. This way, it weakens entire macro-regional planning.

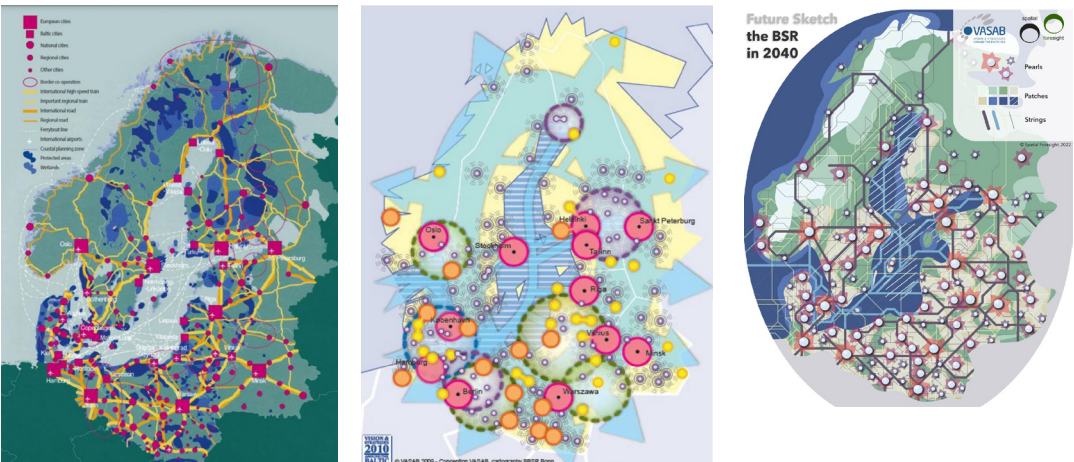


Figure 32: Illustration of the BSR vision 1994. Source: Vasab

Figure 33: Illustration of the BSR vision 2009. Source: [https://vasab.org/wp-content/uploads/2018/09/VASAB\\_long\\_term\\_perspective.jpg](https://vasab.org/wp-content/uploads/2018/09/VASAB_long_term_perspective.jpg)

Figure 34: Sketch illustration of the BSR vision 2040. Source: Update of the VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region, 2022



# ports

Ports are one of the leading territories in the scope of this project. Therefore, the brief research of the port planning and prospects of development. The current plans for Karlskrona and Klaipėda ports will help to position these territories in the context of European and future trends context.

## correlation between port and city

It is crucial to position the study case ports to understand their scale of performance and impact. Both Karlskrona and Klaipėda ports are considered comprehensive ports. However, Klaipėda port is the country's national and only port. Karlskrona belongs to the secondary port network, which means a considerable part of the territory is private. The ports can be categorized according to city division (Figure X). Klaipėda is a regional port city. Meanwhile, Karlskrona is a Coastal port town. The categorization is important for resources for cooperation and transferability of outcomes.

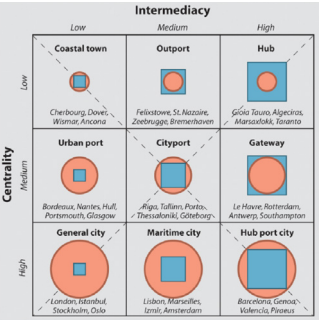
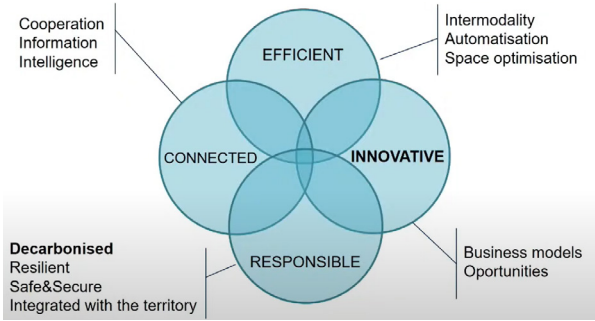


Figure 35: Typologies of Port city scale based on size and traffic intensity. Source: Ducruet, The port city in multidisciplinary analysis, 2011

Figure 36: Future port quality aspects and targets. Source: presentation of Valencia port representatives in Baltic Ports Organization conference, 2022



## vision of the future port

The ports are envisioned through 4 essential values of the ports in the future: efficiency, connectedness, responsibility and innovativeness. (Figure X). The first two aspects legitimize the current necessity of ports: efficiency and connectedness. Responsibility and innovativeness are the values that have to be considered and planned in depth. "Integrated with the territory" and "Cooperation" aspects will be investigated more in-depth in this thesis.

## manual for European ports

The ESPO Green Guide 2021. "A Manual for European Ports Towards a Green Future" is a comprehensive strategic document entailing the spatial, sustainable performative green future of ports. It judiciously highlights target goals, responsibilities and elements crucial for implementation. (Figure X) After all, it directs the development of European ports. The green port is envisioned as a pollution-free actor and, more holistically, includes local communities or soft power and soft tools. Environmental priorities are highlighted as a leading goal in the Green Guide.

Relations among stakeholders and territorial evidence have some aspects and categories. The territory of influence is elaborated more (Figure X). There are 3 categories and spatial evidence:

1. The port authority
  2. The port area where is the distinction between transport and other industrial, real estate, and energy functions
  3. The broader community around the port
- Altogether, these definitions describe the comprehensive perception of the port.



Figure 37: Environmental priorities of European ports: ESPO Green Guide, 2021

Figure 38: Proportions between stakeholders and their influence on space and decisions. Source: ESPO Green Guide, 2021

## Baltic port organization

The organization works as a knowledge exchange, supporting and co-operational platform for ports in the BSR and EU member states. Despite its cross-border approach, the organization is not interlinked with the general governance system of the BSR. The community can shape the priorities and agenda in a more dynamic independent pathway. However, the economic power of ports and their surroundings is unarticulated and not interlinked with general policy objectives ("EU strategy for the BSR"). As a result, the potential for economic prosperity and coordinated actions on the sea environment is overlooked.



Figure 39: Typologies of Port city scale based on size and traffic intensity. Source: Ducruet, The port city in multidisciplinary analysis, 2011

## Klaipeda port strategy: green port

The document explains the development direction towards green activities and less polluted environments with advancing technologies in port activities. There are the main priorities of pollution management highlighted. However, there needs to be more ambition related to depollution, integration or compensation of the natural environment. Other social or economic relations are disconnected from the green aspects. Finally, there is no spatial evidence in the document. The spatial and strategic documents are not related efficiently — such a planning and strategy practice foster segregated or unbalanced relationship among actors.

Klaipėda port has considerable legal power and concentrates cross-scalar interests and actors there. As the state port, it ensures the public sector needs, unites, and diversifies it greatly. Nevertheless, the companies located in the port can work and plan independently, influencing the development of the port, city, region and sea environment. The government is not responsible for spatial development. Meanwhile, social tension between public society-citizens of Klaipėda and the port authority and local companies is accelerating segregated development. The development vision is based on offshore territorial expansion towards North and South territories (Figure X), leaving space for city development. This partially contradicts the green port development recommendations (ESPO Green Guide, 2021). The port authority is the stakeholder who could coordinate the management and framework of the private companies in the port.

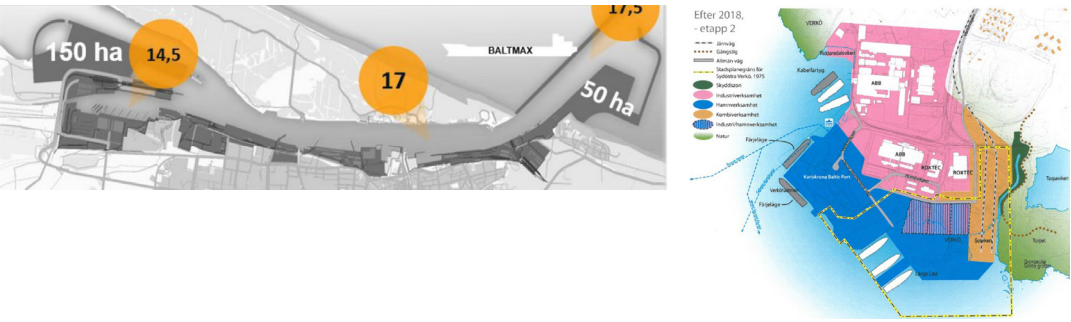


Figure 40: Scheme of envisioned territorial expansion of Klaipėda port. Source: Seaports in the Baltics, 2017

## Karlskrona port development

The considerably small port is distant from the city centre and residential neighbourhoods. The strong duality is evident since there are two owners of port land: a private company and the regional government. There is only one manufacturer in the port territory. The rest of the territory is devoted to logistics and passenger ferries.

The joint detail plan has been carried out. It is based on the general city plan and territorial development. Functional characteristics and scale of the port can be more comprehensive strategic planning. Therefore, cooperation between the two landowners of the port is not identified. The infrastructural development covers all needs of the stakeholders.

A new territory claim for expansion is planned on the harbour's west side.

Figure 41: Karlskrona port development and functional zoning scheme. Source: Detaljplan för Verkö 3:1 och 3:25 m.fl., 2020

# history

## Hanseatic league

This is a historical geopolitical and trade cities union which has a strong legacy nowadays. “The Hanseatic League is ‘probably the best-known historical organization of cities as a network” (Taylor, 2004). This is closely related to the concept of soft space and port cities and their development.

### goal

Despite the primary goal of trade, cities “were more than merely a trading network but cooperated very closely in terms of mutual economic, political, and security assistance and coordinated their rules and activities” (Bussmann, 2018). That indicates the complex (social, cultural, political) developmental network which was driven by international economic activities.

### cities involved

“There was no fixed register of members, and the participation of single cities changed remarkably in time because membership was defined by the traders living in the city (Bussmann, 2018). Lübeck was the most active and mostly involved city of all. It is evident in the architectural heritage and urban fabric of the city. It was considered a centre of governance. Nevertheless, Kaliningrad was most especially a central city. Thus it is one of the best connectors in the spacioeconomical geography.

### governance

The governance structure contains many features of informal, inclusive, soft, performative, and demand-driven planning. “Many of the political structures were weakly institutionalized, the meetings of the main governing body, the Hansetag, took place irregularly, and a formal admission procedure for new members was introduced rather late. The Hanseatic cities were not all equal in their status, reflected by the seating arrangements, which influenced the order of voting, a crucial aspect in a system based on consensus” (Bussmann, 2018).

From today’s perspective, it is possible to state that the private sector was dictating the position in the union and international and local governance of cities and the entire union. “Trading activities and companies played a crucial role in the advancement of city networks, most prominently in the region around the Baltic Sea” (Bussmann, 2018).



Figure 42: Clusters of cities which belonged to the Hanseatic League. Source: <https://media.euobserver.com/f395a01aa980258e-f13ee1661d227ed8.jpg>

# levels of cooperation

It is essential to define what are the levels of coexistence and what defines cooperation.

### sharing information

The level of shared information open data is already the case among a number of cities in the BSR. However, it is a very limiting and voluntary method. Also, sharing does not ensure that the information is taken, considered, interpreted or used in further development. It only formally informs other actors.

### integration

It is the highest level of spatial relation. This approach is relevant in the context of the entire BSR. Yet, the central aspect of interdependency is the unification of the territories and development processes. This is possible only when neighbouring territories follow the same developmental pathways. These aspects were not considered a strategy and must be applied in different cities and regions.

### coordination and cooperation

This project is focused on cooperation as the middle option for territories which are located in different contexts. The integration is complicated due to physical and political distance. Meanwhile, there have to be stronger relation ties in order to integrate the entire macro-region.

### existing cooperation in the BSR

The co-operational development has been central since the first strategies and international agreements in the BSR. As a result, there has been developed existing synergies and a Baltic Sea cooperation culture already. Yet, the intensity differs among counties. It might be explained by economic abilities and resources, the amount of inhabitants, the political culture of cooperation, level of unique production and general societal attitude towards the cooperation. There is the trend that “former Hanseatic towns engage much more in town twinning in the Baltic Sea region than their non-Hanseatic counterparts” (Bussmann, 2018).

The primary and most intensive links ties the biggest countries: Germany and Russia. However, the links with the Baltic States appear more substantial and denser (Figure X). It indicates smaller countries' dependency on ties with bigger ones. The borders and coasts become the main attraction point of the link. Existing policies, traditions, and historic relations has already tied some cities together successfully. The interlinks are already identified and highlighted in some policy documents. The triangle of Baltic Sea South sub-region is based on the links among Karlskrona, Gdansk and Klaipėda.

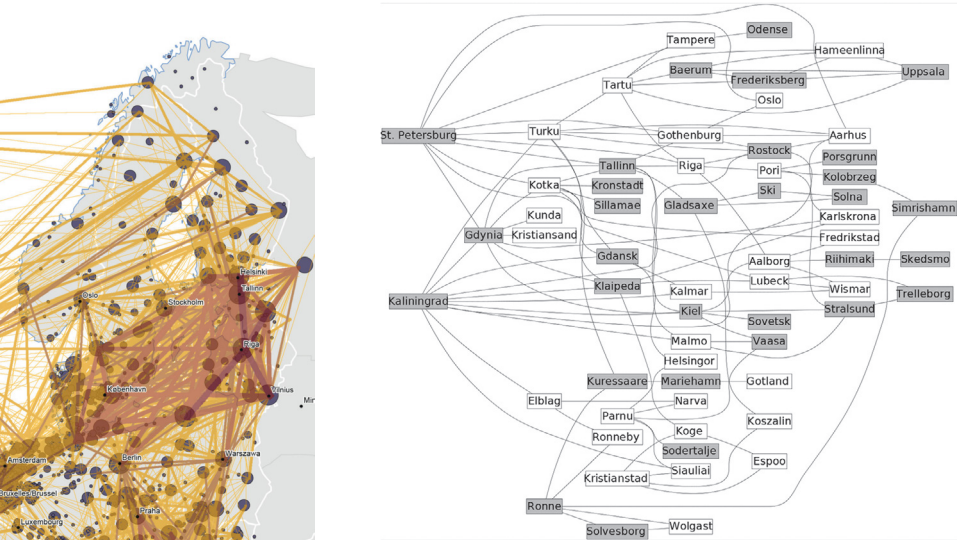


Figure 43: The level of cooperation in the region. Source: Atlas for the Territorial Agenda 2030, 2020

Figure 44: Social relations among cities and towns in the BSR. Source: ??



# manufacturing

Manufacturing practices and businesses were considered as direct links with a port economy. Moreover, the necessity to reexamine urban and port manufacturing became even more critical in the context of local production, circular economy, sustainable development, and industrial shift towards automation trends. There are analyzed research, case study, and policy tracks to grasp the tendencies and vital strategic goals towards the answers about practices of cooperation between cities.

## manufacturing and cities

EU policy (based on Leipzig chart), urban research (Hausleitner, 2023), and current planning practices (makers districts) explore the symbiosis between urban development and manufacturing in the XXI century. Overall, policy track turns to manufacture are a vital aspect of the future city development in the EU. There are 4 main aspects which benefit both a city and manufacturing businesses from a synergy between them (Hill at al., 2020):

#1 Creating a thriving economy

#2 Stimulating innovation

#3 Addressing climate change & environmental impacts

#4 Providing economic and social inclusion

These aspects are closely related to all sustainability goals and general urban problems. However, specific target points must be identified, which would be directed to local problems.

## cities of making

Recent research and case study papers have investigated manufacturing specificities and tendencies in 3 cities: Brussels, Rotterdam and London (Hill, A., 2020). In the book called “Cities of making”, there are concluded principles, tools, limits and implementation of urban redevelopment strategies with case study examples. The pattern language method was used to identify the system and elements needed for planning urban manufacturing. The collection of patterns might be taken as a tool to test the influence of manufacturing in other contexts.

## EU policy

The rapport about manufacturing in cities reminds us that cities are directly related to innovation. This is the beginning of the recommendation paper for the EU cities and industrial development. Furthermore, the rapport brings the perspective further by stating that manufacturing brings innovation into action. As a result, the narrative is structured around bringing manufacturing to places with the potential to innovate.

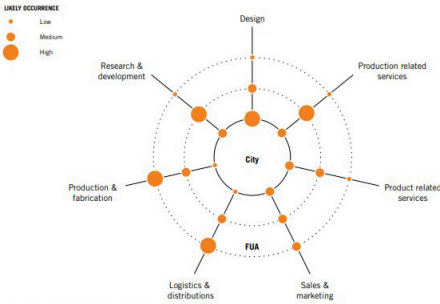


Figure 45: Relation between functional urban area and production processes. Source: (re)assembling the productive city, 2022



Figure 46: Policy scenarios for manufacturing as innovation in a city. Source: (re)assembling the productive city, 2022

# IV

# SWOT analysis

Analysis of two regions, cities and ports

# SWOT Blekinge

SWOT analysis represents the synthesis investigation of case study areas. It is based on the framework of sustainability aspects and the governance of these places. The highlighted words have spatial implications and have evidence in maps of SWOT. These highlights will be used later in the co-operational framework (planning and design section). The analysis incorporates 3 layers of different scales: region, city and port. Both places of Karlskrona and Klaipėda are represented in parallel to see the comparison, differences and potential for cooperation.

	environmental	social	economic	process
strengths	<p>The archipelago system, coastal settlements, low urban intensity, and other natural (wind, landscape, soil) conditions create the region as a <b>safe, natural territory for future living</b>.</p>	<p>The region entails <b>strong and growing urban settlements</b>. Young families and other immigrants moving to the region create a <b>balanced social environment</b>.</p>	<p>The geographical location put Blekinge region in the <b>crossroad of import/export tracks</b>. Spread urbanisation <b>decentralizes the flows</b> of materials, resources and goods <b>connecting the region with surrounding centers</b> (The greater Copenhagen, Kalmar, Gdansk). <b>Leading manufacturing companies</b> (Volvo, NKT) and <b>natural resources</b> sustain local economy.</p>	<p>The region has prepared an ambitious development strategy. Also, Blekinge is cooperating with the closest regions towards common goals. Strategies are based on the existing potential. The level of societal integration is a very high.</p>
weaknesses	<p>Changing climate is diminishing the <b>environmental value</b> and original <b>natural features</b> of the region.</p>	<p>Bigger amount of <b>aging society</b> in the region than in the city.</p>	<p>The <b>extracted minerals or bio materials</b> are sold after extraction, losing the economic advantage of production. The <b>stakeholders of different industries</b> are detached. There is no strong <b>ecosystem of bioproducts</b>, IT innovation sector or hard industries' production.</p>	<p>Spatial, strategic and infrastructural planings are separated. There is no spatial evidence in specialisation strategies or strategic highlights in the plans of infrastructure.</p>
opportunities	<p>Enough <b>natural resources</b> for climate change resistance and strong <b>natural structure</b>.</p>	<p>Growing tourism might influence entire region and give <b>stronger social identity for distant places</b>. Strong regional specialisation would catalyze the <b>social diversity</b> all around the region.</p>	<p>The economic <b>relations among the different sectors</b> and brands would create stronger regional bond. The <b>growing export and specialisation of ports</b> might interconnect them into the stronger regional system. The regional potential. <b>Strong international economic relations</b> (Baltic link) might point the region as an important international node.</p>	<p>The region has prepared an ambitious development strategy. Also, Blekinge is cooperating with the closest regions towards common goals. Strategies are based on the existing potential. The level of societal integration is a very high.</p>
threats	<p>The potential growth of the number of inhabitants would require more <b>intensively used natural territories</b> and <b>expansion of infrastructure</b>.</p>	<p>The climatic shifts might <b>affect the proportions between residents of rural and urban areas</b>. The stable or descending economy might bring <b>more non working people</b> (seniors).</p>	<p>The expanding transitional identity would draw the <b>economic dependency on export/import</b>. This might lead to a region with a <b>vulnerable economy</b>. Developing sectors (tourism, IT) might <b>use the local resources</b> in a less productive way. Advancing economic level might exclude <b>lower economic level stakeholders</b> making the region vulnerable to export or investment shifts.</p>	<p>Proximity to Greater Copenhagen and Kalmar and formal institution of the region can argue better infrastructural investments, livable infrastructure and economic attraction of companies.</p>

# SWOT Klaipeda region

	environmental	social	economic	
strengths	<p><b>Coastal landscapes and protected areas</b> are good transitional flooding zones on the coast of the lagoon. Growing level of <b>forestations</b> in the country enriches environmental structure. <b>Unurbanized main river delta</b> is more resilient environment to flooding and other environmental phenomena.</p>	<p>Region attracts <b>different social groups</b> especially during the summer season. Most touristic and leisure destinations are located by the coasts or in the spit. Stronger counties attract <b>active young families</b> (Tauragė case). The infrastructure and deconcentrated town system attract many <b>citizens to live in Klaipėda</b>.</p>	<p>Vast unurbanized and shrinking urban spaces provide a <b>lot of lands for the bioproduction and other natural production activities</b> in the region. The infrastructure and coastal location have a <b>high level of tourist attractions and routs</b>.</p>	
weaknesses	<p>Productive <b>intensive farming</b> and use of fertilizers is weakening the quality of production and polluting environment drastically. There is shrinking environmental quality. <b>Big patches or fields of farming</b> produces weak production and harms natural species.</p>	<p>The region is shrinking and most of the residents are <b>socially vulnerable, unqualified or non-working</b> age.</p>	<p>Regional <b>activities</b> are mainly <b>monofunctional and dependent on environmental features</b> (tourism, flooding, etc.) The <b>energy economy and infrastructure</b> is based on fossil fuel and have not declared transformation strategy.</p>	
opportunities	<p><b>River basins</b> might be a base for a good planning system for the regional landscapes, urban districts and natural systems. The expected <b>transition in energy sector</b> would require the <b>energy storing and manufacturing landscapes</b> be redeveloped</p>	<p>The regional <b>migration from smaller to bigger urban areas</b> might socially enrich the port city identity and create more diverse communities.</p>	<p>The <b>heritage sites</b> might participate as socioeconomic attractions for the tourism industry. <b>Connecting rotes and infrastructure</b> with the ferries might be the beneficial zones. The region can benefit from <b>port</b> inventing new farming technologies.</p>	
threats	<p><b>Urbanized coastal zones</b> might face the storms, floodings and other natural disasters more intensively. The <b>coasts</b> will be effected irregularly and will break the coastline.</p>	<p>Any <b>geopolitical instability</b> would directly affect social environment and tendencies of migration. <b>Southern part of the region</b> might strengthen emigration because of bigger extremes of the <b>delta floods</b>.</p>	<p>The <b>southern delta area</b> might become economically insufficient to live in due to increasing floods. The <b>coastal territories</b> might economically become weak to sustain tourism because of coastal erosion. The <b>bio production</b> would deteriorate in the context of climate change.</p>	



# SWOT Karlskrona port

	environmental	social	economic	process
strengths	<p>The landscape structure of archipelago system, soil, rocks and protected areas let to develop <b>resilient and independent territory of the port.</b></p>	<p>The port creates the <b>diverse working positions</b> (manufacturing, logistics, transportation and technological) and <b>tensionless relation</b> between local communities and the manufacturing and logistical infrastructure. The ferry transport contributes to the <b>social diversity and exchange</b> between destinations.</p>	<p>The port has the program of <b>diverse activities</b> in a <b>compact territory</b>. The geographical position and ambitious branding set it as an <b>important transnational export-import place</b> connecting the biggest transport corridors (Ten-T), the biggest cities and countries (Goteborg, Gdansk, Gdynia). There is a developed <b>connection to the other logistical and industrial territories.</b></p>	<p>Both private and municipal port territory has integrated diverse activities in a common territory and work towards integrated expansion. The port participates in several transborder initiatives (Ten-T, Baltic Link). The productivity of the port is growing.</p>
weaknesses	<p><b>Spatial limits and protected natural territories</b> on the Verkö island are bounding the expansion of the port.</p>	<p><b>Social group which is working in the port</b> is limited to specific activities and business priorities. It is very <b>vulnerable social position.</b></p>	<p>Both neighbouring <b>private and public ports</b> are insufficiently interrelated. The port is comparatively small and the relations to the <b>main flows of goods</b> are distant.</p>	<p>Both private and municipal ports coordinate the activities separately. Despite the common plans of infrastructure, the enterprises do not coordinate the service or production integrally.</p>
opportunities	<p>Great potential in <b>natural resources and public spaces</b> to adopt to climate change threats.</p>	<p>The greater numbers of citizens would attract <b>more high quality specialists</b> needed in the activities of the port.</p>	<p>The increasing number of <b>newcomers</b> might add the high economic value. The growing economy and improving living conditions might attract greater numbers of <b>passengers by ferry</b>. Growing export/import might <b>expand the port</b> and its importance internationally.</p>	<p>The clear strategic principles and spatialization of the ports might develop better integrated regional system and stronger cluster of ports.</p>
threats	<p><b>Growing port</b> might create more conflicts with the <b>nearest protected and valuable environment</b> both on land and under water. The growing economy might require <b>expansion of infrastructure.</b></p>	<p>The growing number of inhabitants might require <b>more territories claimed for living and working</b> rather than the port activities.</p>	<p>The increasing transportation of passengers by ferry would require more <b>space and infrastructure</b> exceptionally for this service. The <b>infrastructure and docks</b> might be negatively affected by climate extremes.</p>	<p>Unclear strategic principles and specialisation might weaken the port both in the international and regional context or limit its growth.</p>

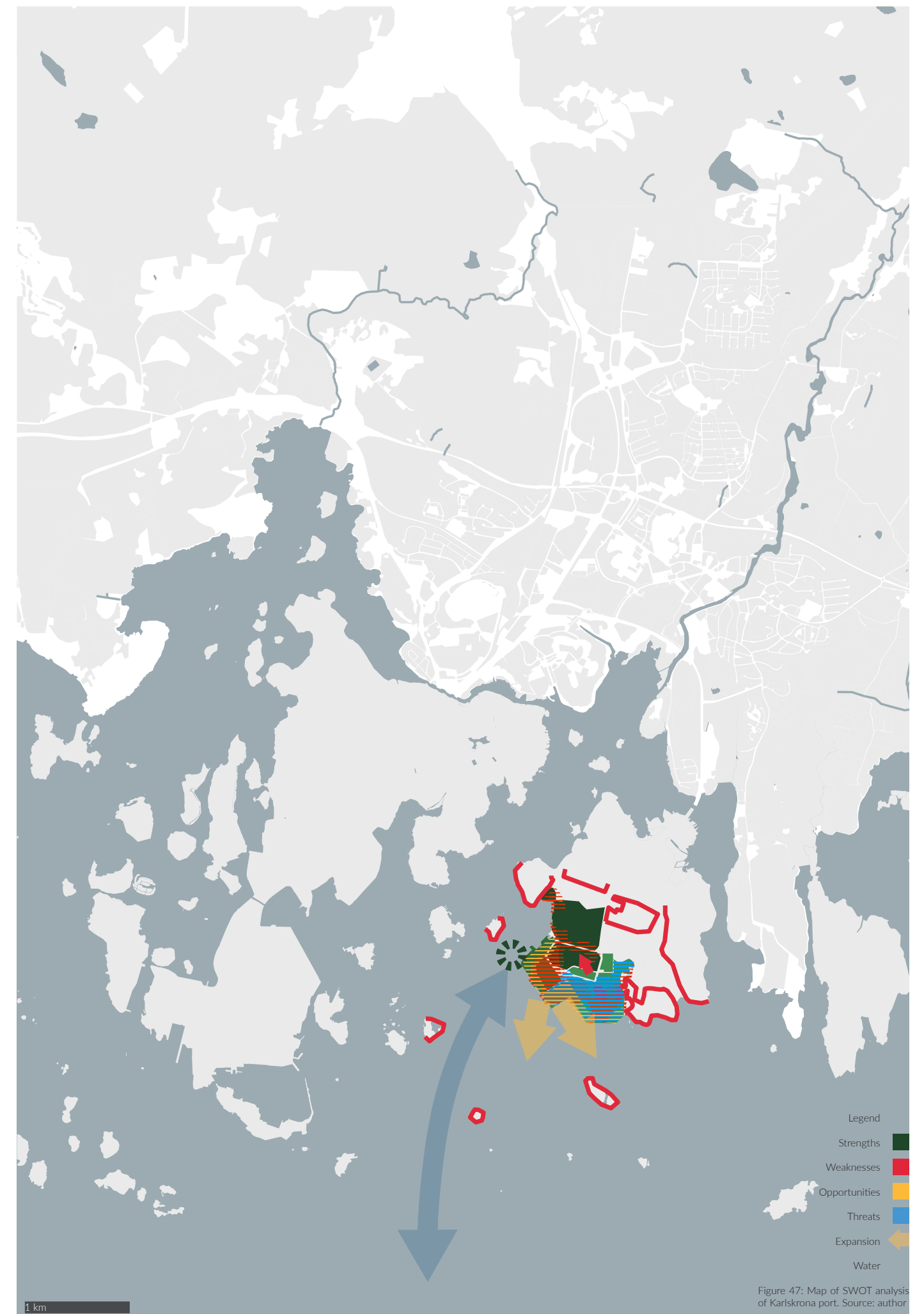


Figure 47: Map of SWOT analysis of Karlskrona port. Source: author

# SWOT Klaipeda port

	environmental	social	economic
strengths	Most of the port activities are <b>logistical</b> and they alone diffuse very little pollution to environment. The compact <b>port-urban form</b> and well developed <b>train infrastructure</b> reduces the transportation pollution.	Diversity of businesses attract <b>specialists from different fields</b> . The publically accessible places between the territories of the port increase <b>social transparency and trust</b> .	The port and the city are developed parallelly with well developed infrastructure, diverse <b>economies and growing capacity of industries</b> . The spaces and infrastructure attract <b>manufacturing, logistics, energy supply and cruising</b> in the port.
weaknesses	<b>Northern territory</b> of the port intersects <b>coastal ecology system</b> of the city from the lagoon. The <b>harbour</b> produces all kinds of pollution <b>affecting the urban and natural protected areas</b> drastically. Water management and treatment is decentralized and insufficient.	<b>Port and the city are detached by hard physical boundaries</b> , territories and do not interconnect for better social mix and other potential activities.	Land use of the <b>harbour territory</b> is based on the model of the growth. Proximity is unconsidered and the <b>historic activities take the same place</b> for low-tech activities.
opportunities	Natural resources of the region might be integrated into the <b>production and logistics</b> of the port. Technological advancement will produce better environmental protection methods.	Proximity between the <b>city and the port</b> might be the catalyst for the interrelation and benefits for each other. The <b>heritage objects</b> on the edge of the city and the port might act as catalysts for social	The proximity between <b>harbour and city</b> territories might be the catalysts for innovation in economic activities. The <b>terminals</b> and links to other <b>transport hubs</b> might benefit both the city and the port. There is a huge potential for the growth of the port.
threats	The <b>expansion of harbour</b> would effect all the <b>natural or protected surrounding territories</b> (Curonian spit, lagoon, the sea, etc.)	Elimination of the <b>heritage sites</b> and buildings might increase conflicts between city and harbour authorities.	Unstable geopolitical context would effect <b>logistical connections</b> between east and west partners of the port.

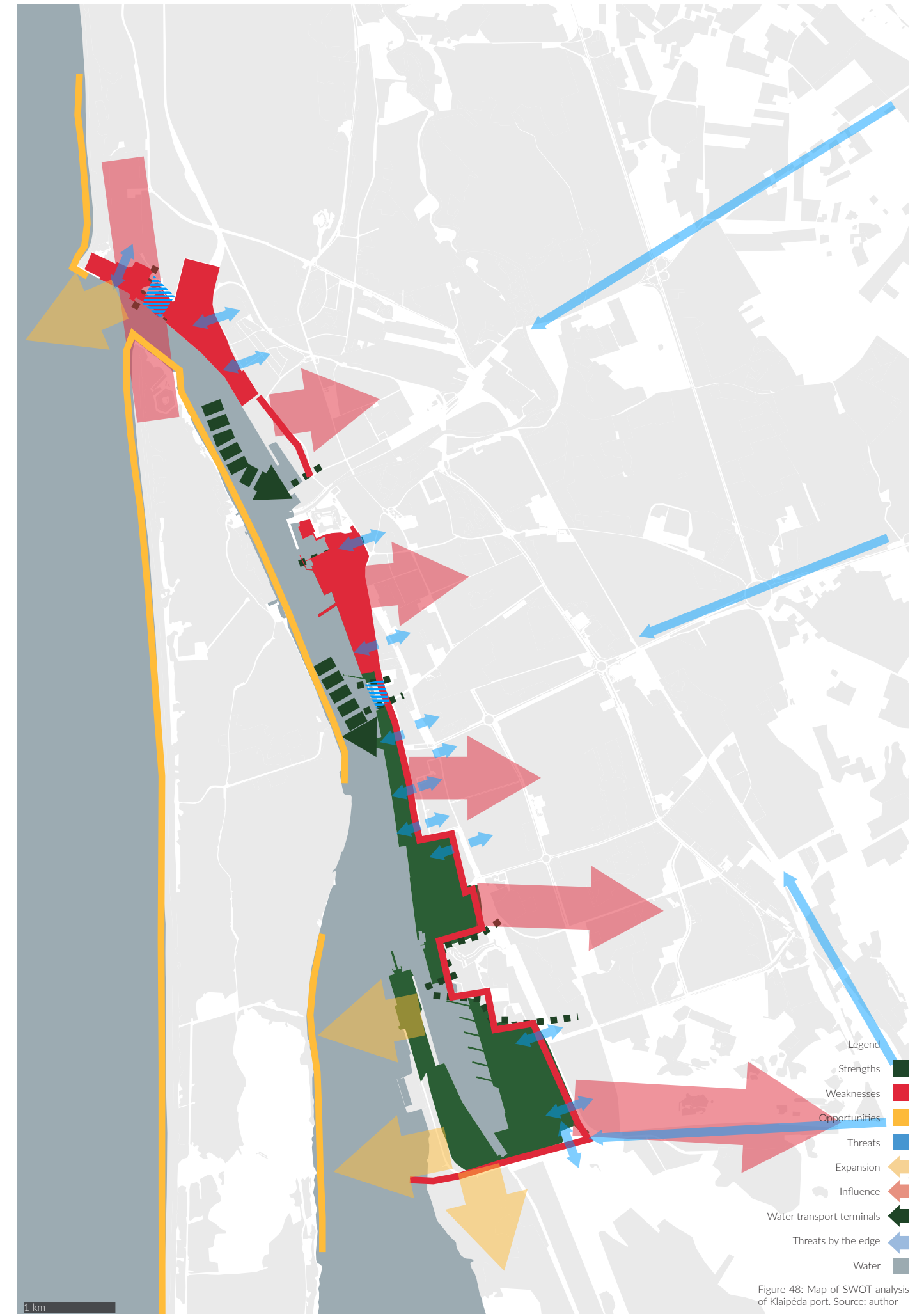


Figure 48: Map of SWOT analysis of Klaipeda port. Source: author



# SWOT Karlskrona

## strengths

### environmental

The archipelago system, rocky soil, natural or protected territories and low intensity urban development create **sustainable and resilient living and working environment. Scenery landscapes and waterscapes** and a number of **valuable territories** is the

### social

The **growing town with young families and newcomers** from Poland and other countries form the socially diverse and strong environment. The **graduates from the institute** who settle in Karlskrona strengthen social environment.

### economic

The town has a strong **emphasis on telecommunication and IT companies** which together with **Blekinge Institute of Technology create innovation** based production. Local historical **heritage and landscape** features contribute to the tourism sector greatly.

### process

Karlskrona has published development strategy with target development areas and principles of design. There is a proactive emphasis on strategic topics (telecommunication innovations, water and heritage tourism and health innovations)

## weaknesses

The **urban design** especially in the central Trossö island are **purely adapted** to the climatic extremes. The most sensitive and affected areas are in the **former industrial sites and coastal territories**. Some especially **heritage areas** are constantly affected by level of flood and other water related extremes.

**Ageing society and specialists** are poorly related to the strategic goals or not intensively involved into the development of the sector (IT, health). The scattered **urban form, landscape structure and instant development** segregate different neighborhoods greatly.

The **scattered development** of the city suppress the development of more **concentrated clusters** and their economy generated locally.

The strategic goals and target areas do not correspond fully to each other in the strategic and development plans. The areas of regeneration are loosely related to the new functional program. The stakeholders are not always identified.

## opportunities

Enough **natural resources and territories** for adaptation for climate change in urbanised environment. The **coast territories** have enough space to work as a barrier for the water related threats. Potential for bigger biodiversity if **stricter zoning rules** are applied.

The safe living conditions towards climate change might attract **more residents**. The growing diverse modes of tourism could attract more **diverse social life and newcomers**. The growing business and manufacturing export might attract **specialists related to the industries**.

The **greater number of inhabitants** would increase the economic vitality and more diverse services. Local businesses and the municipality would benefit from the **growing tourism**.

Integrated planning (spatial, infrastructural, strategic, urban, maritime spatial, environmental) and interconnected strategies might lead to a faster and more accurate development.

## threats

Increasing merging weather extremes and sea level rise would affect **central city, coastal territories and neighbourhoods on low lands**. The overcrowding tourism and seasonality might devastate valuable **natural territories**. The **expansion of harbour** and activities on water would affect the ecosystems negatively.

Due to climate extremes and sea level rise residents might choose living places distant from the coast, leaving the **socially disadvantaged territories by the water**. The disproportionate tourism might **gentrify the core of the historic city**. The economic stagnation might leave the **city socially unattractive for high level professionals**. The growing demand of housing might **segregate citizens** according to the disbalanced housing value. The growing target economies (IT) might attract **specific social groups of specialists**, leaving the others disintegrated in other economic sectors (manufacturing, fishing).

The rising sea level would make the **low and coastal zone** less attractive economically and investment wise. Growing tourism might create unstable and seasonal services and economic environment in the **city center**. The growing demand of housing might increase the housing prices greatly in the **central districts**. The developing innovation sectors might exclude other local important economic sectors.

The current planning process might lead to weak monofunctional structures, strong segregation and car oriented development.

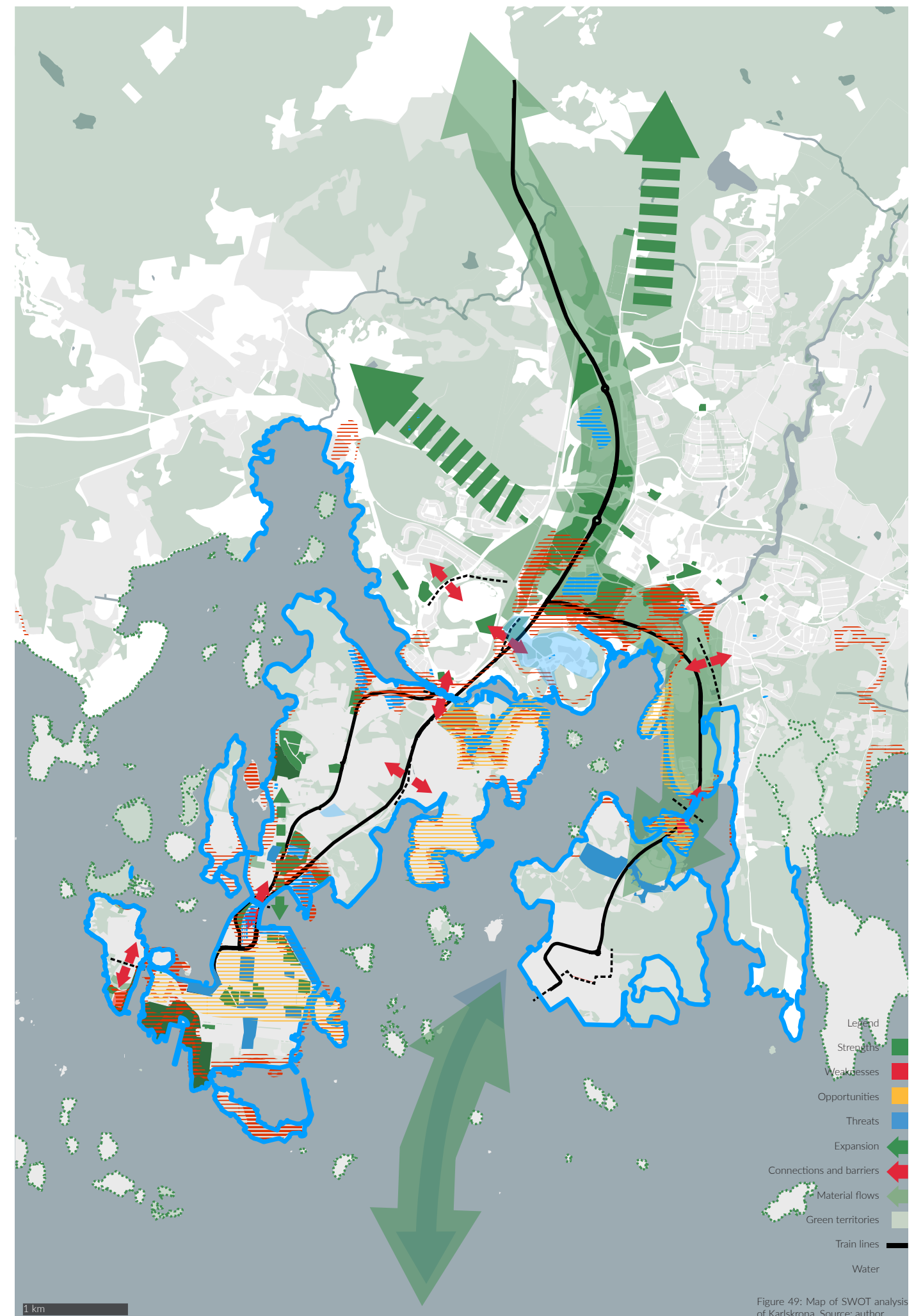
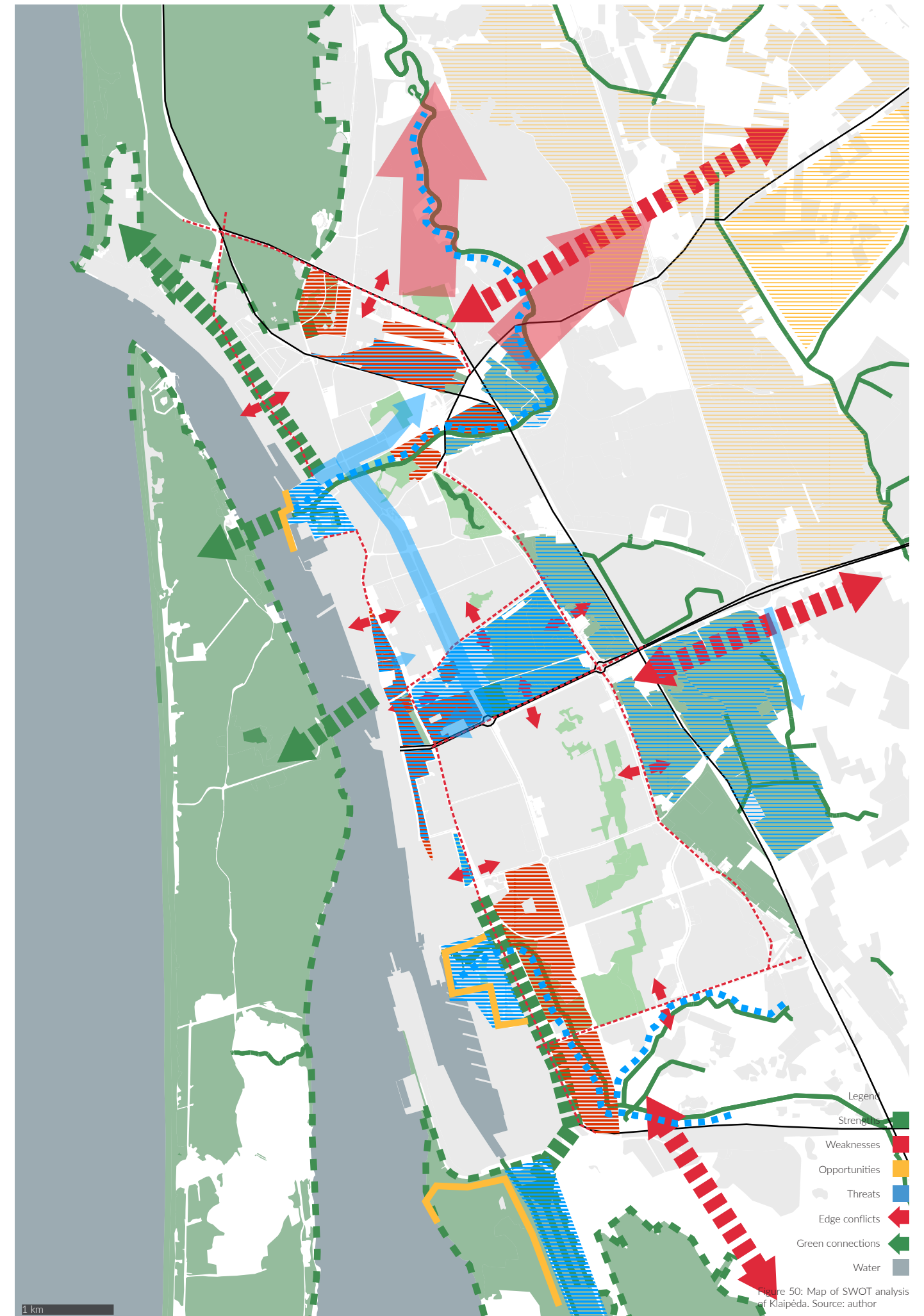


Figure 49: Map of SWOT analysis of Karlskrona. Source: author

# SWOT Klaipeda

	environmental	social	economic
strengths	<b>Protected natural areas</b> around the port and the city stabilise the natural habitats and participate in the process of climate adaptation. They work as <b>barrier</b> for the city and the port. The <b>biggest green territories and rivers</b> in the city forms the essential green structure.	Middle sized city has a <b>considerably big social diversity between locals, newcomers and tourists</b> . The knowledge institutions attract <b>many specialists</b> to settle. <b>Socially different districts</b> are located along the port.	The form of the city contains many <b>areas for manufacturing, logistics and the other port activities</b> . It also has a <b>close relation to touristic and leisure infrastructure</b> . The existing production clusters (wood, plastic, oil) creates <b>ecosystem for compact production and logistics</b> .
weaknesses	Many <b>inside city spaces</b> are used insufficiently (parkings, fields, monofunctional territories, surplus of transport infrastructure). There is <b>poor diversity of green spaces</b> . <b>Territories are fragmented</b> . Most of urban <b>expansion</b> is happening <b>towards the rural landscapes</b> .	The segregation and <b>immigration form countryside</b> is growing. Weak <b>linkages between city and surrounding towns</b> segregates society. The <b>growing suburbs</b> of the city segregates the citizens and weakens the social environment.	<b>City and region are weakly interconnected</b> with a huge gap between small and big businesses. The port is dominated by the <b>biggest companies</b> . Meanwhile, <b>medium and small enterprises</b> are dispersed in the city. There is very little synergy between them.
opportunities	The <b>environmental advancement</b> might be emphasised in the areas where <b>urban environment inserts between the port territories. Unbuilt territories or heritage sites</b> can be developed in an environmentally beneficial way	The city <b>districts along the harbour</b> might be locations which strengthens identity of the port city. The <b>rivers</b> in the urban environment might become the core catalysts for tactical urbanism or social changes. Different <b>harbour terminals</b> might socially affect the <b>closest urban districts</b> .	<b>Underdeveloped zones</b> on the edge of the city and the <b>port and greyfields</b> might become beneficial territories. <b>Former industrial zone</b> have the potential spatially connect the port with the logistical districts on the other side. The cooperation between the <b>port and the city</b> can lead to compact city form and better shared infrastructure.
threats	The <b>expansion of city</b> might affect <b>natural territories</b> and encourage the <b>port expansion</b> as well. Climate change extremes and sea level rise would harm to the <b>urban coastal zones</b> .	The social segregation between <b>different city districts</b> might increase due to disbalanced port activities and <b>terminals</b> .	Unstable <b>manufacturing</b> needs and shrinking population would weaken economy of the city. Tourism might be effected by <b>expanding port</b> .





# stakeholders

Stakeholder balance is disproportionate throughout different scales. Most private stakeholders are active on a small scale (city, port scale). The macro-regional scale involves mostly cross-national and intergov-  
ernmental supportive overarching organizations.  
The links between them are vague or non-recognized. Medium scale actors are in between all stakehold-  
ers managing both sides. There is the most significant potential in medium scale local regions and city  
regions connecting stakeholders.



# focus

The bigger scales have been investigated to make decisions on a smaller scale. Therefore, Klaipėda, Karlskrona, and their environment will be the main target areas.

## manufacturing

The ports, positions in the regions, local infrastructure, resources and historical development of the cities lead to manufacturing in current urban areas. This topic was investigated due to the existing decaying manufacturing infrastructure surrounded by the urban environment. The linkage between the port and the region was also identified through the industrial-manufacturing economic perspective. As a connector between region and port, the city has to synthesize the outcomes of both stakeholders and make the system function. Finally, manufacturing is one of the critical aspects of prosperity.

## tourism

Due to regional resources, existing strategies and current trends, the potential might be uncovered in the sphere of joint tourism vision. There are separately well-developed infrastructures which have the potential to benefit one from each other while being connected. This is an opportunity to test how cooperation can be applied in the same oriented contexts, which usually economically compete in practice.

## migration

Social perception is expressed through the flow of migrants. This aspect will be used to test the limits of different migration modes and infrastructural, cross-border possibilities to improve it. Migration is considered a general tendency. Therefore no decision will be made to limit it. Conversely, balanced migration might bring quality to a living environment.

## notes on public goods

Public goods will be taken into consideration throughout the entire process of design. However, no individual action plan for public goods will be developed. A sustainable planning process will result in existing and new public goods in the case study locations. The design process will be used to identify how it is possible to ensure existing public goods and supplement new ones. Also, the design outcomes will show how far place-specific goods can be identified. Further, it will show what public goods should be universal and should be applied all around the BSR.

## conclusions

The research section helped to evaluate the knowledge and tendencies in different aspects: cooperation, ports, cities, regions, manufacturing, the stakeholders of the macro-region, water issues and governance structure. Despite being considerably short, the conclusions were composed of several methods (interview, literature, document research, fieldwork and example observation). However, the sectoral research did not show the linkages among all the aspects. The following sections will be devoted to the complex application of all the mentioned objectives.

# V

# patterns

language, design and tool for regional and city strategies, design and implementation

## pattern use

### pattern language

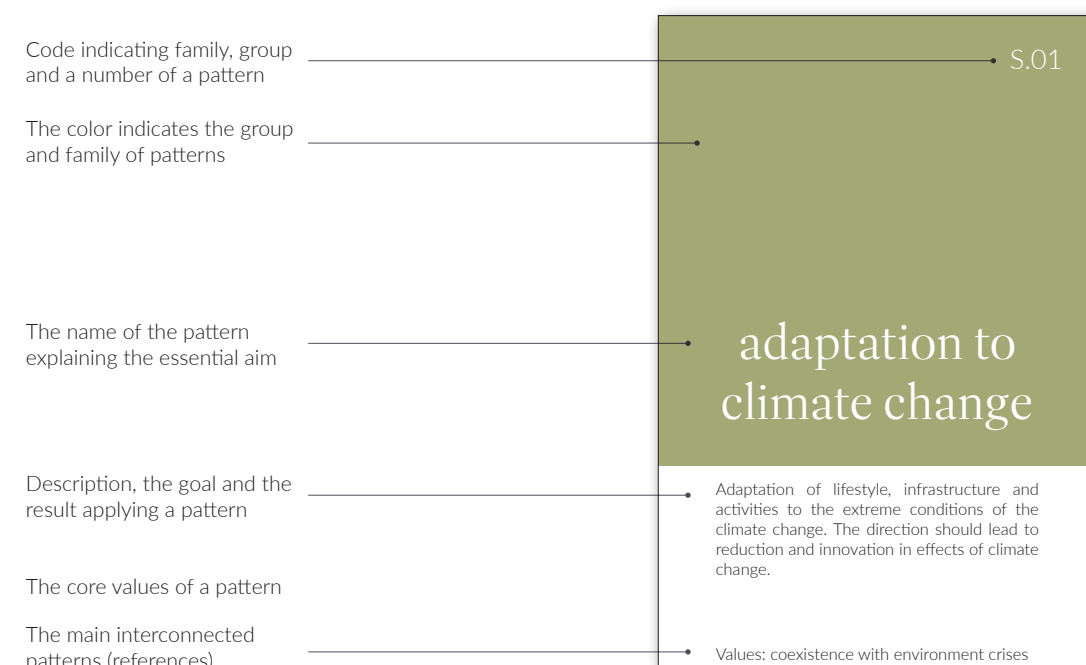
A pattern language is a method used to define the structure of elements and the complex relations among them. As a result, there is a complex structure and interdependencies, and this method helps to grasp and explain it.

The patterns were identified during the research and design process. They were taken from existing examples in the BSR, potentially good examples from other places, the interviewees, the theoretical literature and policy and design exercises. The selection helped to merge the existing planning and design practices with an expected shift towards alternative strategies. Therefore the collection of patterns is a diverse and advanced set of elements for cooperation.

### use of patterns

The essential use of patterns is based on a diverse systemic collection. The sequence might be guided by the identified links among patterns (it is indicated on pattern cards). There are 3 groups of patterns: strategic, design and action patterns. The choices have to be made from different families of patterns. The composition should entail as different categories as possible.

The first strategic layout of patterns must consist of an average of 3-4\* choices. Their collection can be applied to one territorial unity (region, city). The other patterns are picked from other families and have to relate to the strategic pattern. The collection of physical design patterns should also incorporate elements from different scales. Finally, action patterns follow the same principles and must be aligned with chosen strategy and design patterns. Altogether, they are the framework of a strategy for cooperation. The collection can be used for discussion, making priorities, testing scenarios or grasping the complexity of planning. The information on a pattern card is explained at the bottom of this page. The 3 pattern families are explained in detail on the following pages.



\*  
This number is evident as a common arrangement of topics and goals in strategies. Such a choice can keep the complexity of the strategy. On the other hand, it can ensure a unique set of strategy for any region since the total amount of compositions (of 4 patterns) are 7920. As a result, there is possibility to compose 7920 different regional strategies.

Figure 51: Exemplary pattern card. Source: author



# strategic patterns

There are 2 extra patterns ('smart' and 'innovative'). These two patterns are very common in strategies, yet they are too general for the spatial and strategic plans and widely applied all over cities (Stockholm, Blekinge). In this case, they are additional patterns and could be attached to any other pattern. They create additional value to the strategy. Yet, they require additional features and effort to achieve the unique qualities.

These patterns define the strategic pathway. They can be alternatively called political patterns since they help to draw the political priorities in regions and cities. They must connect more extensive (national, regional) scale priorities with locally implemented projects. Therefore, the categories.

## categories

There are 4 groups of patterns sorted after 3 poles of sustainability: environmental, social, and economic. Despite that, some patterns cross several aspects of sustainability. Thus, there are categories of socio-environmental, socioeconomic and en economic. Only one pattern incorporates the entire concept of sustainability: "Degrowth". Most of the patterns are associated with economic activities. This does not lower the importance of other elements. However, it highlights the importance of economic strategies to be more diversified and interconnected.

Due to their comprehensive explication, the strategic patterns might be applied on a big scale: regional, city and district strategies or visions. They will be applied in regional and city strategies in the planning and design section.

Despite being abstractly defined, they direct to other concrete steps and elements of design, decision making and policy. The colours in other patterns identify the links with the strategy.

Figure 52: strategic pattern card.  
Source: author



# physical design patterns

These patterns are necessary to localize the strategies in specific places and formalize them into projects.

## categories

There are 4 groups of patterns which are defined by physical scale. "Areal" patterns target the district or territorial scale. "Node" patterns define from concentrations to block scale. The "Building" group objectifies building scale elements. Finally, the group "Detail" highlights building and smaller scale elements. The application is directly linked with scales.

These patterns are oriented towards more local small scale implementation. The target scales might be the city, district or block (building).

Linkages with strategies are marked in colours. They address the crucial relations with strategies. The sequence of blocks of colours is marked at the bottom of the pattern cards.



Figure 53: physical design pattern card.  
Source: author





# action patterns

The last family of patterns is oriented towards non-physical activities or decisions. They are essential in making performative strategies that stakeholders can initiate. This group of patterns activates strategic and physical choices and turns them into processes.

## categories

There are 4 groups of patterns which address very different strategic aspects. "Cooperation" group represents actions which legalize or legitimize the cooperation process. "Information" group involves more informal patterns vital for communication, participation of stakeholders and information exchange. "Financial" ones represent sources of finances. "Civic" patterns advocate public goods and justice in planning. Therefore they provide qualities for public society.

The action patterns are non-spatial. Due to this reason, they can be applied on any scale, from macro-regional to very local. However, the combination with other patterns might call for a specific scale of actions. The merge of scale and action will lead to specific stakeholders whom the chosen action would address. Therefore, these patterns apply in scales from macro-regional to a block.

The essential relation to strategic patterns is indicated in colours in the bottom line of pattern cards.



Figure 54: action pattern card.  
Source: author

# VI

# planning and design

regional, city, port and district planning and design. Synthesis of research and aims

# planning process

The sequence of planning stages will be depicted throughout the design and strategic solutions: regional - port city scale - district scale. The sequence is essential for the cooperation model.

## regional vision

The vision should identify the key stakeholders and places where the projects should take place. Despite the least power of regions, they appear as catalysts in this cross-border process. At the same time, the vision will help to identify the role of the central city, a port and the regional network in the bigger picture. The vision will consist of 3 to 4 strategic patterns and their spatial implications.

## port city strategy

The port city strategy would perform as a synthesis community for regional goals and priorities. Port and city are considered as partnering and coordinating communities. Therefore, both communities have to carry out a joint vision and goals. The city and port would contain territories or other places where the specific synergies would occur. That is why strategic clusters (manufacturing, energy innovation, logistics, and others) should be identified in the strategy. The infrastructure between strategic places becomes a priority.

## district strategy and design

The lowest planning scale should focus on design solutions, local stakeholders and synergies between them. The mixed-use development is unavoidable in most cases. The development of chosen territories will be explained in detail and different stages. For this reason, the patterns will be chosen and applied.

## co-operational process

Joint planning actions have to be coordinated in order to apply the co-operational model between distant places. The development of port cities and districts should be coordinated in several stages. First of all, joint visioning and goals have to be considered. The development process might take different paths and separate projects. However, the evaluation process is another action that must be considered jointly. The rest of the process might be separate.

## planning principles

A shift in planning practices is necessary in order to reach the projected future. Therefore, planning systems must become performative, developmental, and less statutory. It has to incorporate informality and procedural planning better. Therefore, value-based planning and politics should be appraised in the context of consensus-driven decisions. Strategic spatial planning has to be acknowledged over territorial planning. Finally, general policy-making must contain place-based proof to ensure functioning implementation.

conformative → performative  
regulatory → development  
formal >< informal  
statutory → non-statutory  
substantive >< procedural  
consensus → value  
territorial → strategic-spatial  
legislative → place-based

Planning principles

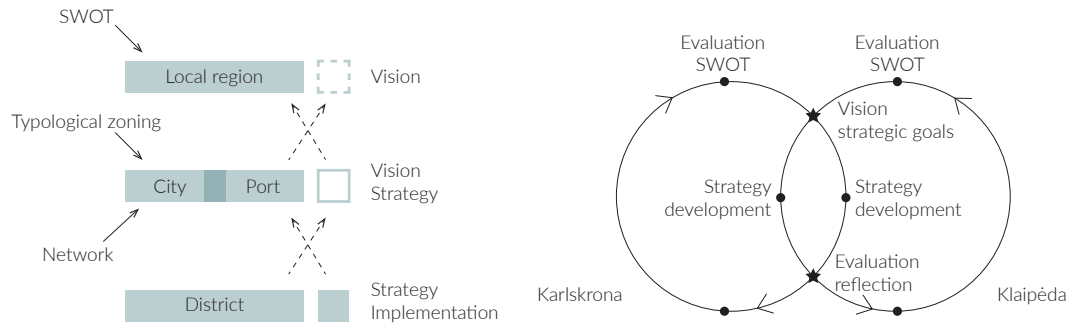


Figure 55: Planning process scheme. Source: author

Figure 56: Cooperation between two places scheme. Source: author



# design process

Design and implementation are used to illustrate results and forms of cooperation. At the same time, the design proposal can become the catalyst inspiration for co-operational processes and it is physical benefits.

The urban design process consists of 4 stages: analysis of the territory, general spatial development vision, implementation strategy and time frame. This urban design model is typical in design practice when each stage informs the following. However, the process of this project was cross-scalar. Stakeholders or defined patterns informed the spatial vision. The time frame was affected by patterns. Analysis was based on elements of spatial vision. Nevertheless, the design and implementation localize the entire process of the macro-regional approach.

## analysis

The analysis part informs spatial vision. It helps briefly scan the main characteristics and potentials of the chosen territory. There are 5 elements in the analysis: references, the image of the place, planning documents, historical perspective and potentials. All elements are concluded in a spatial quality scheme where the main features and potentials are highlighted and addressed in later development.

## spatial vision

Spatial vision defines the core spatial structure which is absent in the territory. The main aim is to balance sustainability aspects, city development and stakeholders' interests. The model of the proposed vision is similar to the analysis part. There are 3 layers: zoning, public spaces and spatial-functional structure. All the elements are concluded in the proposed spatial quality scheme. The vision will only be detailed in later stages.

## implementation strategy

The part of strategy defines the development steps consisting of patterns, stakeholders and identification of specific projects. Patterns are applied from the general pattern list. Stakeholders are identified after the specificities of location, and finally, projects are aligned with patterns and delegated to target stakeholders. Additionally, the patterns of actions coordinate the stakeholders' actions. Altogether, the implementation strategy is expressed through 3 stages, each taking 7 years. The implementation strategy is the final stage which will be evaluated and applied on a bigger scale in different sections.

## principles

The design process requires a statement of general principles and pathways which will help ensure desired qualities. The principles are defined by general urban planning practices, essential international agendas (Habitat III, Leipzig chart) and the urban problematization in the cities of the case study. Additionally, there are named the current planning tendencies that must be shifted to achieve sustainability goals.

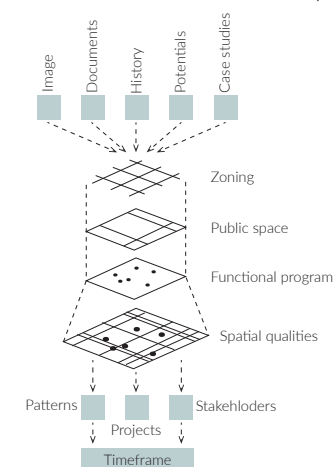


Figure 57: Design process scheme.  
Source: author

functional → qualitative zoning  
monofunctional → mixed-use  
car oriented → humanized  
machine → human scale  
expansion → compact  
demand driven → sustainable

Design principles

# SWOT synthesis

The process of cooperation has to be started from the synthesis of evaluation. The swot analysis is used as a base in this process. The Strengths of one city are being used to confront the opportunities and threats of the other. However, there are exceptions. The weakness evaluation is left out as a natural feature of the place which cannot be affected. Also, the environmental aspect is not considered an element which might influence the distant city. The local environmental aspects must be dealt with in the place itself.

The analogue process of cooperation takes place on the city and port scale. Both port and the city are considered an integrated system. The synthesis of SWOT analysis is applied in the same manner as on the regional scale. The strengths of another place can uncover the opportunities and threats of one place. Finally, the cooperation will be activated by applying strategies connecting strategic aspects on both territories.

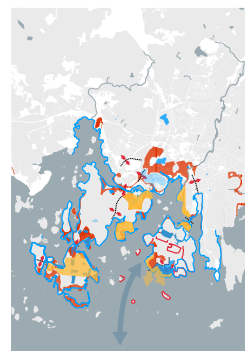
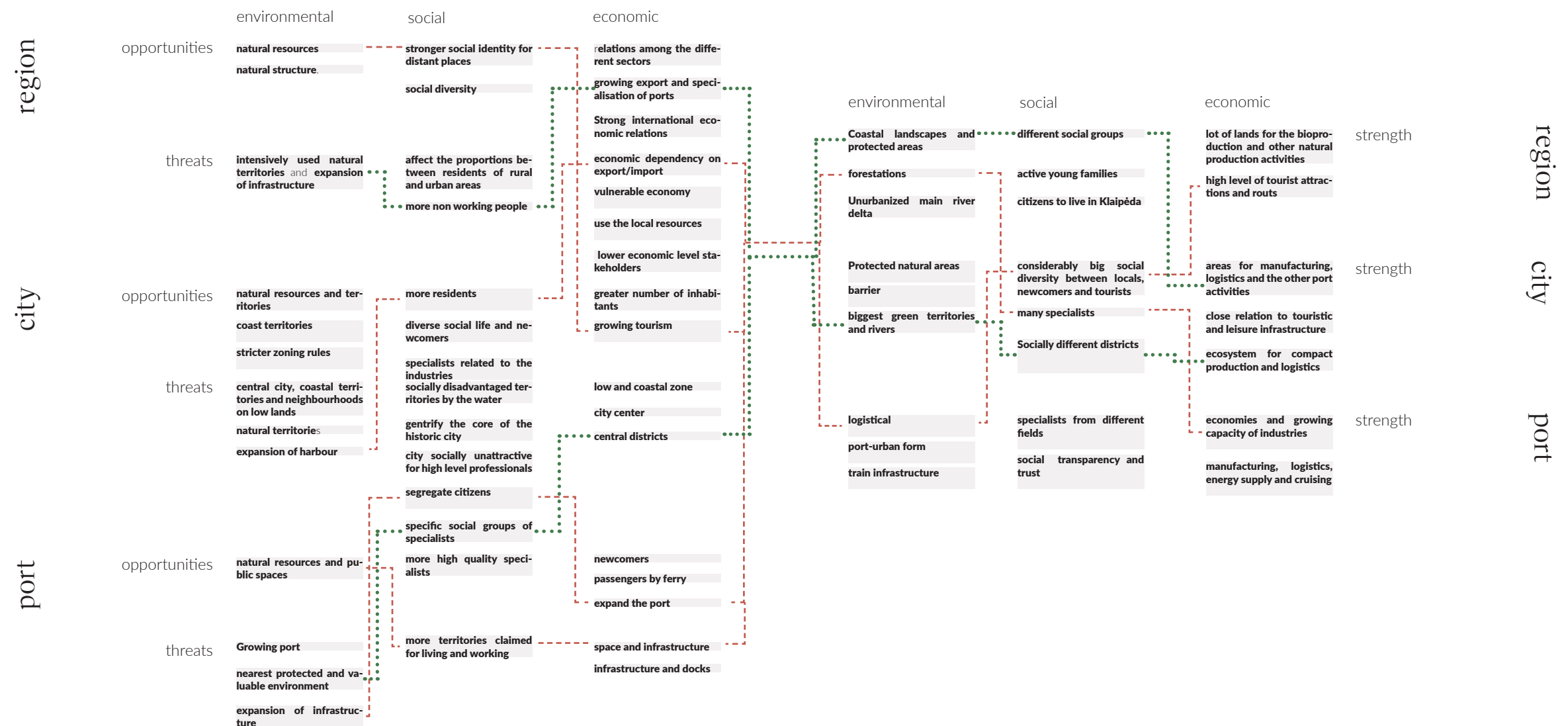


Figure 58: SWOT analysis of Karlskrona. Opportunities, threats and weaknesses part. (Look at the SWOT analysis in "Research" section). Source: author

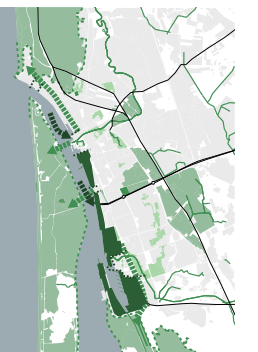
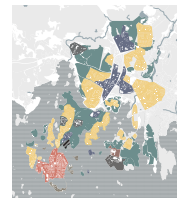
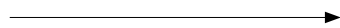


Figure 59: SWOT analysis of Klaipėda. Strengths part. (Look at the SWOT analysis in "Research" section). Source: author

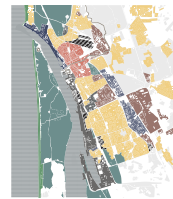


Karlskrona

Strengths



Opportunities  
Threats



Klaipėda

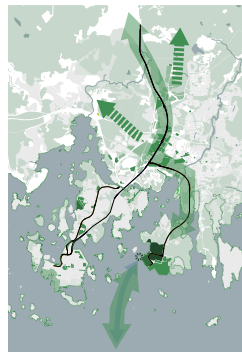
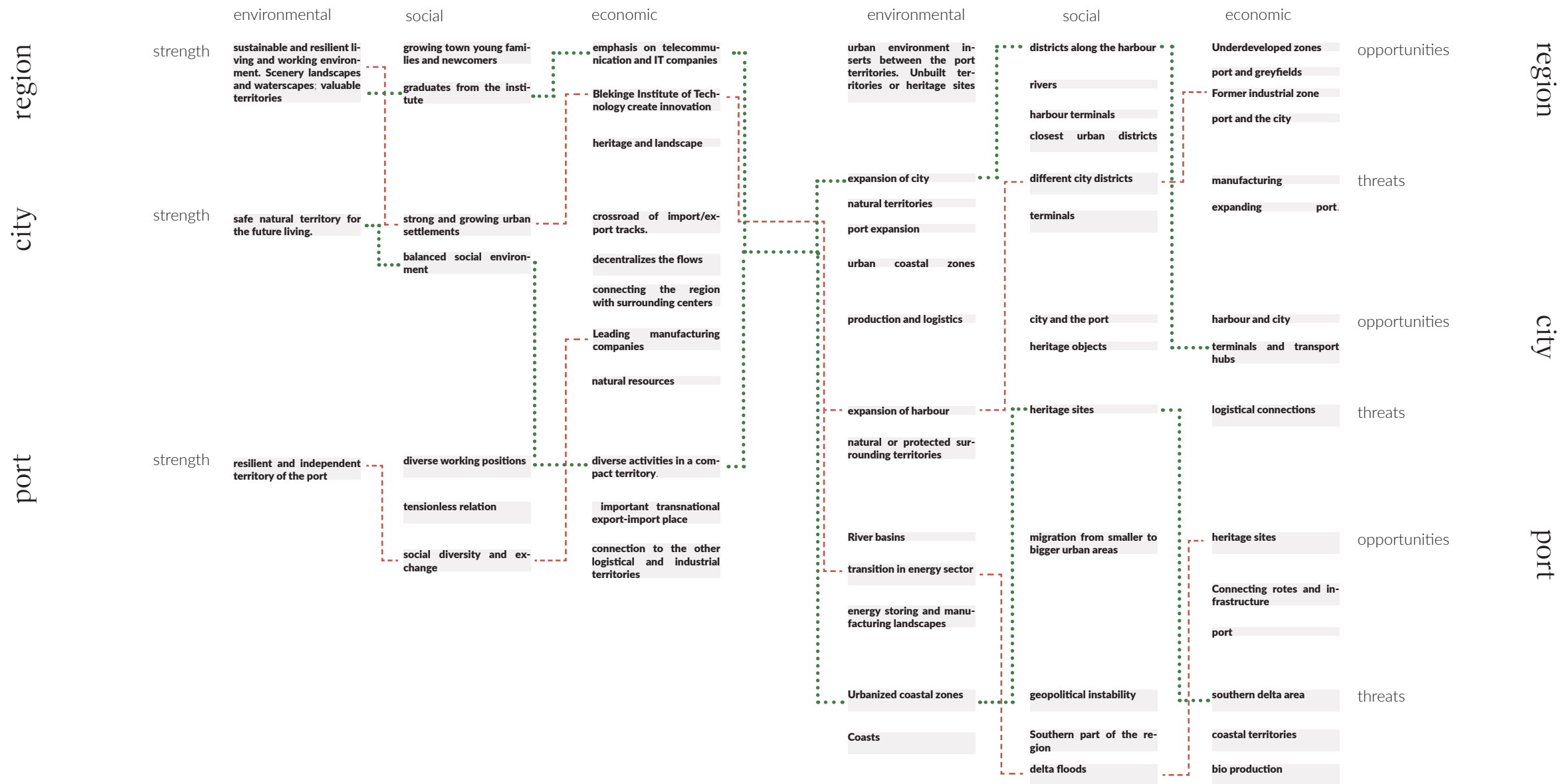


Figure 60: SWOT analysis of Karlskrona. Strengths part. (Look at the SWOT analysis in "Research" section). Source: author

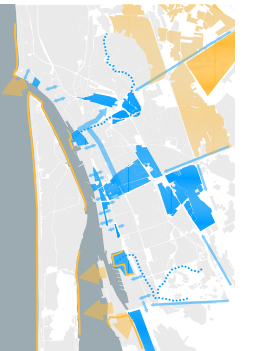


Figure 61: SWOT analysis of Klaipėda. Opportunities, threats and weaknesses part. (Look at the SWOT analysis in "Research" section). Source: author



# regional vision

Blekinge has all the potential to become a region linking the country with other overseas countries and ensuring the expected quality of life on the sea coast.

## regional vision

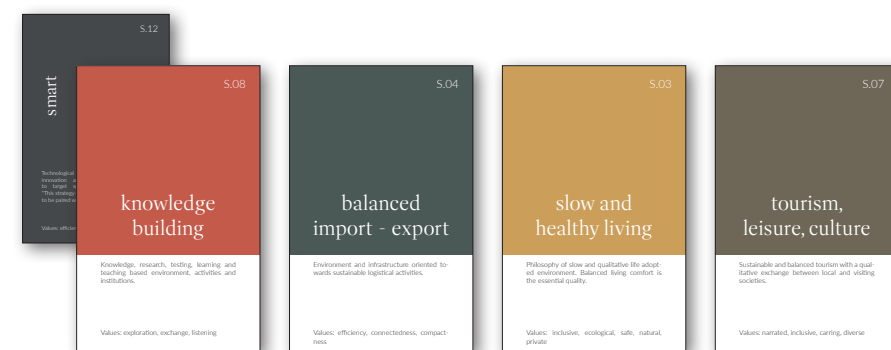
The vision is based on 3 main poles of sustainability and infrastructure, ensuring functioning systems. Natural coastal ecosystems and inner water bodies shape the entire spatial structure of the region. Each river catchment area is directed to the North-South side, connecting the coastal city, archipelago coastal zone and continental bio-productive part. These single systems shape the region connected by coast and transport infrastructure.

Cities and towns differ from each other significantly and focus on different aspects of life and the economy. Karlskrona focuses on digital life and innovations and introduces foreigners to the region. Meanwhile, Karlshamn works on logistical innovations. It is comfortable to live in one city and work in another. Links with Kobenhavn and Kalmar broaden social ties with other regions and regularly move to any other coastal place or city.

The economic activities are place-specific and intersect with one another. Cities cooperate with the countryside. Bioproduction and natural mineral resources are innovated through the perspective of historical manufacturing. The manufacturing processes are coordinated with Klaipėda. Finally, there is the possibility of living in both the city and countryside any season and comfortably moving between them.

## patterns applied

The patterns direct to the strategic, coordinated actions. They involve 4 strategies: "knowledge building", "logistic-oriented balanced import and export", "slow, healthy, qualitative living", and "tourism, leisure, culture". The first leading strategy is considered smart-based and should focus on smart technologies, methods and tools to produce. These strategies direct to other patterns and actions that need to be made to implement these strategies.



## stakeholders

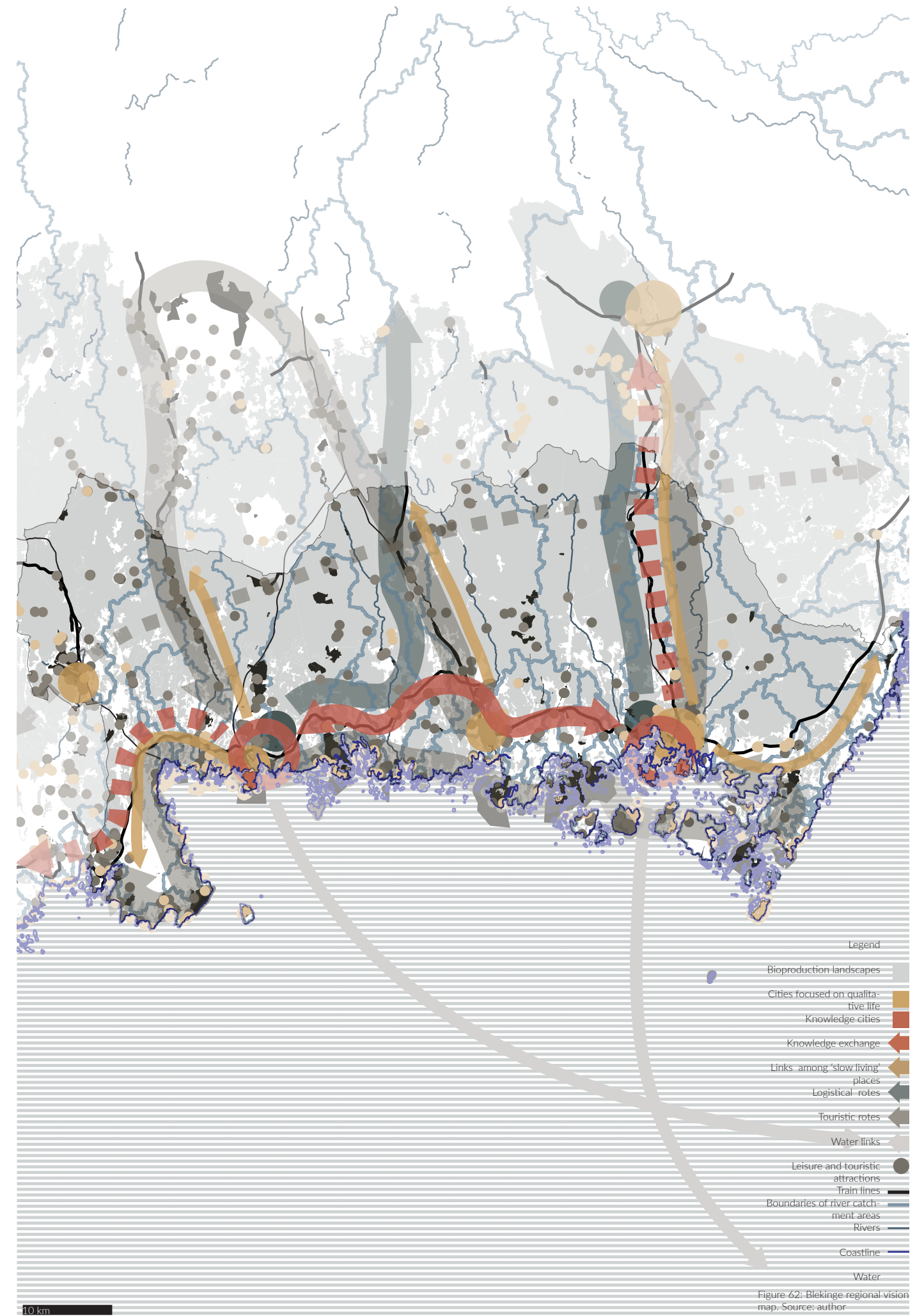


Figure 62: Blekinge regional vision map. Source: author

# regional vision

Klaipėda region has all the potential to become a cooperating region of green and blue innovations with a strong seaport.

## regional vision

The vision consists of 3 main layers of sustainability and the layer of infrastructure. The natural water system stands as the foundation for other systems. The coastal zones gain special attention as transitional spaces connecting water and land and accumulating environmental challenges. The rivers and their catchment areas bring local actors to organize the landscapes together. The agreements follow the natural over the administrative boundaries. The cities and towns cooperate towards integrated living places. The towns have unique identities and specializations. Therefore, they strengthen their overall identity and sustain unique social life. The core city of Klaipėda connects urban places and ties the region to other regions and countries. The business activities develop the most potential sectors and create ecosystems among all the actors and places participating in the system. Smaller towns specialize and produce specific products. Klaipėda synthesizes and innovates the production, and the port participates as a distributor and sender of the production. The infrastructure is used efficiently, and expansion is carefully planned.

## patterns applied

Patterns define specialization. There are chosen 4 strategic topics: 'Living and making', 'Tourism, leisure, culture', 'Living in transition' and 'Bio and blue economy'. There is the most potential to innovate and connect bio-based manufacturing. This is why the different pattern of innovation is added to the pattern of 'Living and making'. The chosen patterns address other patterns: actions and design solutions that must be applied in more minor scales. However, different stakeholders have to be introduced at different scales.



## stakeholders

### private

SBA:  
Šilutės baldai  
Klaipėdos baldai  
Vakarų medienos grupė

Plungės baldai  
Revel baldai  
Scandye  
Lyra  
Thermotextile  
Ptexile  
Šilalės baldai  
Kristensen & Kristensen

Grigeo  
Rietuva (paper, carton)  
Metal industry Mažeikiai

Valstybinių miškų girtininkijos  
Privatų miškų savininkų asociacija  
Klassmann-Delmann

### governmental

Curonian Spit National Park  
Seaside national park  
Nemunas delta regional park  
National government  
Ministry of environment  
Ministry of Economy and innovation  
Conference "Klaipėda region"  
Klaipėdos regiono plėtros taryba (tik pl4tra)  
Nacionalinė mokėjimo agentūra (zemes ukis)  
Klaipėdos prekybos, pramonės ir amatų rūmai  
Klaipėdos pramonininkų asociacija  
Palanga international airport  
Zemes ukio tarnyba

### Non-profit Intergovernmental

Lithuanian research center for agriculture and forestry  
Klaipėdos brjendruomenių asociacija  
Vietos veiklos grupės  
VVG žemėlapis

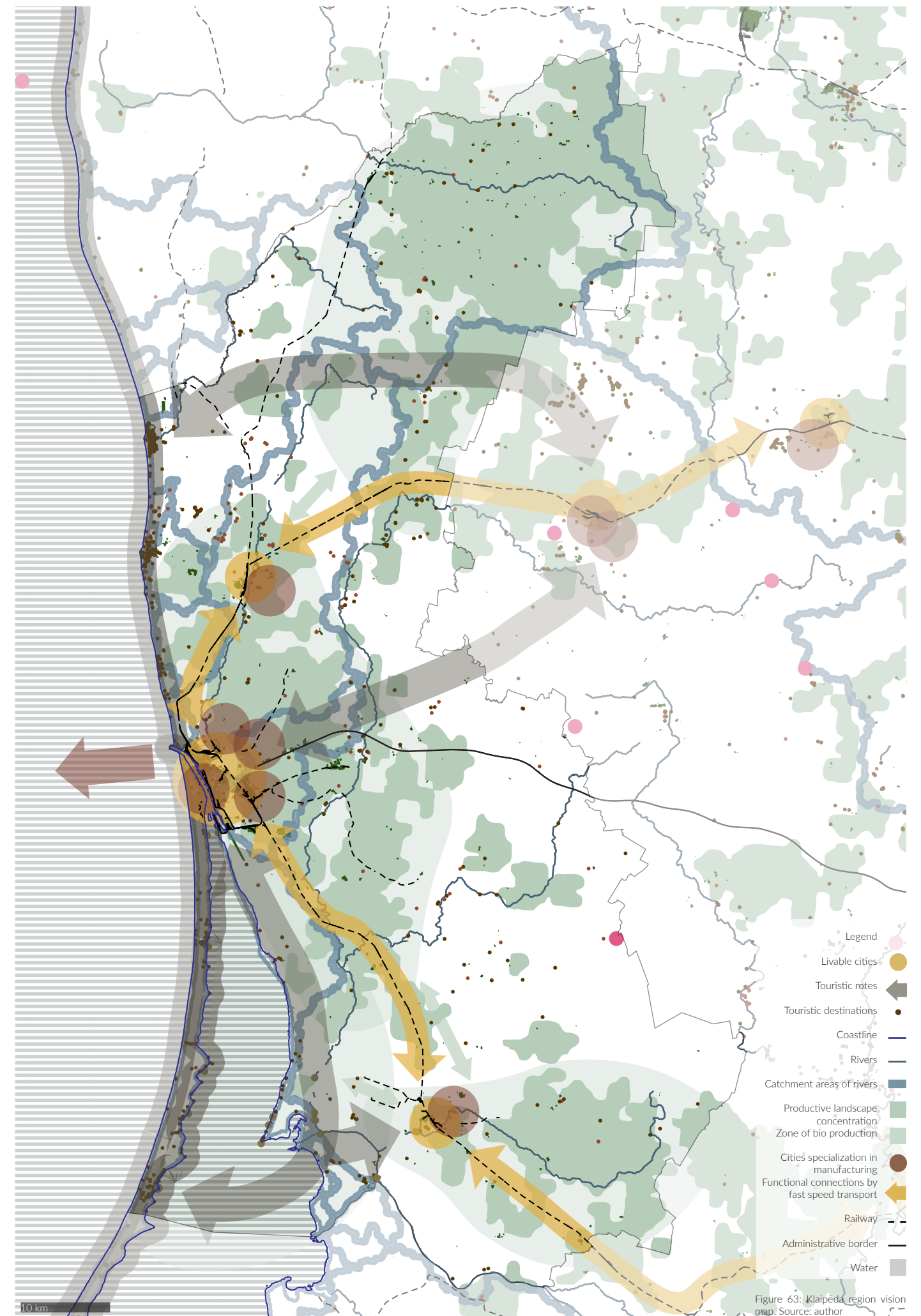


Figure 63: Klaipėda region vision map. Source: author



## knowledge building

Knowledge is considered a symbiosis between two cities. Their specialization informs each other. One is responsible for logistics, and the - is for telecommunication advancement. Together they transfer the knowledge to other cities - Kobenhavn, Stockholm and overseas.

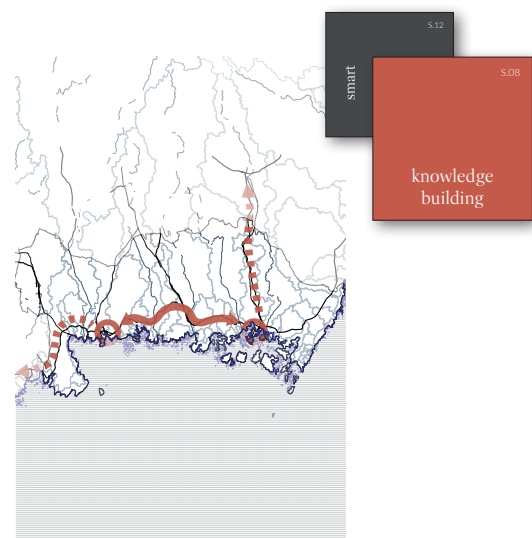
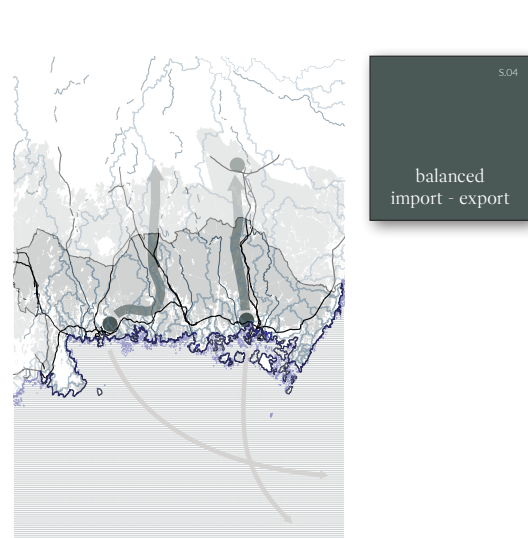


Figure 64: Knowledge building strategy. Source: author

Figure 65: Strategy of knowledge building. Source: author

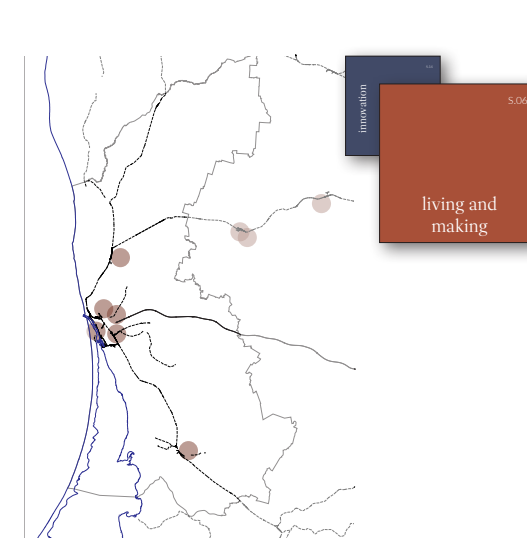
## balanced import - export

The ports create physical gates for trade ways. Both Karlshamn and Karlskrona divide the flows and reach other distant continental places. This is strongly informed by logistics innovation and knowledge in other strategic areas.



## living and making

Strategy redefines the specialization in the specific industry. Each city and town strengthens specific target industries related to local resources and knowledge. Altogether, the outcomes are combined in the central city - Klaipėda. There is carried out the synthesis of elements.



## bio and blue economy

The natural environment brings the focus on local resources. Coastal position leads to the blue economy. Meanwhile, bioproduction fields become the resources for production in local cities and towns.



Figure 68: Living and making strategy. Source: author

Figure 69: Strategy of bio and blue economy. Source: author

## slow and healthy living

The local environment, resources and facilities bring quality of life. The coastal cities are interconnected with continental cities—new settling possibilities appear along the infrastructure. There is a diversity of places for slow living.

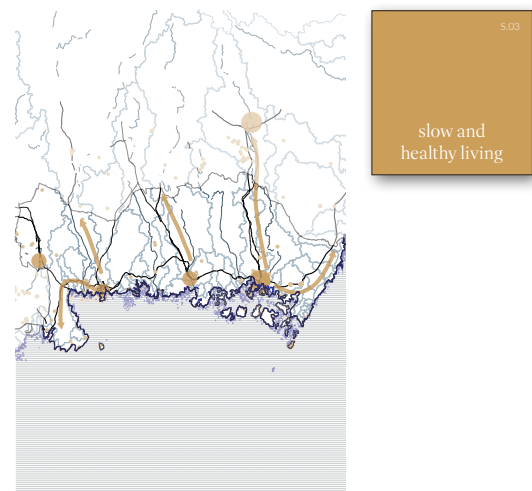
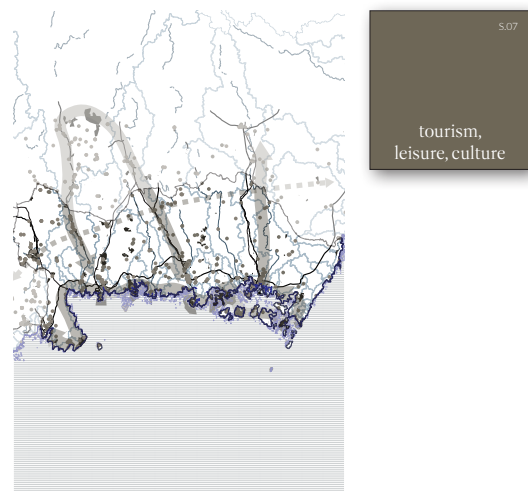


Figure 66: Strategy of slow and healthy living. Source: author

Figure 67: Strategy of tourism. Source: author

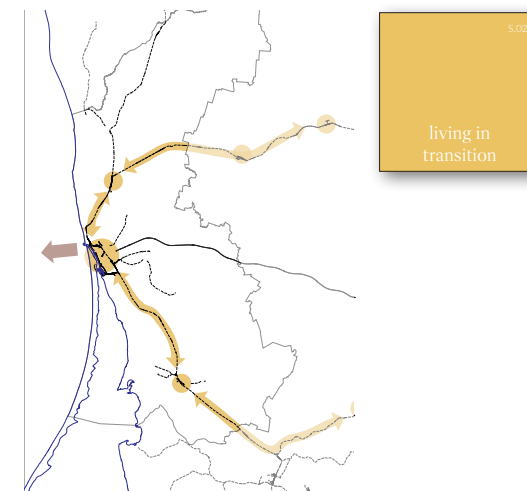
## tourism, leisure, culture

The coastal archipelago is the leading route for sustainable tourism. Nevertheless, distant places are connected by loops. The places of attraction vary throughout the year and seasons.



## living in transition

Internal migration among cities and towns is no longer considered a drawback. The regional railway interlink allows a dynamic lifestyle. Klaipėda is envisioned as the core city.



## tourism, leisure, culture

The coastal territories are the main touristic attraction. Two routes connect coastal and continental attractions. Tourism becomes more local and transportation more sustainable.

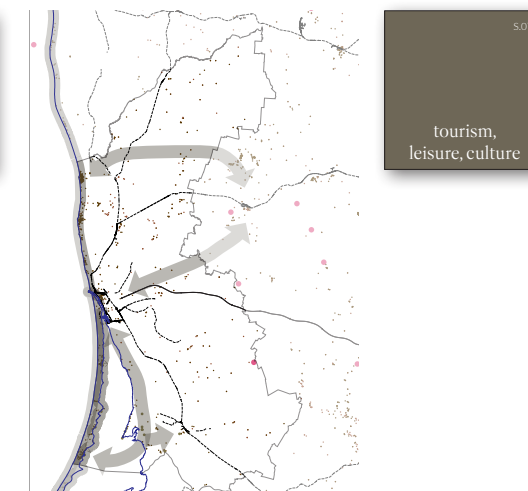


Figure 70: Strategy living in transition. Source: author

Figure 71: Strategy of tourism. Source: author



# cities in focus



Figure 72: Karlskrona case study areal photo. Source: [https://upload.wikimedia.org/wikipedia/commons/thumb/b/b7/Karlskrona\\_From\\_Above.jpg/1600px-Karlskrona\\_From\\_Above.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/b/b7/Karlskrona_From_Above.jpg/1600px-Karlskrona_From_Above.jpg)

Karlskrona



Figure 73: Klaipėda case study areal photo. Source: ??

Klaipeda



# spatial typological zoning

The zoning helps to grasp the general structure of districts, functional zoning and spaces in between them. However, the documented zoning is usually too specific or abstract to briefly understand the city structure on this scale. As a result, the typological spatial zone plan had to be interpreted from the existing one.

There are 9 types of zones in Karlskrona. They help to identify the scale of districts, the general urban typological structure of the city and territories which have the most potential for mixed-use development interventions. The different spatial typological zones could interact over the existing boundary. There is clear evidence of extensive monofunctional territories in the southern part of the city. They separate the port and logistical and industrial zones apart. On the other hand, the central and industrial territories in the middle participate as functional connectors of the East and West sides of the city. The undeveloped territories are spread and located all across the city, especially on the edge of the harbour and the city. There are territories which have no functional relation to other zones, like territory for fuel storing on the Northern coastal edge of the harbour and the city. This general zoning plan strengthens the spatial cluster system in the city. This explains which territories might better participate in the urban functional system.

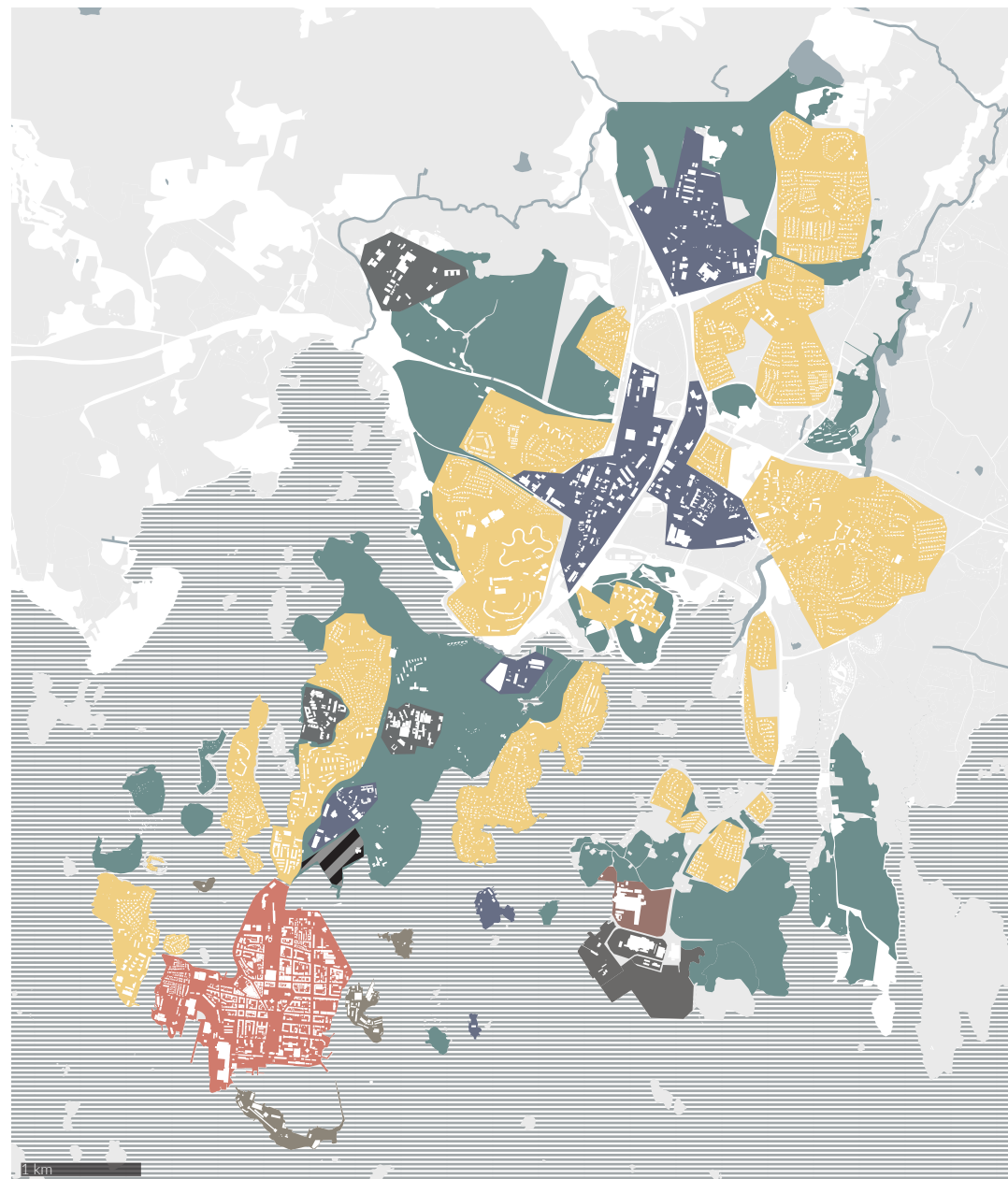


Figure 74: Karlskrona spatial typological zoning. Source: author

There are 9 types of zones in Klaipėda. They help to identify the scale of districts, the general urban typological structure of the city and territories which have the most potential for mixed-use development interventions. The different spatial typological zones could interact over the existing boundary. There is clear evidence of extensive monofunctional territories in the southern part of the city. They separate the port and logistical and industrial zones apart. On the other hand, the central and industrial territory in the middle participates as functional connectors of the East and West sides of the city. The undeveloped territories are spread and located all across the city, especially on the edge of the harbour and the city. There are territories which have no functional relation to other zones, like territory for fuel storing on the Northern coastal edge of the harbour and the city. This general zoning plan strengthens the spatial cluster system in the city. This explains which territories might better participate in the urban functional system.

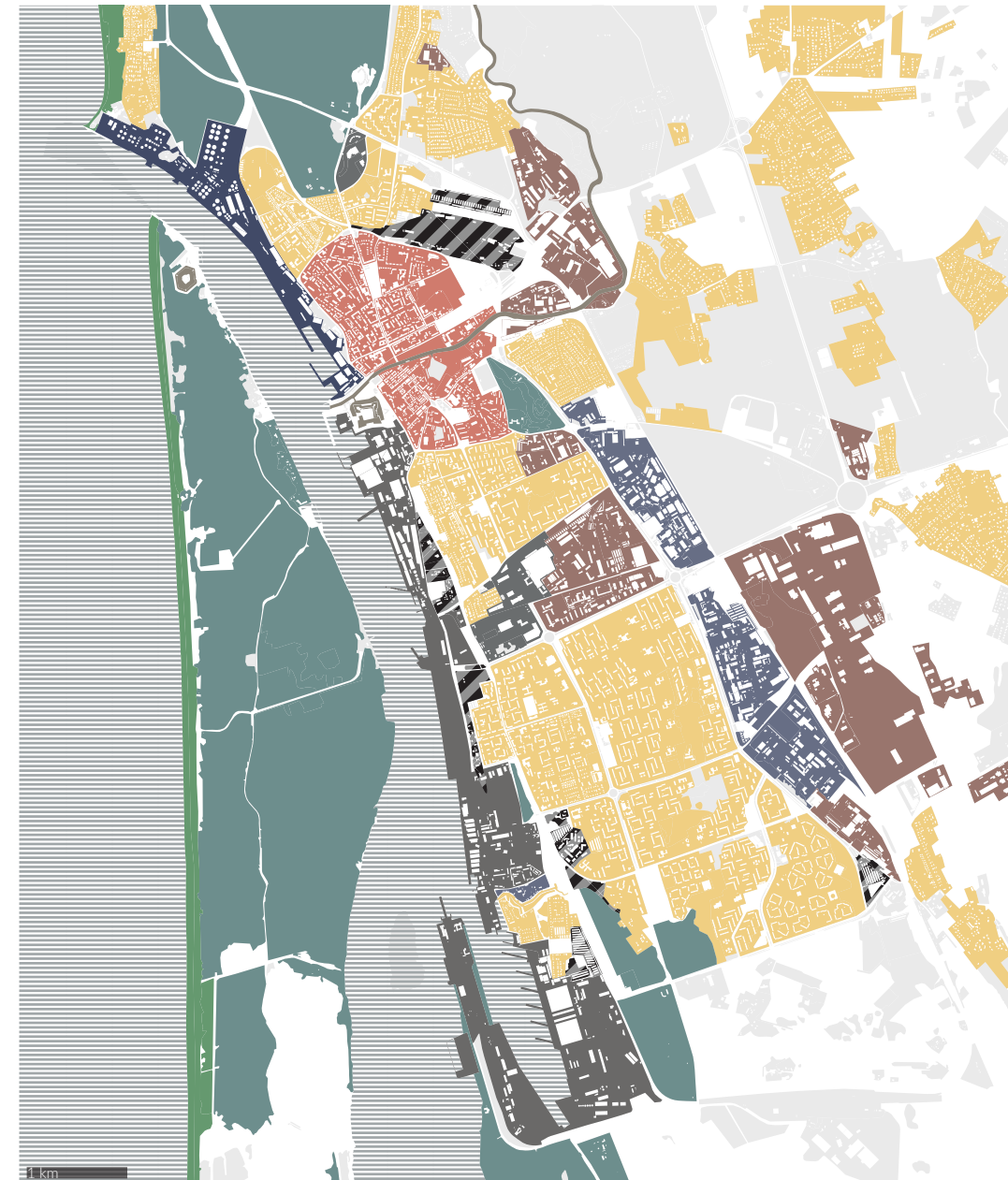
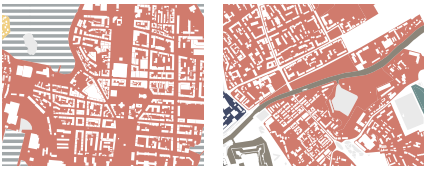


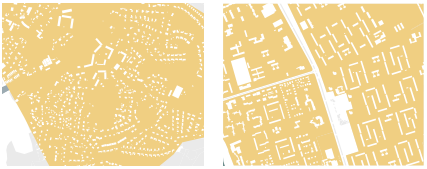
Figure 75: Klaipėda spatial typology zoning. Source: author

The brief explanation of zones will assist in defining the concentration places, nodes and biggest potential for the development of places for cooperation. The interdependencies among them will explain the compatibility. The biggest potential is evident in territories which are defined as “in transition”. These places are prepared for redevelopment. However, a clear functional program is absent. These territories are located in between other contradicting zones. This position makes the “in-between” the most potential for redevelopment.



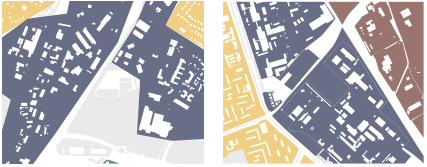
### Urban center

- most dense area
- high level of functional diversity
- heritage site, historical oldtown center



### residential

- One dominating typology of buildings (mostly mass housing blocks)
- Around half the territory of the urban area



### logistical

- Concentrated around the transport nodes
- Distant from city center. Located on outskirts
- Non human scale environment



### manufacturing

- Located next to logistical areas and transport nodes
- Contains the biggest building volumes



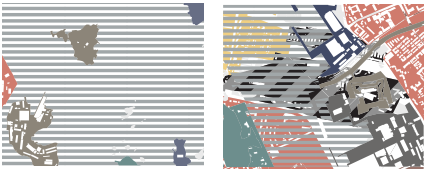
### port

- located by the water
- half the territory contains no building
- non (partially) accessible for civic society



### in transition

- territories with no functional use at the moment
- prepared for redevelopment
- drosscapes (usually former transport infrastructure)



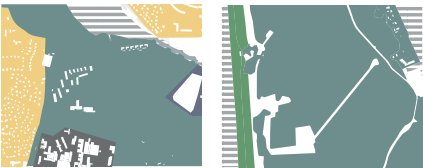
### heritage

- protected historical touristic areas
- part of oldtowns, islands, ramparts or bunkers
- no extensive development allowed



### special complexes

- campuses (universities, schools, hospitals, factories, sport parks)
- surrounded by residential areas



### green or natural spaces

- diverse natural territories with very few buildings
- the biggest areas located on the outer edge of urban area



### energy

- energy making or storing facilities
- non-accessible for civic society
- specific, resources oriented built infrastructure



### coastal

- beach environment
- sandy soil with coastal dike
- located next to green, residential areas or transport nodes

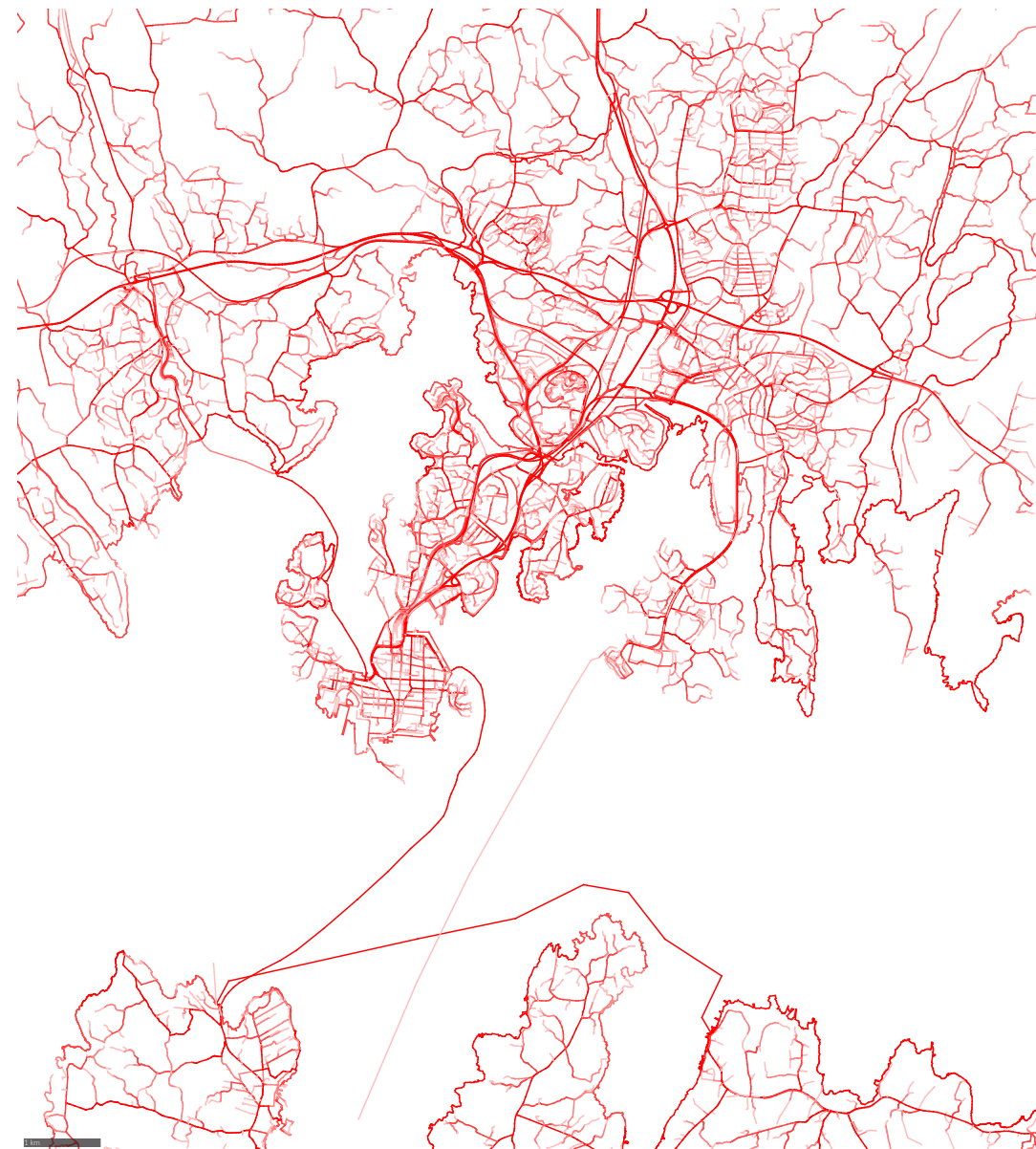


# street network analysis

## street network analysis; angular choice: 2000m

The target of the space syntax analysis is the average street choice. The target groups are pedestrians and cyclists. Yet, the results might give brief indications for vehicle traffic as well. There is evidence of the network core going North-South direction to the old town island in the South. Some paths identify the side connections to other islands or East-West directions. Yet, they lead to coastal dead-ends and barely cross other important streets. The general urban structure is based on one core axis and side branches leading to aside districts and ports.

The district-scale street network is mostly defined by landscape features and the spatial typology of buildings. The most characteristic street network is evident in the heritage Trossö island in the South. The grid street network is well integrated despite the big block structure. Other residential or logistical districts contain loose street networks. The close land patches by proximity are maintained as distant places due to the structure of the water body.



## street network analysis; angular choice: 2000m

There is an evident network difference between the North and South parts of the city. Despite the Southern part seeming better integrated, the arterial street fragment two parts of the city. Also, the monofunctional of the districts weakens the use of these paths.

The analyzed territory is in between two network parts and divides them with a fragmented network, wide transit streets and big blocks. The original industrial function lets to create big plots and shape big blocks. There is only a small dead-end street network inside the blocks. The railway structures were considered part of the network system due to their misuse and connecting function. There is a clear necessity to develop a better-integrated pathway network in order to transform the territory as well as better connect different urban areas.



# city strategy clusterising

## strategy statement

The city is the place for the synthesis of different activities. Karlskrona port-city priorities are formulated after 5 topics: living with manufacturing, efficient logistics, sustainable tourism, knowledge for innovation and living with the port. Extra priority is given to the strategy of knowledge building. It is emphasized as a strategy of innovation. The city will function well when all the clusters work in synergy. Therefore continuous multimodal transport and infrastructure connecting the clusters are necessary. All 5 strategic subjects were extracted from SWOT analysis.

## patterns

All 5 strategies are chosen from the patterns of strategies. The main 3 patterns accord with regional strategies. These strategies perform as the base for cooperation between the region and the city. As a result, all territories in the region are connected to the spaces in the city. For e.g., the logistical cluster in Karlskrona is connected to Karlshamn logistical campus. The physical links include railways, highways and waterways.

## clusters in the city

Each strategic topic has a spatial implication in the city fabric. Most of them are related to existing functions (logistical district, heritage sites, university campus, etc.) Other clusters are located in the territories which have to be transformed (station and innovation area, new residential districts, etc.)

## chosen cluster

The cluster of 'living and knowledge building' is chosen to depict the design solutions and the full transformation strategy of the territory. The location was chosen based on proximity to the city centre, spatial quality, architectural resources, a close relation to the city districts and the harbour, relation to the regional strategies and the position in the network of all the clusters.



Figure 79: Patterns chosen for strategy. Source: author

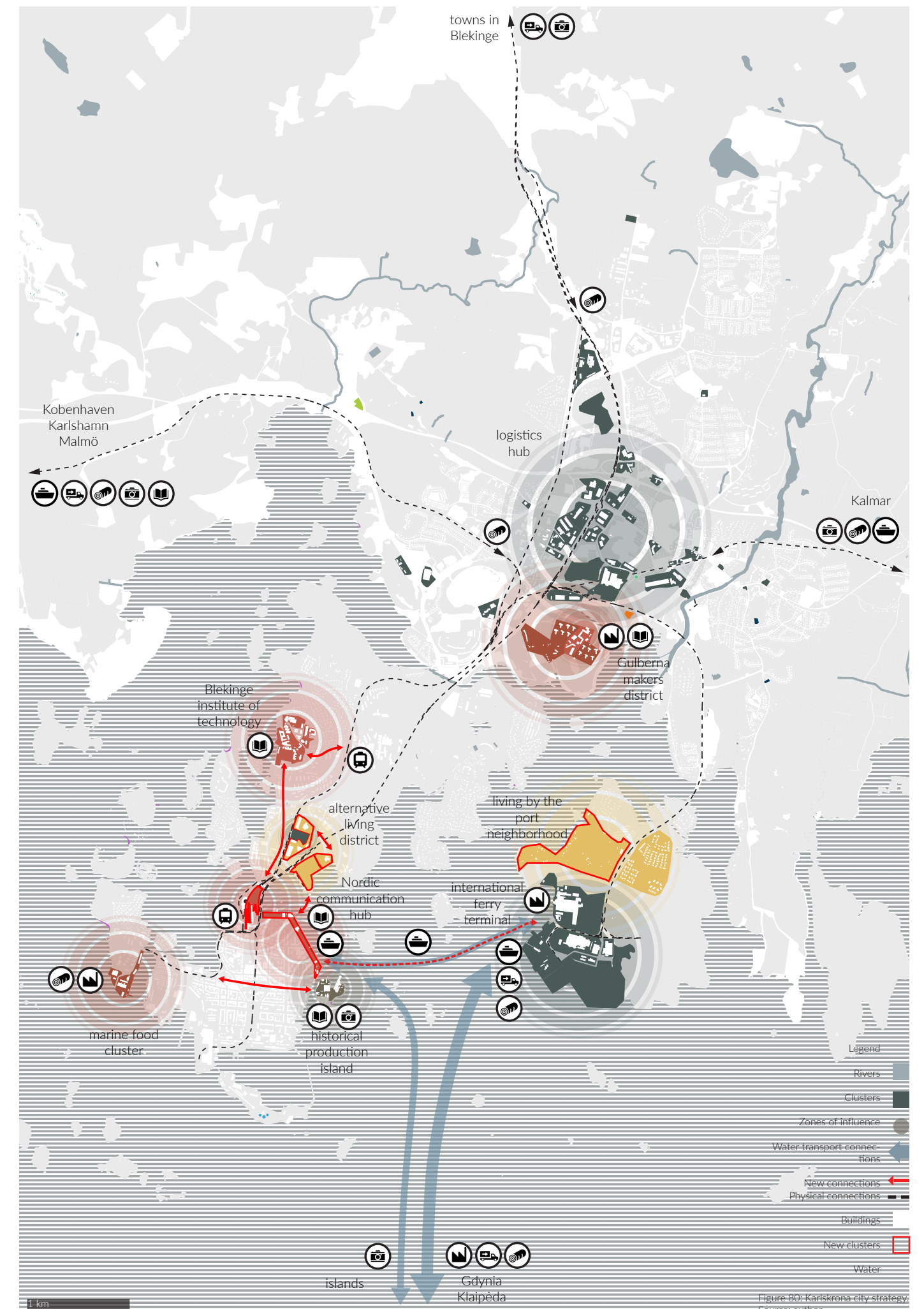


Figure 80: Karlskrona city strategy. Source: author



## strategy statement

The city is the place for the synthesis of different activities. Klaipėda port-city priorities are formulated after 8 topics: alternative energy, living with manufacturing, efficient logistics, sustainable tourism, knowledge for innovation, living with the port and adaptation to climate change. The urban environment would work only when all the target topics work in synergy. All 7 subjects were prioritized after the SWOT analysis and potential territories for redevelopment and advancement.

## patterns

All 7 strategies are chosen from the pattern list of strategies. However, the 4 leading patterns accord with regional strategies. This is evidence of cooperation between the region and the city. As a result, all territories in the region are connected to the spaces in the city. E.g., the wood production cluster in Klaipėda is connected to wood production landscapes all over the region by railway or highways. Other design solutions are taken from the sequence of patterns. (Look: section "Patterns").

## clusters in the city

Each strategic topic gains spatial evidence in the city fabric. Most are related to existing functions (fuel storage, natural territories, manufacturing territories, and others). Other topics are located in the territories that must be transformed (logistic centre, manufacturing in the city, and others). All the clusters perform as a continuous network along the connecting routes.

## chosen cluster

The cluster of 'manufacturing and living' is chosen to depict the territory's design solutions and complete transformation strategy. The location was picked based on proximity to the city centre, spatial quality, architectural resources, a close relation to the city districts and the harbour, relation to the regional strategies and the position in the network of all the clusters.

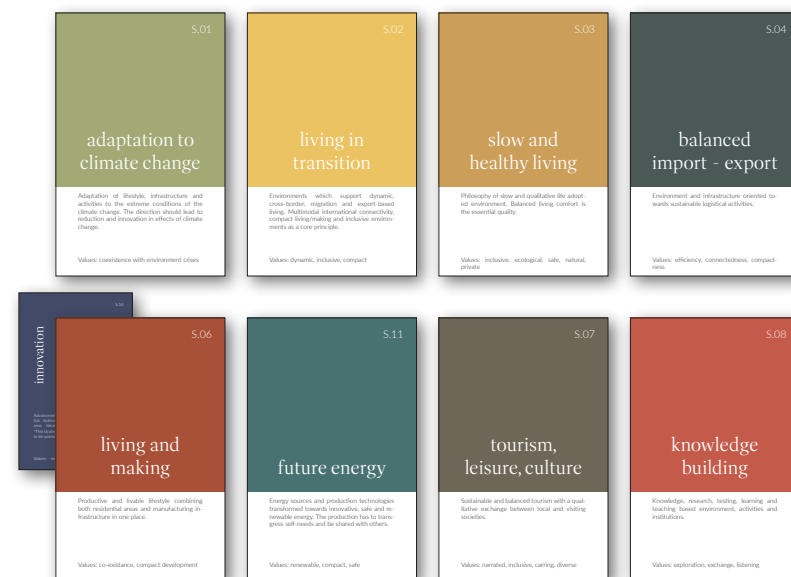


Figure 81: Patterns chosen for strategy. Source: author

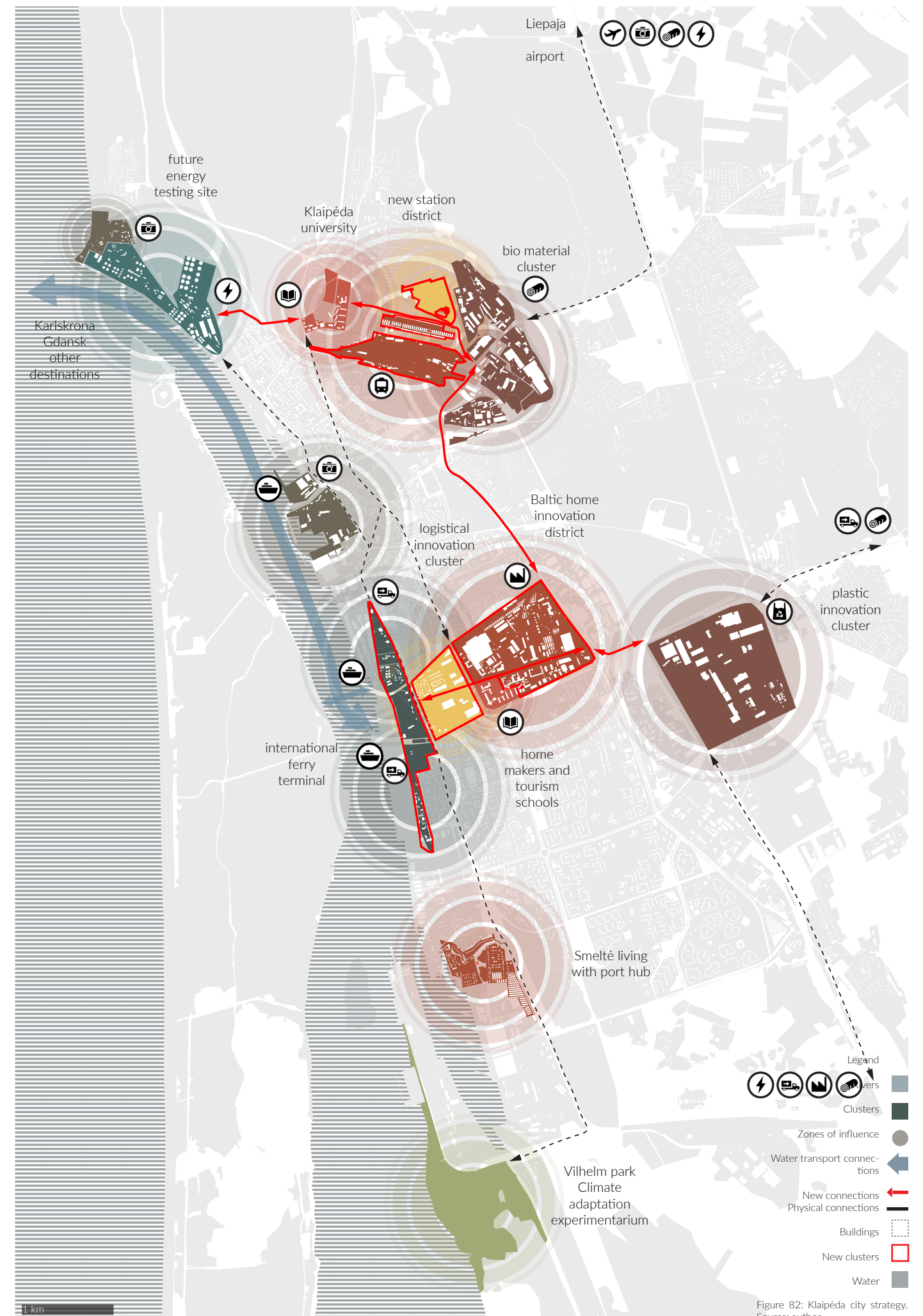


Figure 82: Klaipėda city strategy. Source: author



# cluster in focus

## Nordic communication hub

The territory is located on the edge of the central island. The Northern part of the territory is a former rail yard, the entrance (a bridge) to the historic city. The area is also a crossroad between transport linkage to the island and the water body, framed by bridges.

The Southern part of the territory contains only hard surfaces and vehicle infrastructure. The edge of the land is rugged and dedicated to parking facilities more than public space. The upper zone is considered a “gateway”. Meanwhile, the Southern zone has an image of the old town's reserved edge. Additionally, regional, national and local transport nodes are located in the territory. That is an opportunity to design both spaces as links between different transport modes: trains, ferries, cars, bicycles and other public transport.

There are very few buildings and facilities located in the territory. There is a train station, tourist centre, marina administration building, street sport public hangar, and the former railway infrastructure building. The surrounding blocks involve city centre facilities and private telecommunication and IT companies. The existing mix of stations, companies and public facilities might become the ground for the strategic development of the territory.

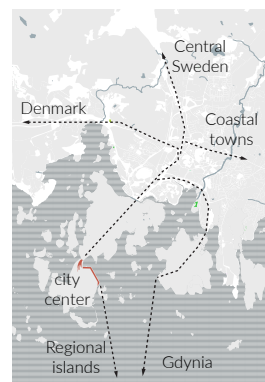


Figure 83: Context and importance of the territory in regional and city scales. Source: author

Legend  
Cluster zone  
Figure 84: Territorial borders of the cluster. Source: author

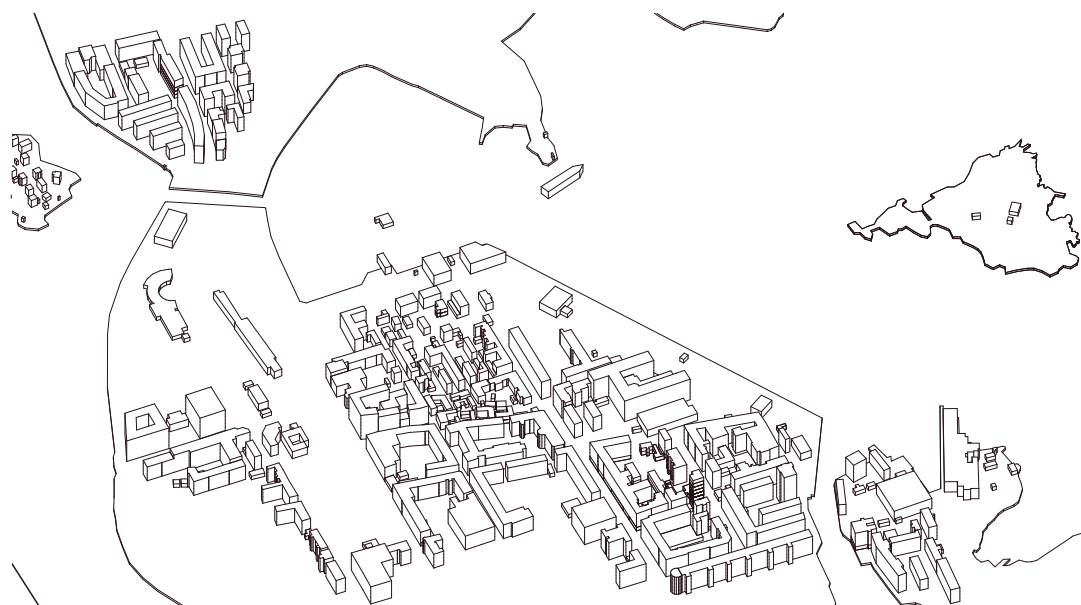


Figure 85: Karlskrona district axonometry. Existing buildings and streets. Source: author

## Baltic makers district

The territory is located in the spatial centre of the city. It divides the mono-functional sequence of residential districts aligned NW - SE direction. At the same time, it functionally connects the manufacturing zones on the NE side with the harbour and ferry terminals on the SW side.

Urban fabric and zoning are strictly modernistic since it was developed in the postwar period. However, some new interventions were made in the SW zone during the last 20 years. The original industrial functional zoning affected the scale and arrangement of the buildings. The surrounding districts have a more conventional residential spatial arrangement.

The territory and the network of streets were zoned in the 70s. This territory was considered the third industrial zone in the city and was developed as the last of them. The city construction combine was the strategic project in this territory. The combination opened the possibility for quick construction of new residential districts in the South part of the city. Currently, the West part of the territory involves civic functions, shopping facilities, parking and territories for future development.

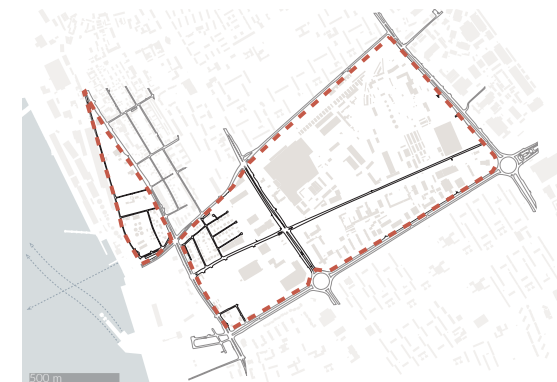
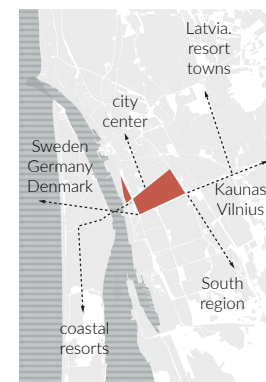


Figure 86: Context and importance of the territory in regional and city scales. Source: author

Legend  
Cluster zone  
Figure 87: Territorial borders of the cluster. Source: author

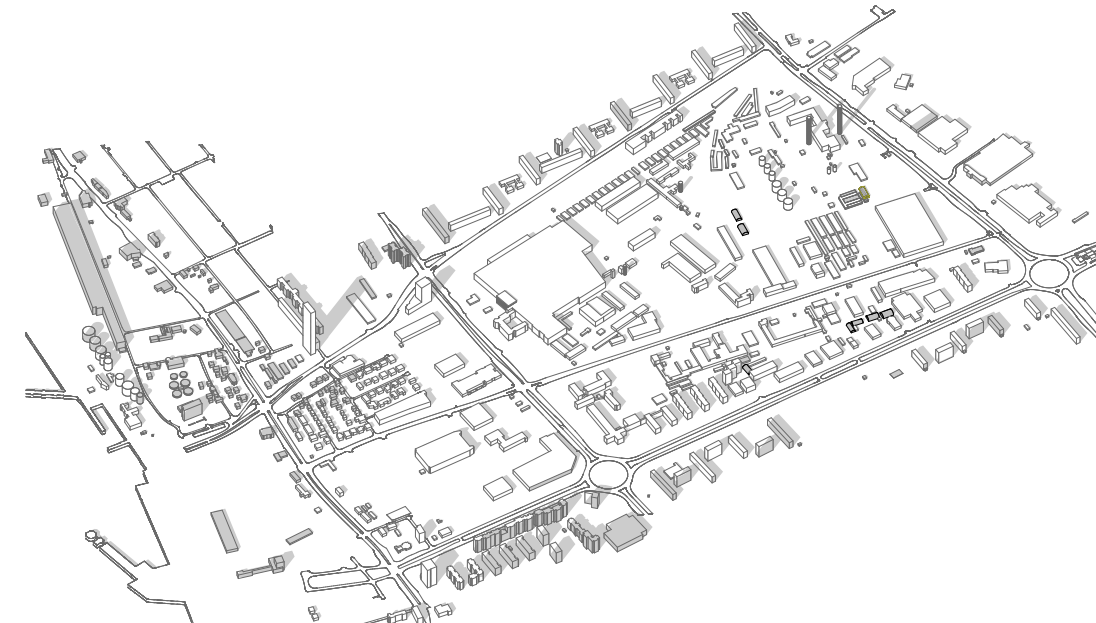
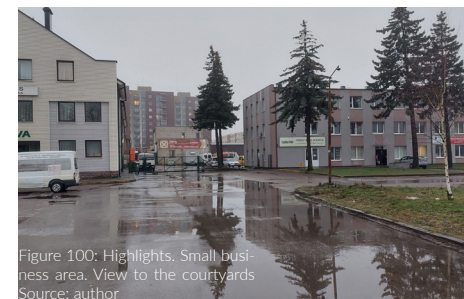
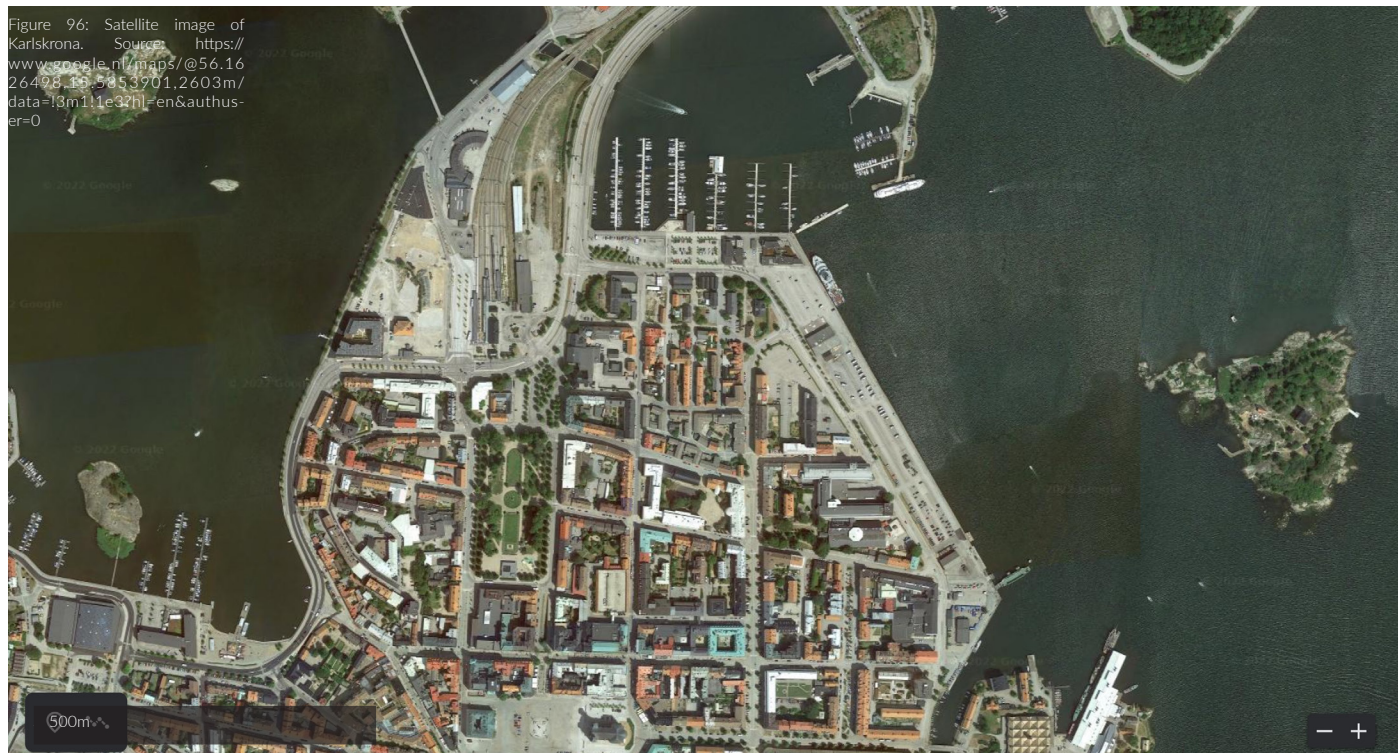
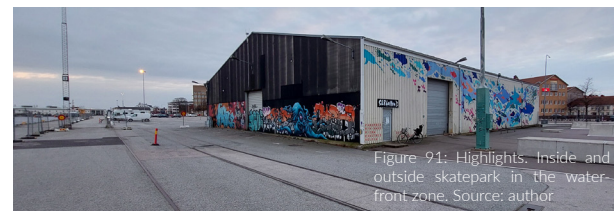


Figure 88: Klaipėda district axonometry. Existing buildings and streets. Source: author



# image of places





# planning documents

The planning documents envision the chosen territory as a high-importance area for development. The public functions and accessibility are highlighted. Waterfront is recognized as a public facility. However, no specific guidelines or functional or strategic organization are mentioned. There is much freedom for development interpretation.

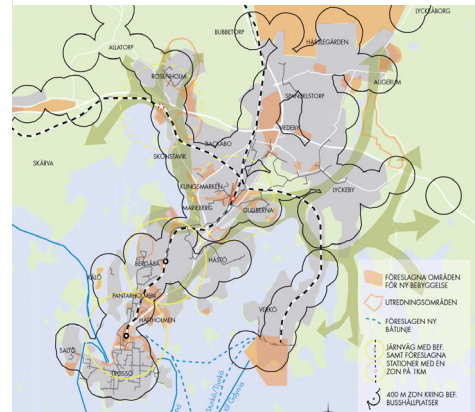


Figure 104: Map of spatial structures development. Source: ÖVERSIKTSPLAN 2030, 2020

Figure 105: Specific spatial tasks applied in the old town area. Source: ÖVERSIKTSPLAN 2030,

## spatial development

Urban development is planned to expand to the North continental part of the territory. At the same time, there are marked priority territories in between existing structures. There is potential for new interventions

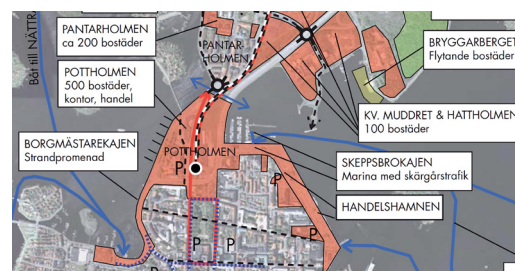


Figure 106: Strategy of the structure of public spaces development by the waterfront. Source: Strategi Karlskrona, 2022

Figure 107: Strategy of the structure of the main public spaces in oldtown. Source: Strategi Karlskrona, 2022

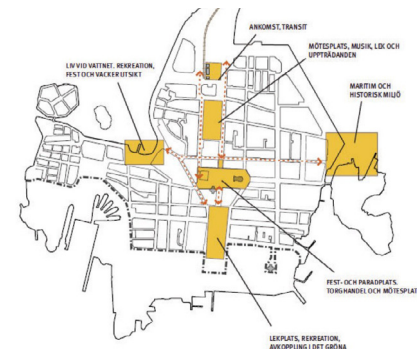
## waterfront public space

Waterfront areas are the priority of the old town development. The island has access to water only in the North part. Therefore the coastal territories have to have the continuous development principles.



## land use

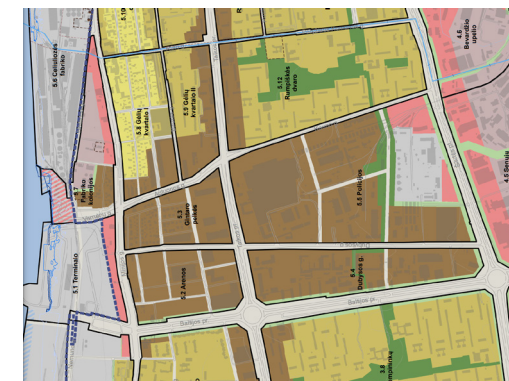
Priority areas are located in former industrial territories and waterfronts. Additionally, new water public transport lines are envisioned for these territories.



## public squares

The existing classical structure of public spaces should be strengthened and enriched by new coastal public space nodes on the West and East sides of the island.

The territory is envisioned as an ambitious future city centre. High-density, mixed development is allowed. However, the specific urban design solutions, street network, green spaces and development mode are exact yet have no strategic relation to any program or quality of spaces.



## land use

The territory is exceptionally marked as a central mixed-use central urban territory. There is great potential to form a new urban central node.



Figure 108: Map of land use. Fragment of Klaipėda masterplan. Source: Klaipėda masterplan, 2021

Figure 109: Map of maximum building heights. Fragment of Klaipėda masterplan. Source: Klaipėda masterplan, 2021

## building height

The clusters of high rises are aligned with the core regional and city streets. The maximum height of 80 meters allows around 20-floor buildings at most. Other territories have lower height, gradually lowering towards other residential districts (35-20m).



Figure 110: Map of development mode. Fragment of Klaipėda masterplan. Source: Klaipėda masterplan, 2021

## development mode

Most of the territory of the city is under the mode of modernization. Nevertheless, the central manufacturing territory is exceptionally under conversion mode. There is the most potential for a radical transformation in this territory.

## building intensity

The allowed intensity is 1.5 times bigger than in the surrounding districts. Nevertheless, it is only 2.5, generally applied in distant areas or suburbs.

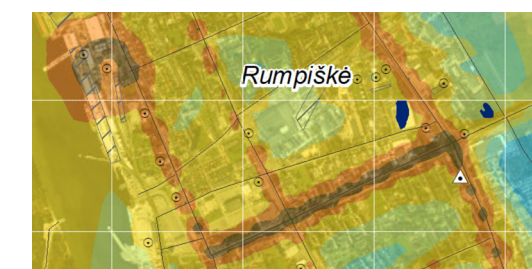


Figure 111: Map of maximum building intensity. Fragment of Klaipėda masterplan. Source: Klaipėda masterplan, 2021

## air pollution

The leading cause of air pollution is transport. This is evident in the main transitional street where pollution is the highest. Other city-importance streets have a less negative impact on the air. Generally, the territory contains the average level of air pollution in a city context.



# potential

## spatial features and potential

A brief evaluation of basic spatial features helps to find the focus objects and topics, leading to design solutions. This section lets us identify the list of local potentials and elaborate on them in later stages.

The waterfront spaces are the highlight of identity shaping in Karlskrona. However, the qualities differ very much among different zones. The national navy owns the southern part of the island. Thus, it is inaccessible to the public. Intensive streets limit northern waterfronts, yet pedestrian pathways are along the coastline. The exceptional space is on the North-East side of the island. Here the total distance of open space is equal to a typical old town block. As a result, there is broad space for new development scenarios.

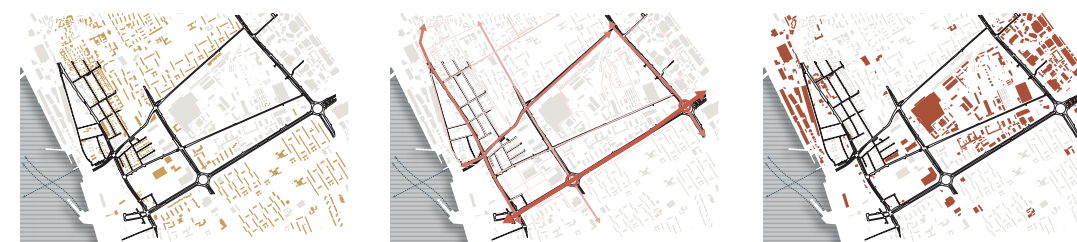
Stations and public transport nodes are the critical functional feature of the territory. There is existing regional and international reachability by water transport and trains. The main destinations are the ferry to Gdansk and the train to Kobenhavn. The spatial link between these nodes is weakly expressed. It has a complex potential in the comfortable linkage between train and ferry modes and in activating the spaces.

The former rail-yard territory is another area of drosscapes. There is the highest potential for the development of a new urban program. On the other hand, it crosses the essential heritage feature of the city - enclosed island development. The redevelopment strategy has to react to and value the essential feature distinct from the historic Trosso island and other continental districts.

## spatial features and potential

The territory is limited by the national road and a core city street. The international and regional transition is the main feature of this place. The streets strictly cut social, residential, economically weak and stagnating districts from economically vital, productive, service-based territory. The middle street crosses the entire area and connects both NE and SW parts. SW part contains a square block structure with more civic facilities (arena, swimming pool, and others). The South block of the territory has a mixed character of productive, service-related and small enterprises unstable environment. Despite the strict zoning, The North block is primarily conventional and has several monumental-scale manufacturing and service stakeholders.

Nevertheless, the area contains a substansive amount of drosscapes. These consist of two main types: parking and grass fields. The parking lots are developing around the main civic attraction places. Meanwhile, grass fields cover underdeveloped, reserved territories, leftover spaces or safety zones. Almost half of the territory is considered the most potential space for transformation towards cross-border cooperation.

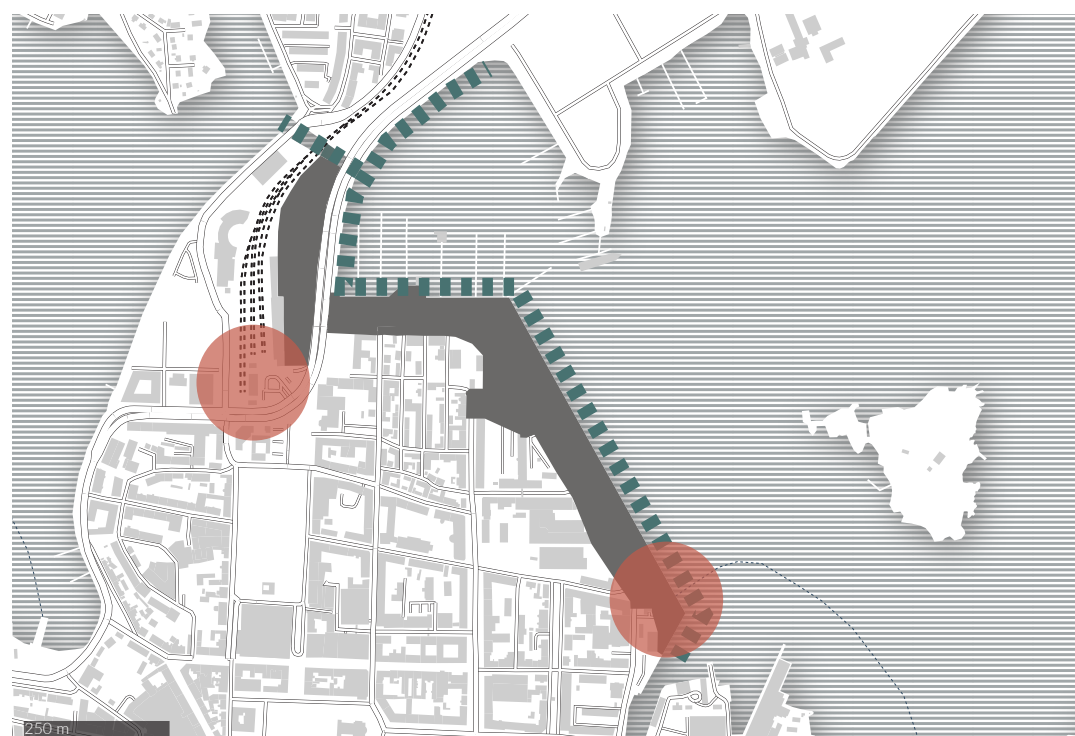


- Legend
- Social, residential buildings
  - Buildings with economic activities
  - Streets in different categories

Figure 114: Building with residential or social functions. Source:

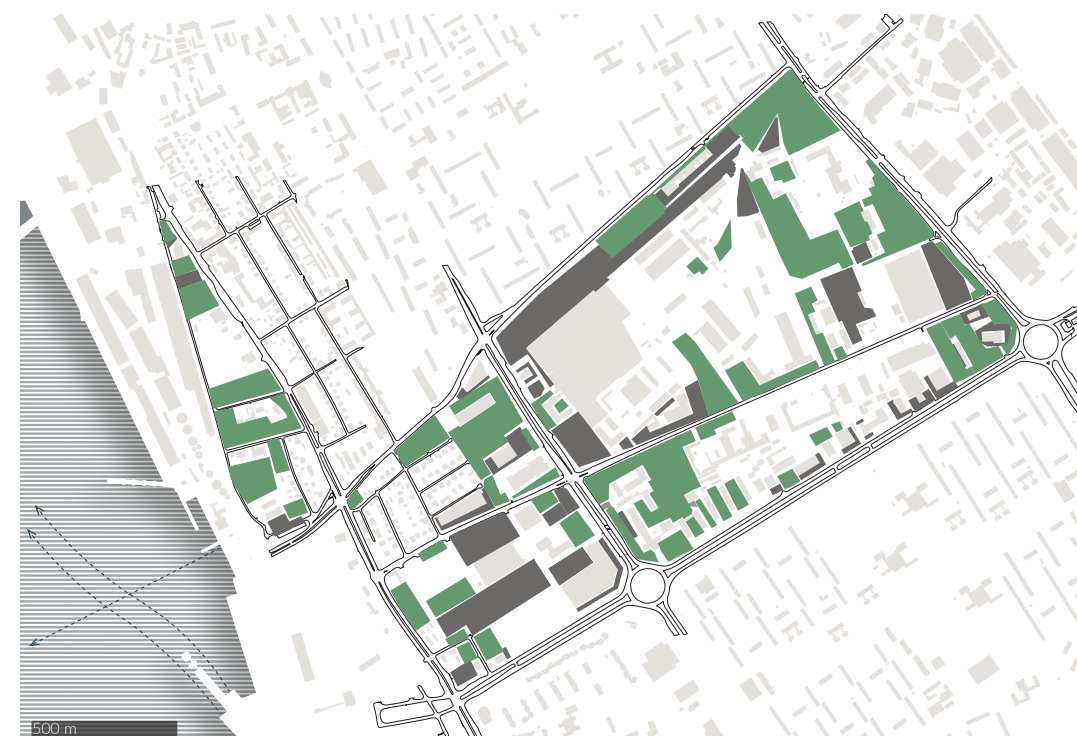
Figure 115: Streets according to category. Source: author

Figure 116: Buildings inhabiting economic activities. Source: au-



- Legend
- Drosscapes - waterfront
  - Transit centers
  - Drosscapes - parking, grass areas
  - Building
  - Water

Figure 113: Drosscapes. Spaces and functional program with most development potential. Source: author



- Legend
- Drosscapes - grass areas
  - Drosscapes - parking lots
  - Buildings
  - Water

Figure X: Drosscapes. Spaces with most development potential. Source: author



# historical perspective

Figure 117: Areal view of the historic city island, railway station and rail yard behind. 1920-1944



Figure 118: Northern side of the historic island, waterfront and island for military manufacturing. 1920  
Source:



Figure 119: home manufacturing combinat, (concrete factory) established in 1969. Areal view.  
Source:

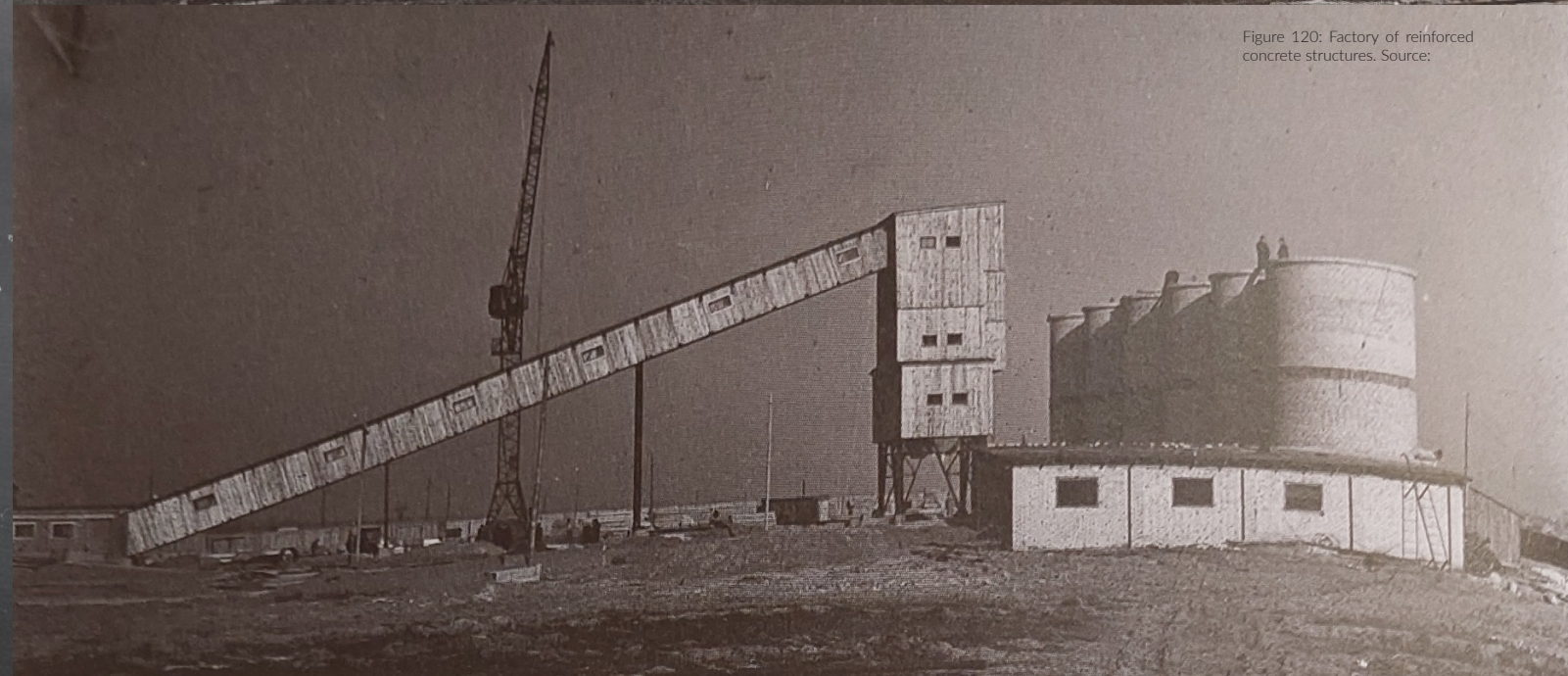


Figure 120: Factory of reinforced concrete structures. Source:



# references and take aways

Figure 121: Satellite photo of RDM district. Source: <https://www.google.nl/maps/@51.8970999,4.4233525,1088m/data=!3m1!1e3?hl=en&auths-er=0>

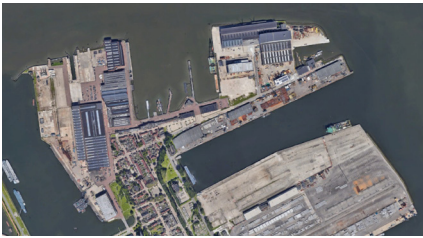


Figure 122: Waterfront spaces in RDM. Source: [https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcT4ZIGK-Wd6DNlbNoQV2uu8k9Smwx\\_F2vyjhjXpHNdytNYnMWt](https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcT4ZIGK-Wd6DNlbNoQV2uu8k9Smwx_F2vyjhjXpHNdytNYnMWt)



Figure 123: Interior of retrofitted industrial building in RDM. Source: [https://www.overons.kpn/images/\\_1920xAUTO\\_crop\\_center-center\\_none/2.2.13-Header-KPN-Innovation-Playground.jpg](https://www.overons.kpn/images/_1920xAUTO_crop_center-center_none/2.2.13-Header-KPN-Innovation-Playground.jpg)

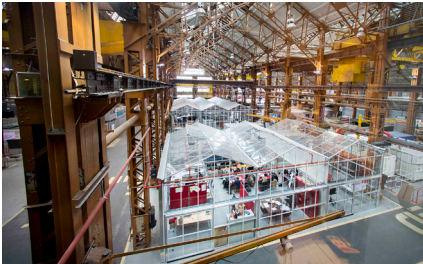


Figure 124: Satellite photo of Zsolnay cultural quarter. Source: <https://www.google.nl/maps/@46.0785342,18.2484879,623m/data=!3m1!1e3?hl=en&auths-er=0>



Figure 125: New buildings in Zsolnay cultural quarter. Source: <https://img1.oastatic.com/img2/36101537/834x417r/t.jpg>



Figure 126: Integrated heritage panorama and courtyard of Zsolnay cultural quarter. Source: <https://chm2013.files.wordpress.com/2013/01/zsolnay-negyed-jegefoto.jp->



## Rotterdam RDM, NL

- Potential between harbor and urban environments is emphasized as a connecting territory rather separating.
- Existing infrastructure is used as
- Mix of functions in time
- Strategic priorities
- Highlights and branding
- Part of a bigger system. Interconnectedness with other districts
- Elaborated public space structure
- Open district structure - development can be continued. Street life
- Water and other public transport node

## Zsolnay cultural quarter, HU

- building heritage and original function as a catalyst for new development
- bringing back intelligent manufacturing to urban environment
- public space connecting all the activities in the middle
- diversity of activities
- connections to the environment
- Closed quarter structure. Liveliness in inside spaces
- One owner - many actors redevelopment model



## Dublin Docklands, IE

- Development authority is composed out of three types of stakeholders: public sector, private sector and local and national government.
- National importance project
- Broad funding from the central government
- EU finances for specific target projects (tunnel)
- Urban planning ensures socioeconomic qualities
- Constructing alternative infrastructure network for urban development separated from port.
- Strategy rather than masterplan driven planning.
- There is general development structure. However, the local development can be shaped independently.
- Policy as the main driver of transformation
- Brownfields as the location of transformation
- Coopetition is the leading theme in urban development. There are competing new developments. Yet, each offers different qualities. Together they form complete urban picture.
- Mixed use of housing and offices
- There is still a strict zoning between living and working spaces
- Water as a core element of development
- Priority for public spaces over buildings in time

## London docklands, GB

- Integrated socioeconomic-territorial redevelopment. Involving newcomers, new competence centers and work places
- Reinvention of existing infrastructure with highlighted program (Tate modern)
- Overall redevelopment framework, individual territory planning and design
- Policy driven redevelopment
- Public sector investment as a catalyst. Functional system is based on public attraction points and services
- Landmark oriented marketing strategy
- Brownfields as a territory for urban and port upgrade after economic decline
- Diversity of smaller redevelopment strategies (business, residential districts, campuses, public hubs, arenas, logistical districts)



Figure 127: Satellite picture of Dublin docklands. Source: <https://www.google.nl/maps/@53.3479613,-6.2389116,1262m/data=!3m1!1e3?hl=en&auths-er=0>

Figure 128: Retrofit development waterfront in docklands. Source: <https://planetgeoblog.files.wordpress.com/2018/03/14.jpg>

Figure 129: Public space next to civic buildings in docklands. Source: <https://planetgeoblog.files.wordpress.com/2018/03/14.jpg>

Figure 130: Satellite image of London docklands. Source: <https://www.google.nl/maps/@51.5028654,0.0299734,4379m/data=!3m1!1e3?hl=en&auths-er=0>

Figure 131: Images of new developments in Docklands. Source: <https://www.thetimes.co.uk/imageserver/image/%2Fmethod%2Ftimes%2Fprod%2Fweb%2Fbin%2Fa609f442-35c2-11e8-9a8f-0b0aae019371.jp->

Figure 132: Images of new developments in Docklands. Source: [https://cdn.rtemap.com/wp-content/uploads/sites/4/2018/09/28001309/fm\\_1204\\_albertisland\\_view02-1100x1100.jpg](https://cdn.rtemap.com/wp-content/uploads/sites/4/2018/09/28001309/fm_1204_albertisland_view02-1100x1100.jpg)



# public and green spaces

The structure of public spaces is essential in this study case because the public spaces are the spine for further territorial and ownership development. Also, it is a system which might ensure links among the functional structure and nodes.

The existing network is well-developed in Karlskrona. This is evident in the recognition as a heritage site of the city's old town. However, there is an issue with public space quality and usage. Despite the historical public space network, some territories were developed very recently. This is the case with coastal zones near the station. The West zone has been developed already. Therefore the public space network has been developed there. The Northern zone contains shallow-quality pedestrian connections. Meanwhile, the North-East part has no defined public space, and the currently accessible area is the parking lot. The new connection by the water would be interconnected with the existing street network. It ensures linkages among places over currently existing nodes as public space.



Figure 133: Quality of existing central public green spaces. Source: author

Figure 134: Existing and new structure of public spaces and green areas. Source: ÖVERSIKTSPLAN 2030, 2020

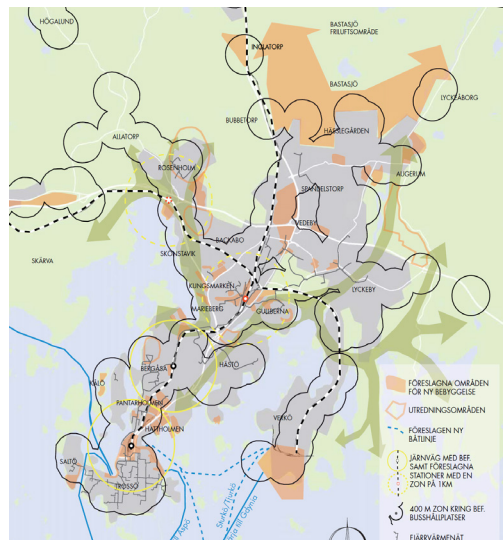


Figure 135: Existing and new structure of public spaces and green areas. Source: author

## public and green spaces

The main issue is related to the fragmented green network in the city. The territory separates the north and south parks and green connections. On the other hand, the structure of green spaces needs to be better defined. The proposed green spaces structure connects residential parks in the North and South. Also, these two connections meet in the proposed centre by the street crossing in the district's middle. Finally, the structure extends to the ferry terminals and another territory in the West. The proposed structure ensures fair accessibility for pedestrians to green spaces and multimodal international and local transportation.



Figure 136: Quality of existing green spaces. Source: author



Figure 137: Fragment of city masterplan of green structure. Source: Klaipėda masterplan, 2021



Figure 138: Existing and new structure of public spaces and green areas. Source: author



# functional structure

The strategic target places should connect the spaces into a fully functioning cluster. Firstly, the network emphasizes the existing public nodes like the station, ferry terminal, central square and waterfront square.

The proposed structure creates an alternative waterfront pathway in the island's northern part. The sequence of smaller nodes strengthens the attraction points. The links to the outer side of the island are equally essential to maintain attractive and vital public spaces on the Trosso island. As a result, the walkway should extend to the Northern districts of the city and link piers together. The current image of the existing and proposed centres is difficult to differentiate. The function, facilities for users and different characters need to be articulated. This does not apply to the central square, which contains historical form and architecture.

Figure 139: Marina square. Source: author



Figure 140: Square of telecommunication companies. Source: author



Figure 141: The central square. Source: author



Figure 142: Public ferries terminal. Source: author



# functional structure

The proposed network connects places and buildings, which becomes home for all manufacturing innovations. The very central place becomes the crossing of transitional and district streets. Their designers, developers, exhibitors, investors, and researchers find common spaces and places to work. The centre for material innovations, distribution or international fairs is more distant from the big crossing. Despite the existing buildings for the arena, professional school and historic furniture store, new buildings for design, development, investment, distribution and material centre have to take new shape. Finally, the ferry terminal is a convenient connecting transport centre for the cluster. The main crossing of the territory becomes a multimodal node between the city core, ferries, train station and airport. Additionally, the proposed functional structure connects with other urban civic centres by the core city street.

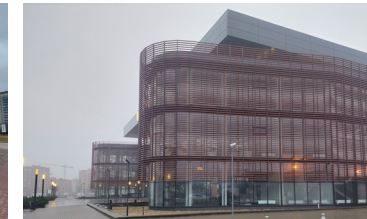


Figure 144: Historical furniture store. Source: author

Figure 145: City arena. Source: author

Figure 146: International ferry terminal. Passengers entrance. Source: author



Figure 147: School of crafts. Source: author



Figure 148: Existing and new functional places and nodes. Source: author



# towards qualitative zoning

It is necessary to shift from traditional functional zoning towards zoning, ensuring a particular set of qualities and spatial characteristics. This approach should help to reach advancement in spatial quality. Also, it provides long-term quality while leaving space for functional flexibility.

Territory in Karlskrona includes several transportation nodes. These areas connect up to 3 different layers. Other areas concentrate more qualities by streets. There is a direct relation between projected qualities, use intensity, and social mix.

The essential feature of Karlskrona block zoning is a gradual shift from an ecosystem service-based environment in the North to the traditionally urbanized environment in the Southern part. However, the entire territory is connected by public space and entrance representative areas to the city centre.

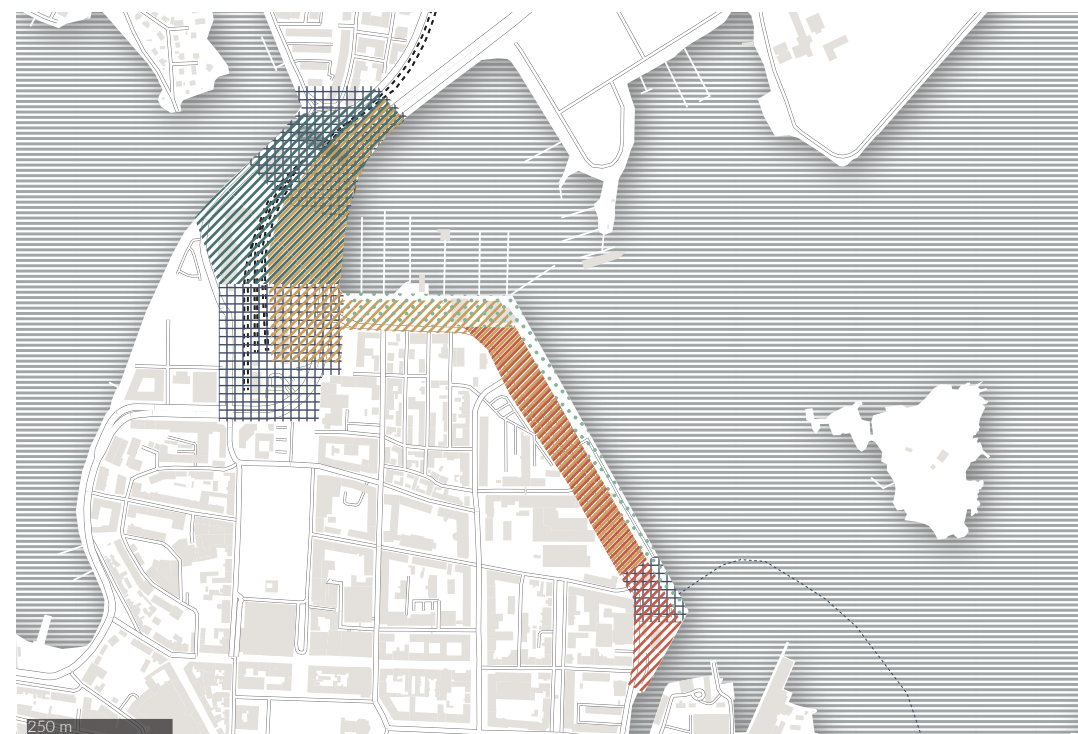
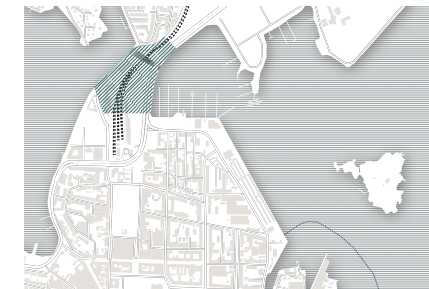
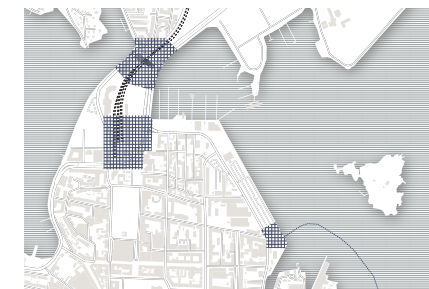


Figure 149: Zoning scheme.  
Source: author



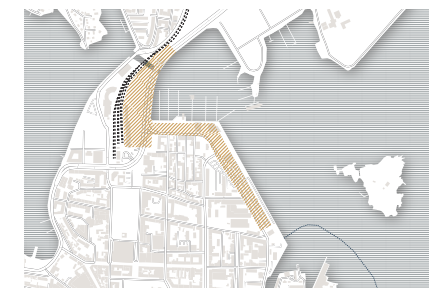
## Adaptation to nature

Natural  
Balanced micro-climate  
Slow



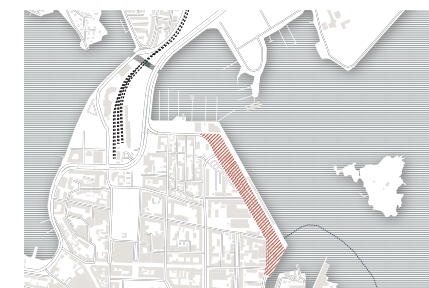
## Gateway / entrance

Representative  
Intensive  
Transit oriented



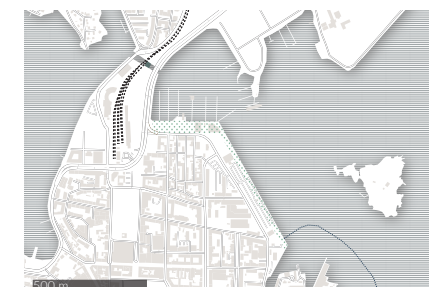
## Livable

Calm  
Human scale  
Safe



## Productive

Business oriented  
Inspiring and representative  
Futuristic / innovative



## Leisure

Inclusive / public  
Attractive  
Nature based

Figure 150-155: Maps illustrating each zone separately. Source:



Klaipėda case is an excellent example to test the zoning since it was planned during strict functional zoning practice. In this case, the types of zones were identified after the existing quality and expected strategic goals and principles.

There are 6 zones in the Klaipėda case, each of which ensures specific values and qualities. The zones overlap; there appear to be 'rich' places, including all the qualities of both zones. For example, the livable space, productive and green zones overlap in the Northern part of the cluster. The design solutions have to ensure all qualities (calm, livable, safe, human-scaled, productive compact, green) in this space using advanced planning and design methods (e.g. landscape urbanism). Other distant from the centre zones are less complex and are dedicated to specific functions.

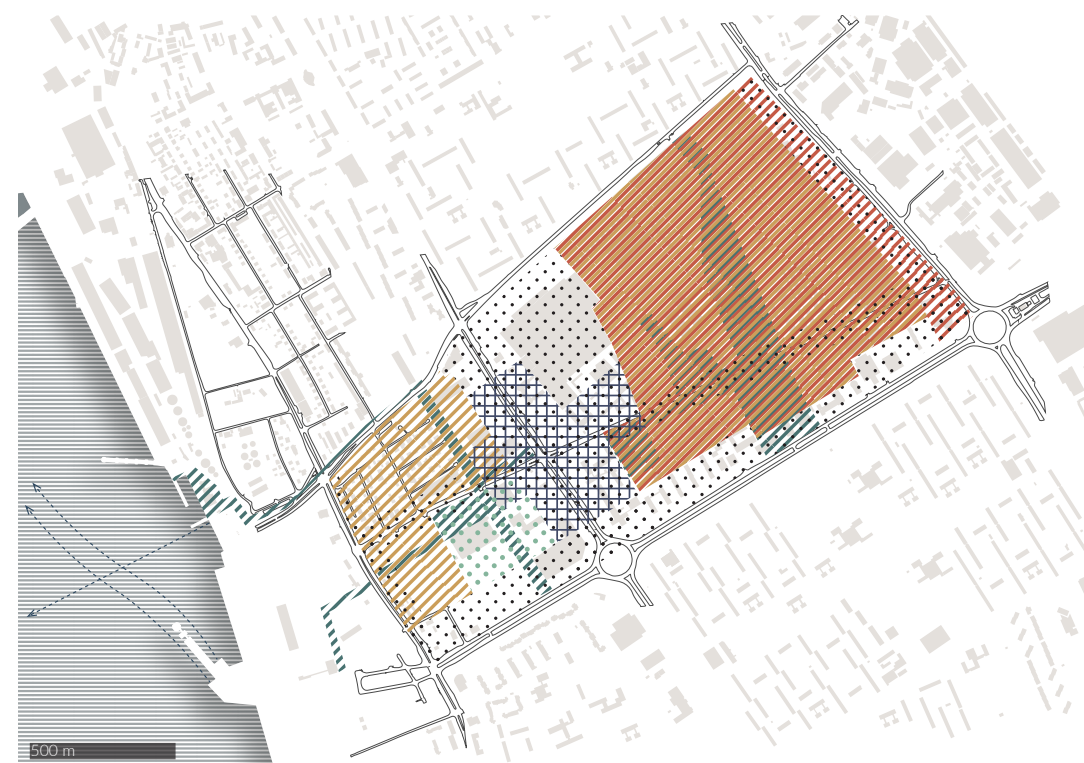
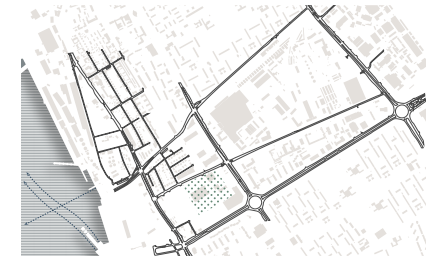
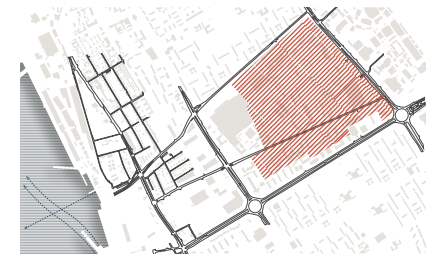


Figure 156: Zoning scheme.  
Source: author



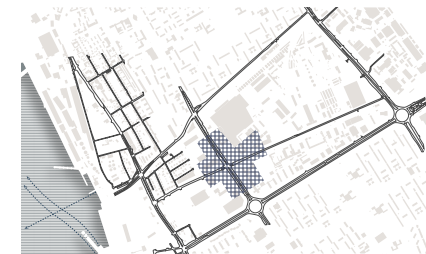
## Civic space

public  
inclusive  
occasional



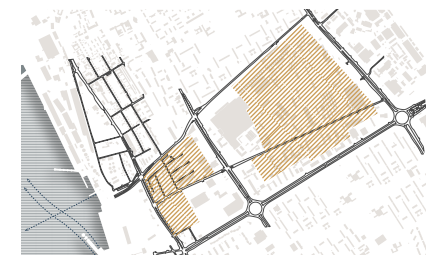
## Productive

Compact and pollution free  
Human scale  
Consistent production



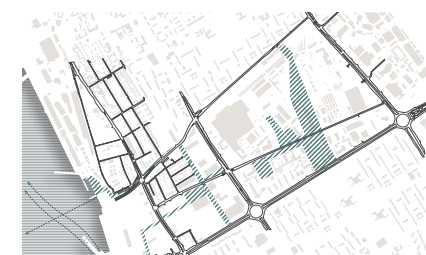
## Core

Street life  
Intense and active  
Diversity



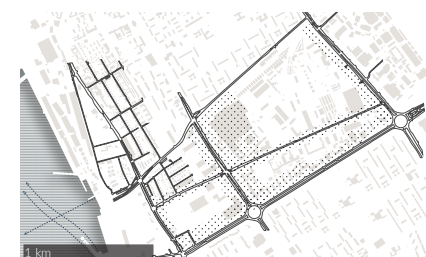
## Livable

Calmness  
Human scale  
Safety



## Green

Vegetation based  
Calmness



## Logistics boundary

Productive and connecting  
Compact

...

## Highway boundary

Buildings as wall  
Program related to highway needs (logistics, retail, drive-in)

## Port boundary

Productive  
Representative  
Iconic

Figure 157-162: Maps illustrating each zone separately. Source:

# new spatial qualities

The spatial arrangement of spaces has to work hand in hand to reach the target spatial qualities. That is why the entire territory has to have a consistent sequence of design characteristics and priorities.

The central nodes are concentrated around the transport stations and operational highlights: tourist centre, historic island, and headquarters of companies. The centres follow the waterfront line and regularly connect the two most important transport hubs.

Public and green spaces are essential elements in this spatial arrangement. It ensures the connections but leaves open space in the most valuable areas. It provides balanced development

Building blocks following streets and public spaces. The development is primarily corridor-like. However, none of the structures forms a traditional old town like a squared block. Here, the sequence of buildings and paths is highlighted more.

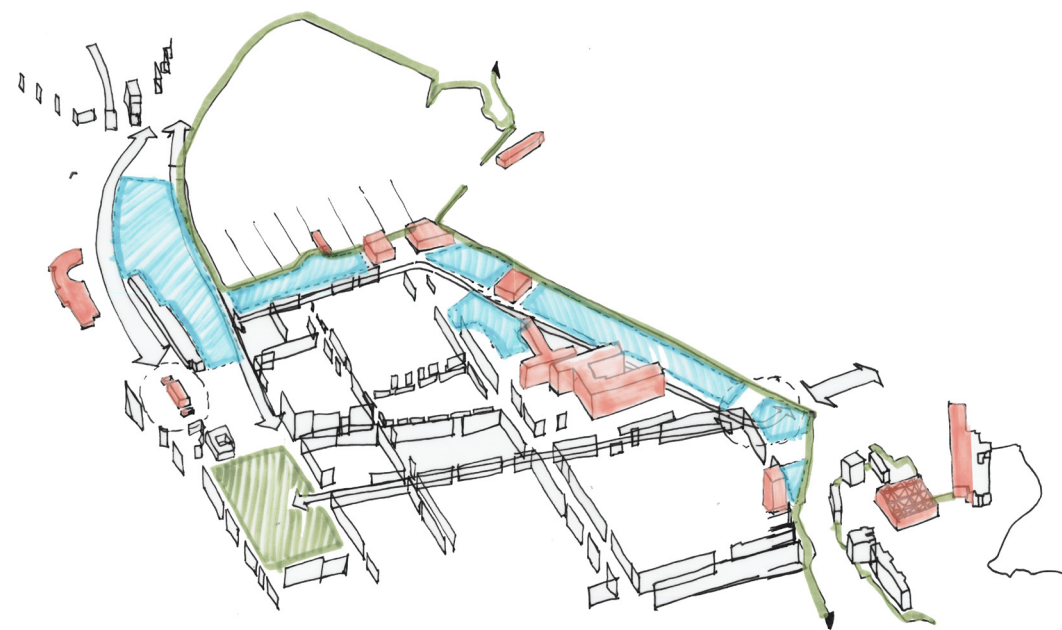


Figure 163: Existing spatial qualities and potentials. Source: author

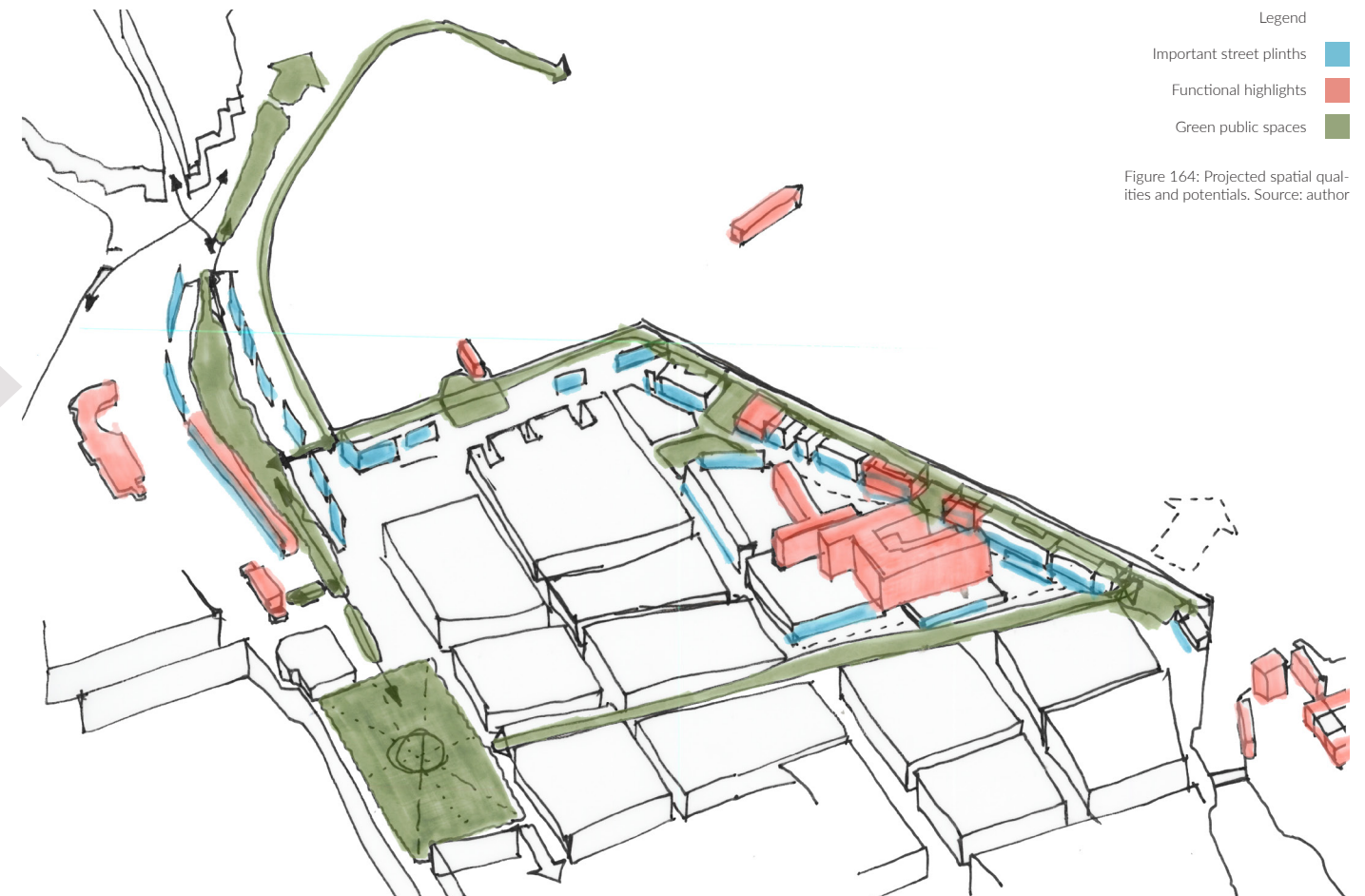


Figure 164: Projected spatial qualities and potentials. Source: author

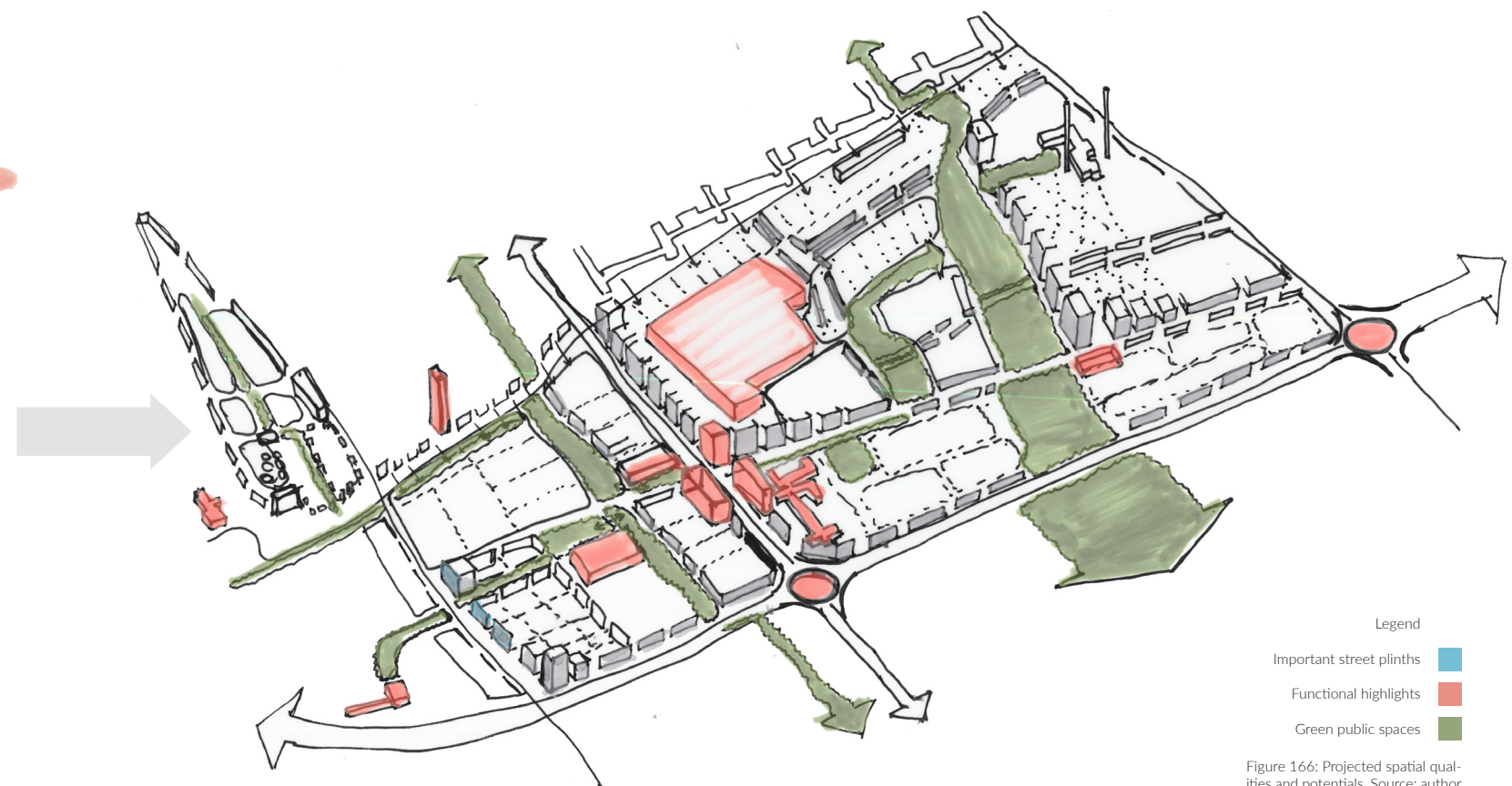
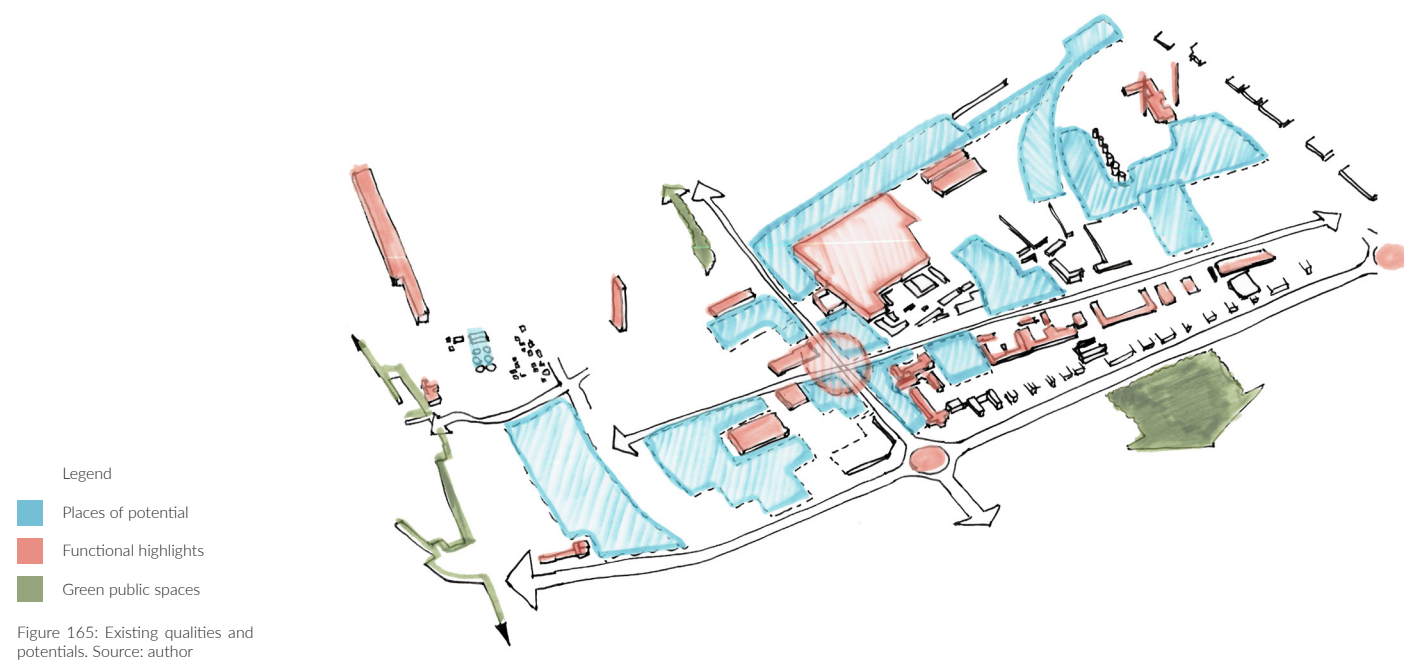


## spatial qualities

The nodes (public squares) are the concentration places where several spatial structures cross each other. Their front facades and human-scale street network form detailed street plinths. The highlighted buildings and places inhabit the functional program and work as architectural highlights and place makers. Some are already recognized (shopping mole, the residential tower)

Green and public spaces ensure the continuity of city-scale structure. They serve as connectors but also as local ecosystems, which are absent in the current situation. Irregular green spaces in between blocks ensure the reachability between the core structure.

The footprint of building blocks varies in different areas. They create smaller clusters or micro-districts. Overall, the edges, plinths and length of facades define the spatial quality.



# patterns applied

Design and action patterns are chosen and applied in target places. They identify what projects should be prioritized and what actions, agreements or responsibilities must be taken. The main criterion for applying patterns in specific places are the functional program, public space system, existing infrastructure, stakeholders and potential of spaces and buildings.

In Karlskrona's case, most patterns are applied in unbuilt territories. Also, the existing buildings are targeted to be transformed simultaneously. Railway territory contains more nature-based solutions. Meanwhile, the West part includes hard infrastructure patterns.



Figure 167: Design patterns which are applied in Karlskrona district. Source: author



Figure 168: Locations and buildings which are applied the patterns to. Source: author

Patterns in Klaipėda are also applied at different intensities. The most significant concentration of transformations and interventions is located around the central node of the district. Also, most patterns are applied along the streets, emphasizing the qualities of street plinths and connections. Some patterns transgress the boundaries of the cluster. It illustrates the importance of integrated context and connections to other districts, clusters and transport nodes.



Figure 169: Design patterns which are applied in Klaipėda district. Source: author

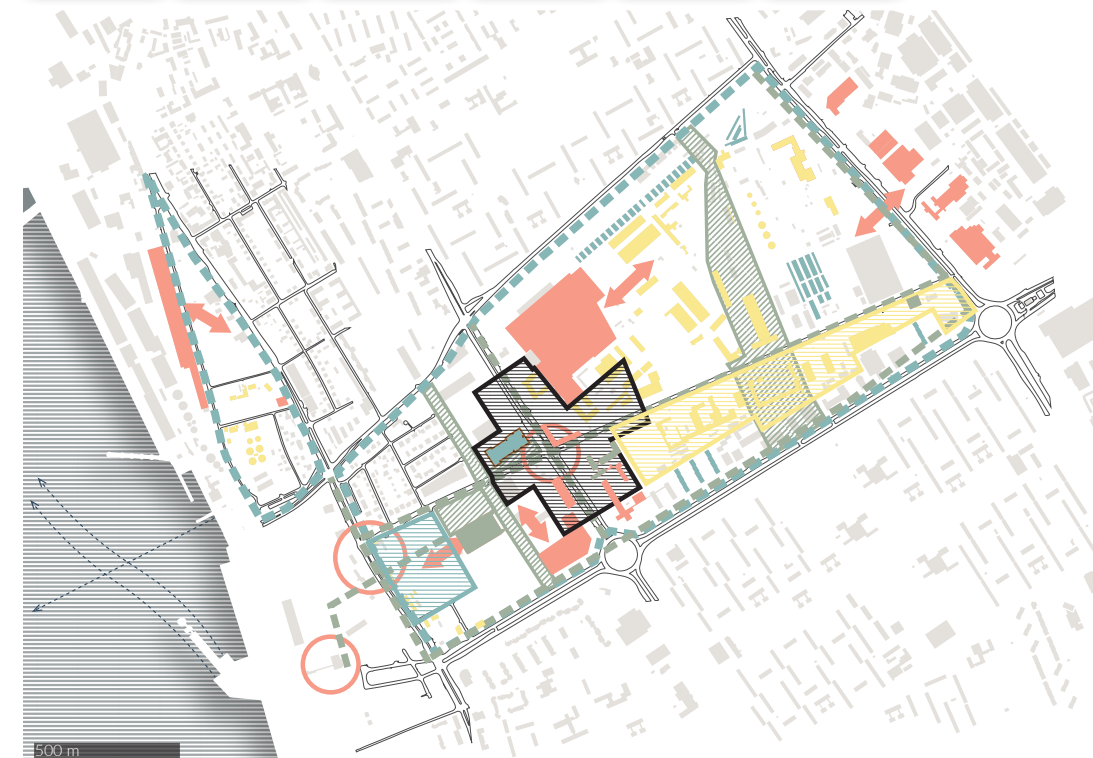


Figure 170: Locations and buildings which are applied the patterns to. Source: author



# stakeholders

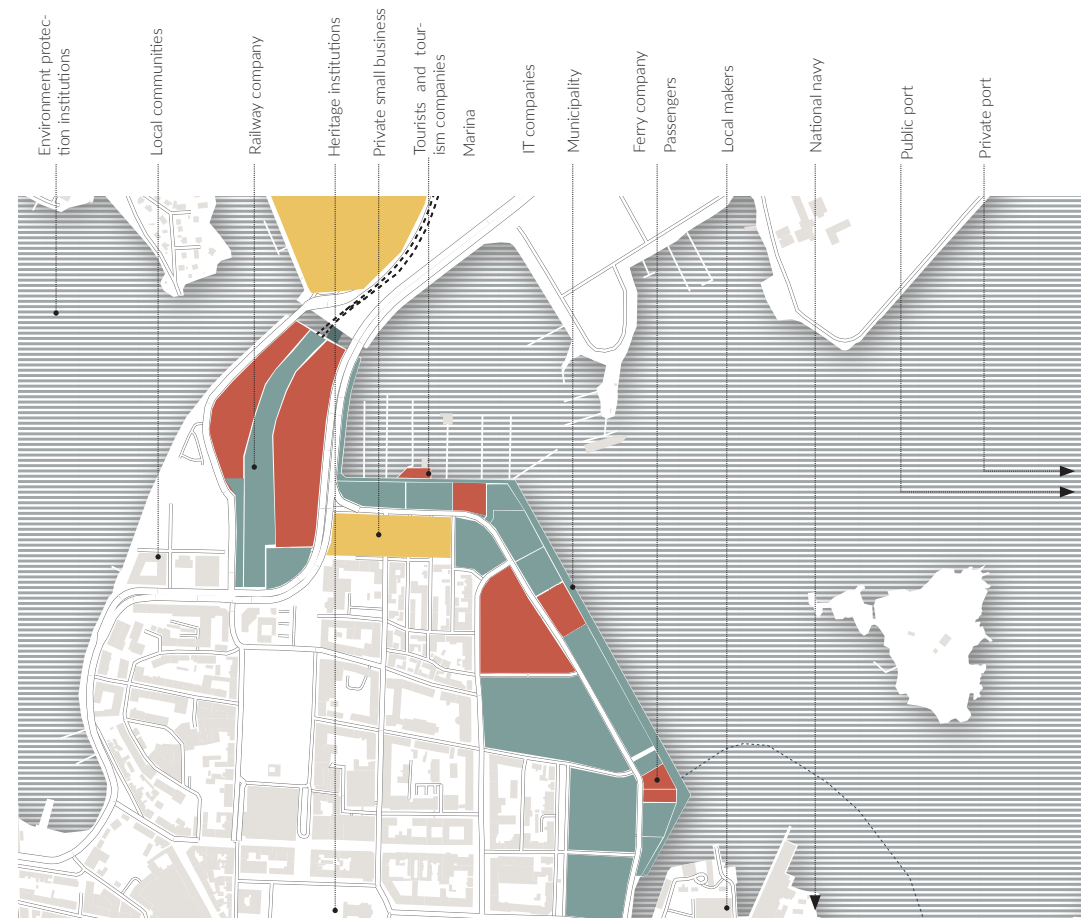
The final aspect of cluster development involves stakeholders and other actors. The stakeholders were considered as land owners at the same time. That is why the main scheme of stakeholders is depicting the plots. There are 3 groups of stakeholders identified: private (non-business), public and business oriented.

A municipality or public company mainly on the territory of Karlskrona. Therefore, the main initiator of the project has to be the governmental sector offering synergistic development with private actors. Private and business-oriented actors own some plots. In station areas, private and public stakeholders should ensure qualitative, natural, structure-based development. The North-West part is the opposite example where public institutions as land owners have to establish project-based cooperation.

The engagement strategy is based on the power and interest of stakeholders in this project. The Railway surroundings involve supportive actors. They should become leaders of the entire development. The ferry terminal in the South is another strategic actor that should actively support the waterfront development. The public space development is an element which could empower and bring the 'silent' actors to make decisions. Finally, the uninterested actors should base the arguments on design solutions. As a result, a mixed development model could balance the power.

Other stakeholders

University of Blekinge  
Foreign investors  
Blekinge regional government  
Public transport company



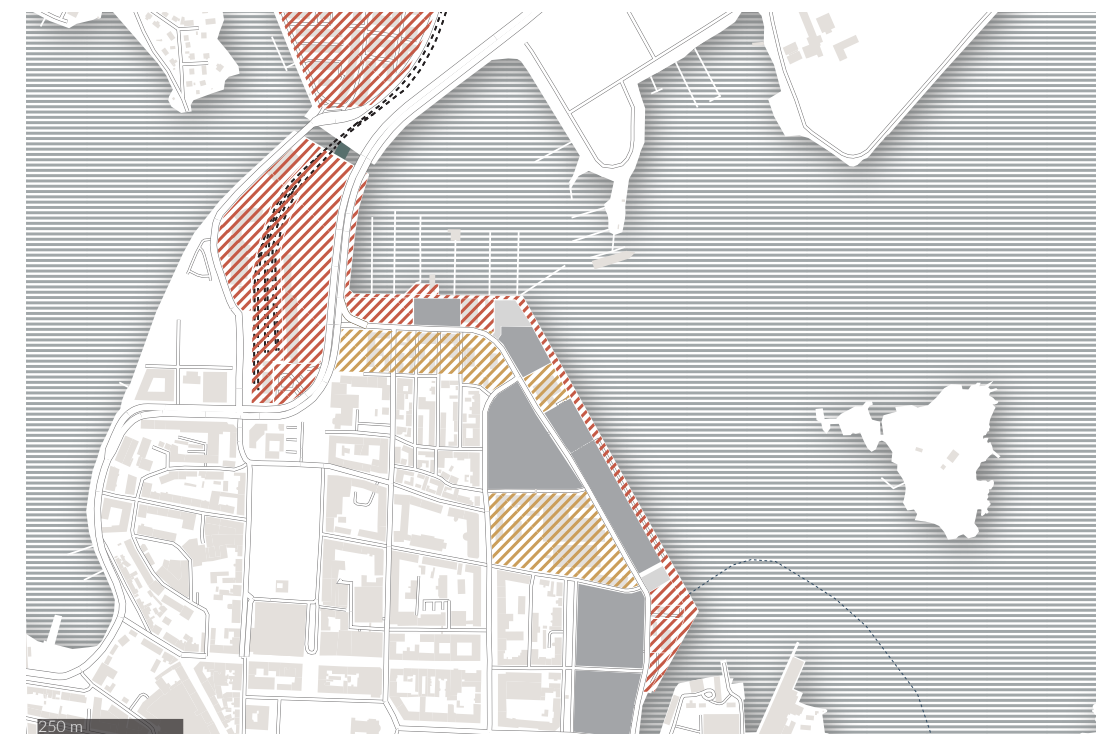
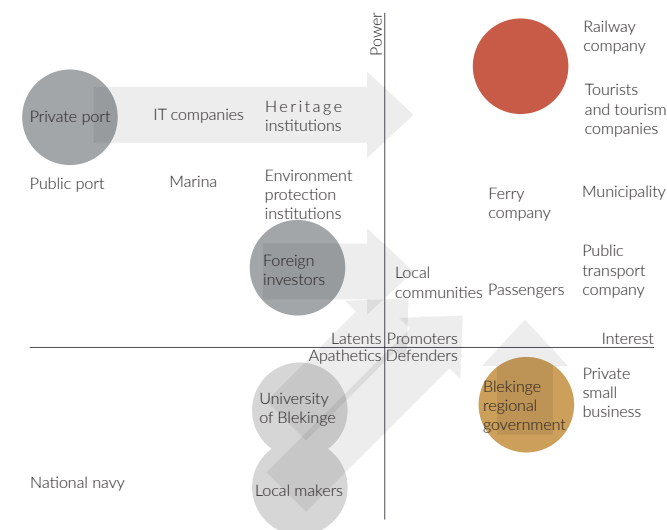
Legend

- Private / business oriented stakeholders
- Public stakeholders
- Private stakeholders
- Buildings
- Water

Figure 171: Stakeholders, their category and claims on land. Source: author

## engagement strategy

Stakeholder engagement has to encompass the empowerment of regional government, involvement of the University of Blekinge as an essential stakeholder, empowering local makers and elaborating potential to foreign investors and local private companies (port, IT companies) and heritage institutions. The regional strategy should be directly linked with the city and local development strategy to empower regional government. Soft events and representations tools should be introduced to attract the port, companies and investors. Finally, Partnership between the IT sector and the university would empower the educational institution to participate in the strategy actively. After all, the stakeholders' involvement is interconnected and depends on the actors' positions of each other.



Legend

- Latents stakeholders
- Promoters stakeholders
- Defenders stakeholders
- Apathetic stakeholders
- Buildings
- Water

Figure 172: Stakeholders, interest and power division in territory. Source: author

A considerably equal amount of businesses and public stakeholders are located all around the territory in Klaipėda. The territories on the edges of the area belong to public institutions. Meanwhile, business-oriented actors are located inside the blocks. Mostly private stakeholders are the strategic players in this redevelopment. However, the public sector can only catalyze the transformation if the public companies as land owners work commonly

The additional power of the stakeholders' scheme helps to identify the priority areas and challenging places for development. The central crossing area does not involve conflicting actors. Thus, the central crossing should be a strategic development promoter. The Northern block and the block by the harbour territory are of varied interest. The influential land owners (manufacturing and retail companies) have to work in synergy with foreign actors. The clear trade opportunities have led to the expected redevelopment of industrial territories.

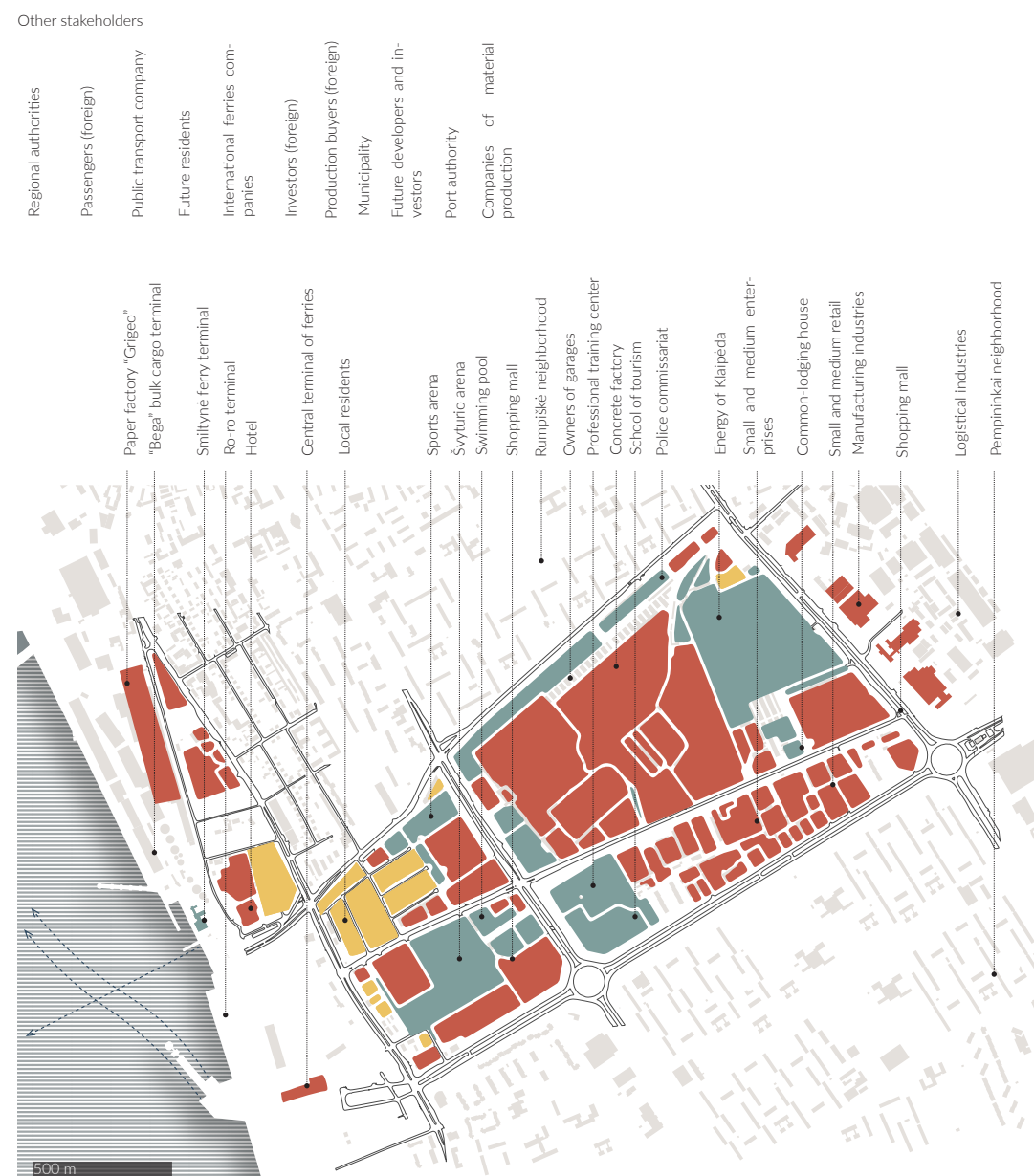


Figure 173: Stakeholders, their category and claims on land. Source: author

## engagement strategy

The engagement actions encompass the motivation of 'Promoters' making legal agreements of engagement, annual meetings, updates and listening for their evaluation. All defenders should be 'activated' by giving considerable decision making. The schools could be engaged by managing study programs dedicated to the strategic development of manufacturing. This could be achieved through funding programs like "Erasmus+". Most 'Latent' actors should be actively engaged from the beginning. Their main focus should be respected, not contradicted and engaged in strategy for quality exchange (less polluting paper production - design of advanced manufacturing technologies; intensive development next to existing private neighbourhood - new services and qualities for residents). Only some 'Apathetical' stakeholders should be introduced into constant active processes. Residents should be included in public participation and evaluation events. Meanwhile, more legal port terminals like 'Ro-ro' should participate in legal agreements on infrastructure and long-term prosperity. Consequently, engagement must react to the 'language' of stakeholders with whom they operate. Nevertheless, not all stakeholders should be included equally.

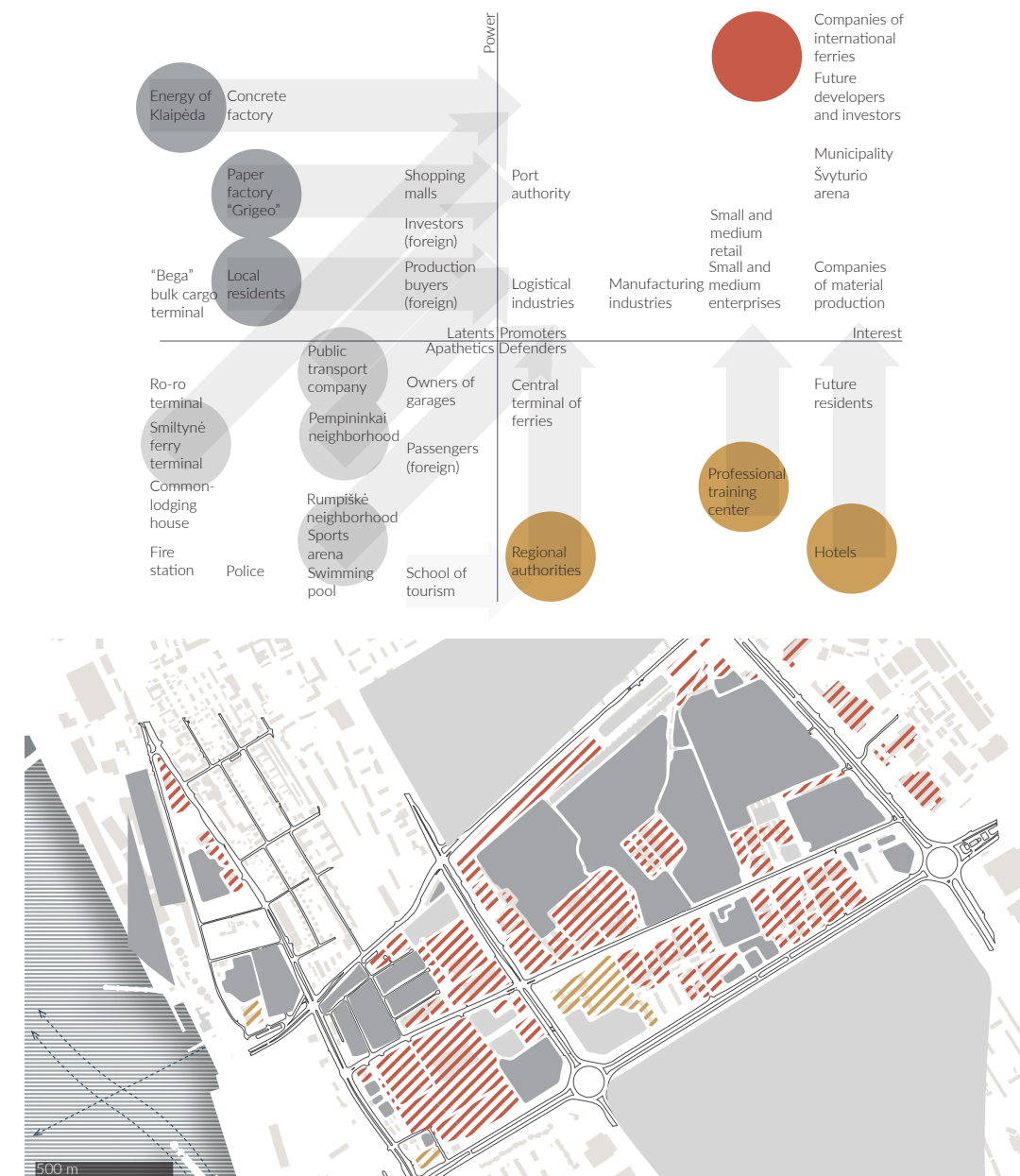


Figure 174: Stakeholders, interest and power division in territory. Source: author



# new development strategy

## new building development

The building development strategy clarifies what structures, buildings and projects could illustrate the strategic plan in previous sections. It focuses on the qualities of spaces rather than on separate buildings. Therefore, the known, well, functioning urban districts are taken as unified structures to fill the planned territory and spaces. The examples are only from the BSR cities.

## reference districts



Figure 175: Klaipėda oldtown. Source: author



Figure 176: Satellite image of Klaipėda oldtown. Source: <https://www.google.nl/maps/@55.7078924,21.1349738,727m/data=!3m1!1e3?hl=en&authuser=0>



Figure 177: Jatkasaari public space. Source: [https://upload.wikimedia.org/wikipedia/commons/thumb/3/33/Bike\\_lanes\\_in\\_Hyv%C3%A4ntoivonpuisto\\_in\\_J%C3%A4tk%C3%A4saari%2C\\_Helsinki%2C\\_Finland%2C\\_2022\\_June.jpg/2560px-Bike\\_lanes\\_in\\_Hyv%C3%A4ntoivonpuisto\\_in\\_J%C3%A4tk%C3%A4saari%2C\\_Helsinki%2C\\_Finland%2C\\_2022\\_](https://upload.wikimedia.org/wikipedia/commons/thumb/3/33/Bike_lanes_in_Hyv%C3%A4ntoivonpuisto_in_J%C3%A4tk%C3%A4saari%2C_Helsinki%2C_Finland%2C_2022_June.jpg/2560px-Bike_lanes_in_Hyv%C3%A4ntoivonpuisto_in_J%C3%A4tk%C3%A4saari%2C_Helsinki%2C_Finland%2C_2022_)



Figure 178: Jatkasaari satellite image of built environment and public space structure. Source: <https://www.google.nl/maps/@60.1546275,24.9126038,704m/data=!3m1!1e3?hl=en&authuser=0>

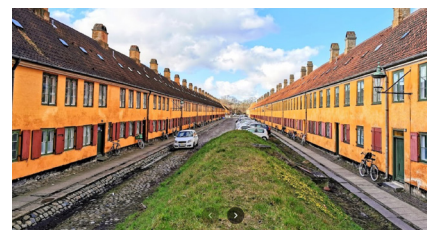
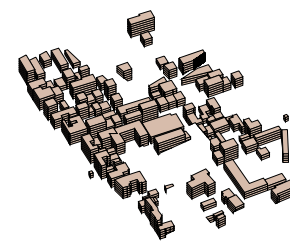


Figure 179: Heritage Nyboder district typical street image. Source: <https://www.google.nl/maps/@55.6880239,12.5874327,934m/data=!3m1!1e3?hl=en&authuser=0>

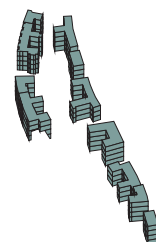
### Klaipėda oldtown

- Compact urban fabric
- Diverse functional program
- Historic architecture
- Human scale spaces
- Rich public space network



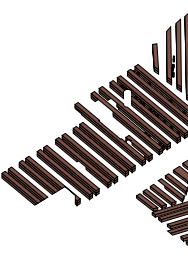
### Helsinki Jatkasaari

- Developed public spaces and green network
- Compact housing
- Prioritized international transport hub
- Transformed former harbor territory
- Integration with existing public spaces



### Kopenhagen Nyboder

- Human scale environment
- Compact housing
- Low building height
- Economic structure
- Calm residential environment
- Iconic aesthetics
- Historic identity



### Karlskrona oldtown Trosso

- Compact urban fabric
- Diverse building typologies and periods
- Mixed use environment

Figure 180: Karlskrona typical oldtown image. Source: author

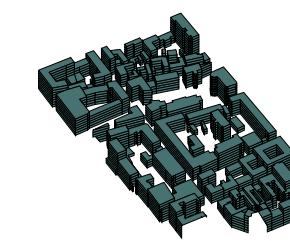
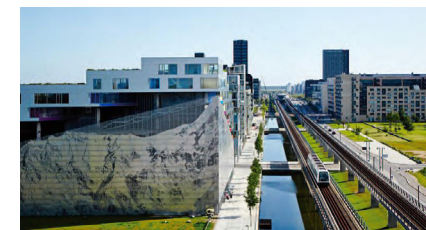


Figure 181: Karlskrona satellite image. Source: <https://www.google.nl/maps/@56.165593,15.5887718,1014m/data=!3m1!1e3?hl=en&authuser=0>



### Kopenhagen Orestad

- Gradual urban environment
- Linear spatial development
- Transit oriented development
- Emphasised street plinth
- Iconic pieces of architecture
- Gradual building development over time
- Integrated ecosystem services
- Direct connection to international airport

Figure 182: View to Orestad from the central transport artery. Source: <https://galeri3.arkitera.com/var/resizes/Haber/2011/12/12/OR-ESTAD%20MAIN%20PIC.jpg.jpeg>

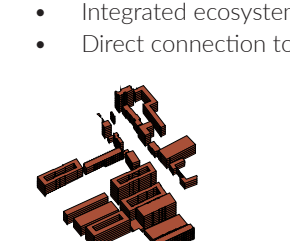
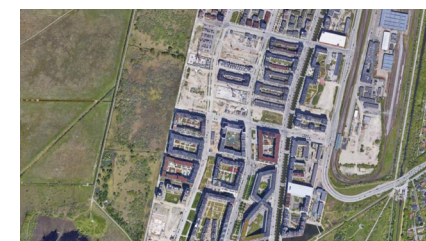


Figure 183: Satellite image of Orestad. Source: <https://www.google.nl/maps/@55.6206551,12.5801458,1428m/data=!3m1!1e3?hl=en&authuser=0>



### Malmo Vastra hamnen

- Human scale environment
- Calm residential environment
- Small scale diverse buildings
- Big variety of housing typologies
- Diverse and gradual building environments: high density on the outside, low density - inside

Figure 184: Typical residential street in Vastra hamnen. Source:

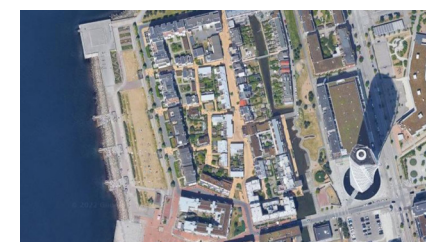


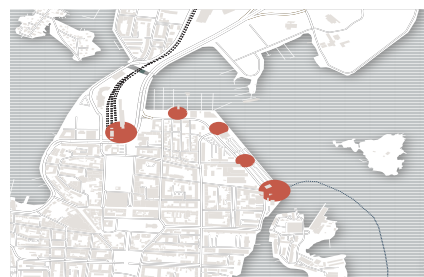
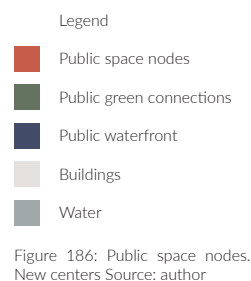
Figure 185: Satellite image of Vastra hamnen. Source: <https://www.google.nl/maps/@55.6134186,12.9750289,633m/data=!3m1!1e3?hl=en&authuser=0>



# implementation: stage I skeletoning

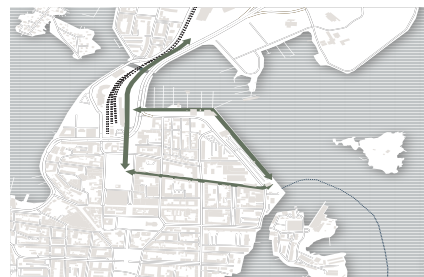
The time frame of 7 years is dictated by the EU development program Interreg which is dedicated to regional integration. Due to this reason, there have to emerge specific goals and development programs throughout the first development stage. The entire implementation has to aim for complete development, which can be advanced in other stages. There are presented spatial actions, specific projects and stakeholders involved in the projects. The detailed implementation follows underlying spatial priorities, which grounds space for the new program.

## spatial priorities



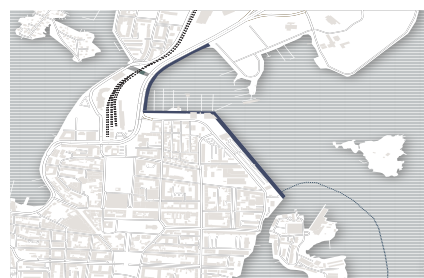
The essential element of development is nodes. These public spaces form the destination places by the waterfront. Smaller public spaces complement the existing station and ferry terminal centres by the waterfront, which would support the activities of the surrounding building.

Figure 187: Public space connections. Source: author



The nodes have to be interconnected by continuous public spaces. These linking streets connect the central old town park, ferry terminal and waterfront in a loop. The link passes the central station and directs to the continental part of the city.

Figure 188: Public space waterfront. Source: author



Diversity in typologies is an essential distinctive condition of the public space system. The waterfront public walkway is a critical space encompassing land-water system challenges, several neighbouring stakeholders and virtual public space. Hence, it is prioritized as one of the development goals.

Figure 189: Collection of applied patterns. Source: author

Action pattern	public handshake	public good upgrade +1	branding	taxes	testing site pilot project	3 x handshake PPPP	foreign investors local makers	public handshake	neighbor handshake	resolution
Stakeholders	Railway company Municipality Public transport	Municipality	Municipality Tourist center Marina administration	Skatepark administration Municipality	Municipality private ship owners	Municipality	Municipality	Municipality Public transport Ferry company	Municipality Private developers Land owners	Municipality Land owners Local companies
Design pattern	multimodality	water for public	season oriented attractions	heritage in action	brand store / park	public info center	foreign school	station renaissance	come along	centralization
Project	Strengthening multi-modal node	Transforming waterfront as a public space	Initiating temporal activities throughout the year	Upgrading existing skatepark building	Supplementing community of ships	Establishing district development public center	Humanizing street profiles and environment prioritizing people	Strengthening ferry terminal identity and multimodality	Developing building by the street plinth	Planning telecommunication innovation district



Figure 190: I stage development and new interventions. Source: author



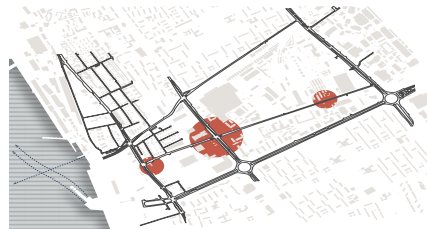
# framing

The first stage in the Klaipėda site is dedicated to developing the functional structure and borders of the territory.

## spatial priorities

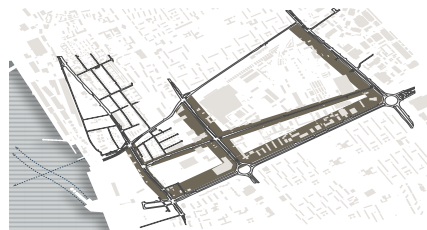
- Legend
- Public space nodes
  - Street plinths
  - Public space to waterfront
  - Buildings
  - Water

Figure 191: Public space nodes. New centers. Source: author



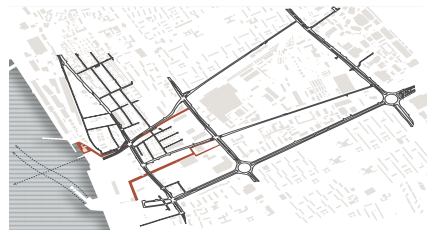
Central crossing nodes as public spaces are important places for the entire development. All 3 centres are newly shaped public spaces. It is opposite to the Karlskrona case, where existing nodes are liked. The central crossing becomes the critical centre of the entire strategy.

Figure 192: Street plinths. Source: author



Framing is most evident in the redevelopment of street plinths. The street profile gains a constant sequence of facades. Some buildings perform as wall barriers from intensive streets. Others entail buildings with complementary functions with another street side. The frame leaves space for future development inside.

Figure 193: Public space connections to waterfront and terminal. Source: author



The final spatial link is dedicated to urban - water and international terminal integration. The pedestrian connections favour the new urban centres. They both intervene in the harbour environment and bring different values to it. Terminal connection represents values of multimodality and functional rote. Meanwhile, the walkway to the waterfront brings public value to this development of a new centre.

Figure 194: Collection of applied patterns. Source: author

Action pattern										
Stakeholders	Municipality Land owners	Port authority Municipality Ferry company	Land owner Municipality Private developers	Land owner Municipality Private developers	Private business Building owners Municipality	Private business Building owners Municipality Private developers	Municipality Private developers Future residents	Private companies Land owners	Municipality Private companies Local business	Municipality Private stakeholders
Design pattern										
Project	Building barrier and pollution treatment upgrade from the port	Transformation of international ferry terminal	Mixed use development	Path between terminal and city	Civic building for citizens engagement into the development	Integrated development with private stakeholders	mixed use district development	street plinth development as a strict barrier	Infrastructure for material sorting and dismantling	social or municipal housing integration

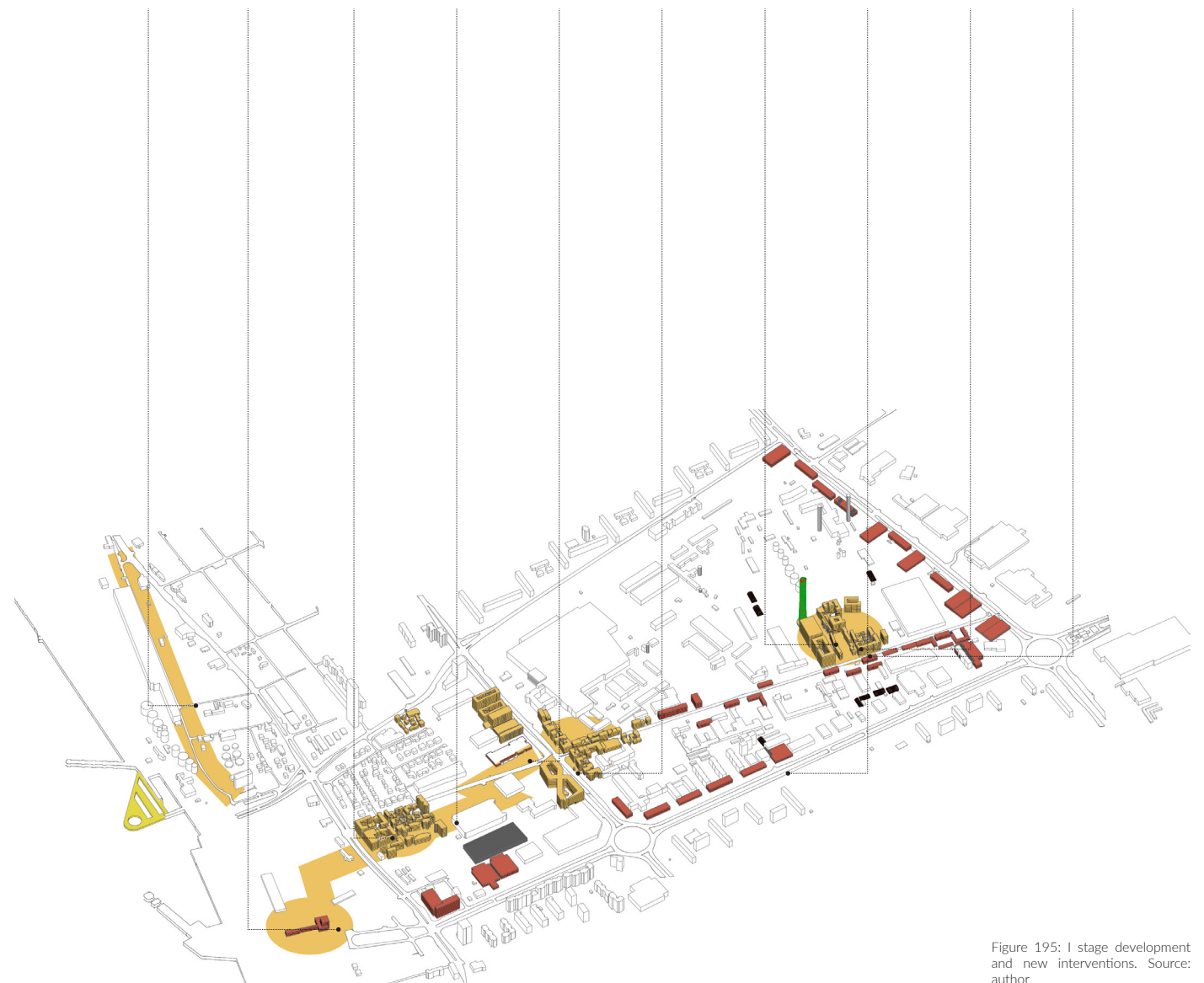


Figure 195: I stage development and new interventions. Source: author

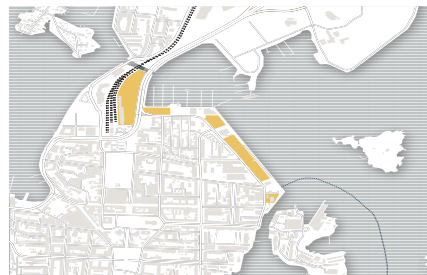
# stage II patching up

Another development round is dedicated to intensifying activities in the territory. This stage focuses on unbuilt spaces, street plinths and better integration with natural structures.

## spatial priorities

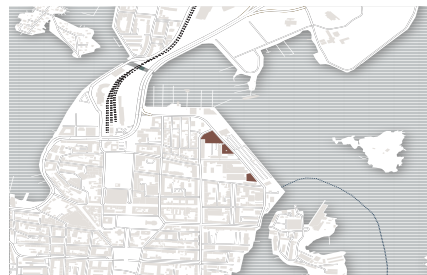
- Legend
- New development patches
  - Existing unbuilt blocks
  - Green connections
  - Buildings
  - Water

Figure 196: Empty land areas. Source: author



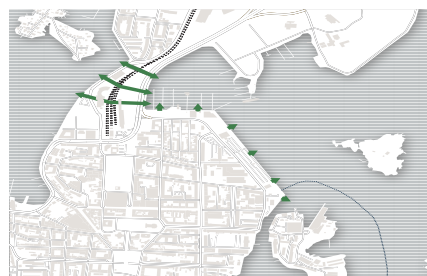
Spatial patches along the waterfront are dedicated to urban blocks. This linear development follows previous structural elements: public spaces, linkages and the waterfront. This layer provides a mass of users, activities and spaces for them. It is the central aspect of the strategy of the innovative IT sector and companies.

Figure 197: Free space in existing blocks. Source: author



Space in existing old town spaces gains additional attention. There are blocks which have been ruined throughout time, creating a drosscapes-like environment. The street becomes no longer a barrier but an attractor with the fulfilled street line.

Figure 198: Green connections to water environment. Source: author



Natural water and land structure are overviewed in general urban plans. However, the coastal territories must gain more precise attention in the context of climate change and heritage protection. Due to this reason, the public waterfront transforms the rigid boundary into a membrane between two environments. The zone at the entrance to the island is treated in a different model. Their natural structure is waved together with new development. Coexistence with the natural environment becomes the leading narrative.

Figure 199: Collection of applied patterns. Source: author

Action pattern										
Stakeholders	Municipality Land owners	Municipality Land owners	Municipality Land owners Developers	Municipality	Municipality Developers Land owners	Developers	Developers Land owners Future users Foreign investors	Developers Land owners Private companies	Developers Land owners Municipality Future users	Developers Land owners Municipality Future users Foreign investors
Design pattern										
Project	Installing eco-system services between urban spaces	Developing human scale environment	Developing housing next to stations	Transforming street for human friendly environment	Developing social or municipal housing	Constructing water defense integrated buildings	Developing mixed use district	Showcasing local innovative production	Integrating public services in building development	Planning integrated infrastructure for target stakeholders

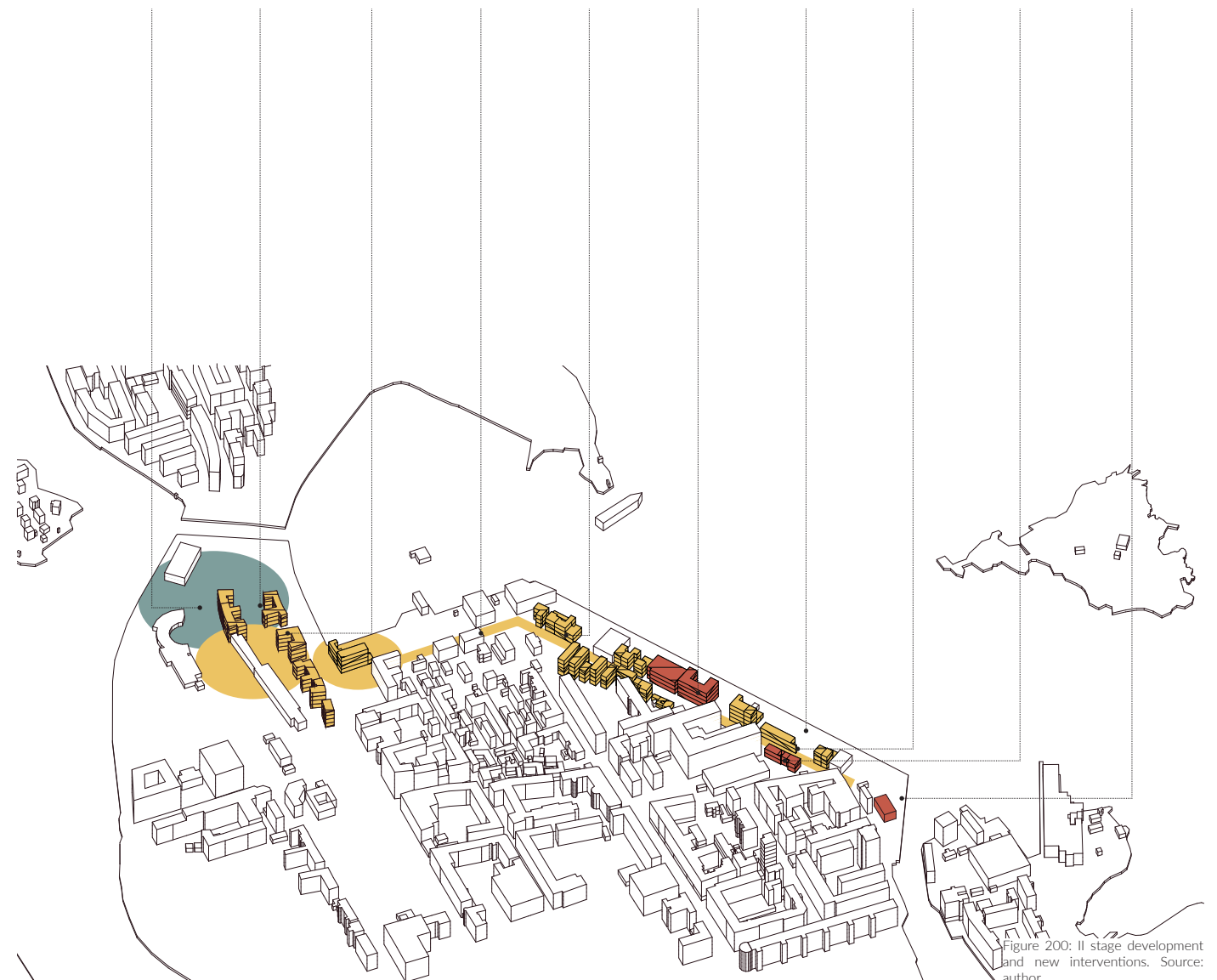


Figure 200: II stage development and new interventions. Source: author



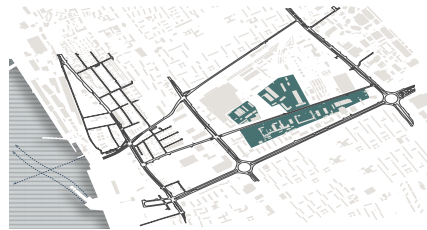
# inflation

The second stage enables to activation of the inner blocks and local communities. The local values are transformed and exhibited. The district is wholly intervened in the city structure.

## spatial priorities

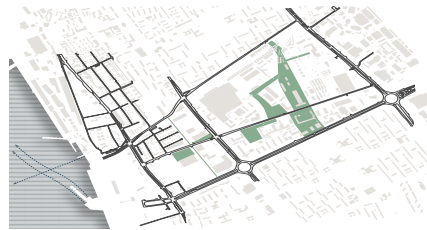
- Legend
- Facilities for makers
  - Green public space
  - Factories
  - Buildings
  - Water

Figure 201: Existing small enterprises and makers area. Source: author



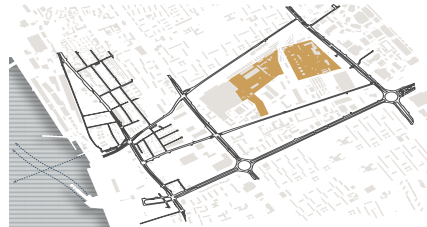
Small and mid-scale manufacturing spaces become the target of transformation. Existing blocks are enriched with functions and infrastructure with the involvement of makers' communities. The area activates the main district street and upgrades the local manufacturing culture.

Figure 202: Public green space connections. Source: author



Green space structure connects the open end spaces in surrounding districts. Additionally, it sequences new green and public spaces along essential connections. The structure participates in the city, district and local community scale.

Figure 203: Transformation of concrete factory and heat plant territories. Source: author



The final stage involves manufacturing territories where alternative functions will take place. The heating energy company will have to be transformed due to advancing technologies and resources. Meanwhile, concrete factories will gain alternative space and technologies for advanced manufacturing. The redevelopment will fulfil the strategic goals of mixed residential and manufacturing environments in the final stage.

Figure 204: Collection of applied patterns. Source: author

Action pattern									
Stakeholders	Municipality Land owners	Municipality Manufacturers Energy company	Municipality Residents Transport companies	Municipality Residents Land owners	Owners Manufacturers	Municipality Manufacturers Developers	Manufacturers Developers Investors Retailers	Municipality Residents	Municipality Land owners manufacturers
Design pattern									
Project	Public bath	energy sources exchange between neighboring infrastructure	Multimodal node	development of natural and recreational infrastructure	continuous development of manufacturing facilities along the street	Showcase campus of local production	infrastructure to assemble different elements in one product	Buildings for small and medium scale makers in new development	corresponding functions on both plinth of the street

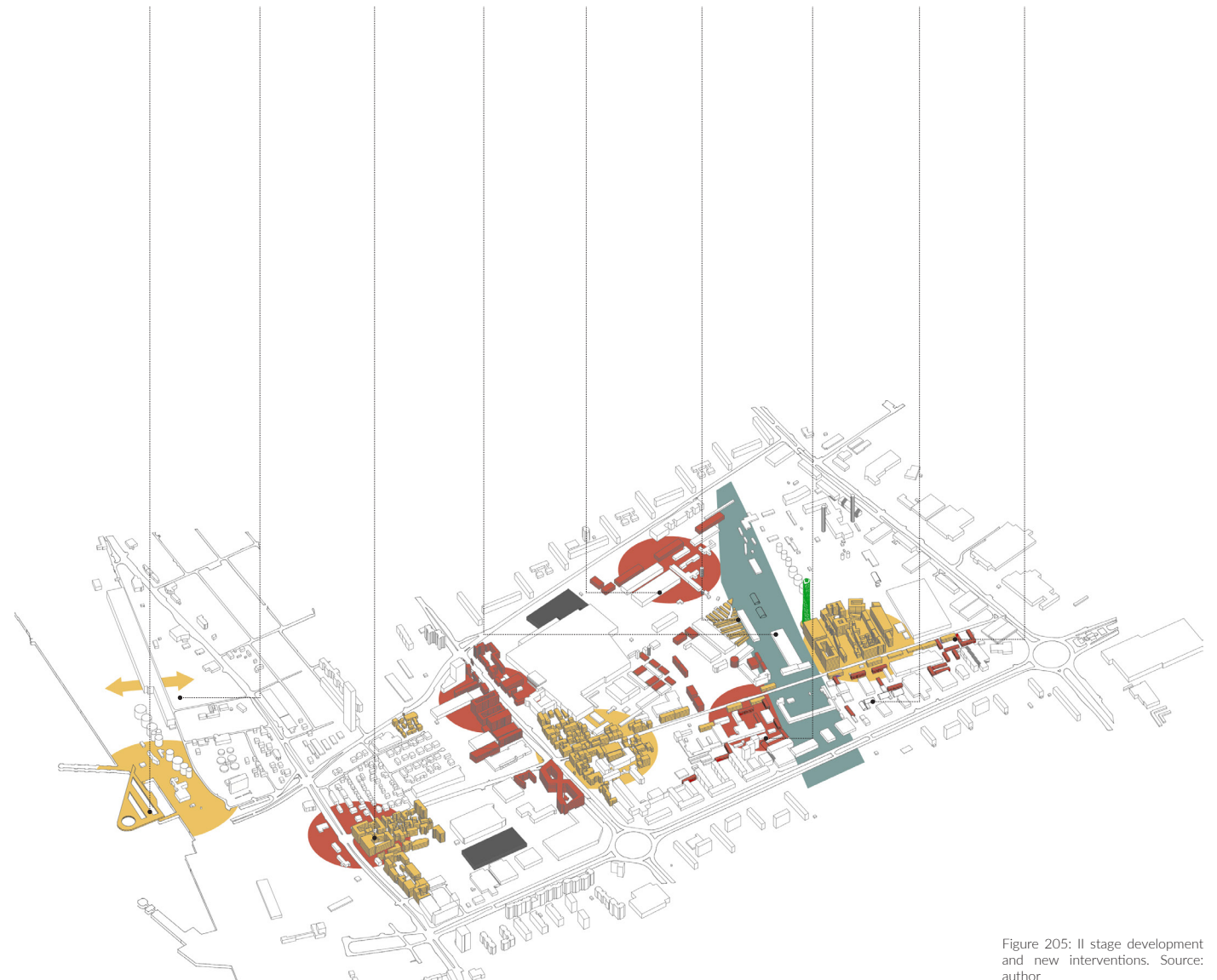


Figure 205: II stage development and new interventions. Source: author

# stage III Nordic communication hub

New public goods and other interventions

Green - blue connections, Public flooding park

Vital street economy, Ground floor economic activities

Public space - safe connection with the oldtown  
Retrofitted railway building, Newcomers center

The Little Helsinki, Diverse affordable housing

International multimodal station

Place for local businesses

Public green promenade

Trossö bay picnic

ariskrona Regata fest

Underground railway rave

New local street - business

New green street with slow traffic

New public bridge to the park

New public space for alternative culture

The little Klap4da, Affordable social housing for newcomers

Social housing and civic center for communal living

Place for international companies and startups

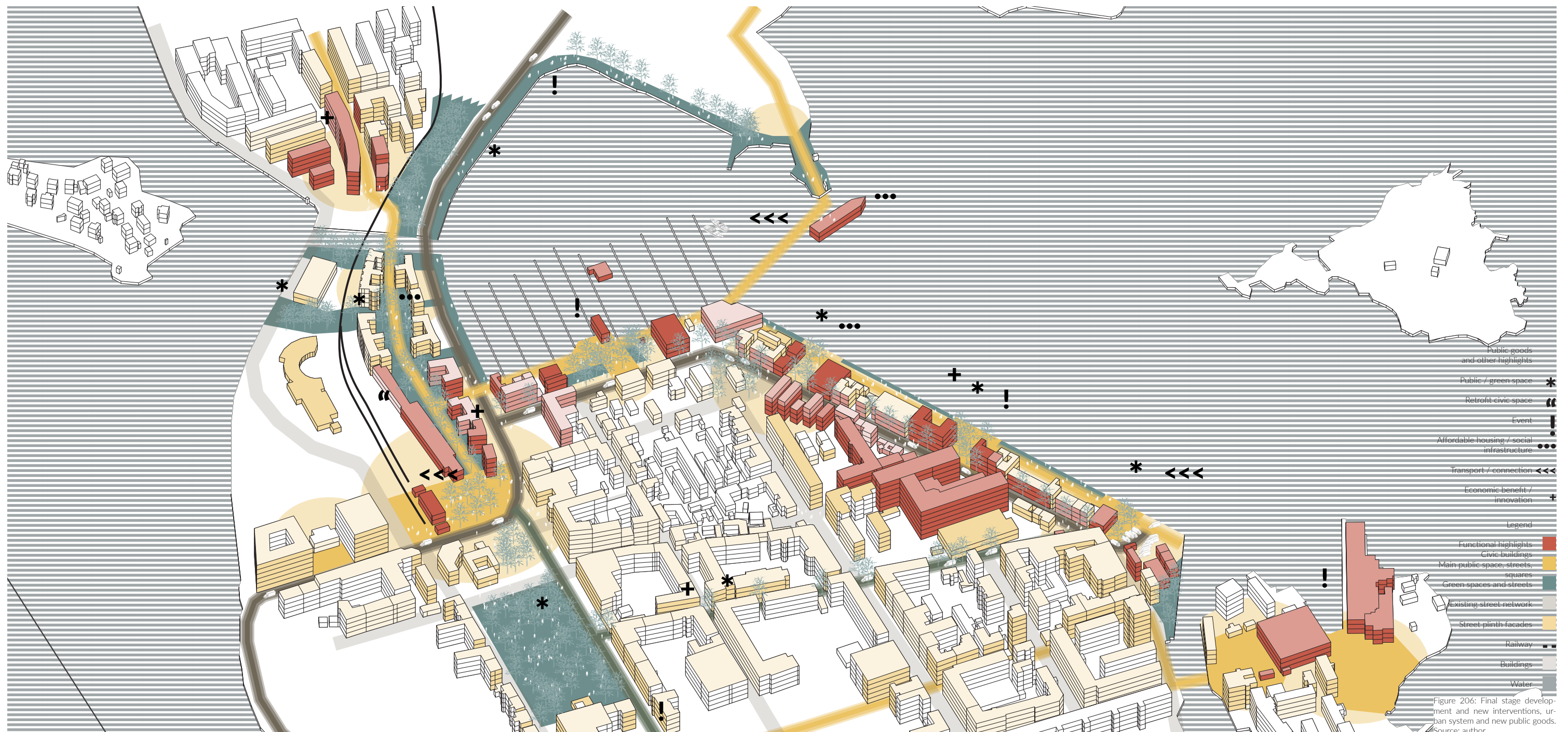
Telephone square, Public place for telecommunication offices

The innovation of telecommunication fair

Public square by the ferry terminal

Regional ferry node, Link to the international ferry

Traditional makers' fair





# stage III Baltic makers district

Ferries night life festival  
The little Aarhus. New waterfront public space. Public bath

Logistical innovation center

Public space connection

International ferry lines transport hub  
New public space connection

New city multimodal node. Karskrona stop

International furniture and home fair  
Marathon and healthy days festival

New green field. Arena park

The little Kobenhaven. Affordable housing

New green street park

Retrofit of historical furniture store

New civic center for innovation

New city center. Multimodal node

Social housing and space for local economy

New educational program for makers

Retrofit of old factories. New manufacturing

New campus of experimental locally produced

Reuse of old industrial building for new production

New housing on top of old makers' place

New green space. The cement park

New public place and retrofit of heat infrastructure

Retrofit and festival of heat plant

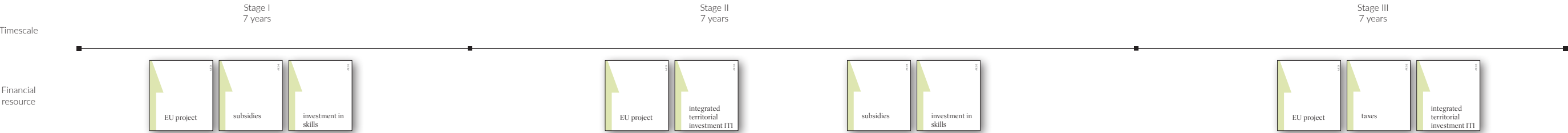
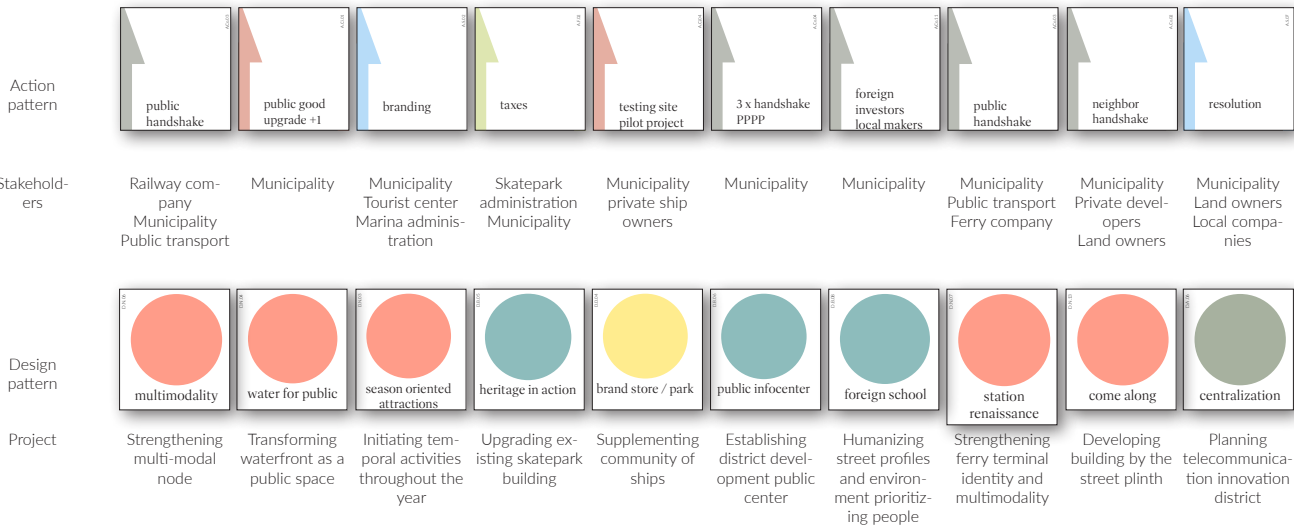
New public place. multimodal node and material center



Figure 207: Final stage development and new interventions, urban system and new public goods. Source: author

# timeline

Karlskrona



Klaipeda

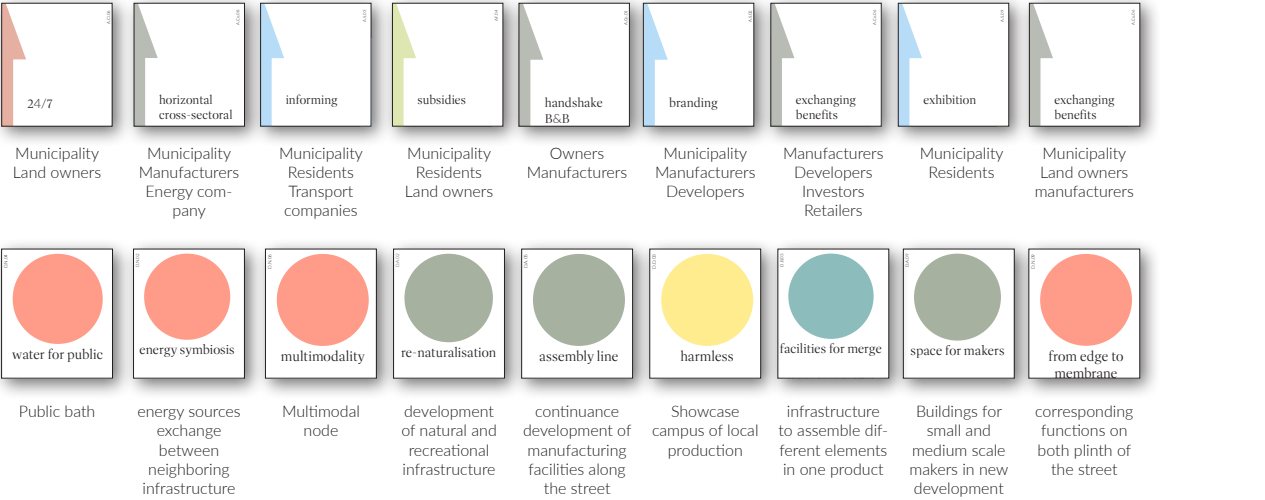
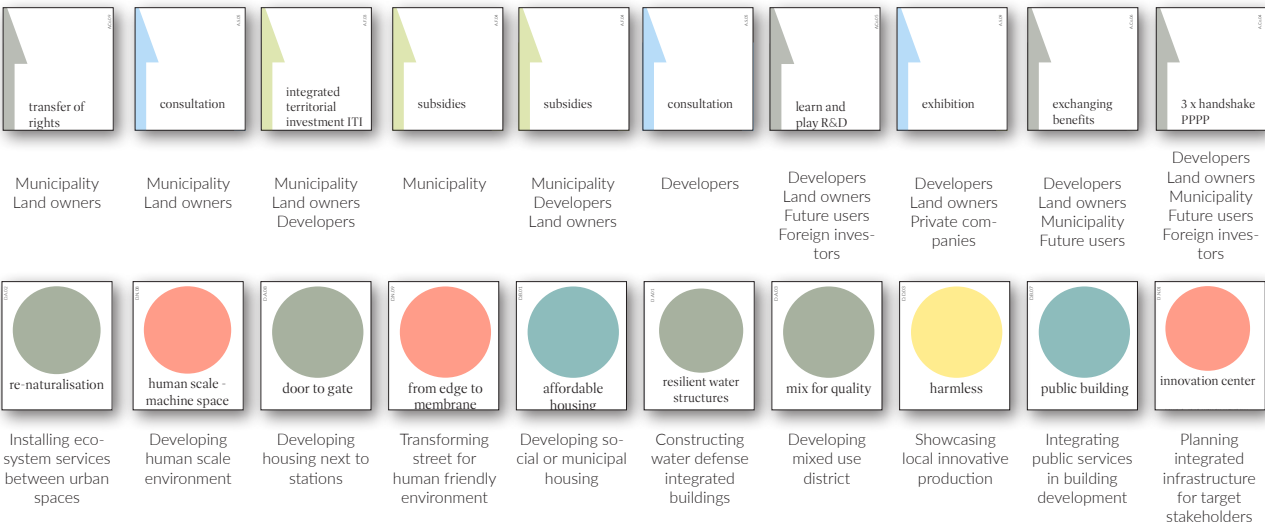
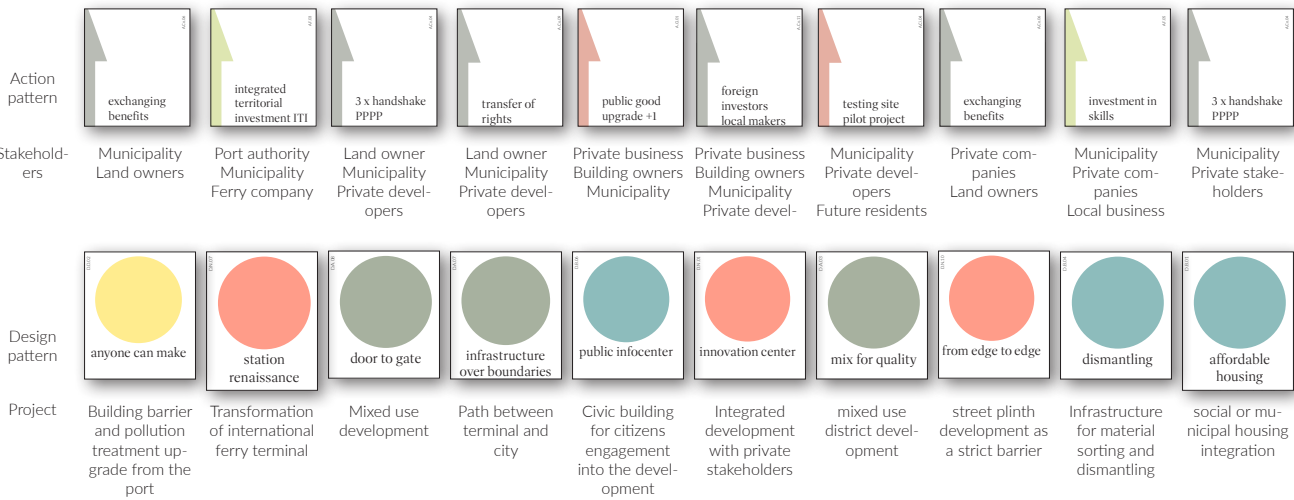


Figure 208: All patterns applied in both territories. Source: author



# cooperation

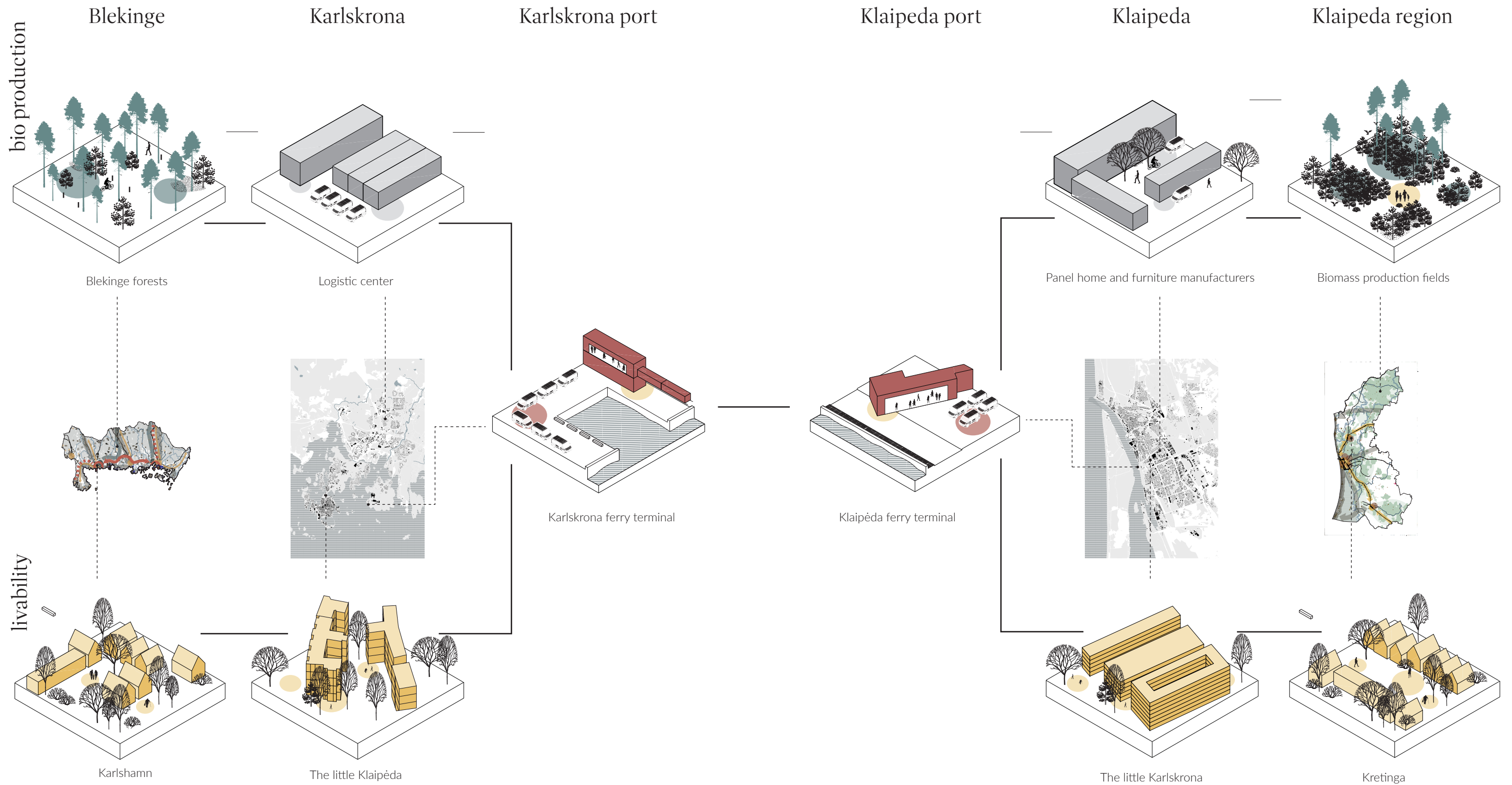


Figure X-X: Axonometries of place typology and interlink among two places. Source: author

Figure 209-218: Axonometries of place typology and interlink among two places. Source: author

# VII

# upscale

application of design outcomes for the entire territory and essential systemic changes for the projected vision

## stages of integration

The exemplified model of distant cooperation can be upscaled. Due to this reason, the entire macro-region has to be taken into account. The macro-regional transformation is envisioned in 3 stages. However, it cannot be framed in a specific time scale. The region is illustrated as a process which allows the co-operational sequence repeats itself through different times and places. Only joint actions would lead to desired futures. The most important condition is the order of stages.

### I recognition

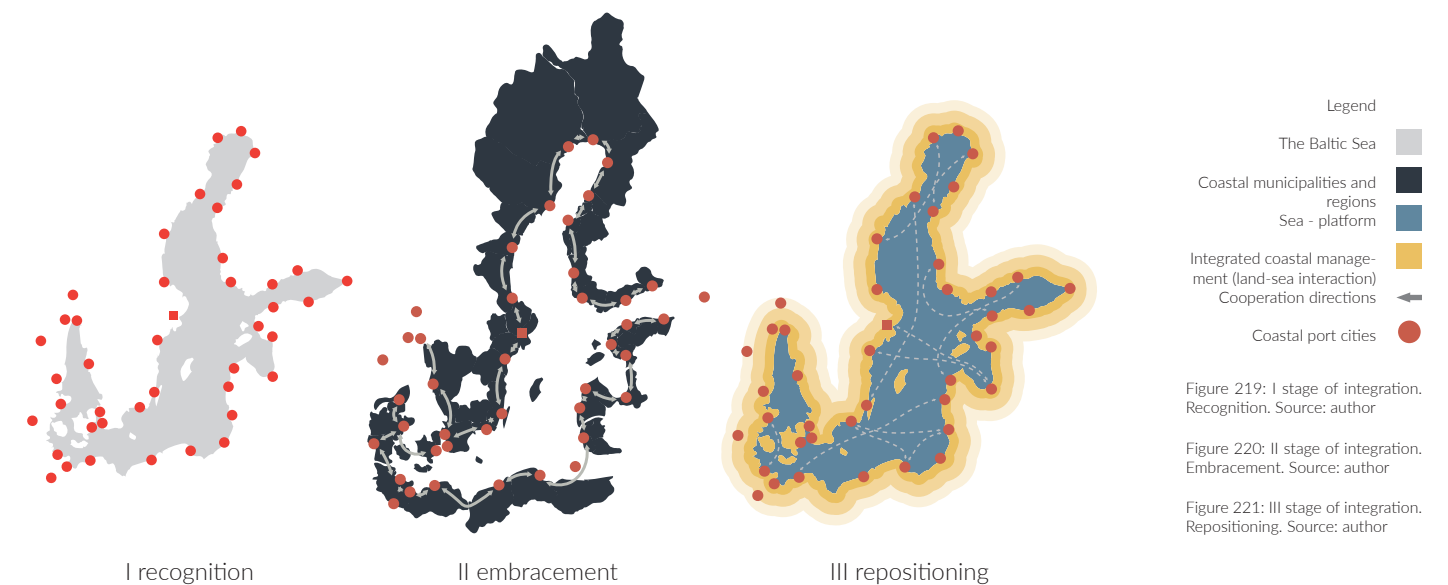
The first stage defines the shift from separately governed unities - cities, ports, regions, the sea, towards integrated systemic spatial sequences and habitats. As a result, cooperation between cities and ports should be established. The joint point of view would shift towards acceptance of challenges (especially climatic) from the sea environment.

### II embracement

The second stage broadens the performance of cooperation from compactly located to jointly integrated recognition. Regional cross-border neighbouring cooperation is the leading narrative. The cross-border loop around the sea emphasizes the coastal territories and land-sea interaction.

### III repositioning

The final stage explains a new quality which appears from the synthesis of cooperation, cross-border synergy and mutual recognition of challenges—the sea metamorphoses into a platform of the BSR. The essential action in the last step is cooperation through the distance over the water body. The platform turns the performance of the region to the highest peak. The Baltic sea no longer separates the places.





# cooperation program among port cities

The port cities cooperation program should be based on the Baltic Sea’s 5 water sea regions (sub-catchment areas). Each of them could function independently. The organizations of the South and North BSR should be the key stakeholders coordinating it (South Baltic Region).

## I pilot projects

There should be established 6 pilot projects in each sub-basin of the BSR. In 16 cities, ports and regions would participate in testing the cooperation system inside local sub-catchment regions. The cities might already have the links, which would be strengthened.

## II connected subregions

The next stage would encompass more complex connections, including more port cities in the same sub-catchment area. The connections would enhance cooperation in the same sub-catchment area.

## III interconnecting sea

Finally, the links between port cities would transgress the sub-catchment territories to the fully integrated sea and macro-region.

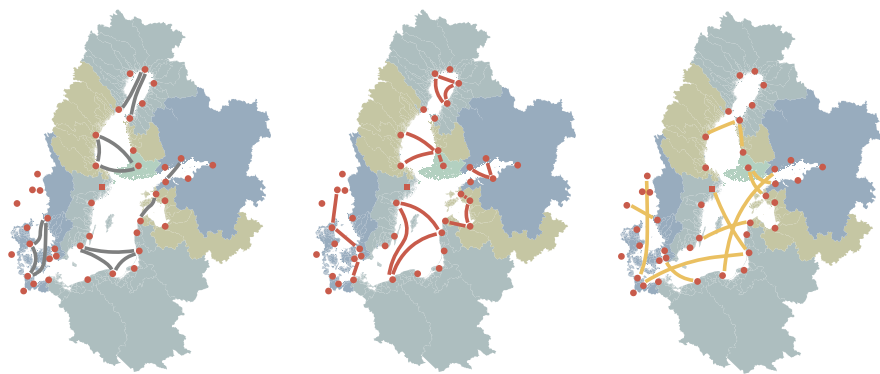


Figure 222: I stage of cooperation. Pilot projects. Source: author

Figure 223: II stage of cooperation. Connected subregions. Source: author

Figure 224: III stage of cooperation. Interconnected sea. Source: author



Figure 225: Cooperation among port cities Entire network. Source: author

# vision statement

Integrated, performative, listening  
and reflective region - platform



Figure 226: Image of new soft spaces based on political and planning pathways, proximity from coast and sub-catchment areas. Vision map. Source: author

# actions: planning and governance

## spacial planning principles

Stronger regions valuable cooperation. 7 different planning unities. They are defined spatially by division of sub-regions, interest and power.

## sub regions

Paradoxically, the macro-region has to be divided into sub-regions to integrate them. The dependency on different development pathways justifies the strategy where sub-regions must be integrated into themselves first. This comes as no surprise since the sub-regions have already been developed. Nevertheless, they have to be better recognized and integrated better among them. The sub-regions are Nordic, Baltic and Pomeranic.

## power heat

more power to regions. The interest and power of regions define the influence and necessity towards integrated planning. Which is only equal in some places all around the region. That is why power has to be defined in spatial terms. There are 3 zones of power: leaders, influencers and supporters. Each of them gradually gains less power and interest in the cooperation process. Leaders are coastal regions and cities where participation is politically, financially, infrastructurally and socially mandatory. Influencers are distant yet incorporated places where participation is more voluntary. Supporters gain less power, yet they can participate in a democratic system of the region.

Figure 227: Power heat map representing leading, supporting and other regional stakeholders. Source: author

Figure 228: Sub-regions based on development trends. Source: author

Legend

- Leaders
- Influencers
- Supporters
- Nordic
- Pomeranic
- Baltic

Figure 229: Alternative spatial planning division among sub-regions. Source: author

# actions: politics

## crossparty of the BSR

The cross-party is a standard political tool in intergovernmental planning and cooperation. The proposed cross-party should overarch existing political parties around the countries of the BSR. The agenda of the cross-party should contain the values of the BSR. This initiative could be driven by a joint agreement or pact highlighting the collaborative culture around the BSR. The initiative's parties could be regional, municipal, and national. The last ones would participate in governments, including. The cross-party should establish the flag as an expression of a joint political statement and identity.

## principles and program

The crossparty should be constructed on the core principles:

- Sustainability as a way of living and making decisions.
- Ensuring public good in an equal way.
- Cross-border cooperation.
- The Baltic sea-oriented economy and actions.
- Integrated strategic-spatial and political planning.
- Integrated social and economic ecosystem (friendly for migration).



Figure 230: Official flag of the BSR. Source: author





# actions: finances

## EU funds

The EU funding programs like Interreg or Sustainable development fund are critical funding possibilities for cooperative or regional development in the EU context. The implementation timeline of the urban project was constructed after 7 years of the Interreg project rhythm. South Baltic Region has already been approved for the funding 2021 - 2027. The Sustainable development fund is another alternative funding program—the possibility of combining several programs. Also, there is the possibility that new programs will be established in the time course.

## intergovernmental financing structure

Governments and responsible ministries should emphasize and financially cover strategic goals (economics, environment, planning, innovation or others). The integrated financial structure is crucial while taking other steps in cooperation. This step would allow governments to create inner funding programs or finance target areas and projects directly. The integrated territorial investment is an excellent example of this approach.

## private companies

The private sector is an essential actor in financial issues as well. The interested companies will become essential stakeholders if the strategy is related to manufacturing or other economic activities. Therefore, a product, service or infrastructure-based investment for cooperation would relate to the business sector and governmental goals. The private sector also includes international transport (ferry) companies. They are one of the key stakeholders in the framework of cooperation.

## crowdfunding

There is a growing tendency for funding from civic society or unorganized citizens. Unsystematic, informal goal-oriented actions could be crowdfunded. It would involve smaller scale actors: sub-regions, local regions, cities, districts, non-governmental communities, and unorganized citizens. That is not easy to reach without a clear goal, specified public communication and general awareness of citizens.



# actions: communication

## different naming

The current name of the BSR is complicated and uncommon for many from the perspective of branding strategies. The 'BSR' acronym requires additional explanation. Therefore, the new brand name should better represent the macro-region as a united community. This branding practice is used in the case of Greater Copenhagen (cross-border city-region; SE, DE) and Randstad (city-region; NL), where one word or the name of the central city represents the entire region. Mediterranean toponyms are another one-word naming example which describes territorial unity based on sea basin, history, geography, culture, and economy. The alternative naming would participate in the general branding strategy.

## standard labeling "Made in BSR"

Labelling is another step in general communication. There needs to be a representative and manufacturer in cooperation, cross-border production and services. As a result, labels should contain alternative naming and integrated branding. This practice is used in the EU, already stating 'made in EU' on a label. The additional sign of quality would better target integrated qualitative production.

## aligned graphical language

Despite common international language in policies and general communication, the challenge of verbal communication is still evident in the BSR. The general shift from verbal to visual communication should be emphasized stronger in cross-border planning, design and public communication. Standardized graphical language in symbols, strategic documents, and public communication would participate in strengthening common identity at the same time.

## informality

Broad public / unorganized citizens integration and informing.  
Informal participation in legal processes. Public initiatives, competitions, ideas.  
Supporting informal initiatives (festivals, workshops, communities, events, unspecified creative or social actions).  
Baltic-Nordic EASA European Architecture Student Assembly). Informal, self-organized network.



Figure 231: Proposal of integrated branding. Source: author

# recommendations

## ports

- Development without expansion has to be stated as a priority. This could be achieved by joint space use optimization and multi-functional use among the companies.
- Spatial and strategic plans have to be aligned. This can lead to the more efficient and beneficial use of space and territories. For this reason, urban planning is an example of achieving it.
- Plan in an integrated way. The influence of the port is far-reaching from the borders of the port. Therefore, planning practices have to transgress the territorial limits. Cooperation is the tool to avoid conflicts.
- Manufacturing back to the ports. Mixed-use program is essential for sustaining the port under fast-changing economic conditions.

## cities

- Integrate diverse and place-specific public goods. (Coastal territories - water facilities).
- City as a joining node for making, growing, exporting, importing, consuming, and remaking. It has to incorporate all of the activities and processes and innovate.
- Intelligent manufacturing back to the cities. Places for makers.
- City integration with regional towns
- Design or delegate designing tasks from strategies.
- Use the potential of port territories next to the urban environment. Place functions that correspond to the port's needs and benefit the city environment there.
- District-based planning has to be formalized in the Baltic States and Poland

## regions

- Plan in an integrated way with cities, towns and countryside making target goals. (Spatial-strategic planning)
- Highlight specialized goals and visions for the development of the spatial-strategic development of a region.
- Align the strategy with the private sector and port goals. The ecosystem and other integrated approaches are the strength of regions.
- Enable smaller secondary towns and cities to use their strengths and gain a stronger unique identity in the entire regional system.
- Look for other regions around the sea that might have the strengths (products, methods, infrastructure, resources) that might target local problems or accelerate opportunities. Establish or strengthen cooperation with them.
- Integrate land-sea interaction plans and align them with other regions (usually cross-border)

## governments

- The Ministries of economics, planning, and environment must participate equally in the processes. Other ministries have to be explicitly included. Depending on needs, other ministries have to be included.
- Aline the strategies and strategic goals among policy and planning (between scales and borders)
- there is no special planning without strategic planning, and vice versa
- Empower regions and their self-organization by giving them specific planning, design, financial and political tools.
- Devote ongoing funding into collective funds of the BSR. They would be

## private sector

- Better lobbying conditions. Specify goals.
- Focus on entire product shaping. It might be achieved through an integrated ecosystem of public infrastructure and other correlating businesses.

## BSR organizations

- Aline the strategies and strategic goals among policy and planning documents (between scales and borders) (Helcom, Vasab, Minister meeting)
- Delegate the design and implementation assignments to other actors (ministries, regions, cities or specific territories).
- Differentiate the goals, tasks, and priorities according to territories (regions, sub-regions)
- Administrate the common governmental financial
- Create tools and methods-based recommendations.

## updated macro-regional plan

- Link spatial solutions with other cross-national documents. This will strengthen both the spatial plan and other policy documents
- frame the plan in a cross-scalar way
- link the solutions with possible stakeholders or institutions and other plans or policies.
- Formulate decisions in toolboxes so the solutions would be adaptable over time
- Interconnect the vision with specific values, not only spatial features
- illustrate with successful examples

## notes on MSP

- Emphasize land-sea interaction. Link it to land-based planning.
- Prioritize decisions measured after natural features, resources and environmental issues.
- Use integrated planning-design methods. Scale in and out
- Align the planning language (drawings) with stakeholders in a cross-border planning conflict.
- The distant cooperation between leading ports is a complementary approach to address the negative impact and sea pollution from these places.

## example projects actions

- Klaipeda-Liepaja cooperation on coastal, sea management, tourism, culture and transport relations
- Klaipeda-Gdansk (+Karlskrona) feasibility study of missing links and common future
- Karlskrona-Karlshamn strategy for synergy and advanced region
- Klaipeda and the port integrated development strategy. Aligning current goals and development
- The sea transport strategy. Advanced and differentiated ferry routes and multi-modality on the land. (Jet, Intercity, Night and Micro transport modes)
- South Baltic sustainable tourism strategy. The shift from branding to narrative and experience-based travelling.
- Common identity-building workshops.
- Publishing lifestyle magazine for the Baltic Sea region
- North music festival on the coast of the sea
- Political memorandum of political parties around the Baltic Sea to address the strategic issues of policy documents (the sea, safety and common prosperity)

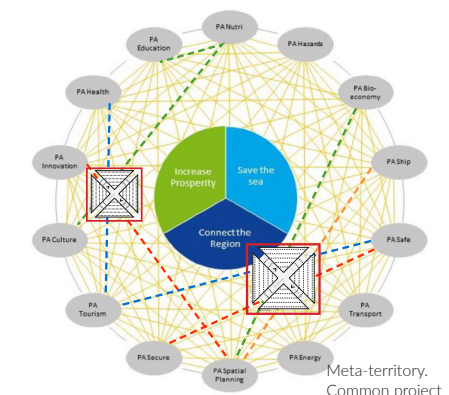


Figure 232: Recommended governance structure and application of the conceptual framework in the system. Source: author



# VIII

# conclusions and reflection

recommendations, overview and reflection on the project

## answering the research questions

How would cooperation among the BSR port cities catalyze the transition towards a more sustainable future in the macro-region and ensure the fair distribution of common goods?

The cooperation would catalyze the transition positively. The links among the socioeconomic nodes would close the material and production flow into loops between places of exchange. The port cities would accelerate the processes significantly due to legal power, the concentration of human, natural and economic resources and the crossroads of material flows

The cooperation process would call for specificities among cities. This approach would foster stronger identity and place-based decisions integrating cities and regions

Nevertheless, the growing and enclosing inner macro-regional system would isolate the BSR from other regions and places in the EU and other continents. Despite the self-sustaining approach, the enclosed system would institutionalize the current growing economy model.

**fundamental:** What are the public goods currently available and could be developed in the macro-region?

There is a considerably limited number of public goods in the BSR. On the one hand, most of them are concentrated in more extensive urban areas and are related to natural resources (green public spaces, water and heritage-related infrastructure and accessibility); daily services (street and road network, local public spaces, city events); basic civic infrastructure (education, work, social infrastructure). On the other hand, there are territories where many public goods cannot be ensured due to low residents' density or absent urban concentrations. Consequently, a more spread network of public goods could be developed across the regions. Also, more extensive diversity according to age groups or place specificity should be integrated into current urban areas (inside multi-functional civic centres, accessible unique buildings and places, co-working places, migrants integration places, and specialized language education). More specific solutions are elaborated on in the section on patterns.

**sustainable:** What are the factors and determinants in the economic shift and performance of the port cities?

The geopolitical state and shifts in the BSR is the central aspect which defines decision making. Ports are influenced mainly by geopolitical positions. Therefore they radiate tension towards the surrounding cities and regions. Consequently, the closing of territorial borders paralyses the logistical function of ports.

The geographical position of the deltas positions the port cities as the gateways to the sea. The seawater pollution and degradation have influenced the first steps in cross-border cooperation in the BSR. As a result, the post-cities are included in the water systems, pollution, adaptation to climate change and reaction to the challenges.

Urbanism and place-specific decision trends require complex strategic-spatial planning in ports as well. The urban resources and dynamics influence port activities directly in the short term and indirectly in the long term. This is closely related to growing societal awareness.

Societal awareness is growing in the case study cities. The ports have to react to both economic, environmental and social issues at the same time. After that, social sensitivity drives big-scale economies to react to very local issues.

Limits of territorial expansion and economy of growth drive the port development in the opposite direction from sustainable co-operational development. The spatial and economic limitations require for alternative technological approach.

Finally, technological advancement is the innovative approach to sustain the current port activities and

make them more efficient. This model might contribute to sustainable development as well.

## What are the possible futures of social, cultural, and identity issues concerning a shrinking population?

More spatial resources and freely accessible common goods might be expected among cities and regions. This trend might contribute to a stronger place-based identity, local production and cultural emphasis on port cities as the main civic concentration points.

However, cultural and social degradation, poor service and quality of life might be expected. This drawback turns the BSR into as non-equally livable macro-region. This trend would polarize the urban livable local regions from vast natural territories.

The societal shifts would influence some local urban-scale tendencies as well. There is a high chance of growing migration inside the BSR, catalysing more integrated, socially diverse and migrants-oriented places.

## What are the most significant environmental, water pollution, climate change and coastal erosion accelerators?

The definition of the accelerators depends on scale. The macro-regional scale targets general trends of infrastructure, transportation and cultural pathways. Transport-oriented planning brings expanded dependency on private vehicles. The intensity and effect of ferries on water quality are growing. Aircraft transportation is unavoidable in the context of sparse urbanization. Meanwhile, growing migration supports the intensification of these transport modes. However, the general pathway is still car and economic-demand-oriented. The regional drivers are defined by methods of agriculture (pesticides, monofunctional fields), forestation trends and actions. The environmental degradation system resulted in the exploitation of the sea and the priorities of the MSP.

The mid-scale identifies the unbalanced intensity of water and land use, especially in coastal territories. This is accompanied by intense coastal urbanization (Klaipėda region) and offshore (harbour) expansion.

Small-scale accelerators incorporate manufacturing and energy practices and methods. Illegal environmental pollution actions are still evident on the East side of the BSR. Additionally, the effects of unbalanced tourism, especially in coastal resorts, have an impact on a small scale. However, it is closely tied to cross-border trends.

Natural environmental dynamics are the passive drivers that must be considered (wind system, coastal morphology, water system-river basins, tectonic geomorphological dynamics).

## performative: How to organize decision making and implementation processes between different stakeholders and territories to ensure the fair distribution of common goods over time?

Joint vision and common strategic areas might be the primary tool for integrated planning. The vision would state the necessity for coordinated actions, and strategic areas would define the beneficial pathways for both sides.

Active curators of the processes or responsible representatives are crucial coordinators of the planning process. Their responsibilities include periodical and critical self-assessment conclusion building and steering the planning process in cycles.

Finally, big scale planning practices must acknowledge long-term planning processes that transgress po-

litical rhythm and power fluctuation.

## How to operationalize the soft space by integrating local places, stakeholders and resources?

The model of frameworks rather than direct decisions is fundamental to the operational approach. It leads to more open and integrated planning practices with integrated and inter-coordinated plans. After all, the transgression in land use-based planning has to be transferred to vision-driven spatial-strategic planning.

Pilot projects are one of the main tools to link planning and design. An integrated financial system would foster the actions of stakeholders.

Finally, events and performance-based planning (annual meetings, exhibitions, resolutions) should wake up and inspire the stakeholders and activate their participation.



# reflection

## critical planning and policy recommendations

- The sequence of cooperation steps is essential:
1. The economic ecosystem has to be developed locally (local region or city).
  2. Cooperation among cities, ports and regions is crucial to achieving.
  3. Distant cooperation can take place.

Local regions are the most perceptive entities of all the stakeholders. Their approach enables seeing the entire cross-scalar complexity and making advanced decisions nationally wise and locally relevant. Therefore, they should be better-empowered decision-makers.

Macro-regional planning has to include principles: a guiding set of goals, targets and aspects to work on. These general principles should guide all the policies and decisions in all separated sectors (spatial, financial, governmental). This approach helps to design, include stakeholders and concentrate actions and finances in a more coordinated way.

The Baltic Sea region. North urbanization characteristics are based on regional urbanism fabrics and tendencies. City-regional and landscape urbanism mindsets are more relevant than traditional metropol-centric thinking.

The top feature is ‘isolation’ in planning systems, urbanism tendencies and civic mindsets in different areas around the BSR countries.

Soft space concepts have several limitations. One of the main features is that soft space cannot exist without strict barriers or value limits. This is most evident between different territorial approaches (EU and East countries). These barriers might be changed over time. Nevertheless, they are necessary to ensure the performance of soft spaces.

Cooperation among ports, cities and regions is complicated. Economical-political trends drive power and interest. Therefore, systemic thinking and acting are essential. Planning and design are continuous processes that have to be linked in cross-scalar and cross-interest ways.

## transferability for further research

A deeper investigation should be taken into planning systems and documents across the countries of the BSR. Also, the research should lead to possibilities to align the different planning systems around the countries.

There is a necessity to define specificities of Northern urbanism and regional development due to geographical conditions and historical developmental pathways. There is little notion of unique features and values in the context of the BSR, which could not be applied in other climatic or cultural regions.

The stakeholders and interrelation among them should be investigated in depth. At the same time, the stakeholders should be aligned with other planning or design processes.

Cooperation among cities, regions and ports requires research from the perspective of the port actors. This research was based on an urban-regional focus. Therefore, very few solutions are given to port development.

The Hanseatic league’s influence on urban and regional development could be investigated through the fabric and urbanization trends in historical Hanseatic cities.

Patterns can be applied in other places. The methods of co-operational planning and design could be applied to MSP.

## scientific relevance

The thesis focuses on the extensive territory and topic which has yet to be analyzed insignificantly. There are some papers investigating the context of the BSR in selected topics (dynamics of climate change, political perspective, MSP) and none of them combined several aspects (Climate Change in the Baltic Sea, Helcom, 2021; The Future of the Welfare State. Perspectives from the Baltic Sea Region, Polakowski, M., 2018). This project mainly contributes to the macro-regional planning scope and the BSR field. Therefore, the thesis is a quantitatively valuable scientific document which tests the incorporation of cross-scalar planning, sustainable development, territorial interrelations and urban design by applied spatial theories.

The policy analysis methods used to analyze planning, political or territorial cases are usually conventional and based on literature research (policy review, layer analysis, statistical data, swot analysis). However, considerably free exploration was used based on research by design method. Additionally, there were raised “what if?” questions as a method to investigate specific aspects of sustainable development. The design helped sharpen the general topics (planning, climate change, economic power, local resources, performance of ports) and test them throughout the scales. As a result, the outcomes appear as cross-scalar development scenario testing. The design methods informed policy solutions.

Throughout the thesis, sustainability was taken as a cross-narrative and fundamental to entire territorial development. This is closely related to the Nordic academic tradition and research in the theory of sustainability and sustainable development in the BSR and worldwide (Bogason, 2000; Bucchi & Neresini, 2008; Cass, 2006). This project investigated the influence of sustainable development through territorial and “soft space” viewpoints in urban, regional and macro-regional planning. As a result, the thesis challenges hierarchical conformative planning practice in the North Europe context.

The originality of the synthesis of methods and approaches might be observed in the thesis. Methods like “Research by design”, “Scenario building”, and SWOT analysis was merged to carry out a technique for design implementations and territorial cooperation. The exploratory methodological framework resulted in new approaches to spatial-strategic planning merging SWOT analysis (Planning and Design section) and coordinating urban design solutions with macro-regional governance (Pattern section). Finally, it brings an alternative perspective on merging global and local planning and spatial cooperation between distant places.

The conceptual framework resulted in a new concept called “Meta-territory” (Conceptual framework). The innovative concept helped to answer the raised questions and goals of the project by combining spatial-strategic planning process and territoriality with the concept of “soft space”. Furthermore, this conceptualization performed well as a tool for research and design (Conceptual framework section). The framework uncovered alternative planning and design synthesis between the theoretical approach of “neo-medieval” and practical territorial planning. This method can be investigated further and lead to alternative planning practices.

## societal relevance

The territory of the project includes 12 countries with around 85mln. Inhabitants in total. This is the quantitative social focus. The project tests the power of common prosperity for the entire region through cooperation and an integrated planning approach. The alignment of distant places leads to shared social qualities. There are pointed out specific social benefits: common goods (III stage of development), the broader benefits from the cooperation (cooperation in meta-territory) and economic growth (port and manufacturing sections).

Public goods were one of the focus subjects in the thesis. The existing public goods were investigated, and the final design proposal comprehensively incorporated them (III stage of development). Moreover, some patterns (around 15) identify more place-based solutions which can be accepted as public goods (pattern section). Their acknowledgement of formal planning and design system raises the awareness of social environment quality and their implementation in cities.

The concept of sustainability was the backbone of this project. Thus, the main raised social issue was international and local migration. Design solutions illustrate the network for migration flows and choices



Figure 233: Other 3 macro-regional strategies in the EU. Source: [https://mrs.espon.eu/assets/img/MRS\\_perimeters.png](https://mrs.espon.eu/assets/img/MRS_perimeters.png)

in different environments (countryside and city) and countries (Nordic, Baltic, Pomoric). Moreover, the societal aspect was considered interrelatedly with economic and environmental subjects. It concluded with complex solutions reacting to the policy aspects (EUSBSR strategy) (patterns, public goods development, policy and design interrelation). The mentioned aspects correspond with sustainability and social justice at the same time.

The thesis has a direct link between cross-scalar planning systems and societal impact. The project informs the interlinks among macro-regional soft planning, national and regional legislative planning and small-scale urban planning and design. On the one hand, outcomes illustrate the possible significance of the macro-regional strategies to local inhabitance. On the other hand, the planning and design approach informs how the public field legislation might bring tangible quality to the territories they are dedicated to.

## studio relevance

Studio “Planning complex cities” was the framework focused on planning, stakeholder management and design where this thesis was carried out. The BSR was investigated from the institutional perspective first. Macro-regional plans are policy documents. The EUSBSR is an excellent example of this planning practice, where plans are carried out mainly by political institutions. The governments are the key actors who would implement or change the planning in this context. As a result, the outcomes gave legislative and political advice to institutions.

Macro-regional planning encompasses stakeholder management, a good subject for spatial planning practice. It might help to bring scattered design, sometimes non-spatial solutions, to the political agenda in other stages.

Additionally, there is interest and expertise in Mediterranean planning, Randstad and other similar macro-regional strategies among studio mentors. Some previous graduation projects in the studio have investigated the cooperation for the energy around the North sea. This project was a source of inspiration and knowledge to advance.

Finally, the observation of the BSR has started from the perspectives of problems arising on the conflicting sites. In most cases, cooperation of ports, coastal erosion, water quality, marine spatial planning or disarranged energy systems are mainly geopolitical, territorial and later design challenges. This perspective is celebrated in the studio greatly.

## ethical questions

Geopolitical exclusion. The commonness of the different geopolitical positions of the BSR countries was celebrated. Nevertheless, the joint geopolitical statement towards two members of the macro-region played an essential role in the thesis. Even though value politics were prioritized, the outcomes of this position could not negatively affect the citizens or the states in planning and designing proposals.

Limited engagement. There was no intention to exclude stakeholders or social groups from the integrated macro-regional planning process. However, the limits of the research project are required to limit the choices and target the groups to communicate with. The interviewees were chosen to represent public, private, and societal groups on different scales. The missing representation of some aspects was covered by other methods: field research, different literature and public media.

Language exclusion. Despite the project about territorial integration, the focus area is divided into countries with 10 different languages and much more dialects. This is a strong barrier between policy documents and communication among countries and peoples around the Baltic Sea. It affected the analysis and accessibility of information. However, this issue might be addressed in the community of decision-makers in the BSR.

Academic ethics. As a student, the author belongs to the TU Delft academic community. Therefore the rules of proper data management, cooperation among fellows, evidence-based research and other academic ethical aspects are appreciated and respected in the thesis project. The aspect of social justice, fair representation, and interviewees' anonymity were highlighted. The diverse stakeholders were prioritized

in the choice of interviewees to stay as objective as possible. Finally, the objectivity of design and planning outcomes was based on research and critically recognized case studies.

## limitations

There are several ethical limits to this research project. Some are related to geopolitical dynamics, others to the limits of time, the academic approach and the accessibility of data.

Territorial exclusion. 10 countries which are included in the region are located around the sea. The countries or regions outside these boundaries were not investigated and were excluded from the research scope. After that, the decisions favoured the success and benefits of the BSR and its countries. This approach segregates other unities like the EU or broader global community and projects enclosed political unities. That is opposite to the intended goal of the project. The approach complements the macro-region rather than the outer unities like the EU.

The concept of soft space might be misleading and negatively affect spaces and their inhabitants. The goals like power or claim of new territories legitimize the unwanted influence on other territories (soft occupation, economic dependencies, resource exploitation, overruling and others). As a result, the integrated planning approach and cooperation is a tool for globalization, internationalization and exclusion of local authorities and practices.

One of the leading macro-regional subjects is Maritime spatial planning (MSP). However, the focus on land-based, urban and regional planning and design was limited to investigating the MSP of the Baltic Sea Region. There is minimal investigation on land and sea interaction in coastal territories.

Despite the general focus on sustainable development, the economic (manufacturing, port activities and private companies) perspective was considered a leading theme. This perspective deformed the sustainability approach and left less space to articulate environmental proposals and the necessity to act on them.

# IX acknowledgment

The project could only have been thoroughly carried out with the interviewees who bravely engaged throughout the semistructured talks about the specificities of the subject and a general notion of the BSR itself.

The mentors, academic community and the academic approaches of TU Delft inspired this project for advanced knowledge, synthesis and braver explorations.

The parents of the author have contributed for the longest time. The academic influence and engagement in the BSR activities were one of the main narratives among family members. Therefore, the author's interest in this topic grew from a very early age.

Finally, college urbanists, architects, maritime spatial planners, landscapers, group mates and other friends have challenged and inspired the project significantly. They keep continuing challenging and inspiring.



# X bibliography

- Allmendinger, Phil, and Graham Haughton. "Soft Spaces, Fuzzy Boundaries, and Metagovernance: The New Spatial Planning in the Thames Gateway." *Environment and Planning A: Economy and Space*, vol. 41, no. 3, Mar. 2009, pp. 617–633, doi:10.1068/a40208.
- Allmendinger, Phil, et al. "Europeanizing Territoriality—Towards Soft Spaces?" *Environment and Planning A: Economy and Space*, vol. 46, no. 11, Nov. 2014, pp. 2703–2717, doi:10.1068/a130037p.
- Andrea Noferini, Matteo Berzi, Francesco Camonita & Antoni Durà (2020) Cross-border cooperation in the EU: Euroregions amid multilevel governance and reterritorialization, *European Planning Studies*, 28:1, 35-56, DOI: 10.1080/09654313.2019.1623973
- Angelstam, P., V. Naumov, M. Elbakidze, M. Manton, J. Priednieks, and Z. Rendenieks. 2018. Wood production and biodiversity conservation are rival forestry objectives in Europe's Baltic Sea Region. *Ecosphere* 9(3):e02119.10.1002/ecs2.2119
- Annex to the Action Plan for the EU Strategy for the Baltic Sea Region. Ongoing and completed flagships of the EUSBSR, 2018.
- Armondi, Simonetta, and Sonia De Gregorio Hurtado. *Foregrounding Urban Agendas*. Springer Nature, 2019.
- Atlas for the Territorial Agenda 2030. Maps on European Territorial Development. Federal Institute for Research on Building, Urban Affairs and Spatial Development, 2020.
- Background information on the Baltic Sea catchment area for the Sixth Baltic Sea Pollution load compilation (PLC-6). Baltic Marine Environment Protection Commission, 2020.
- Territorial Agenda 2030. A future for all places. Informal Ministerial Meetings, 2020.
- Baltic port in TEN-T policy. CEF instrument 2014-2020. Evaluation and recommendations for CEF II. Baltic Port Organisation, 2018.
- Baltic Sea Ecoregion – Ecosystem overview. International Council for the Exploration of the Sea, 2019.
- Barca, Fabrizio, et al. "THE CASE FOR REGIONAL DEVELOPMENT INTERVENTION: PLACE-BASED VERSUS PLACE-NEUTRAL APPROACHES\*." *Journal of Regional Science*, no. 1, Wiley, Jan. 2012, pp. 134–52. Crossref, doi:10.1111/j.1467-9787.2011.00756.x.
- Better Together 10 Years. EU strategy for the Baltic Sea Region. Ministry of Foreign Affairs of Poland, 2019.
- Brenner, Neil. "Restructuring, Rescaling, and the Urban Question." *New Urban Spaces* (2019): n. Pag.
- Climate Change in the Baltic Sea. 2021 Fact Sheet. Baltic Sea Environment Proceedings n°180. HELCOM/Baltic Earth 2021.
- Eduardo Medeiros (2019) The Poverty of Territorialism, *Planning Theory & Practice*, 20:4, 619-624, DOI: 10.1080/14649357.2019.1653033
- ERB 2030 Agenda. Euroregion Baltic, 2019.
- EU annual regional and local barometer. European Committee of the Regions, 2021.
- European Union Strategy for the Baltic Sea Region. Comission of the European Communities, 2009.
- Eva Purkarthofer, Franziska Sielker & Dominic Stead (2021): Soft planning in macro-regions and megaregions: creating toothless spatial imaginaries or new forces for change?, *International Planning Studies*, DOI: 10.1080/13563475.2021.1972796
- Faludi, A. (2019). New horizons: Beyond territorialism. *Europa XXI*, 36, 35-44. <https://doi.org/10.7163/Eu21.2019.36.3>
- Faludi, Andreas. "New Horizons: Beyond Territorialism." *Europa XXI*. Institute of Geography and Spatial Organization, Polish Academy of Sciences, 2019, pp. 35–44. Crossref, doi:10.7163/eu21.2019.36.3.
- Faludi, Andreas, and Bas Waterhout. *The Making of the European Spatial Development Perspective*. Routledge, 2012, <http://dx.doi.org/10.4324/9780203378878>.
- Faludi, Andreas. *The Poverty of Territorialism : A Neo-Medieval View of Europe and European Planning*. Edward Elgar Publishing, 2018. INSERT-MISSING-DATABASE-NAME, INSERT-MISSING-URL. Accessed 19 Jan. 2022.
- Final recommendations from the Baltic Sea Parliamentary Youth Forum. Baltic Sea Parliamentary Youth Forum, 2021.
- From Policy to Action! CBSS Action Plan 2021 - 2025. Council of the Baltic Sea States, 2021.
- Giancarlo Cotella, Eva Purkarthofer & Andreas Faludi (2020) The poverty of territorialism and the future of European spatial integration, *Regional Studies*, 54:7, 999-1003, DOI: 10.1080/00343404.2020.1733252
- Haarstad, Håvard, et al. "Nordic Responses to Urban Challenges of the 21st Century." *Nordic Journal of Urban Studies*, no. 01, Scandinavian University Press / Universitetsforlaget AS, June 2021, pp. 4–18. Crossref, doi:10.18261/issn.2703-8866-2021-01-01.
- Implementation of macro-regional strategies. European Parliamentary Research Service, 2020.
- Integrated Report on Stakeholder Involvement and Engagement in Maritime Spatial Planning. Baltic Environmental Forum, 2021.
- IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.
- Jerzak, Katarzyna et al. "The Essence of Marine and Coastal Space – an Interdisciplinary Perspective." *Europa XXI* 36 15–34. Web.
- John R. Moodie, Viktor Salenius & Mari Wøien Meijer (2021): Why territory matters for implementing active subsidiarity in EU regional policy, *Regional Studies*, DOI: 10.1080/00343404.2021.1966404
- Jonna Gjaltema, Robbert Blesbroek & Katrien Termeer (2020) From government to governance...to meta-governance: a systematic literature review, *Public Management Review*, 22:12, 1760-1780, DOI: 10.1080/14719037.2019.1648697
- Klaipėdos valstybinio jūrų uosto Žaliojo uosto koncepcija. VĮ Klaipėdos valstybinio jūrų uosto direkcija, 2021.
- Klemeshev, A. P., Korneevets, V. S., Palmowski, T., Studzieniecki, T., & Fedorov, G. M. (2017). Approaches to the definition of the Baltic sea region. *Baltic Region*, 9(4), 4-20. <https://doi.org/10.5922/2079-8555-2017-4-1>
- Larsen, Henrik Gutzon. "Scaling the Baltic Sea Environment." *Geoforum*, no. 6, Elsevier BV, Nov. 2008, pp. 2000–08. Crossref, doi:10.1016/j.geoforum.2008.07.002.
- Latour, Bruno. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry*, no. 2, University of Chicago Press, Jan. 2004, pp. 225–48. Crossref, doi:10.1086/421123.
- Margit Bussmann & Sebastian Nickel (2018) Transnational cooperation: a network analysis of town twinning in the Baltic Sea region, *Journal of Baltic Studies*, 49:3, 281-303,DOI: 10.1080/01629778.2018.1447977
- Moroz, Nadina, et al. "The Development of the Baltic Sea Region as a Centre of Global Logistics: The Situation Report and Future Prospects." *Lecture Notes in Networks and Systems*, Springer International Publishing, 2021, pp. 678–90, [http://dx.doi.org/10.1007/978-3-030-68476-1\\_63](http://dx.doi.org/10.1007/978-3-030-68476-1_63).
- Orłowski, Aleksander, and Edward Szczerbicki. *Smart Blue Cities*. IGI-PZ PAN, 2019, [http://rcin.org.pl/igipz/Content/129279/PDF/WA51\\_160176\\_r2019-t36\\_EuropaXXI-Orlowski.pdf](http://rcin.org.pl/igipz/Content/129279/PDF/WA51_160176_r2019-t36_EuropaXXI-Orlowski.pdf).
- EU Strategy for the Baltic Sea Region. Action Plan. European Commission, 2021.
- Quality of Life for Territorial and Citizen-centric Policies. How to Empower People as Actors of Change. ESPON, 2021.
- Roe, Michael. *Governance, Policy and Juxtaposition*. Springer International Publishing, 2020, <http://dx.doi.org/10.1007/978-3-030-31848-2>.
- SPATIAL PLANNING. Key Instrument for Development and Effective Governance with Special Reference to Countries in Transition. Economic Commission for Europe, 2008.
- STATE OF THE NORDIC REGION 2020. Nordic Council of Ministers, 2020.
- Stuart Elden, *The limits of territory and terrain, Dialogues in Human Geography*, 10.1177/20438206211001036, 11, 2, (213-217), (2021).
- Territorial Scenarios for the Baltic Sea Region in 2050 – BT 2050. Nordregion, Spatial Foresight, Institute of Geography and Spatial Organisation, 2021.
- The forest industry around the Baltic Sea region: Future challenges and opportunities. Centrum Balticum Foundation, 2020.
- THE NEW LEIPZIG CHARTER. The transformative power of cities for the common good. Informal Ministerial Meetings, 2020.
- Update of the VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region. Nordregio. Spatial Foresight. 2021
- Vilnius II Declaration. A Vision for the Baltic Sea Region by 2030. Council of the Baltic Sea States, 2021.
- Vision for the Baltic Sea Region beyond 2020. Report by the Council of the Baltic Sea States Vision Group. Council of the Baltic Sea States, 2021.
- Youth Vision Statement Beyond 2030 Developed at the CBSS Ministerial Youth Edition. Council of the Baltic Sea States, 2021.
- Zaucha, J., Pyć, D., Böhme, K., Neumann, L., & Aziewicz, D. (2020). EU macro-regional strategies for the Baltic Sea Region after 2020. A nutshell of beauty and possibilities. *Europa XXI*, 38, 51-76. <https://doi.org/10.7163/Eu21.2020.38.1>

# XI appendixes

# Pattern cards

The diagram is a conceptual model with a dark teal background. At the top left, the text 'S.1' is written vertically. In the center, the words 'future energy' are written vertically in a large, white, sans-serif font. To the right of this text, a white-bordered box contains the text: 'Energy sources and production technologies transformed towards innovative, safe and renewable energy. The production has to transcend self-needs and be shared with others.' Below this box, the text 'Values: renewable, compact, safe' is written in a smaller white font.



DA.03

**mix for quality**

Introducing more integrated social and public functions into the existing urban environment (public goods). It leads to functional urban diversity for more qualitative living, (residential, commercial, civic, manufacturing, logistics,...)

DA.04

**compact logistics**

Logistical clusters which are located as close as possible to the sustainable transportation infrastructure and the users of material

DA.05

**assembly line**

A sequence of infrastructure, buildings, spaces and businesses for integrated complex projects. The cooperation among manufacturing units has to result in the common product.

DA.06

**centralization**

A territory as a cluster which unites stakeholders of the same material, knowledge or people to gain more productivity. Usually, it is a size of a campus, a district or a neighborhood.

DA.07

**infrastructure over boundaries**

International, cross-border, cross-regional linkage transportation infrastructure for different modes: biking, trails, trains, vehicles, trucks, ferries, plains and other

DA.08

**door to gate**

Qualitative housing for those who commute cross-border or migrate because of economic, work or foreign reasons.

DA.09

**space for makers**

Mid-scale mixed urban environment for experimentation and making facilities.

DA.10

**whatever space**

Undefined space for the future, for the spontaneity and for the unprogrammed.

DN.01

**innovation center**

Intensively mixed center for sectoral innovation connecting other functions: makers, designers, residents, manufacturers, material resources, logistics, public and private sectors

DN.02

**energy symbiosis**

Industry synergies with industry or residential environment. The leftover energy is reused in other industries or outsourced for domestic use in residential places.

DN.03

**season oriented attractions**

Adaptable infrastructure for cold, warm and transitional seasons. Activities adapted to changing lifestyle, season and other needs.

DN.04

**water for public**

Mixed-use public spaces by the water for better social, multimodal, environmental, heritage integration

DN.05

**closer by proximity**

High speed passenger or object-oriented transportation line. Multimodality, convenience and comfort comes first

DN.07

**station renaissance**

Station / port area transformation towards TOD and multimodal model with 1 km radius around

DN.08

**human scale - machine space**

Human based qualitative spaces or connecting spaces in the harbor, industrial or other non human environments

DN.09

**from edge to membrane**

Street plots have to correlate between both sides. In terms of functional program, architecture facades and building parameters

DN.10

**from edge to edge**

Street is the hard boundary and have to strictly divide different zones. The opposite plots have to contain different functional programs, clear border, different architectural features or scales.

DN.11

**wall barrier**

Green, built, infrastructural or mixed barrier between harbor related activities and urban (residential) environment. The type of barrier have to be based on the source of pollution and other functional, aesthetic or political tensions.

DN.12

**membrane barrier**

Green, built, infrastructural or mixed barrier between harbor related activities and urban (residential) environment. It have to connect functionally both port and a city (small or medium manufacturing). The type of barrier have to serve to the port and to the city needs at once.

DN.13

**come along**

Linear "corridor" development of a pathway, street or highway. The buildings have to frame and be aligned to the street itself. Publicly accessible functions have to be integrated in the first floors.

DB.01

**affordable housing**

Integrated mixed social housing for different social groups (thinkers, makers, users, immigrants,...) New urban developments and transformation have to integrate at least 30% of social housing units

DB.02

**productive port**

Manufacturing located back in the territory of harbor. Priority to the diverse manufacturing which requires use of water and local logistic companies. It has to control its pollution.

DB.03

**facilities for merge**

Infrastructure where combination of different materials and products could be assembled together. The final product have to be exhibited publicly or tested locally.

DB.04

**dismantling**

Dismantling outdated buildings or other infrastructure and reusing or selling it. New objects have to incorporate materials into new design which are reused in the same location

DB.05

**heritage in action**

Renovation of heritage objects and adaptation to multi-functional public use

DB.06

**public infocenter**

Room or building where general public can access the information platform and future place highlights the interactive representation, real time data and periodical events.

DB.07

**public building**

Public or civic building and infrastructure: youth houses, libraries, civic centers, social centers or others

DB.08

**foreign school**

The high school which follows the program of any other country or the region (for e.g. Swedish school in Kalpesta)

DB.01

**street for people**

Public functions for citizens by the streets. And manufacturing inside. Eye level visual connection between public and private territories (port, manufacturing, logistics).

DB.02

**anyone can make**

Reusing basements, garages or other underused infrastructure for domestic repairment and small scale making

DB.03

**harmless**

Transformation of manufacturing or logistical infrastructure so it eliminates the spread of its pollutions. The changes incorporate technological advancement, additional built structures, superstructures, barriers or treatment engineering in the site.

DB.04

**brand store / park**

The store of the business located next to the manufacturing company. The park of the produced materials located next to the manufacturing company

DB.05

**pioneer ship**

Boat or ship docked (usually temporarily) as a catalyst in the area of transformation. It can maintain missing functions: social housing, public facilities, place for gatherings or informal culture

ACo.01

**handshake B&B**

Partnership between two or more private companies for joint project, product, service or exchange of materials. The companies can originate from different scales, locations or countries. They should entail related business activities. (makers, designers)

ACo.02

**neighbor handshake**

Agreement between public and private sector towards common projects, strategic actions or financial support. This is essential for leading strategies making, living, energy, tourism and others) (municipality - terry company)

ACo.03

**public handshake**

Agreement between separate units of public sector (municipality, government,...). It tackles complex issues and strategies (socio-economical, socio-environmental,...)

ACo.10

knowledge for skills

Close cooperation between knowledge institutions and practitioners, producers for a qualitative skills and production. Lifelong learning over graduation-to-job linear model.

ACo.09

transfer of rights

Selling, exchanging or giving the rights of development or benefits to other stakeholder. Usually the rights are given to the centrally located places, objects, business or development projects in cities.

ACo.08

horizontal cross-sectoral

Cooperation connecting different sectors on the same territorial or political scale. For e.g. environmental and economic sections in municipality.

ACo.07

vertical cross-scalar

Cooperation connecting the same sector from different territorial or political scales. For e.g. governmental - municipal, international - district.

ACo.05

learn and play R&D

Cooperation between knowledge institution (university, school,...), researchers (science center, valley) and makers or manufacturers. This model puts the measured solutions into practice.

ACo.04

3 x handshake PPPP

Cooperation among private, public and civic society towards common projects, strategic actions financial integration. This is essential for the essential, innovative, long term urban qualities (quality of living and working environment).

ASo5

consultation

Periodical consultation with experts or communities which are involved into process. The remarks have to be considered and adapted to solutions.

ASo4

artist residencies / competition

Organization of design or ideas competitions or invitations for target specialists in residencies or ideas competitions.

ASo3

informing

Periodic information about the process of planning, design and collaboration for the specific actors and society. It entails the specific actors and society. For example, church, social media post, report, public info post et cetera.

ASo2

branding

The creative branding and communication campaign to reach the target stakeholders and inform them. The communication campaign is designed for the target group and oriented towards international target group. Common logo establishment.

ASo1

curator

Person or delegate which or who is responsible for the process of the project or program. The main responsibility is to coordinate the process and ensure the financial flow of the process. The inclusion of stakeholders is crucial.

ACo.11

foreign investors local makers

Foreign investment into full production or process in a specific place (knowledge, manufacturing, distribution and resources).

AF02

taxes

Lower or higher taxes for the expected outcomes. It limits unnecessary activities (urban or port expansion) and foster desired actions (compact manufacturing), (parking, innovation, livability, investments, liveliness, economy).

AF01

EU project

Application for the EU fund project for the target strategy and outcomes. (Interreg, EUBSR, Horizon, Erasmus+, others).

ASo9

exhibition

Public event dedicated for meeting of stakeholders and exposition of products and services. Possible models of events: exhibition, fair, meeting point, et cetera. For e.g. Baltic Furniture Fair.

ASo8

digital information

Digital publicly available information (websites, plug-ins, tools,...) for public information, technological efficiency and potential cooperation. (Resource material and urban mining digital map. Website of Klajpeda makers district).

ASo7

resolution

A legal document as a common public agreement between several stakeholders. The agreement should define what actions each party have to take in near future.

ASo6

conference, workshop, forum

Periodical or single event dedicated to specific target subject. Participants should consist of diverse stakeholders and the conclusions should be integrated into further steps of the process.

ACI03

common good into account

Exclusive attention and sustainable management of limited (natural) resources. Close public monitoring, management and strategy or exploitation is necessary.

ACI02

public good downgrade +1

Eliminating facility which is a public good (public access to the waterfront, open rooftop, beach, free children day center,...)

ACI01

public good upgrade +1

Adding a new facility which is a public good (new public space, civic infrastructure, park, free drinking water,...)

AF05

investment in skills

Private company invests in educational activities or full studies for their employees.

AF04

subsidies

Financial support for strategically important actors or projects to foster the desired actions. Especially for financially vulnerable actors (civic society, social business, small scale makers, immigrants, etc.).

AF03

integrated territorial investment ITI

Investment based on territorial functional program rather than stakeholders' ownership. The investment is collected from all participating stakeholders or crowd-funded.

ACI04

testing site pilot project

Making exemptions from the general laws or planning, rules for defined lab projects or territories, (extending limits of parking places, density, sound or other).

ACI05

fair data

Management of data which preferably should be open for public, interactive and real time. Information should follow the specific data and highlighted subject, not the territorial statistics.

ACI06

24/7

Open and public access for long hours and weekends.



