

REVIVING MARINAS

A NEW LIFE-PATH FOR THE DANISH MARINAS

PART 1: research report



MSc04 URB11
Master Thesis, May 2016
Department of Architecture, Design and Planning

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Project title

Reviving Marinas - a New Life-path for the Danish Marinas

Group number

ma4-urb11

Theme

Design strategy

Project period

01.02.2016 - 25.05.2016

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Number of pages

125

Number of words

26.216

Number of prints

05

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S U M M A R Y

This master thesis takes its point of departure in the notion that marinas always have had a clear purpose of aiding maritime use, but today 84 % of Danish sailors are over 50 years of age [Minbaad 2013, 05.02.16], resulting in significant challenges. This is visualized in a generation gap. The marina faces additional challenges, as the number of overnight stays in the Danish marinas are decreasing significantly, which leads to vacant moorings, making it difficult for many marinas to fill their capacity. [Minbaad 2012, 10.02.16]

Since the subject lacks an academic scope, this thesis will elucidate the marina and its relation to the city, where the thesis strives to find better knowledge regarding the use of the marina and its physical environment as well as its potentials.

The abovementioned is met through research, which is based on existing theory. The research is seen and assessed in the context of the marina. This is supplemented by an empirical research, a case analysis of best practice marinas, and user research. The latter results in a collection of design parameters that contribute to adapt and improve the marina to meet its challenges, and anchor it as a recreational place in the city. The design parameters are combined in a design compass to set a holistic and sustainable direction for the development of the marina. This compass is tested and exemplified through the chosen case, Middelfart Marina, leading to a site-specific design strategy, where we, as urban designers, provide principles and inspiration for its development on a conceptual level.

P R E F A C E

This master thesis is a research project carried out by Nanna Skovbo Jepsen and Stine Juul Christensen as part of the Urban Design MSc04 semester at the Department of Architecture, Design, and Media Technology at Aalborg University. The thesis is developed during the period from February 1st 2016 to May 25th 2016, completed with a final examination June 8th of 2016.

The project takes point of departure in the fact that the number of people sailing has decreased significantly over the past decades. The scope of the project is an exploration and analysis of the physical environment of the marina, its setting within the urban context, and its use.

We want to thank our two supervisors and especially our primary supervisor Lea Louise Holst Laursen for helpful guidance, comments, and engagement throughout the process.

Additionally, we want to thank Kaare Bak, harbour master in Middelfart, for introducing us to Middelfart marina and their challenges.

Furthermore, we want to thank Benjamin Kristensen, chairman of Duelighedssklubben, for showing great interest in the project and helping us distribute online surveys to its members.

A special thanks to Niklas, Jonna, Poul, and Hans, who we have interviewed as a part of the user research phase.

Lastly, many thanks to Mathilde Jespersen for proofreading this report.

READING GUIDE

This thesis is two-parted; an academic research-based report and an inspiration catalogue. Together they are divided into three overall sections; the first and third sections represented in this part (the research report), and the second section in the other part (the inspiration catalogue). The second part holds the references and appendix for that particular document. Each section is subdivided into paragraphs; all containing a short introduction to the following matter and a sub-conclusion recapitulating the content.

THE FIRST SECTION is subdivided into six paragraphs. This section forms the basis of the thesis. Through research, a range of themes relating to the challenges that the marinas are facing have been explored. This leads to an evaluation of a problem statement and main motivation, outlining our position towards the thesis. Furthermore, it contains a historical perspective of the way we travel and the marina in a Danish context. Next, a theoretical framework explores three main subjects that seek to investigate the role of the marina, an exploration of the physical environment through case analysis of three best practice marinas, and an investigation of the organizational dynamics between the marina's users through user research. Lastly, a paragraph recapitulates the previous work in a conclusion for further work.

THE SECOND SECTION is subdivided into six paragraphs. This section is an inspiration catalogue, which is built on the basis of the last section, where it is composed to be able to stand alone. At first, an introduction to the catalogue is given; how it is built, and how it should be read. Next, urban design parameters are constructed, where a holistic approach is used as a basis for the creation of these. The parameters are implemented in a design compass that sets each design parameter in relation to a sustainable discourse. Furthermore, this section delves into the case, Middelfart Marina, where a presentation of Middelfart, frames the exploration of the site through mappings and seeks to expose the problems and potentials. Leading to a conceptual design strategy, holding the vision, areas of interest, and implementation of design parameters. *Go to the inspiration catalogue.*

THE THIRD SECTION is subdivided into three paragraphs. This section is an assessment of the preliminary work. Furthermore, this section will conclude and reflect upon the results of this thesis.

Each paragraph opens with a brief explanation of the following content.

Attached is also a design strategy, which the reader will be directed to grab when necessary.

The Harvard method is used, when references appear.

All quotes are written in English. If that is not the original language, it will be marked with "own translation". Each quote is found in original language in appendix A.

TABLE OF CONTENTS

Summary
Preface
Reading guide

PROLOGUE

08. Societal problematics
14. Problem statement
16. Motivation
18. Methodology
22. Demarcation

A HISTORICAL PERSPECTIVE

26. The maritime environment
28. The way we travel
30. The sailing lifestyle
31. Cultural carriers
32. Sub-conclusion

THEORETICAL FRAMEWORK

36. The boat as a second home
40. The notion of 'sense of place'
44. Inviting spaces
50. Sub-conclusion

THREE CASE STUDIES

54. The chosen cases
55. Methods
56. Case 01: Kerteminde Marina
64. Case 02: Ballen Marina
72. Case 03: Juelsminde Marina
80. Sub-conclusion

THREE USER GROUPS

84. Introduction to the three user groups
85. User involvement - why is it important?
86. Method
88. User 01: Danish maritime users
94. User 02: Foreign maritime users
100. User 03: Locals of Middelfart
108. Methodology critique
109. My marina
114. Sub-conclusion

RECAPITULATION

118. Concluding remarks

INSPIRATION CATALOGUE (PART 2)

ASSESSMENT

122. Conclusion
124. Discussion

REFERENCES

128. List of literature
131. List of illustrations

APPENDIX



ill. 01. Kerteminde Marina

PROLOGUE

The following content represents the basis of the thesis, holding research of a wide range of themes, which relate to the challenges that many marinas are facing. The first subject is an investigation of how the marina is affected by contemporary societal problems, such as changes in climate, life patterns and tourism. These are explored and evaluated, leading to a problem statement and main motivation.

Lastly, a review of the methodology used is presented, where the reader will be taken through our chosen field within urban design, the working method, the analysis method, and the inspiration catalogue as a product.

SOCIETAL PROBLEMATICS



ill. 02. Gilleleje Marina after the storm, Bodil, in 2013

The following problematics are chosen due to their immediate influence on the marinas' contemporary challenges. This paragraph seeks to account for their impact.

CLIMATE CHANGES

Over the next many years, the climate in Denmark will change gradually, which will contribute with a number of challenges in the long term. Since the year of 1870, the temperature in Denmark has increased with 1,5 degrees celsius. Similarly, the annual rainfall has increased by 100 millimeter over the past 150 years, and there is a tendency of growing numbers and intensities of heavy precipitation. In general, in the future, the weather will be warmer and more wet. The extreme incidences are expected to increase, meaning more intense and more frequent heat waves, heavier rainfalls, longer droughts, and stronger storms. Experts expect more rain during the winter season and both longer droughts and heavier rainfalls during the summer season. The temperature will increase as well, making both winters and summers warmer, with increasing heat waves. (Task Force for Klimatilpasning 2012)

As a result, the climate changes have both positive and negative consequences. The positive effects are, among others, related to rising temperatures,

which provide milder winters that reduce the energy consumption, construction costs, winter preparedness, and salt consumption. The changes also provide a longer season of growth. The negative effects are primarily related to an increased frequency of extreme rainfalls as well as rising sea levels and stronger storms, which cause floods and damages on urban structures, and erosion of the coasts. It is expected that the individual coastlines are affected by climate changes in different ways, but that the sea level, in general, will rise. On a global plan, the rising sea level is caused and influenced by the melting of snow and ice as well as the heating of the water. (Task Force for Klimatilpasning 2012)

Due to these climate changes, the sea level at the Danish coasts, except in Nordjylland, will rise significantly over the next 100-200 years. It is expected to increase by 0,2 or 0,3 meters by 2050. All though the rate of increase is associated with a few uncertainties, the sea level is expected to increase with 0,8 meters and a maximum 1,5 meters by the year 2100. (Task Force for Klimatilpasning 2012)

The consequences of climate changes as well as possibilities and obstacles of climate adaptation can be illustrated through four categories; physical infrastructure, business sector, biological areas, and transverse areas. In this thesis, the emphasis will

be put on the physical infrastructure, which involves construction and housing, coasts and harbours, transportation, and water. These areas represent the urban framework, which is characterized by big investments that have a long life, and where the potential costs of damages are very extensive. (Task Force for Klimatilpasning 2012) Since marinas are small and vulnerable as economic unities, the financial outcome of a substantive destruction can put them on the verge of bankruptcy. This was seen in the aftermath of the storm *Bodil* that generated a storm flood that ravaged in december 2013, causing 27 million kroner in damages. [Information 2014, 02.05.16]

This indicates the importance of integrating climate adaptation at an early stage. In these areas, the climate changes almost exclusively cause high expenses, where the damages are typically caused by extreme weather events; such as storm floods and cloudbursts. In case of storm floods, an integrated coast protection can secure the infrastructure and buildings in the marina, where it can provide damage control. Additionally, the negative consequences of climate changes can weigh against an introduction of sustainable solutions like LAR-solutions and the reuse of rainwater to gain from the cloudbursts. (Task Force for Klimatilpasning 2012)

In Denmark we define cloudbursts as heavy rainfalls with an intensity of 15 millimeters or more in maximum 30 minutes. The large amount of precipitation in a short period of time is almost impossible to predict accurately, but often has enormous consequences. [DMI 2015, 02.05.16]

Storm floods are flooding that is caused by extreme high level of sea water. In Denmark the storm floods can hit the coasts from October to April and can vary a lot in intensity. [Stormraadet 2016, 02.05.16]

The climate adaptation of flooding by storm floods, involves a local or communal security of the coast. The more extreme actions count as dams, sluices or a rise of houses and other infrastructure. The dams can be located adjacent to the area, as a coastal dyke, the sluices can close off the whole belt, and the raising of the built so that it can withstand the water at a certain height in intervals. Whereas the less extreme actions count as stone dykes and screens located along the coastline.

It is necessary to plan an area so that the least damage is done, because things of high value is at risk.

The climate adaptation of flooding by cloudbursts

should be incorporated in future building and planning projects. It is no longer ideal to lead rainwater away from the local area through sewer systems. Focus is now being put on local drainage of rainwater (in Danish called LAR - lokal afledning af regnvand). The rainwater should be managed locally, as far as possible, by draining or storing the water, e.g. in bassins, lakes or the like, where a focus is also put on increased urban quality. [Middelfart 2013, 02.05.16]

In December 2012, an action plan for climate protection of Denmark was launched by the Danish government. The plan describes initiatives that will help create sustainable, green climate adaptation efforts, focusing on five main areas:

- “
1. *The government shall ensure the best possible framework for municipal climate adaptation.*
 2. *The government shall ensure a common base of knowledge and ongoing guidance of the impact of climate changes.*
 3. *There shall be a coordinated effort across authorities, businesses, and citizens.*
 4. *There shall be focus on the growth potential of developing new innovative solutions that contribute to the green transition.*
 5. *Denmark is working to reduce the impact of the climate changes on an international level and for an ambitious climate adaptation in the EU.”*
- [Klimatilpasning 2014, 20.04.16] own translation, cf. appendix A1

CHANGES IN LIFE PATTERNS

Today, tourism is highly influenced by alterations in life courses, where getting an education, starting a family, getting a job, and starting a career have great influence on the possibilities of acquiring a boat and the amount of time to spend on it. (Hall, Müller 2004) These significant changes in Danish life patterns have appeared in modern society as a consequence of the welfare state's development [Information 2007, 15.04.16], where its complexity and prosperity provide many opportunities, but also side effects such as longer educations, late parenthood, easy access to transnational travel, and economic priorities (Hall, Müller 2004), where the last two are highly influenced by globalisation as well. [Denstoredansk 2012, 15.04.16] (cf. ill. 04 pp. 12)

One can argue that longer education, late parenthood, and economic priorities interconnect with mutual relations. It affects the likelihood of purchasing a second home, when people are in their 30s, since they might be more prone to have children, travel abroad, and purchase a home (72 % first-time house purchases are made before age 39 [Realkreditraadet 2013, 15.02.16]). This notion is seen in the average age of vacation home owners as well, where it is 59,1 years old. [RD 2014, 15.02.16]

The increase in transnational travel can be seen as both a result of a common improvement of living standards, but also as a result of globalisation. Danish families effortlessly fly on vacation in Thailand or on a weekend get-away to Paris, but the growth in air travel has a downside; the greenhouse gas emission. Travelling by airplane from Copenhagen to New York emits more CO₂ than an average world citizen emits in a year. Today, air travel is liable for 75 % of the greenhouse gas emission [Information 2015, 15.02.16], where the aviation industry expects a sevenfold increase in air travel by the year of 2050, and, thereby, a fourfold increase in greenhouse gas emission. [Videnskab 2015, 15.02.16]

We argue that this increasing accessibility can pose a great threat to local tourism, where sailing in particular is prone to suffer before caravans and vacation homes. Due to the extensive costs of owning and maintaining a boat, it makes it unaffordable for most to go on a transnational trip, which likely forces most to choose between owning a boat or going on vacations abroad. Additionally, sailing is inaccessible due to constrictions regarding technical knowledge and requirement of a sailing license. Therefore, boats are not easily purchased or rented unlike a vacation home.

Even though it is expected that airplane-fuel will become more CO₂-effective every year, the increase in airplane passengers will exceed the efficiency improvements. [Information 2015, 15.02.16] Oil prices are expected to increase as well, which is likely to affect the price of plane tickets, [Oilprice 2016, 15.04.16] making it less affordable for a large amount of people.

**“ We recommend that
one go on vacation closer
to home, where one travels
fewer times a year,
but for a longer
period of time.”**

Jacob Fjalland, manager foreign-program,
Verdensnaturfonden
[Information 2015, 15.02.16]
own translation, cf. appendix A2

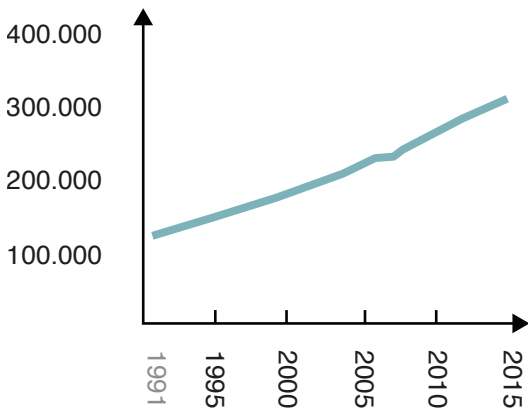
Arguing that this might call for a future change in travel behaviour, which might lead to an increase in local tourism again, where second homes, boats in particular, have the chance to regain part of its glory.





LONGER EDUCATIONS

An increasing part of the Danish population is getting a higher education. Since the year of 2000, the number has increased by 43 %. Yet, it is not only higher education; the general level of education has risen significantly over the past 30 years, while 15 % of the 25-64 year olds had a higher education in 1981, the number rose to 32 % in 2012. [dst 2013, 12.02.16]

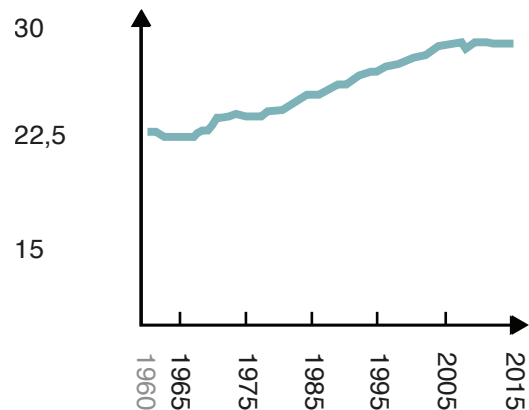


Number of students, who complete a higher education
[Statistikbanken hf1, 12.02.16]



LATE PARENTHOOD

The age of first-time mothers has risen; the Danes have children at a later age than in the past. [Berlingske 2015, 12.02.16] In 2015, the average age of first-time mothers was 29 years - five years older than in 1970, where the number of children born was also higher than it is today. [dst 2013, 12.02.16]

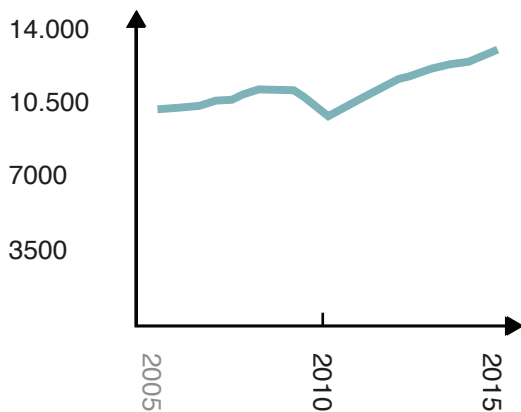


Average age of women giving birth
[Statistikbanken fod11, 12.02.16]



ACCESSIBILITY TO TRANSNATIONAL TRAVEL

In the 1950s and 1960s, Danish tourism flourished, especially after the German visa requirement was lifted in 1954, but in the 1970s, Denmark saw an increase in charter tourism in regards to both the number of foreign tourists visiting, and the number of Danes who chose to go on vacation in their own country. With an annual growth of approximately 6,5 %, tourism has since 1950 been among the fastest growing industries in the world. [denstoredanske 2014, 12.02.16]

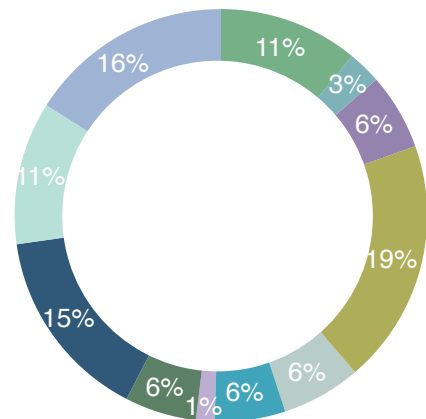


Number of scheduled- and charter flights
[Statistikbanken FLYV34, 12.02.16]



ECONOMIC PRIORITIES

On average, the Danes have a higher income per year, but there is also a lot of private consumption that needs to be paid for. Over the past 25 years, the budget for food, alcohol, and tobacco is much less than earlier, however, the cost of living has increased. It appears that services like housing, hotel, restaurant visits, entertainment, unemployment insurance, TV-license and tele-, data- and financial services now account for over half of the budget. [Finans 2015, 12.02.16]



A household's annual spending for a family of two adults and two children
[Statistikbanken FU5, 12.02.16]

- Food products
- Beverages and tobacco
- Clothing and footwear
- Housing
- Electricity, heating
- Furnishings, household services etc.
- Medicine and medical expenses
- Purchase of vehicles
- Other transport and communication
- Recreational equipment, entertainment and travel
- Other goods and services

PROBLEM STATEMENT

The thesis takes its point of departure in the notion that many marinas often appear enclosed and reserved for maritime users only. This thesis seeks to challenge this notion and investigates how the marina can invite a broader user group, without compromising its maritime use.

The contemporary lifestyle provides new demands, not just in relation to the maritime users, but locals and tourists as well; we seek places with sense and purpose that provide a variation of facilities, where a narrow use is insufficient, when striving to secure the use and economy. [Phys 2015, 10.03.16] Thus, there is a need to rethink the purpose and possibilities of the marina as part of the urban development.

Since their heydays in the 70s and 80s, Danish marinas have suffered a decline in national- and transnational tourism, which has very likely been affected by the increase in transnational travel as earlier mentioned. With a decline of 42 % since 1990, marinas have suffered the largest decline when compared to other forms of overnight stays. [Statistikbanken, 08.02.16] (cf. ill. 06 pp. 15)

“ **84% of all sailors
are over 50 years old** ”
[minbaad 2013, 05.02.16]
own translation, cf. appendix A3

The sociological changes accounted for in the previous paragraph are disclosed in a generation gap that is experienced within contemporary sailing, where the declining elder generation still outnumber the younger, leading to an absence of a new generation to take over. Sailing benefits from cultural carriers, where each generation pass on traditions and knowledge to the next. As a result, many marinas have lost a very important generation, when striving to secure potential prosperity.

If these challenges are not met, it is likely that marinas, in the future, will start to close as a result of vacant moorings and an unhealthy economy, starting with the marinas that now suffer the most. If they are not adapted, the closing of marinas can result in urban voids with no conclusive function within the urban system, where a significant part of the Danish coastal- and maritime heritage will be lost.

As seen in the current urban development a number of municipalities, for instance Middelfart [Middelfart 2015, 04.04.16], Svendborg [Svendborg 2014, 04.04.16] and Esbjerg [Esbjerg 2016, 04.04.16]

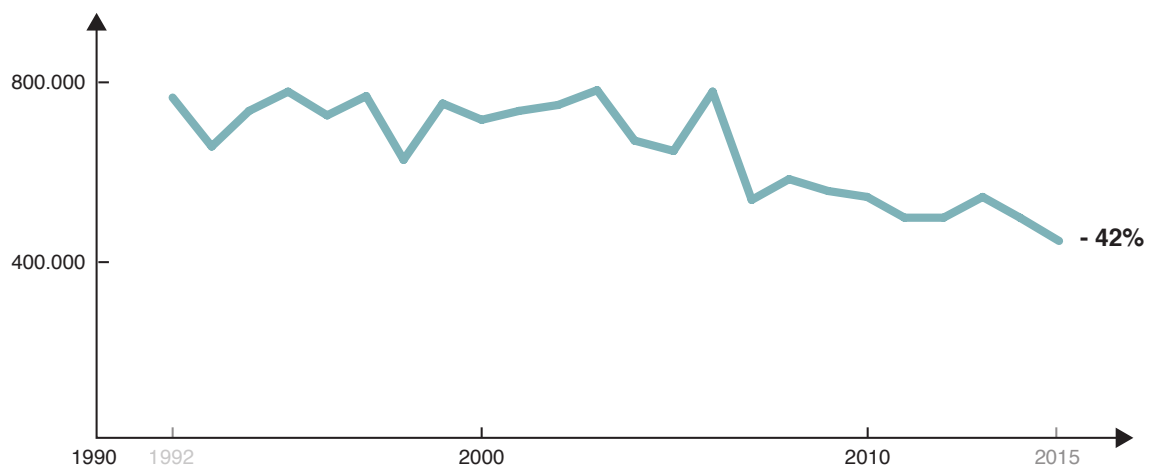
imply that the harbour and marina in the future, will serve as a recreational space for a broad user group. Inviting a new user group into an enclosed and occupied space can become a threat to its maritime use, if not carefully regulated. Therefore, it is important that the design is based on the maritime use, while adapting the physical environment to accommodate this.

To support the extended use, the marina's relation to the city is to be considered, since it often holds a vague connection to its urban context, which is often seen in rows of trees shielding the marina, disconnected or lacking paths between city and marina, and large open spaces creating an incoherency in the urban structure.



ill. 05. Project vision

***Can the contemporary
sociological issues be met by
adapting and improving the
physical environment
of the marina?***



ill. 06. Number of overnight stays in the Danish marinas

MOTIVATION

“ Urban design draws together the many strands of place-making, environmental stewardship, social equity and economic viability into the creation of places with distinct beauty and identity.”

[Horizontalism 2013, 10.05.16]

The motivation derives from a decrease in sailing, where many marinas face vacant moorings and unutilized recreational potentials. This will be met by accentuating its recreational quality, history, and identity, through a site-specific optimization of its physical environment, resulting in a recreational refuge with an improved connection to its context. An extended purpose helps to illustrate a new life path for the marina to meet the urban prosperity.

The general motivation originates from the desire to challenge ourselves. Since the education has mainly been characterized by design projects, we found it interesting to explore and use our academic knowledge in the field of research and urban planning.

This is fueled by an interest in the planning and development of cities, in particular recreational spaces. In addition, to investigate how marinas can contribute to the quality of life in urban areas, through a user- and site-specific approach, where the topicality of user research and urban renewal are significant. The thesis is unfolded through a structured and analytical approach, where we strive to find a profound understanding of the marina, its problems, and potentials. Subsequently, we seek to explore how its often vague relation to the city can be strengthened, and how the marina can benefit and become a substantial part of the city.

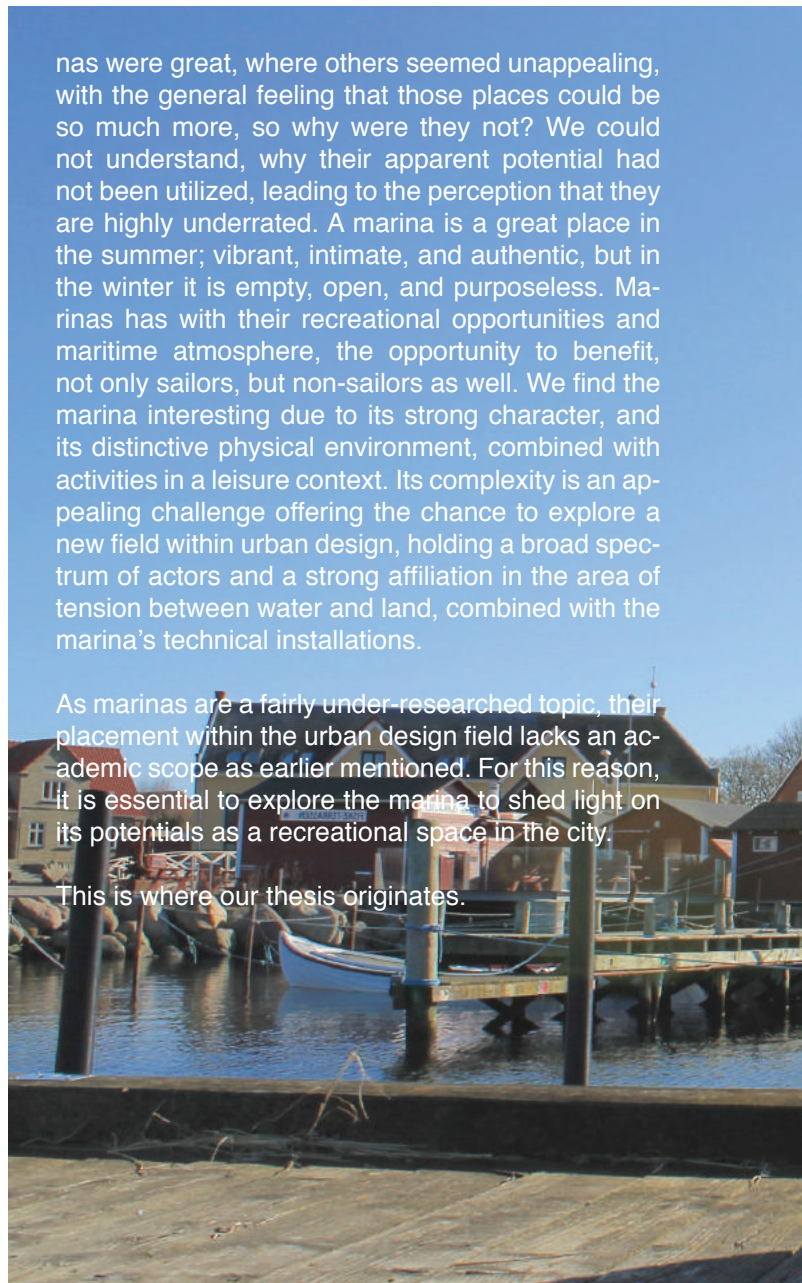
A CURIOSITY WAS AWAKENED

With a personal fascination of the maritime environment's complexity and the sailing lifestyle, the idea of working with the marinas appeared during a summer at sea. While travelling from one marina to the other, in the best weather the Danish summer can bring, we received the impression that some mari-

nas were great, where others seemed unappealing, with the general feeling that those places could be so much more, so why were they not? We could not understand, why their apparent potential had not been utilized, leading to the perception that they are highly underrated. A marina is a great place in the summer; vibrant, intimate, and authentic, but in the winter it is empty, open, and purposeless. Marinas has with their recreational opportunities and maritime atmosphere, the opportunity to benefit, not only sailors, but non-sailors as well. We find the marina interesting due to its strong character, and its distinctive physical environment, combined with activities in a leisure context. Its complexity is an appealing challenge offering the chance to explore a new field within urban design, holding a broad spectrum of actors and a strong affiliation in the area of tension between water and land, combined with the marina's technical installations.

As marinas are a fairly under-researched topic, their placement within the urban design field lacks an academic scope as earlier mentioned. For this reason, it is essential to explore the marina to shed light on its potentials as a recreational space in the city.

This is where our thesis originates.





ill. 07. Ballen Marina

METHODOLOGY

The following paragraph touches upon an exploration of the field of urban design, to anchor the thesis in a field of opportunities. Here, the working method, the analysis method, and the development of an inspiration catalogue is accounted for.

Professors, writers, critics, and urban designers have their own definition of what urban design is, but simply said; urban design is design of cities and towns, spaces, and streets. [Urbandesign 2016, 17.03.16]

Architect and planner Donald Watson describes it as follows; *“Urban design and city building are surely among the most auspicious endeavors of this or any age, giving rise to a vision of life, art, artifact and culture that outlives its authors. It is the gift of its designers and makers to the future. Urban design is essentially an ethical endeavor, inspired by the vision of public art and architecture and ratified by the science of construction.”* [Academia 2016, 17.03.16] It is the art of making places; creating and shaping cities collaboratively. It is a wide spectrum of fields that involve individual buildings, groups of buildings, public spaces, landscapes, as well as processes that facilitate successful development. [Academia 2016, 17.03.16] Combined, it makes urban areas both functional and attractive. Urban design concerns giving shape, form, and character in three areas; the city, the neighborhood, and the building/space. It involves place-making, which is the creation of an environment that gives a sense of place to an area. [Urbandesign 2016, 17.03.16]

“Urban design is about making connections between people and places, movement and urban form, nature and the built fabric. Urban design draws together the many strands of place-making, environmental stewardship, social equity and economic viability into the creation of places with distinct beauty and identity.” [Urbandesign 2016, 17.03.16]

This thesis operates in a certain part within the field of urban design. We have an analytical and strategic approach to the subject, where our two primary themes urban planning and user research. With a holistic mindset, we will shed light on the problems and potentials by using five core values within area renewal; site approach, user involvement, integrated solutions, value added, and new urban qualities. (MBBL 2014)

WORKING METHOD

This thesis is, as mentioned, an exploration of the Danish marinas, where it is based on an empirical, theoretical, and analytical investigation. The overall working methodology derives from the desire to understand both the physical environment and the dynamics between the users, which lead to a broad insight into the area. In this respect, The Golden Circle by Simon Sinek is helpful (cf. ill. 08 pp 19). It contains three steps to successful communication and project development; what, how, and why. The initial purpose of the book Start with Why is to provide a new way of thinking, acting, and communicating for leaders that wish to inspire. (Sinek 2013) What is significant about this method is the will to reverse the order of how one communicates; most communication happens from outside the circle (what) and in, but it is essential to work from the inside (why) and out. People do not “buy” what you do, but why you do it. [TED talk 2013, 26.05.16]

The idea behind The Golden Circle is to learn how to work from inside and out, starting with why.

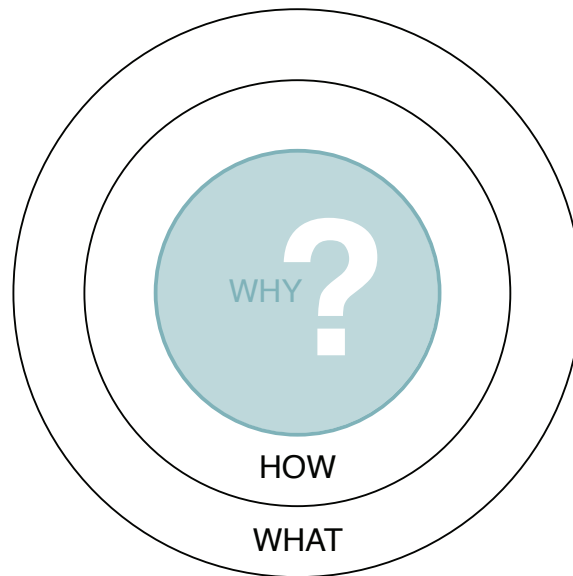
What Everybody knows what they do - both as a company and as a person.
How Some companies and persons know how they do it.
Why Only a few companies and persons know why they do it. (Sinek 2013)

The method is a helpful tool throughout the entire thesis and it is a repeating method; from the motivation to initiate the thesis to being a part of the research, process, and end result. It has especially been of use in the development of the design guide, where it sets the groundwork for each design parameter.

ANALYSIS METHOD

As described in the problem statement, the main problem of the project is the decline of the number of people sailing. Among others, we will address the problem through an analytical approach, both phenomenologically and physically; regarding case analysis and site analysis.

Through phenomenological analysis, we learn how architecture affects the human being sensorially and emotionally. French philosopher and professor Maurice Merleau-Ponty believes that the human being cannot set itself apart from its body, and that we sense and experience the world through the body. [Denstordanske 2013, 19.04.16] Also known as embodiment. Pallasmaa addresses this notion in his book The Embodied Image, where he removes



ill. 08. Working method

the word image from the visual eye to the body, to challenge one to experience the physical environment on a sensoric level. (The Embodied Image 2011)

Definition:

“Phenomenology *noun* [phe-nom-e-nol-o-gy]

1. the study of the development of human consciousness and self-awareness as a preface to or a part of philosophy
 2. a philosophical movement that describes the formal structure of the object of
 3. awareness and of awareness itself in abstraction from any claims concerning existence
 4. an analysis produced by phenomenological investigation”
- [Merriam-webster 2016, 19.04.16]

Also, Danish architect, urban planner, author, and professor, Steen Eiler Rasmussen, [Denstordanske 2014, 20.04.16] is well known for his phenomenological approach to architecture; especially with the book *Om at opleve arkitektur*. The main purpose of the book is to explore how a person experiences architecture and design, where Rasmussen outlines

means regarding the form of architecture, among these; space, form, volume, colour, scale, light, texture, and rhythm. (Rasmussen 1966)

Within the urban design field, the method of phenomenological analysis takes its point of departure in the individual’s experience of the city and architecture. The purpose is to create new knowledge between different phenomenon such as the physical environment, the visual-, and the emotional reactions. It is about exploring how architecture and urban design are experienced as a sensorial experience. [Byplanlab 2010, 20.04.16]

To establish urban design and architecture as experienced phenomenon, certain methods of site analysis can be used. In this thesis emphasis is on two specific methods; Serial Vision by Gordon Cullen and a townscape method by Kevin Lynch. Both is represented in the case- and site analysis, where the method is explained and elaborated. (cf. case studies pp. 55)

Case analysis is an ideal methodology, when an in-depth investigation is needed [Harvard 2008, 20.04.16]. In architecture and urban design, it is often used to describe a detailed study of a specific project. Case analysis pose an essential part of this thesis, as three best practice marinas have been

studied in terms of first impressions, sense of place, and townscape analysis. How the case analysis is conducted is presented in the respective paragraph (cf. case studies pp. 55).

The physical environment is studied through several methods and on/in several scales. In the site analysis of Middelfart Marina, structural analysis is an essential part. It is important to gain an understanding of the physical and functional conditions of a city. For a municipality, the urban structure is about, where the cities of the municipality is located, where they are developed, and which role they play. In that relation, some tematics such as central structure, housing conditions, traffic conditions, and recreational areas are relevant. (Marling, Kiib 1996)

The city is to be divided in several structures or sub-structures. Four main structures provide a sufficient picture of the physical conditions and functions of the city:

The built structure: Contains buildings; their use, function, physical expression, location, coherence, etc.

The green structure: Contains recreational areas, their location, use, shape, coherence, etc.

The traffic structure: Contains infrastructure, their location, function, shape, capacity, etc.

The blue structure: Contains harbours, lakes, streams etc., their course, shape, etc. (Marling, Kiib 1996)

Furthermore, the thesis is rooted in a survey research, which been useful in the wish to gain knowledge about the users. The particular research method is presented in the respective paragraph (cf. three user groups pp. 86).

INSPIRATION CATALOGUE

The production of an inspiration catalogue is a tool of us to gather the strategic foundation of information and knowledge obtained during the research phase. It is a collection of inspirations communicated through several phases; design parameters and how these are seen in the context of a marina and a manual explaining how the parameters are used and implemented in a site-specific context.

Definition:

“Inspiration *noun* [in-spi-ra-tion]

1.

something that makes someone want to do something or that gives someone an idea about what to do or create - a force or influence that inspires someone

2.

a person, place, experience, etc., that makes someone want to or create something

3.

a good idea”

[Merriam-webster 2016, 23.04.16]

“Catalogue *noun* [cat-a-log]

1.

a book containing a list of things that you can buy, use etc., and often pictures

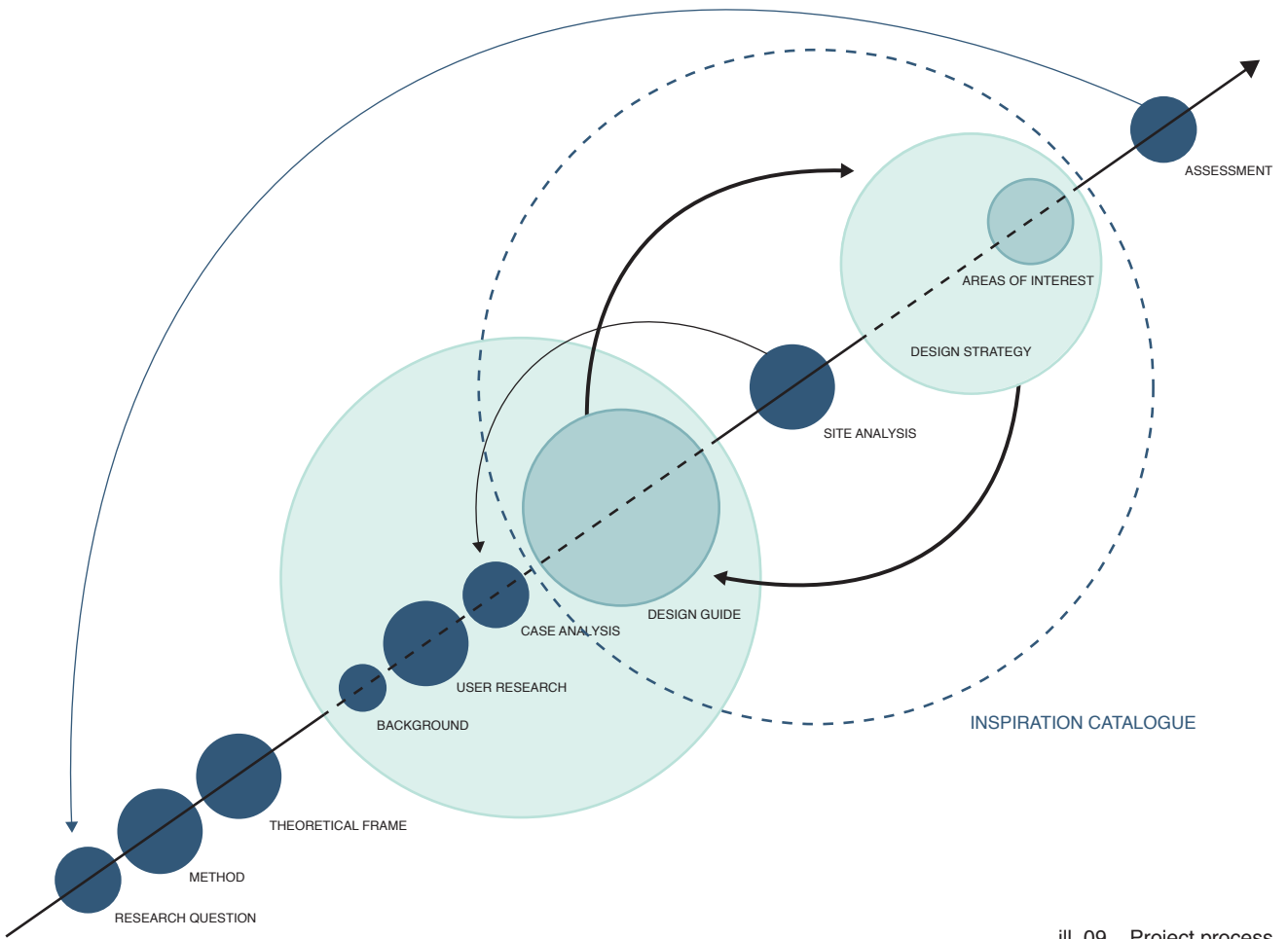
2.

a group of similar or related things”

[Merriam-webster 2016, 24.04.16]

The design parameters are assembled with the term sustainability to achieve a sustainable development, holistic, and site-specific, communicated through a design compass containing the environment-, social-, nature-, economy-, and local value discourses, assembling the initiatives in a palette for further design. The method will be elaborated in the respective paragraph. (cf. inspiration catalogue (part 02) pp. 12)

The catalogue can stand alone, and it is aimed at municipalities, urban planners and -designers, architects, and students with an interest in urban renewal and the maritime environment.



ill. 09. Project process

DEMARCATIION

A marina can be analysed in a very broad perspective; for instance by a cultural- or sociological analysis, providing the project with another direction of focus. Yet, in this thesis, the marina is analysed with an urban planning mindset, applying focus on the built environment and its users. The project solely focuses on Danish marinas set in a near-city location.

This thesis does not include a detailed design of a marina. Instead, we seek to create the preparatory basis by translating the preliminary work of research and analysis into design guidelines and inspiration for further work.

As the thesis aims for a strategy, the focus has not been to design climate adaptation solutions, but rather to point out why it is important, where and what it should protect and provide inspiration for how to integrate climate adaptation as a multifunctional urban installation, where it is a part of the future development strategy.

The project does not include calculations of rising sea level and rainwater management.



ill. 10. Juelsminde Marina

A HISTORICAL PERSPECTIVE

The following content outlines the marina seen in a Danish context, as well as its importance in relation to cultural heritage, and the coastal identity. This is disseminated through a historical perspective and leads to an understanding of the development of tourism and traveling, as the marina is perceived as a second home area.

Lastly, the sailing lifestyle is described based on personal experiences, with the purpose of framing a more sensorial perspective of the lifestyle.

THE MARITIME ENVIRONMENT



ill. 11. The Danish coast

The following provides a description of the environment that the Danish marina is a great part of; the Danish coast, as well as the maritime cultural heritage.

For many marinas, the physical appearance has not changed much since they were built (cf. appendix E), often in the 70's or 80's, with the purpose to accommodate leisure boats and perhaps small fishing boats. It was a place where people met and exchanged goods and the latest news (Gehl, Svarre 2010). On that basis, the future marina can become a place for gatherings - an attractive hub. The marina is already a point of arrival for maritime tourism, and for some marinas, like Juelsminde, a point of stay for autocampere as well [Autocamper 2016, 28.03.16]. Most people have a wish to stay by the water, but they need to be included and guided there. [Regioner 2008, 28.03.16] Many marinas do not have a connection to a network of paths, making them inaccessible by foot. The physical environment and cultural heritage of the marinas, and the surrounding landscape provide each place with its own distinctiveness. In some marinas, the original maritime architecture has been replaced by modern and conventional architecture that could be placed almost anywhere, which poses a threat to their maritime identity. Marinas can become a destination from land as well, per se, if they are characteristic and interesting enough.

THE DANISH COAST

Denmark has a long coast, actually more than 7300 kilometer of coastline (which is unique in relation to its small size) and never more than 50 kilometer to the nearest coast, making it highly accessible. [Visit Denmark 2016, 26.03.16] The value of the coast is both unique and vulnerable, and can easily be threatened or disappear entirely, due to urban development (construction) and climate changes [Stedet-tæller 2016, 26.03.16].

The coast hold a great amount of potentials that should be protected to secure its use in the future. In the 1800s, a significant development started along the coast. Harbours were built, joined by windlasses, where each generation of fishermen built a characteristic housing for their families. This sets the base for the maritime coast culture that stood out from life known in larger cities and inland. When artists in the mid 1800s sought inspiration in the nation's roots and the local nature, the coast community was discovered, as a special theme with a large potential for the middle class to reflect upon their own life and the perception of the good life.. On the coast, people found an independence, community, and pride that was seen as a cultural contrast to the metropolitan latent middle class and working class, where the coast became an attraction and later a place for vacation during the summer. For people

living on the coast, this meant a new potential for increased income. In the beginning of the 1920s, families started to rent out their house or annex to people from the city, giving the coast a new image as a vacation area. At the same time, sailors began to visit the small marinas. With the introduction of the fiberglass boat, the sailing community increased significantly, where marinas were built to accommodate the increasing amount of pleasure boats. [Stedet-tæller 2016, 26.03.16]

“ A millennium of maritime cultural development and tradition has provided the coast with its unique character, but the authenticity are in risk of disappearing between our hands. It is our generation’s responsibility that the places distinctiveness is developed rather than dismantled ”

Thomas Højrup,
professor in european ethnology
[Stedet-tæller 2016, 26.03.16]
own translation, cf. appendix A4

The authenticity of the coast is its potential; the unique combination of thin fertile farmland, beach lots, the culture of the fishing villages, freedom, the sea, and childhood memories all provide the coast with its own place-related potentials to continue its value of attraction. The coasts’ quality of life and cultural values are precarious, addressing the need for precautions in business and development, so the cultural heritage and -value is not lost. [Stedet-tæller 2016, 26.03.16]

CULTURAL HERITAGE AND VALUES

Cultural heritage is the product of a cultural environment that has developed over time. It is a geographically defined area that, by its presence, indicates a unique character of the societal development. A cultural environment is constructed by a holistic form of a place (public space or landscape), something physical (buildings, architecture, infrastructure, physical leftovers), and something culture historical (an event, epoke, larger tendencies, societal development, with an important significance). [SLKS 2012, 10.03.16] Cultural heritage can be translated into cultural history, where heritage does not apply

to the past for the sake of recognition, but rather to evaluate, which part of it can be used in a contemporary relation - it is the practical use of the known history. A culture that is vital as a premises for human development and social life in a cultural reality. The character of a place can be difficult to select and define, where the unique values of the place are preserved. This is often difficult because of a physical and aesthetic ‘top-down’ approach with a restricted geographical mindset. [Byplanlab 2011, 10.03.16]

Instead, the place and its character is to be understood from a ‘bottom-up’ approach. Here the place is understood by ‘seeing’ and ‘feeling’ in combination with its physical appearance and atmosphere, where the social environment and its character form a strong narration and preservational worth. [Miljøministeriet 2009, 11.03.16] The cultural heritage, in this case maritime, can be an asset to initiate a development, where it can be an important development resource to aid the local values. It can both help to attract locals and tourists; for this reason, the cultural heritage needs to be preserved, renewed, and made visible, as it presents the area with identity. Today, the recreational use of marinas has a large impact on their economy, which can be essential for many marinas. [Realdania 2004/5, 13.03.16]

In our opinion the maritime elements are the essence of the marina’s character, where it, along with its history, embodies the cultural heritage. The marina is originally constructed of materials close to nature, for instance, wood, boulders and gravel. Most materials often appear unprocessed and uncultivated, in a rustic form that relates to nature and the ocean. Its character is seen in the recreational environment, with small plot buildings facing the ocean, constructed in wood, often with red or black painted planks on the facade and white details, accompanied by a pitched roof. The buildings are dispersed around a large open area, where they hold maritime functions and -industry. A large amount of the maritime objects can be found laying around the marina. Objects such as dinghies, kayaks, masts, sail, cordage, fishing nets, buoys, fenders, driftwood, seashells, and seaweed sometimes accompanied by a display of a large sculptural anchor. Marinas appear airy and light with open spaces and views, joined by a cooling air.

When the maritime lifestyle performed in the marina and on the boats are combined with the description above, it constitutes a figurative account of the marina’s identity. On page 30 the sailing lifestyle is described.

THE WAY WE TRAVEL

TO TRAVEL...

In connection to the industrial society's breakthrough in the mid 1800s, a decisive change of content and extent in travel life began. For a long time, traveling had been reserved for a smaller part of the Danish population in form of pilgrimages, educational travels, and trade missions. [Denstoredanske 2014, 07.03.16]

Up until the second world war, real holiday travel was still reserved for a relatively small group of the population, who usually chose a seaside resort in, for example, Skagen, Løkken, or on Fanø. Holidays were not truly available for larger population groups until 'Ferieloven' in 1938, where nine days of paid leave was introduced. However, the heydays of Danish tourism began in 1950, when the pastor Eilif Krogager founded Tjæreborg Rejser and established the first bus trip to Spain. [Denstoredanske 2014, 07.03.16]

Danish tourism flourished in the 1950s and 1960s, especially after the German visa requirement was lifted in 1954. But in the 1970s and 1980s, Danish tourism was overshadowed by charter tourism, leading to a stagnation in both the number of foreign tourist visits and the number of Danes, who chose to go on vacation in their own country. In general, the number of sold package holidays has increased since the mid 1980s, including trips to the Canary Islands, Costa del Sol, Tenerife, Mallorca, and large cities; London, Paris, and Rome being the most popular destinations. But in the first half of the 1990s, the Danish tourism experienced an almost dramatic progress, which doubled in just a few years; especially German families were fond of renting a holiday house. A major factor to this progress is the German reunification, which at once gave Danish tourism the potential of 20 million new customers. [Denstoredanske 2014, 07.03.16]

In 2009, Danish tourism registered a total of about 41 million overnight stays; 17 million in holiday homes, 11 million on campsites, 4 million in city hotels etc., 2 million in holiday resorts and centers and 1 million in hostels. [Denstoredanske 2014, 07.03.16]

In relation, international tourism has grown to be one of the largest industries in the world, increasing with approximately 6,5 % every year, making it one of the fastest increasing industries. To illustrate the industry's growing rate, more than 700 million tourists traveled to a foreign country in 2005, which is twice the amount since the 1980s. [Denstoredanske 2014, 07.03.16]

This increase in tourism is not only seen in growth in the number of tourists, but also in a significant increase in transnational air travel. Within the aviation industry, new business models have made air travel economically attractive over a long period of time, with low cost companies as an important catalyst behind the high growth rates in Europe's metropolitan tourism. The low price influenced the European travel behaviour with more short travels, spreading over a large part of the year. When comparing Denmark to other European countries, there are relatively few low-price fares to Danish airports, which weakens the accessibility to Denmark by airplane, while providing minor opportunities to generate more growth in tourism from a long line of European markets. [Regioner 2008, 28.03.16]

THE NEW TOURISM

49,1 million Danish and foreign overnight stays is registered in Denmark in 2015, which is the highest number of commercial overnight stays ever. [Visit-Denmark 2015, 04.04.16]

The new tourism in Denmark has an increased focus on the importance of tourism for local and regional development. It is based on unique experiences, interest based themes, and individual needs. It focuses far more on the content of the holiday and the ability to create personal value for the guest. [Regioner 2008, 28.03.16]

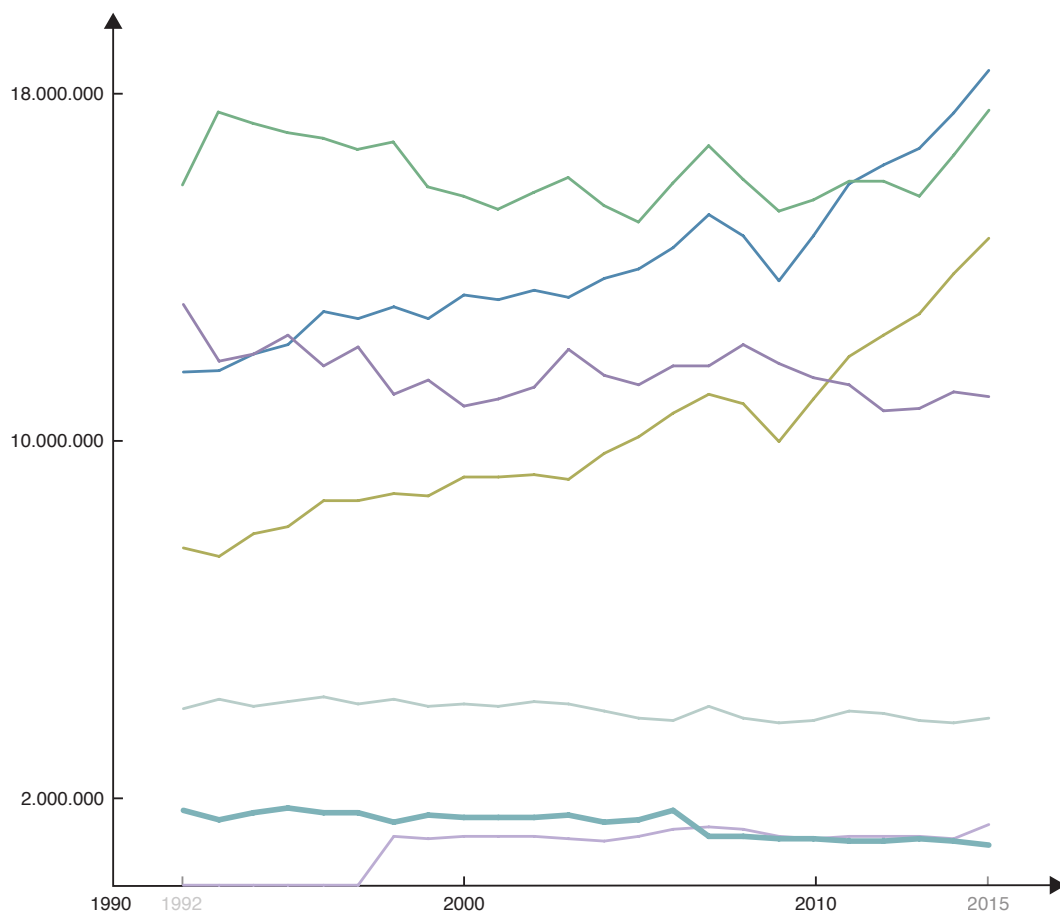
The new tourism is a catalyst for enhanced cultural production on a local scale. Summer schools, festivals, concerts, and cultural manifestations often begin as local initiatives that strengthen the local area's identity, attraction, living environment, and location for business. It often results in local life quality and culture that simultaneously accommodates tourism perspectives. [Regioner 2008, 28.03.16]

Denmark possesses a number of strengths in subjects such as culture, nature, business, and lifestyle; it offers a variety of unique nature elements that, today, is very popular to the guests. About 70 % of guests indicate that nature is one of the primary reasons for choosing Denmark as a travel destination. [Regioner 2008, 28.03.16]

The coasts, harbors, islands, and landscapes contain an important potential for creating new experiences based on nature and coastal values. However, it requires an effort to activate the potential; the approach has often been that the nature-bound attractions have a way of attracting people, which so far has made it unnecessary to brand and communicate them. However, tourists increasingly de-

mand content, meaning, and personal value, creating a challenge when it comes to the accessibility and dissemination of the opportunities for nature experiences. [Regioner 2008, 28.03.16]

- Vacation houses
- Hotels and holiday resorts in total
- Camping
- Hotels
- Holiday resorts
- Marinas
- Hostels



ill. 12. Number of overnight stays based on vacation types

THE SAILING LIFESTYLE

Based on own experiences during the summer season, the marina appears as a place with a vibrant environment enhanced by the sailing community and a set of norms dictating social dynamics where sailors look after one another, helping where help is needed. Activities in the marina during the day mostly consist of swimming, sunbathing, relaxing, reading, walking, playing outdoor games, sightseeing, and cleaning or fixing the boat. Some marinas have music events or a small market, where local goods, fruits, and vegetables are sold.

The vibrant environment is especially experienced in the evening, since most people travel from one marina to another during the main part of the day. The evening is when the activity in the marina is at its peak; as boats leave in the early forenoon/morning and arrive in the late afternoon. During the late afternoon, the smell of barbecues starts to fill the air, children are running around in lifevests, dogs are resting on the landing stage, food is prepared on the boats, some are enjoying a beer with family or friends, while others are taking a swim. In the late evening, people retreat to their boat, where the evening might be spent playing board games or guitar, having friends over for dinner or talking over a glass of wine; maybe while planning the journey at sea for the next day.

The lifestyle on boats are most often primitive equal to life in a caravan, holding small bed areas, a small kitchen (galley), and a manual-flush toilet (cf. appendix B). Larger boats might have a larger common room, kitchen, and a tiny shower. The extent of facilities vary a lot; motorboats are more comfortable, spacious, and accessible, while sailboats are more narrow and less accessible (cf. appendix F). However, they give a different sailing experience. Primitive conditions makes for a different form of living in terms of limited equipment, water- and food supply, while being restricted by the boat's boundaries, reducing the performance opportunities.

This makes the marina a necessity, where coming to shore presents new opportunities for practical errands, but also to relax and unfold after a long journey at sea. Travel distance in a boat is much longer than in a car, where an average sailboat, for leisure use, has a top speed of 6-7 knot equalling 11-13 km/h. - the same as an average running speed. Even on a good summer day, the wind direction can determine whether or not the journey will be short and comfortable or long and uncomfortable.

Definition:

MARINA *noun* [ma-ri-na]

“A dock or basin providing secure moorings for pleasure boats and often offering supply, repair, and other facilities”

[Merriam-webster 2016, 28.03.16]

ill. 13.

CULTURAL CARRIERS

As mentioned in the problem statement, sailing has benefitted, to a significant extend, from 'cultural carriers'; a term to describe how one generation carries on experience and knowledge to the next generation [Ordnet 2016, 15.02.16]. The sailing community appear to be built in this notion, but due to the fact that the elder generation is growing and the younger is shrinking, sailing lacks the next generation to take over, as the elder "retires". We will now elaborate on each generation based on personal perceptions.



1ST GENERATION

This generation is characterised by an experienced, skillful, and often older sailor, a so called søulk in Danish. He is a fisherman or traveller. He has a weathered face, has primitively explored the world by boat, and is often a strong man with tattoos - an anchor on the upper arm. His years of experiences are passed on to his children.

2ND GENERATION

This generation has learned most from relatives, hence the previous generation. For him the boat is like a second home. His boat has all the necessities - and more. He has all the technical gear you can imagine, to make traveling more fun. The amount of leisure time is the only thing that keeps him from life at sea.

3RD GENERATION

This generation is still fairly unknown, some come from cultural carriers as well, but possibly not to the same extent as the previous generations. To increase the presence of the 3rd generation, one might be able to anchor a teenager's interest in sailing through water sports activities.

ill. 14. Cultural carriers



ill. 15. Maritime cultural heritage and values

THEORETICAL FRAMEWORK

The following content originates from an interest in exploring the marina as a recreational space in the city. This will be met through three main subjects related to the composition of the area; the boat as a second home, the notion of sense of place, and cities on a human scale. This thesis sets itself in an unexplored frame, leaving marinas with a need for a deeper insight into its cultures, demands, and potentials relating to urban planning. We draw knowledge and experience from theorists that can help us to understand the marina, but also to find relevant tools for further work. The three-parted theory supports our aim, as the thesis seeks an understanding of the mobile lifestyle of sailing, how the notion of sense of place relates to second homes, and how the potential of recreational spaces relates to urban planning.

The book *Tourism, Mobility and Second Homes: Between Elite Landscape and Common Ground* by C. Michael Hall and Dieter K. Müller (Hall, Müller 2004) offers an insight into some of the latest research within the field of tourism. It strives to extend the existing knowledge of contemporary tourism and its relation to second homes and urban development. As main theorist regarding the notion of sense of place, Christian Norberg-Schulz sets the frame for local identity in the book *Genius Loci - Towards a Phenomenology of Architecture* (Norberg-Schulz 1980), where he strives to disseminate the notion, and how to perceive it. The book *Cities for People* (Gehl, Svarre 2010), Jan Gehl helps to apply the theory to a physical environment and to understand how to transform the marina into an inviting space, and a facilitator for urban life.

The aim is to investigate how the marina can become a public space in the city.

THE BOAT AS A SECOND HOME



This paragraph seeks an understanding of the mobile lifestyle of sailing, where the boat is perceived as a second home on equal terms with, for instance, an recreational vehicle. Marinas are the home of the boats, their station, the camp site. Marinas do not just have a practical purpose, but also an often unutilized recreational potential. They have always been an area primarily minded for maritime use, where current urban development indicates that marinas will have the potential to serve as a recreational space for locals in the future as well. The following theory will investigate the concept of boats as a second home alongside the mobile lifestyle.

Second home tourism has evolved through time. Second homes can be found all the way back to the earliest societies, where an exclusive home in the countryside was something reserved for the upper class. (Hall, Müller 2004)

Second homes are a significant part of contemporary tourism and the leisure lifestyle. Here, it constitutes an integrated component in the rural areas, where they play an important role towards not just tourism, but the local community and economy as well. Contemporary tourism is strongly connected to mobility, where second homes often are a destination for national and international travel that supplements the consideration of their value and im-

portance. On the contrary, they also lead to certain challenges such as seasonal variations in the use, causing seasonal patterns in relation to employment and demands. (Hall, Müller 2004)

“At the level of the individual, second homes may also be important for concepts of identity and sense of place, particularly as they may represent a connection to family and/or childhood place affiliations.”
(Hall, Müller 2004 pp. 3)

A second home is characterized by being a recreational home defined by being either non-mobile like houses and apartments, or semi-mobile like camping, or mobile like boats and recreational vehicles. (cf. ill. 17 pp. 38)

“Definitional approaches to second homes are also made more complicated because interest in second homes is not limited to tourism research, and has attracted attention from urban and regional planning.”
(Hall, Müller 2004 pp. 6)

Boats are a combination of a weekend home and vacation home, generating a continuous circulation of visitors in the marina, with a significant seasonal migration in terms of mobility. These visitors, second home owners, are defined as tourists, where they, especially in the spring- and summer months, transform areas into recreational arenas for leisure and tourist activities. Thus, creating a similar impact as that of other types of tourism. (Hall, Müller 2004)

Weekend homes are visited frequently for short periods of time (Hall, Müller 2004).

Vacation homes are visited occasionally but often for longer periods of time (Hall, Müller 2004).

Second homes are often places that increase the inhabitant's connection to nature. For many, the lifestyle in a second home also means an extended social life. They seek to get away from their everyday life, longing for nature, the rural landscape, and family time. (Hall, Müller 2004)

The 'zone of overnight stay' is a notion that relates to an area, where the tendency for tourists to stay overnight increases, while the probability of same-day returns decreases. All of which is strongly connected to the following aspects: Time budget, engagement in social activities, rest while travelling,

and time- and distance compromise. (Hall, Müller 2004)

Second homes are a vital part of not only recreation, leisure, and tourism, but also in relation to influence on personal identity as well. Here, ideas of heritage are constituted through a sense of belonging, family, and place attachment, where the second home embodies an emotional connection with childhood memories and traditions. The modernity has changed society to a state of great mobility, providing people with a social network beyond their local area, causing their place attachment to decrease. (Hall, Müller 2004)

“ Roots imply that the individual is relatively firmly rooted in a local social environment and culture and find identity in a place ”
(Hall, Müller 2004 pp. 75)

NON-MOBILE VACATION FORMS



Solitary cottages



Second home villages



Apartment buildings

SEMI-MOBILE VACATION FORMS



Mobile homes



Caravans



Tents

MOBILE VACATION FORMS



Recreational vehicles



Boats

ill. 17. Vacation forms - extent of mobility

In the early phases of modernity, most people were still fairly restricted in relation to mobility, while one's social network was bound to a certain place or places. For this reason, the individuality and identity of an unfamiliar place were easy to comprehend. People would fairly easily discover meaning in a place, where they felt in contact with their roots, defined by their place attachment, emotional bounds, and community. (Hall, Müller 2004)

People have always gone on journeys, where they go to discover and explore new places and cultures and will meet and separate, forming hybridised cultures. Yet, an increased mobility has made tourism more complicated, where the contemporary society is greatly influenced by infrastructure and the tourism culture. The tourist experience serves as a significant part, which is vital to emphasize as it acts as a fundamental element in tourism. Here, it is about the dynamic between the tourist's expectations to a new place and the experience of it, where second home tourism is a core component in the domestic tourism of the Nordic countries. (Hall, Müller 2004)

In the contemporary lifestyle, second homes are a space, where people combine living, working, and leisure activities with social relations, which happen in various forms of vacation homes, illustrating that

it is common to have roots and a place attachment to more than one place. The individual is highly mobile at the same time. (Hall, Müller 2004)

“Place attachment may, on the one hand, imply roots, security, and sense of place, but it may also, on the other hand, represent imprisonment and narrow-mindedness. Similarly, mobility may signify freedom, opportunities, and new experiences as well as uprootedness and loss.”
(Gustafson 2002 pp. 680)

In relation to sailing, the place attachment is mainly based on the boat, where the sailor is attached to the boat. Proving the possibility to explore new and unfamiliar places, while maintaining a sense of belonging. (Hall, Müller 2004)



ill. 18.

THE NOTION OF SENSE OF PLACE

**“ Always remember that
you are absolutely unique.
Just like everyone else ”**

Margaret Mead
(Hudson 1982 pp. 117)

The following paragraph strives to find knowledge regarding the affiliation to a certain place, and its relation to the marina. It is crucial to not forget that every place has its own unique qualities; a local character to make people identify with the place.

A local approach to urban design is important, because the qualities may differ in relation to a specific location and culture. Local identity, or ‘sense of place’ is an important term in the urban design field and derives from the concept of ‘genius loci’; a Roman concept that originates from the belief that every independent being has its own guardian spirit - its genius. (Norberg-Schulz 1980) Throughout the years, the concept has been used in different ways, but most often it is used to describe characteristics that make a place unique or as a perception held by people. In a contemporary perspective, the concept usually refers to a special atmosphere of a location; ‘spirit of place’ rather than ‘guardian spirit’. [Yuriartibise 2010, 06.05.16]

The Norwegian architect, author, theorist, and educator Christian Norberg-Schulz advocated that the most important assignment for architects is to elicit the spirit of the place; its genius loci. [Denstoredanske 2016, 07.05.16]

“When we treat architecture analytically, we miss the concrete environmental character, that is, the very quality which is the object of man’s identification, and which may give him a sense of existential foothold.” (Norberg-Schulz 1980 pp. 5)

To belong to a place means to have an ‘existential foothold’, which is a synonym for ‘dwelling’. In order for a person to dwell, one needs to be able to navigate within the space, while being able to identify with the environment, when one deems the environment to be meaningful. In that relation, dwelling is

more than a shelter, it implies that a lively and vibrant space can be defined as a place holding a special character. (Norberg-Schulz 1980) The following five concepts are explored, to evaluate the marina’s relation to local values, as a second homes area is known to have strong affiliations.

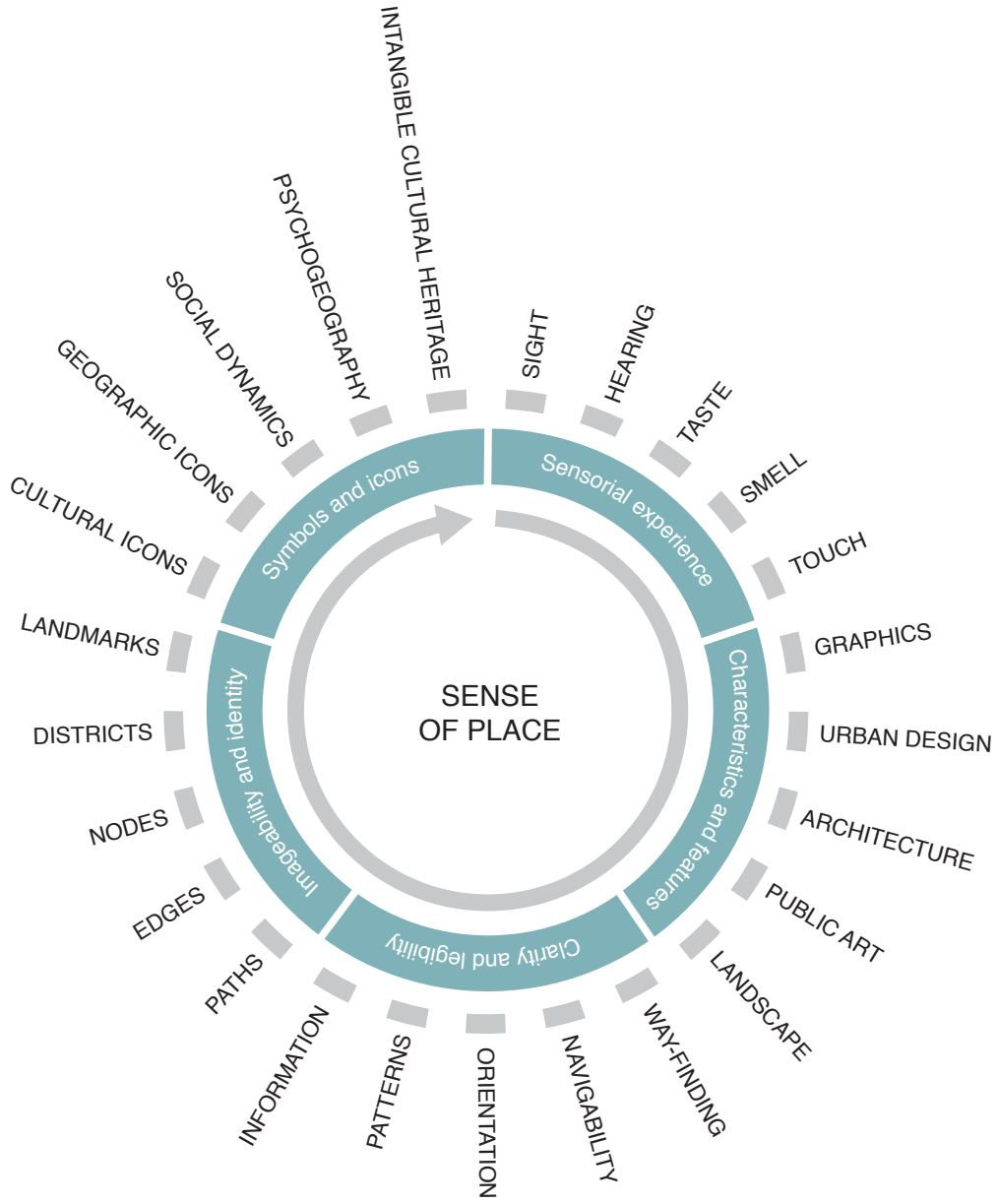
Therefore, for man to dwell he needs an existential foothold, which leads to five important concepts by Norberg-Schulz; ‘place’, ‘space’, ‘character’, ‘orientation’, and ‘identification’ (Norberg-Schulz 1980).

THE CONCEPT OF ‘PLACE’

Norberg-Schulz believes that ‘place’ is more than an abstract location; it is a totality made up of concrete things which have material substance, shape, texture, and colour that together determine the character of the environment as the essence of place. The place is a concrete manifestation of one’s dwelling, and his identity depends on his belonging to places (Norberg-Schulz 1980). His theory is supported with the words of Martin Heidegger; one of the most influential philosophers of the 20th century. [Denstoredanske 2016 05.05.16]

“He (Heidegger) also calls what is between earth and sky the world, and says that ‘the world is the house where the mortals dwell’. In other words, when man is capable of dwelling the world becomes an ‘inside’. In general, nature forms an extended comprehensive totality, a ‘place’, which according to local circumstances has a particular identity.” (Norberg-Schulz 1980 pp. 10)

Norberg-Schulz uses the term ‘dwelling’ to indicate the man-place relationship and to understand the term, he uses the distinction between ‘space’ and ‘character’. (Norberg-Schulz 1980)



ill. 19.

THE CONCEPT OF 'SPACE' AND 'CHARACTER'

According to Norberg-Schulz, 'space' indicates a three-dimensional organization of the elements that make up a place, whereas, 'character' indicates a general atmosphere that is the most substantial and comprehensive property of any place. (Norberg-Schulz 1980)

"When man dwells, he is simultaneously located in space and exposed to a certain environmental character." (Norberg-Schulz 1980 pp. 19)

The word 'space' can mean many things; space as a three-dimensional geometry or space as a perceptual field. Architectural theorists have spent several attempts trying to define space in concrete, qualitative terms. In his book *The Image of the City*, Kevin Lynch, American urban planner and author [Planetizen 2016, 05.05.16], introduces the concepts of node, landmark, path, edge, and district, which form the basis of one's orientation in a space (Lynch 2002).

"Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences." (Lynch 2002 pp. 1)

The Image of the City addresses the visual quality of the city by studying the mental image held and perceived by its inhabitants. Lynch believes that elements of the city can be organized in a coherent pattern and "that a legible city would be one whose districts or landmarks or pathways are easily grouped into an over-all pattern." (Lynch 2002 pp. 3)

Unlike the term 'space', 'character' is a more general and concrete concept, which addresses the general atmosphere of a given place. Through character one can fully grasp the spirit of a place, because it is determined by how things are. (Norberg-Schulz 1980) Determining the character is important in the experience of a place and is essential in urban design. Since it is determined by the physical construction of a place, one must look at the existing materials, shapes, and colors and ask: "How is the ground on which we walk? How is the sky above our heads? How are the boundaries that define the place?" (Norberg-Schulz 1980 pp. 14)

THE CONCEPT OF 'ORIENTATION' AND 'IDENTIFICATION'

Norberg-Schulz explains that when gaining an existential foothold, two psychological functions are engaged; 'orientation' and 'identification'.

"(...) he has to be able to orientate himself; he has to know where he is. But he also has to identify himself with the environment, that is, he has to know how he is in a certain place." (Norberg-Schulz 1980 pp. 19)

When one is able to orientate himself and identify himself with a place, he will feel secure. The opposite of feeling secure is to feel lost. Kevin Lynch uses the term 'imageability', which describes the environmental qualities that protect a person from getting lost, meaning "(...) that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment." (Lynch 2002 pp. 9) Moreover, Lynch claims that the elements of the spatial structures are "things" with character and meaning. (Norberg-Schulz 1980)

Norberg-Schulz points out that it is not only important that our context and environment have a structure that is easy to navigate, but that it consists of objects of identification. (Norberg-Schulz 1980)

"Whereas identification is the basis for man's sense of belonging, orientation is the function which enables him to be that homo viator, which is part of his nature." (Norberg-Schulz 1980 pp. 22)

It is realized that true freedom presupposes sense of belonging, and that 'dwelling' means belonging to a concrete place. To belong to a place means to have an existential foothold, in a concrete everyday sense. (Norberg-Schulz 1980)

This relates to the previous paragraph regarding the boat as a second home, where marinas, in general, function as a place attachment for sailors. The 'sense of place' of a marina provides a place of affiliation, through a comprehensive identification of the space and its character.

HOW TO IDENTIFY THE SENSE OF PLACE

The concept of sense of place is used to help in the identification of a character of a particular place, where it is used as a method to analyse the site. The following will provide a method for identifying the sense of place of a particular place. One should sit down, either in a place from where one can see the whole site or just a part of it. From here, one should take the time to use all of the sense; to not only look, but also to listen and smell. Notice the colours, the materials, the atmosphere, the impressions, and try to understand the character of the place; the 'sense of place'. It might be the way in which the sun hits the ground, how the space is formed, its proportions or the surfaces and textures. Lastly, what are the potentials? What is the identity of the place? (Lecture AAU 2011)

INVITING SPACES

The following theoretical paragraph strives to understand, what is necessary for a person to dwell in an urban context; for a person to feel a sense of belonging to a certain place. Danish architect, urban planner, and author Jan Gehl believes that, whether or not people want and have the opportunity to move and be in the urban space is a matter of working with the human scale in a very careful way. It is about inviting and shaping the lively city. When working with the human scale, in relation to physical planning, it can affect the patterns of use within the city or urban space. Also, through studies of pedestrian traffic and urban life, a direct correlation between patterns of use and invitations can be proved. (Gehl, Svarre 2010)

In general, a city that invites people to walk and stay must hold a reasonable cohesive urban structure with short walking distances and variations in city functions; all enhancing the activity and safety in and around the urban spaces. Also, smaller things can contribute to a more inviting city, such as the quality and number of benches. Simultaneously, studies show that seating areas with the best view of the city; from where the urban life can be witnessed, are much more used than areas wherefrom there is no view of other people. (Gehl, Svarre 2010)

“The close connection between humans’ use of the urban space, the quality of the urban space and the degree of concern for the human scale is not surprisingly a general pattern that can be detected on all scales. As cities can invite the urban life, there are many examples of how the conversion of individual spaces or simply a change in the furnishings and details is able to invite for new patterns of use.” (Gehl, Svarre 2010 pp. 26) own translation, cf. appendix A5

An example is Aarhus Å, which was excavated and transformed into a recreational urban space for stay and leisure in 1996 and again in 2008. The new urban spaces invite people to use the city in alternative ways, where there is a relationship between the quality of outdoor spaces and the form of outdoor activities. (Gehl, Svarre 2010) Aarhus Å is highly popular; specially in the warm summer days people gather along the stream.

Another example is the harbour front in Aalborg, which was developed in 2010. It is divided into four spaces with each their own identity and character;

one is an active environment that provides a certain intensity to the area. Some of the others are more calm, where stay and relaxation is in focus. [Visit-Aalborg 2016, 15.05.16]

“When the quality of outdoor spaces is enhanced, it is especially the optional activities that are allowed to develop and with the enhanced activity, a large increase in social activities follows.” (Gehl, Svarre 2010 pp. 31) own translation, cf. appendix A6

THE CITY AS A MEETING PLACE

Throughout history, urban spaces have functioned as a meeting point for the citizens. People met, where they would gather for bigger or smaller events - news were exchanged and agreements were entered. (Gehl, Svarre 2010)

The deciding factor for cities of today; e.g. Copenhagen, Melbourne, and New York, is the growing understanding of the fact that the city has to be shaped so pedestrian traffic and urban life are invited. In these instances, the cities acknowledge that the urban spaces possess a certain importance of an attractive, informal, and democratic meeting place for the citizens of the century. (Gehl, Svarre 2010)

A common factor for life in urban spaces is that the activities are versatile and of assembled characters; frequent changes between targeted traffic, stops, stays, rests, and conversations. (Gehl, Svarre 2010) In simplified terms, Gehl states the essential activities that can be placed on a scale according to the degree of necessity, as described next.

NECESSARY, OPTIONAL, AND SOCIAL ACTIVITIES

Targeted, necessary activities are located at one end of the scale. These are the activities that the individual is more or less obliged to conduct. For example, one is obliged to go to work or school, wait for the bus, etc.; activities which correspond with the facilities in the marina, such as petrol- and waste stations, boat loading platform, toilets, etc.. (Gehl, Svarre 2010)

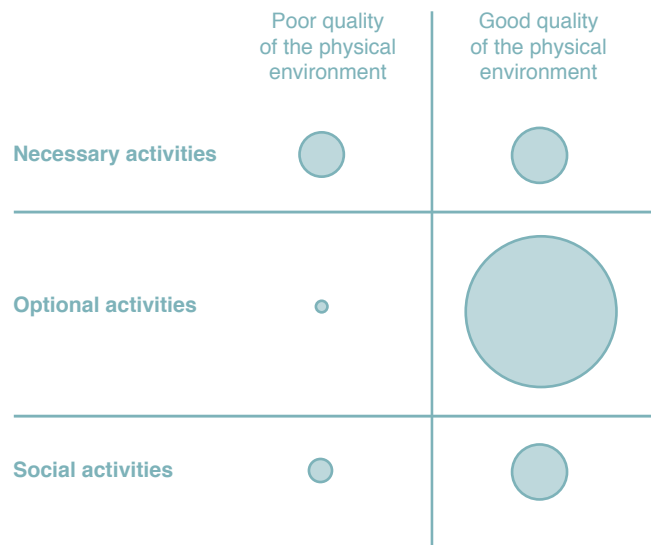
Recreational, optional activities are located at the other end of the scale. These are the activities that the individual may want to conduct. For example, promenading or watching the city, enjoying the view or the good weather. The attractive and popular urban activities belong to this category, but presup-



iii. 20. Aarhus Å



iii. 21. Jomfru Ane Parken



ill. 22. Activities

pose great urban quality. A significant factor is the physical quality of the urban space. The invitations to perform these activities are more than “just” walking; it is about protection, safety, space, furnishings, and visual quality. Also, the weather has a great influence on these activities; the climate is another important factor for the extent and character of the outdoor activities. If it is too hot, too cold, too wet, or too windy the activities are reduced or even made impossible. (Gehl, Svarre 2010)

Preconditions for the social activities are both the necessary and optional activities. By strengthening the urban life, conditions for strengthening all forms of social activities in urban spaces are created. All forms of communication between people in urban spaces have a precondition; that other people are present. Social activities include this communication, and if there is life and activity, there will be social exchanges. The social activities are varied, but include, among others, the many passive seeing- and hearing contacts; to watch people and to keep up with what is going on, since people are the greatest attraction of the city. That is the most comprehensive, social, urban activity of all and is also the form of contact which can be affected by urban planning most directly. In addition, there are other more active contacts, such as exchanging greetings and talking with acquaintances. Also, one may be

asked for directions or engage in brief conversations about weather. (Gehl, Svarre 2010)

To sum up, the inviting city is about a varied and compound urban life, where necessary, optional, and social activities are mixed with special emphasis on creating room for both targeted pedestrian traffic and participation in the life in the city. (Gehl, Svarre 2010)

Seeing or hearing other people is the most widespread form of contact between people in public spaces. It provides information, inspiration, and overview. Through urban planning, Gehl mentions methods of how to communicate and prevent seeing and hearing contacts. (Gehl, Svarre 2010) The communication requires a clear view; no walls, short walking distances, low speed, one level, and orientation towards the experienced, meaning face to face orientation. It is often seen in old pedestrian cities, such as Venice, and in lively streets. The contrary is often interrupted fields of vision; walls, long walking distances, fast speed, and orientation from different levels, which provide an obstruction of people from having seeing and hearing contacts with other people; back to back orientation. (Gehl, Svarre 2010)

To create an inviting, lively, and safe city the keywords are: compact, direct, and logic routes, modest spatial dimensions, and clear hierarchy of urban spaces. Gehl works with five significant principles; (Gehl, Svarre 2010)

to gather vs. to spread	gather the functions of the city to secure shorter distances
to integrate vs. to segregate	integrate the different functions to secure versatility, richness of experiences, social sustainability, and safety
to invite vs. to reject	invite to stay in the urban space as well as pedestrian and bicycle traffic
to open vs. to close	open the space between the urban space and the building, so life inside the buildings and urban spaces can affect each other
to enhance vs. to reduce	enhance and strengthen invitations for more and longer stays in the city

(Gehl, Svarre 2010)

These five principles will later be visualized in the context of a marina, as a part of a site analysis of Middelfart Marina (cf. appendix C).

“The fact that the city is manageable and easy to navigate in, also contributes valuably to the experience of safety. It is a great quality that one simply and directly can seek the destinations of choice, without uncertainty and detours. Clear structure and transparency does not necessarily mean large dimensions and width, straight roads from point to point. The streets may be twisted and the street grid varied. It is important that each link in the network has clear, visual distinctiveness, that the rooms have an independent character, and that important streets can be distinguished from the less important.” (Gehl, Svarre 2010 pp. 111) own translation, cf. appendix A7

importance of sidewalks to create order and safety, which is combined with human interaction, the so-called ‘dance’ or ‘ballet’ that she addresses in her book *The Death and Life of Great American Cities*. (Jacobs 1992) Gehl points out, how front yards and edge zones, which Kevin Lynch also mentions (Lynch 2002), can contribute as a vital part of life in public spaces. It is necessary to process and adapt the transition zones between the public and private sphere. Shift of pavement or material, furnishing and planting are some of the elements that can indicate the degree of public or private; where the public space ends, and the semi-private or private starts. Also, steps, stairs, and height differences in general can contribute to the zone in between and become the basis for contact between inside and outside; between public and private. (Gehl, Svarre 2010)

WHERE PEOPLE ARE, PEOPLE COME

The lively city signals approachability, friendliness, and social opportunities; the presence of other people is in itself a signal of ‘this place is worth staying in’. However, it demands that the urban spaces are lively and visited by different groups of people. In general, it requires the city to be inviting and safe to be in. (Gehl, Svarre 2010)

This corresponds with Jane Jacobs’ notion of the

“The experiences of life in the city are also varied and stimulating entertainment. The scenery varies from minute to minute. There is a lot to look at: behaviour, faces, colors and emotions. Additionally, there is the case of experiences related to the most central theme through the entire human life: people.” (Gehl, Svarre 2010 pp. 33) own translation, cf. appendix A8

THE MARINA AS A MEETING PLACE

Other than the five principles mentioned earlier, Gehl also mentions 12 criteria regarding the achievement of a city on a human scale. (Gehl, Svarre 2013) From the previous theory regarding sense of place, it is known that for people to dwell, one needs to be able to orientate within and identify with the urban space.

1) *Protection*

- Protection against traffic and accidents
- Protection against crime and violence
- Protection against unpleasant influences of the senses

2) *Comfort*

- Possibilities to walk
- Possibilities to stand and stay
- Possibilities to sit
- Possibilities to see
- Possibilities to talk and hear
- Possibilities to express and be active

3) *Amenity value*

- Scale
- Possibilities to enjoy positive aspects of the climate
- Aesthetic qualities and positive sensory perceptions

(Gehl, Svarre 2013 pp. 116)

These 12 criteria will, among others, be used later as a base for the development of design parameters.

Marinas have the potential to become a greater part of the city's selection of urban/public spaces; a place where people meet and stay. As mentioned, the marina is a place for tourism and leisure, a recreational environment, where it offers a unique atmosphere and special characteristics that other public spaces in the city cannot offer. Marinas offer a peaceful, almost sanctuary feeling with a very site-specific character, while providing outdoor activities and a close connection to the sea. It is important that the area is able to invite people to stay longer and use the activities, in order to create a lively space where interaction occurs - a public space.



ill. 23. Middelfart Marina



ill. 24. Middelfart Marina

THE CHOSEN CASES

We have chosen to study three Danish marinas; all elected as Marina of the Year. Every year, FLID (Forening for Lystbådehavne i Danmark) elects a marina of the year based on 9.000 votes by sailors. [Flidhavne 2016, 06.02.16]

Best practice:

Marina of the year 2015: Kerteminde

Marina of the year 2014: Ballen

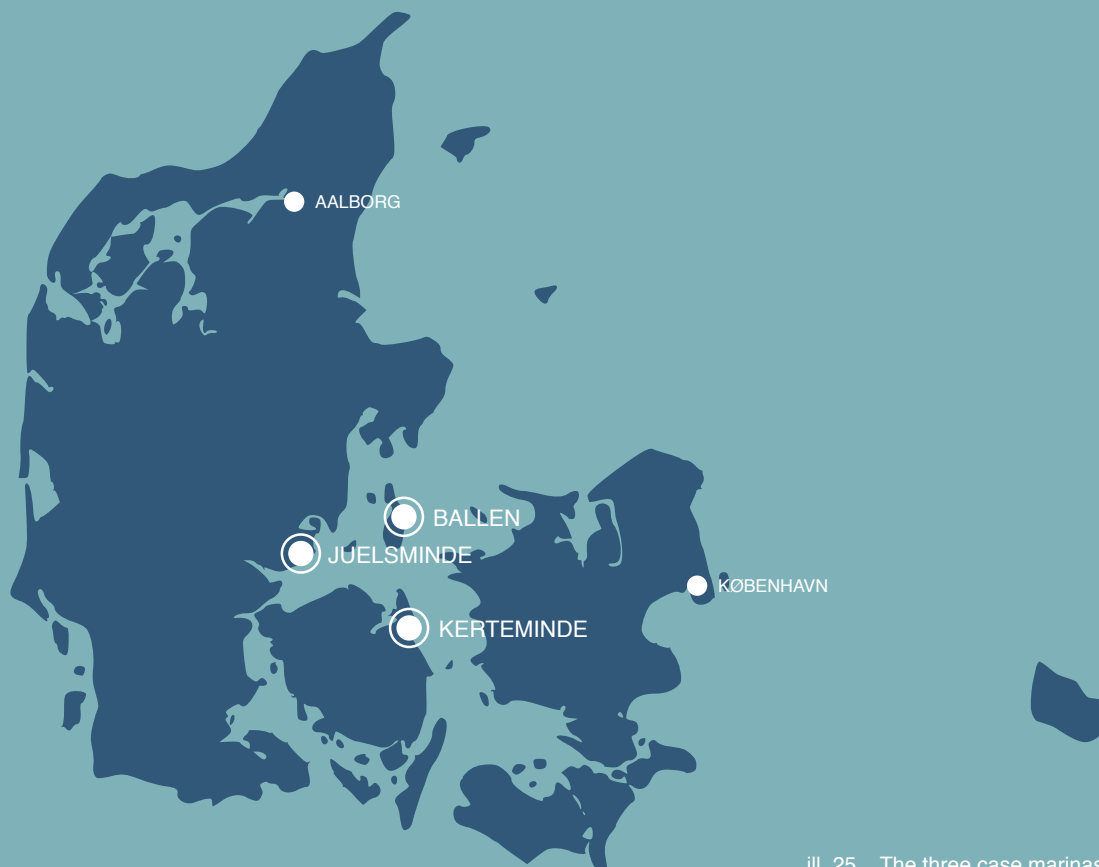
Marina of the year 2013: Hundested

Marina of the year 2012: Juelsminde

Marina of the year 2011: Agersø

Thereby, the cases set an example for best practice when it comes to design and use, and when it comes to understand their environment. The three cases have various differences in their physical environments and appearances, although, they respond to the same constraints. Yet, they are equally popular. The chosen marinas are Kerteminde on Fyn, Ballen on Samsø, and Juelsminde in Jylland. Emphasis will be given to the identification of existing functions, maritime heritage, landmark architecture, the connection between city and marina, as well as arrival from land; by car and as pedestrian.

As before mentioned, the following content contains an analysis of each marina, taking its point of departure in the two methods by Gordon Cullen and Kevin Lynch. As mentioned in the methodology section, (cf. methodology pp. 18) phenomenological methods are used to investigate how the urban environment affects the human body on a sensorial and emotional level. (Marling 2011)





METHODS

The method of *Serial Vision* is a method, where a series of photographs unfold a play of contrasting visual impressions, addressing scale, trajectory, spatiality, color, texture, and the like. The method is compiled by Gordon Cullen, who in his book, *Townscape*, explains, how serial visions can be used to register the visual experience of the townscape, as how it alters while one move through a certain path. (Cullen 1961)

When compiling serial visions, a predefined route is selected and outlined on a map. The altering townscape is subsequently registered in a series of photographs or sketches, which are presented as cinematics indicated on the map and supplemented with a brief text. (Marling 2011)

The townscape method by Kevin Lynch explores how urban design and architecture function as a system of orientation. In the book *The Image of the City* from 1960, Lynch investigates the visual, architectural elements that create the image of a city. On the basis of interviews and a walk through the city, Lynch develops five concepts, which help to map the elements - elements that make each city different. (Marling 2011) The five concepts are paths, landmarks, nodes, edges, and districts; each is described how they are seen in relation to the illustration.

CASE 01: KERTEMINDE MARINA

LOCATION	Kerteminde
CITY TYPE	Borough
YEAR	1970s
NUMBER OF KM TO THE CITY	Approx. 0,1 km
NUMBER OF INHABITANTS	Approx. 6.000 (2014)
NUMBER OF MOORINGS	700 moorings
NUMBER OF GUESTS/YEAR	10.000
*	



Kerteminde was elected as the most recent marina of the year. It is one of the largest marinas in Denmark with 700 moorings and over 10.000 yearly visitors; 300 guest sailors a day during peak season. [Havneguide 2016, 22.02.16]

“Kerteminde Marina has understood how to develop an exciting and active environment at the harbour, which makes it attractive to both sailors, tourists, and the residents.”

Statement by Poul Erik Jakobsen,
Chairman Danske Tursejlere [Fyens 2015,
22.02.16] own translation, cf. appendix A9

Kerteminde, a borough on Fyn, is the main city in the municipality of Kerteminde. It is also the largest and most important fishing harbour on Fyn with auctions and industries. Not only sailors are attracted to Kerteminde Marina, landlubbers are also looking towards the marina - especially on warm summer nights, where the promenade provides a southern atmosphere. The promenade is the main feature; it runs along the harbour basin and ties all the facilities together; adjacent playgrounds, seating areas, barbecue areas, and a restaurant in each end. [Kerteminde 2016, 22.02.16]

Many of the sailors are active touring- and racing sailors, where the sailing clubs are great organizers of boat rallies, evening matches, distance regattas,

tour arrangements, and more. [Kerteminde 2016, 22.02.16]

FIRST IMPRESSIONS

Thursday 25th of February

We park the car in a parking space at the marina. The arrival from the city to the marina has been clear and simple with good signage. From this location we get a good overview of the area; it is neat and tidy.

The large parking space provides good parking options close to the harbour promenade, making it easily accessible by car. A large surface makes it look open and quite empty and un-programmed - the parking space is framed by a grass area and a low fence - that and a minor road are the only elements separating us and the water. To our left there is a restaurant; seems to have good outdoor seating facilities, from where one can enjoy the ocean view and the many boats forming a perforated- and structural ‘curtain’. Generally, the buildings surrounding us appear to be in good condition, well maintained. A clear demarcation between cars and pedestrians in the shapes of a road and promenade is observed; it is also from here the promenade has its starting point. We move towards the promenade.

* [Kertemindekommune 2016, 23.02.16]
[VisitKerteminde 2016, 23.02.16]



ill. 27. Kerteminde Marina

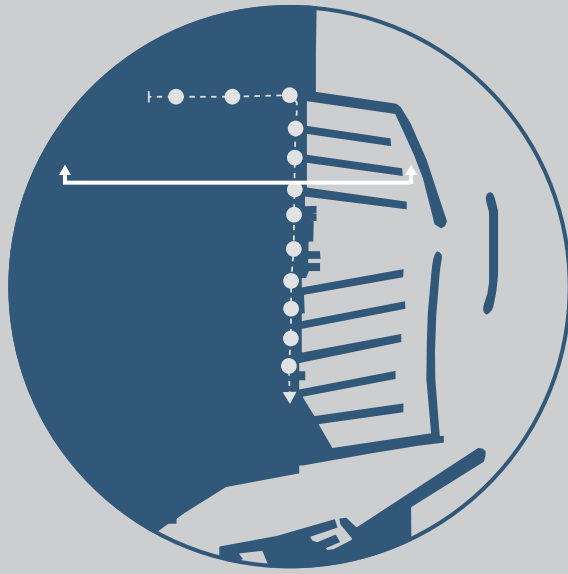
SERIAL VISION

Kerteminde Marina

When moving through the marina by the predefined route, one gets the impression of a tight planning with sharp lines, where everything from lampposts to building facades aligns, making the area very easy to orientate in. The route has a linear progression, where the surface illustrates clear boundaries, which are in tune with the tight planning, but the spatial experience stands, in contrast, much more open with the undefined space between the buildings. This openness is enhanced by the reflections in the window facades.

Kerteminde Marina has a light, bright, and cultivated expression, where it appears open and welcoming. The area opens up particularly towards a beach, where the promenade ends. The promenade connects to the city and the beach respectively, where its trajectory is defined by buildings and other facilities on one side, and a stone dike that defines the edge and the transition to the ocean, on the other. It is the promenade and stone dyke that give the marina a continuous trajectory, since the marina might otherwise appear as two parts, due to a larger open area separating the buildings.





ill. 28. Section of Kerteminde Marina



ill. 29. Serial Vision of Kerteminde Marina

THE IMAGE OF THE CITY - KEVIN LYNCH

Kerteminde Marina

The illustration below shows a mapping of the five concepts by Kevin Lynch.

- The edges are illustrated by the coastline and the main road separating the marina and city.
- The paths are illustrated by paths along the promenade, paths leading to the city, and the boat bridges.
- The districts are illustrated by subareas; city centre, industrial areas, the beach, and the harbour basin.
- The nodes are illustrated by places with critical points of contact; going in and out of the marina and paths or edges crossing.
- The landmarks are illustrated by a tall building near one of the industrial areas

The analysis illustrates that the infrastructural nodes are located as a 'string', stretching from the car entrance and along the promenade, with the districts placed adjacent to the promenade.



ill. 30. Kevin Lynch mapping of Kerteminde Marina



“Kerteminde is modern and clean, with a long promenade for strolling and stay in an airy setting”

ill. 31: The promenade at Kerteminde Marina

SENSE OF PLACE

Kerteminde Marina

Kerteminde Marina consists of objects that identify with the maritime environment, appearing modern with new materials, but in traditional forms and colours. Buildings are mostly constructed with a pitched roof and wood painted black or red, with white fascia boards, where large windows reflect the sunlight and the ocean. There is only one diversion; a mortar washed building in white with a red tile roof. The atmosphere of the place is open and airy with an intuitive orientation. The area has a flat surface, where zones are defined by altering pavements and steps to stage zones for stay, walk, or boat related storage. Maritime elements combined with nature and the city as a backdrop, creates a feeling of peacefulness and seclusion, where the crackling sound of seagulls, the rattling sound of masts, church bells, and water ripples provide a calming effect.

Materials: stone, grass, sand, wood, tile, concrete, steel, glass, gravel, tar, paper, zinc

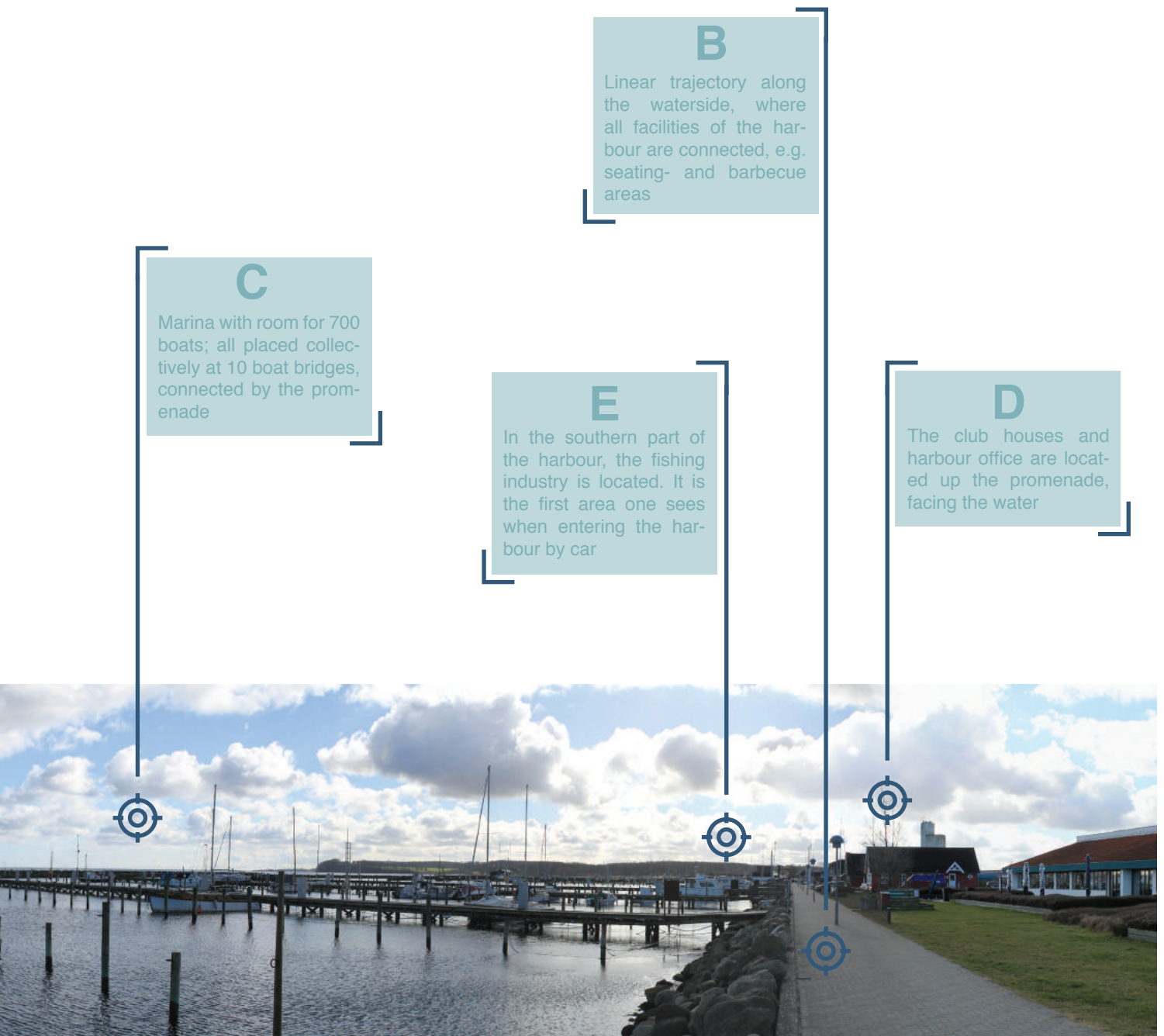
Colours: grey, green, brown, beige, red, white, black, transparent

A

A very good beach area with clear water and room for sports activities and play in the sand



- A: Beach area
- B: Promenade/pathway
- C: Marina/moorings
- D: Clubhouse/harbour office
- E: Industry



B

Linear trajectory along the waterside, where all facilities of the harbour are connected, e.g. seating- and barbecue areas

C

Marina with room for 700 boats; all placed collectively at 10 boat bridges, connected by the promenade

E

In the southern part of the harbour, the fishing industry is located. It is the first area one sees when entering the harbour by car

D

The club houses and harbour office are located up the promenade, facing the water

ill. 32. Panorama of Kerteminde Marina

CASE 02: BALLEEN MARINA

LOCATION	Ballen, Samsø
CITY TYPE	Borough
YEAR	-
NUMBER OF KM TO THE CITY	0 km
NUMBER OF INHABITANTS	Approx. 200 (2014)
NUMBER OF MOORINGS	300 moorings
NUMBER OF GUESTS/YEAR	8.500

*



The island of Samsø is located at the center of Denmark, making it a natural stop for many sailors. Its unique nature, idyllic villages, art scene, delicious ingredients, and child friendliness attract many guests year after year. [Sejlerens 2015, 22.02.16]

Ballen is located on the eastern coast of Samsø, where it is the largest and most visited marina on the island. The marina has more moorings than the city of Ballen has inhabitants, but that does not have an impact on the number of visitors; over 8.500 each year. [VisitSamsøe 2016, 22.02.16] Ballen Marina was elected marina of the year in 2014, especially for its high level of service, good harbour facilities, and visibility of the harbour master. [Sejlerens 2015, 22.02.16]

“There are plenty of options, whether you come to town from land or water side. The marina area and the rest of the city is extremely well integrated, creating an atmosphere of holiday and fun.”

Statement by Frederik Bilsted Pedersen,
Harbour Master Ballen Marina
[VisitSamsøeballen 2016, 22.02.16] own translation, cf. appendix A10

The town of Ballen has previously functioned as a dock for a steamship connection to both Sjælland and Fyn, which contributed with tourism in Ballen, Samsø. After the poet Holger Drachmann and his wife took lodgings at the merchant's house, the city

became a prominent haunt for swimmers, and, thus, an attractive holiday resort. [Denstordanskeballen 2013, 22.02.16] Today, it is primarily a tourist town, which is reflected in its functions that among others include a seaside resort, beach hotel, supermarket, fish truck, and several restaurants and boutiques. [VisitSamsøe 2015, 22.02.16] In addition, Ballen is home to the island festival, Samsø Festivalen, situated two kilometers from the marina; making the marina an attractive place during the festival week. [VisitSamsøe 2016, 22.02.16]

FIRST IMPRESSIONS

Friday 26th of February

We arrive at the marina by a bus that transported us from the ferry to the remote location. We get off the bus, and it is right there. We feel that we have arrived at a deserted place; it is quiet, the sun is shining, and when the bus hurtles on, we are all alone. The area seems intimate and welcoming, and from this point it seems like a relatively small harbour with a fishing environment, cutters, and authentic buildings. To the left a restaurant is located, which has a view of most of the marina. To the right a small bridge crosses the water connecting the two sides of the marina. A changing terrain creates small, intimate pockets where natural paths create connections across the marina - also through rosehip bushes. From the bus stop, we walk across the bridge towards the little yellow house; a smokehouse.

* [VisitSamsøe 2016, 22.02.16]
[Havneguideballen 2016, 22.02.16]
[Sejlnet 2016, 22.02.16]



ill. 33. Ballen Marina

SERIAL VISION

Ballen Marina

When moving through the marina using the predefined route, one gets the impression of an area, where nature has taken its toll and time has past, making it to appear rustic and uncultured, holding both light fishing and a marina. The route has a dynamic trajectory, with many spatial variations and a changing terrain. It illustrates a loose planning that has developed as the need arose, without any major planning. It makes the area appear authentic, with older buildings that are spread across the area. The largest enclave of buildings are assembled adjacent to the central part of the area, where there, among other things, are a supermarket and a beach hotel. Therefore, the marina stands subsequent to the town's functions, where the separation of the two is defined by a light fence.

The area is particularly dominated by the beach, which is experienced on both sides of the marina, but also in the middle of it. The pedestrian path goes through a beach, in a non-defined way, where it leads down to the beach that is lowered in relation to the terrain, and then levels with the asphalt again afterwards. It provides an experience of moving from an urban context to a sanctuary, which stresses the urge to stop before continuing. The pier opens towards the ocean, where it gradually increases. It is defined by a wall on one side and a stone pike of the other - where the outer pier opens up, the stone pike descends into the ocean.





ill. 34. Section of Ballen Marina



ill. 35. Serial Vision of Ballen Marina

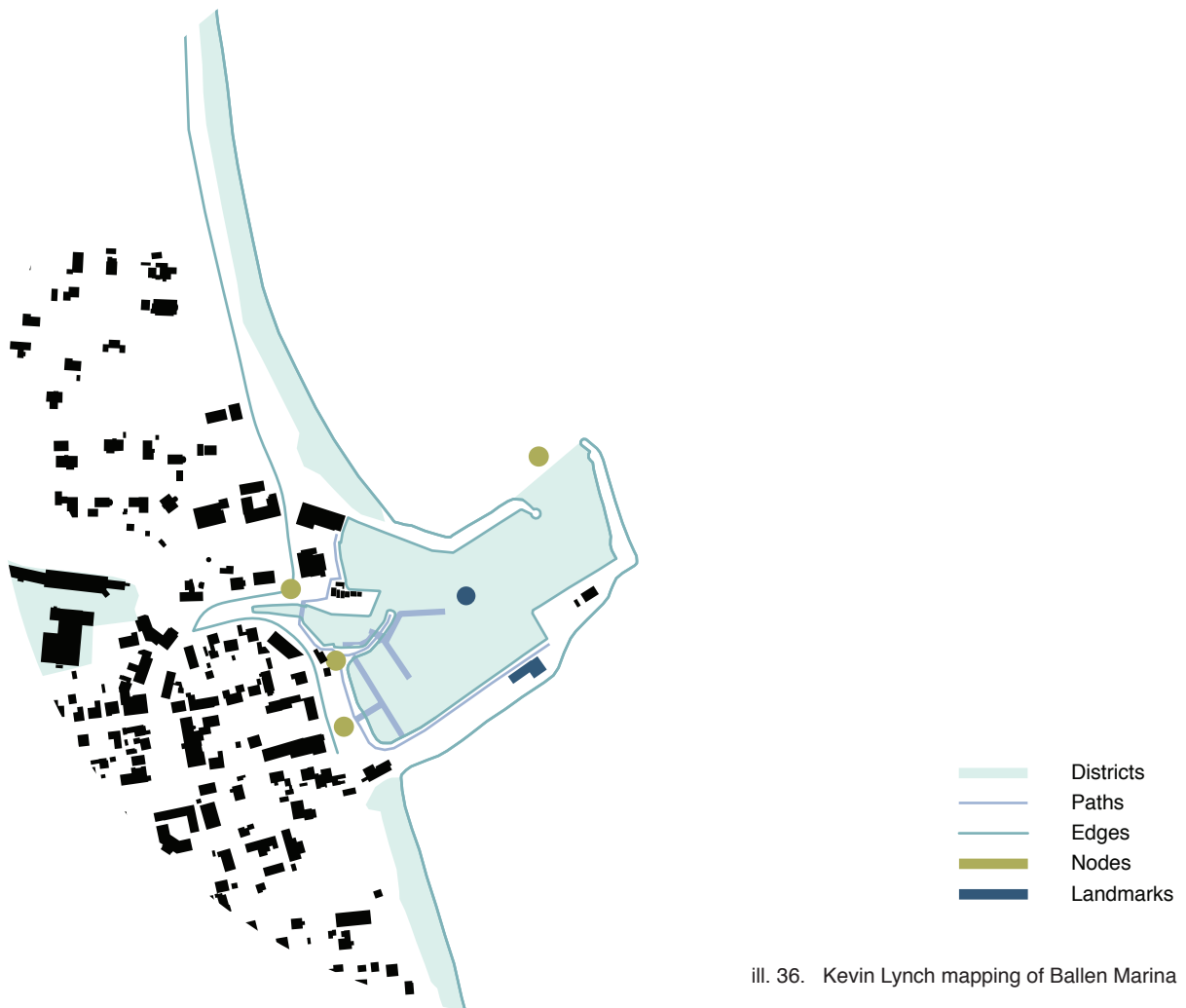
THE IMAGE OF THE CITY - KEVIN LYNCH

Ballen Marina

The illustration below shows a mapping of the five concepts by Kevin Lynch.

- The edges are illustrated by the coastline and the main road that wind along the harbour front.
- The paths are illustrated by the boat bridges and the undefined paths along the harbour front.
- The districts are illustrated by subareas; industrial area, the beach, and the harbour basin.
- The nodes are illustrated by places with critical points of contact; going in and out of the marina and paths or edges crossing.
- The landmarks are illustrated by a large building on the pier.

The analysis illustrates that the infrastructural nodes are located along thoroughfare of Ballen, in front of the supermarket, and harbour office. The last two nodes are located close together along the edge of the marina.



ill. 36. Kevin Lynch mapping of Ballen Marina

“*Ballen is a time warp, where the town offers life and atmosphere in a romantic setting with old houses and rustic materials.*”



ill. 37. Ballen Marina

SENSE OF PLACE

Ballen Marina

Ballen Marina appears as a time capsule, where time moves slowly, and the place just is. It is clear that the objects in the marina is the original buildings kept true to its initial architecture. The marina's functions are either placed in town buildings or in a traditional maritime architecture with wood painted in red.

The functions of the marina and the town lay adjacent to each other, almost merging with an apparent relation; the marina is the town's center. The terrain is often alternating, with an intricate pathway creating small pockets or sanctuaries within the terrain, where it defines certain zones. Yet, the path appears intuitive thanks to an airy and visually open environment enhancing the orientation. Still, there are no large open surfaces, which contributes to an intimate feel. The appearance is very rustic in terms of materials, condition, and planning; it provides a very natural and authentic atmosphere, where the rustic maritime elements and the small town's seclusive location provide a peaceful feeling. The character of the maritime elements appear as if they belong to their surroundings and nature, where the crackling sound of seagulls and small fishing boats complement the authentic effect.

Materials: stone, sand, wood, tile, grass, asphalt, concrete

Colours: beige, grey, red, white, yellow, black, blue

D

Club houses and toilet facilities are located here, all collectively in one building

C

The moorings are located in an enclosed structure, creating an intimate environment

B

The promenade has a fluent expression with no clear boundaries



- A: Beach area
- B: Promenade/pathway
- C: Marina/moorings
- D: Clubhouse/harbour office
- E: Industry

E

Fishery is an integrated part of the marina, combining to types of boats

A

On both sides of the marina, a beach is located



ill. 38. Panorama of Ballen Marina

CASE 03: JUELSMINDE MARINA

LOCATION	Juelsminde
CITY TYPE	Marina city
YEAR	1896
NUMBER OF KM TO THE CITY	Approx. 0,2 km
NUMBER OF INHABITANTS	Approx. 4.000 (2014)
NUMBER OF MOORINGS	500 moorings
NUMBER OF GUESTS/YEAR	10.000

*



Juelsminde is a town located in the eastern part of Jutland between Horsens and Vejle. It is known for its beautiful beaches and is located next to Lillebælt; a geographical position close to the ocean's answer to a motorway, which makes it a marina one naturally visits, when traveling through Lillebælt. [Juelsmindehavn 2016, 22.02.16]

Before the opening of the railway between Horsens and Juelsminde back in 1884, there were no houses in Juelsminde. About 12 years later, after the opening of the harbour in 1896, the settlement initiated. The harbour has always been of great importance to the city; first as a fishing harbour, later as a shipping harbour and now as a harbour and marina for many fishermen and sailors. [Juelsmindehavn 2016, 22.02.16] It has great potential being located in close connection to the city center, where all purchasing needs can be covered. [Juelsmindehavn 2016, 22.02.16] In 2011, the marina was expanded to 500 moorings, which led to the marina being elected marina of the year in 2012, and today, it has four harbour basins at its disposal [Horsensfolkeblad 2013, 22.02.16].

"We can be very proud of a beautiful harbour that understands innovation with a strong foundation of the old values (...) and the price is a result of many years of work and commitment by the entire city."

Statement by Thomas Klostergaard, Tourism Manager [Horsensfolkeblad 2013, 22.02.16] own translation, cf. appendix A11

The marina wishes that every guest feels welcome, regardless of boat type. In spite of the fact that the marina now has up to 500 moorings for boats in all sizes, it still manages to preserve its cultural heritage and intimacy. Where yearly events, good shopping opportunities, and restaurants benefit the marinas popularity, with over 10.000 visitors a year. [Horsensfolkeblad 2013, 22.02.16]

FIRST IMPRESSIONS

Thursday 25th of February

We drive through the shopping street of Juelsminde, where we park the car at the parking space closest to the city. We have come to a small town; provincial town; we park by a fence - on the other side a camping site is located. We imagine that many of the campers enjoy going for walks along the harbour front during a warm summer evening - they probably enjoy that the camping site is located so close to the marina. There seems to be good parking possibilities distributed around the area, rather than one large parking space. From here, the area seems more "closed" and defined with several small settlements, side streets, and corners. The atmosphere oozes holiday mood; neat and well maintained, but rustic. One can imagine that this is a lively place during summer; live music on the patio at the restaurant, and children playing on the crab catching bridge. It seems cozy and inviting. From the car we walk towards the quayside.

* [VisitJuelsminde 2016, 22.02.16]
[Juelsmindehavn 2016, 22.02.16]



ill. 39. Juelsminde Marina

SERIAL VISION

Juelsminde Marina

When moving through the marina by the predefined route, one gets the impression of a small town, as the marina consists of great variations of buildings and facilities, among others; fish retail, camping, a restaurant, and housing. A long pedestrian path spans from one end of the area to another, from where alternating spaces and small streets form a dynamic and unpredictable experience.

The marina area appears with a center holding the largest portion of facilities, which is placed around the inner marina, where the area seems intimate and enclosed. In addition, two new marinas are created on each side of the inner marina. These are built as an add-on to the harbourfront, making them appear more extrovert, opening up towards the ocean, where natural elements have been integrated to promote intimacy. Yet, they are also more withdrawn compared to the inner marina. Juelsminde Marina vary between new and older buildings and facilities, which illustrate its development and progress over time.





ill. 40. Section of Juelsminde Marina



ill. 41. Serial Vision of Juelsminde Marina

THE IMAGE OF THE CITY - KEVIN LYNCH

Juelsminde Marina

The illustration below shows a mapping of the five concepts by Kevin Lynch.

- The edges are illustrated by the coastline.
- The paths are illustrated by the boat bridges and the promenade.
- The districts are illustrated by subareas; industrial areas, the beach, and the harbour basin.
- The nodes are illustrated by places with critical points of contact; going in and out of the marina and paths or edges crossing.
- The landmarks are illustrated by two large buildings.

The analysis illustrates that the infrastructural nodes are dispersed over the large area, but connected through paths. Two of the nodes are located in close connection between the two districts; the marina, and camping site.



ill. 42. Kevin Lynch mapping of Juelsminde Marina

“ Juelsminde is versatile, where the marina offers many activities based a dynamic physical setting with an alternating maritime character.



Ill. 43. Juelsminde Marina

SENSE OF PLACE

Juelsminde Marina

Juelsminde Marina consists of objects that identify with the maritime environment, but with a large amount of buildings with mixed shapes, colours and, thereby, appearances. Most of the buildings are constructed of wood, with planks in red, black, or grey, joined by a few buildings in maritime architecture and houses that are mortar washed and painted white or yellow. The buildings convey the story of the area's development, but also the diversity in functions, where older buildings are placed adjacent to the inner marina, and the newer buildings near the external marina. Housing, marina, campsite as well as fishing- and boating industry lay side by side generating a vibrant atmosphere even in the winter.

All of these variations in function, architecture, and spatiality create a diverse and altering character with an unpredictable environment, where some spaces feel open and airy, while others feel dense and defined. Due to undefined zones, it is difficult to navigate the area, when moving through it. Yet, a great amount of paths and maritime elements constitute a place that invites the visitor to walk, stay, and discover. Intricately, roads and pathways connect the city with the harbourfront, where the extensive marina area appears as a transitional zone to the ocean.

B

The promenade runs alongside the water all through the marina and functions as a connection between the three parts

C

The harbour contains three marina areas; this being the largest, but most quiet area



- A: Beach area
- B: Promenade/pathway
- C: Marina/moorings
- D: Clubhouse/harbour office
- E: Industry

E

The harbour is still characterized by fishery

D

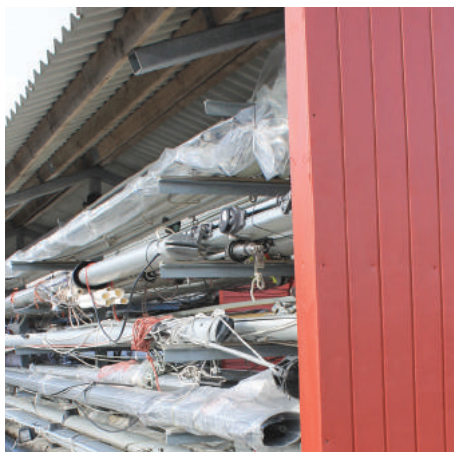
The harbour office is situated in the middle of the marina making it available from all three marinas

A

The beach is located at the far east of the harbour; a beautiful beach with room for play and activities



ill. 44. Panorama of Juelsminde Marina



ill. 45. Maritime atmosphere

THREE USER GROUPS

The following content investigates the mutual dynamics between the three user groups of a marina; the Danish sailors, the foreign sailors, and the locals. In this case, the locals are from Middelfart, as this is the case marina which functions as the final result for this project. As this paragraph strives to understand the needs, demands, and wishes of each group, user research are helpful and an important tool.

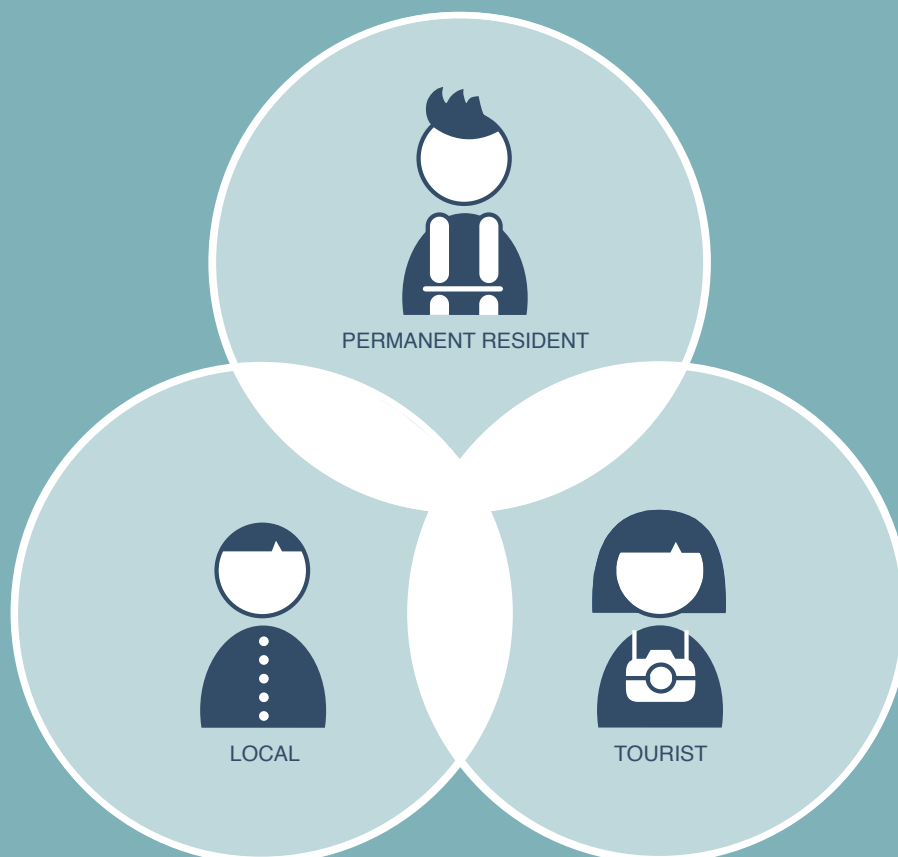
At first, the reader is introduced to the three user groups with the aim of explaining their relation to the marina. Then, the method of collecting- and analysing data is stated, after which each group is examined; beginning with basic facts about the respondents' age, gender, residence, and information about their boat. Then follows an evaluation of the answered questions. All assessed and concluded in a methodology critique, after which an introduction to My Marina, and a talk with four users is presented.

The marina holds, in additions to the previous mentions users, also harbour master, sailing clubs, maritime business and the municipality.

INTRODUCTION TO THE THREE USER GROUPS

The marinas hold two types; the sailors and the non-sailors. The sailors are both Danish and foreign and are both tourists (when they leave their own marina to visit another) and permanent residents (as they are boat owners with a permanent mooring in a marina). In this thesis, the non-sailors are the locals from the adjacent city.

These three groups; the Danish sailors, the foreign sailors, and the locals have a significant importance, when it comes to gaining an understanding of the use of the marina. We have the intention of creating a place that invites people to stay and be active; where people can meet and gather. However, we do not want to compromise the practical and necessary activities the sailors are obliged to perform, which we will avoid by learning about their needs.



iii. 46. User groups

USER INVOLVEMENT - WHY IS IT IMPORTANT?

A number of initiatives can be included in the work of user involvement, but it is important to know why and how the users are involved in each project. Every situation and project has different possibilities, challenges, and potentials, so one can say that the form - and tool - of user involvement depends on the specific situation. [DAC 2009, 29.03.16] Initiatives such as interviews, surveys, field work, observations, workshops, competitions, campaigns, meetings, exhibitions, and happenings are possible ways of involving or informing the user [Cinark 2006, 29.03.16].

In opposition to art, a project such as a building or an urban space is not in itself a work of art, but rather a utility item. Everything about urban design and architecture is about the user; the user is the center, the prerequisite, and the basis of the project. We work in teams, and we all contribute, because the world is experienced from different points of view. The user can contribute with knowledge, energy and curiosity, which can be a great asset for the project. Involvement gives the user a ownership and understanding of the possibilities and compromises architects and urban designs must take into account. Furthermore, they become engaged with the project and, hopefully, they are satisfied with the end result. [Cinark 2006, 29.03.16]

The following approach containing three phases is used to a great extent:

1. *Inform and provide insight.* In this phase the user is passive.
2. *Decide and prioritize options.* In this phase the user is active.
3. *Involve and show options.* In this phase the user is creative.

[Cinark 2006, 29.03.16]

When working with a public area, such as a marina, it is important that user involvement is a great part of the process. The marina is a rather demarcated area that attracts different users with different needs. It is important to ensure the needs and wishes that the sailors possess, because their needs mostly constitute necessary activities. When inviting another user group to the area, the locals, it includes the creation of optional and social activities across the groups. It is important to understand, what their wishes are, to ensure that they will come in the future.

User involvement can be very time consuming, which is why we are focusing on user surveys to gather information as well as informal "talks" with Danish sailors. As our goal is to gain an overall understanding, this method has been fruitful for the thesis. However, to initiate the further work, we suggest a more in-depth involvement through an interdisciplinary collaboration between the municipality and marina actors including the harbour master, users, locals, and associations.

METHOD

To collect sufficient information about the three user groups, we chose to conduct online surveys. The following content will elaborate on the method used for collecting and analysing the data. Survey research is not a particular procedure for collecting information; most often it is questionnaires, but it can also be structured as in-depth interviews or simple observations. The form of data and the method of analysis are the distinguishing features of surveys. It is important to separate the two stages of the research process; collecting data and analyzing data. (de Vaus 2014)

COLLECTING DATA

It is also important to distinguish between quantitative and qualitative research. The quantitative research method is well suited to provide certain factual and descriptive information; the hard evidence, but it is often portrayed as being unimaginative and sterile. On the other hand, the qualitative research method provides a rich set of data, often regarding real life people and situations. It also holds an increased ability to make sense of a certain behaviour within its wider context, while often being criticized for lacking generalizability and being too reliant on the subjective interpretations. (de Vaus 2014)

First of all, it is important to state a research question or formulate a vision for the survey, which will help form the questions and give them a certain direction (de Vaus 2014). This user research strives, as mentioned, to find a better knowledge regarding the needs and demands of the Danish and foreign sailors, as well as locals. We wish to gain an understanding of the dynamics between the three user groups; the sailors in particular. It is in our interest to specify patterns for these groups in relation to the marina's location.

Selecting question types is a vital part of the research; they can be open or closed, which will have a significant effect on the responses. Open-ended questions provide the respondents with the possibility to formulate their own answers. Closed-ended questions are provided with a number of alternative answers, which leave the respondents to select one or more answers. A problem with the closed-ended questions is that in regards to some issues, they create false opinions, by either giving an insufficient range of answers to choose from or prompting people with 'acceptable' answers. However, it has the advantage that the closed-ended questions are quicker to answer - and when analyzing, quick and easy to process. (de Vaus 2014)

Each user group received a survey. We chose to formulate closed-ended questions with the aim to strengthen the control of the output, which will improve the possibilities for comparisons across the three groups. It will set a controlled frame and give specific results that are easy to analyze. On the other hand, it will provide a more narrow-minded result with only a few individual reflections. There is also the risk of a question being misinterpreted. Most questions have the option of 'other', where the respondent is free to elaborate, extending the range of answers.

We expect to receive a minimum of 100 replies from the Danish sailors, 100 replies from the locals of Middelfart, and 50 replies from the foreign sailors. The number of replies will set a base for further investigations. The foreign sailors are a difficult group to reach. Therefore, the expected number of replies is set lower.

ANALYZING DATA

How the data is analyzed depends on what one wishes to know. If one simply wishes to describe one characteristic of the sample at a time (e.g. gender or age) the method of analysis is univariate (one variable). Whereas, if one is interested in two variables simultaneously, the method is bivariate (two variables). (de Vaus 2014) An example is, if we are interested in knowing the relation between gender and age. The Danish and foreign sailors receive the somewhat same questions making them easier to compare. The locals receive questions that is minded towards their use of and affiliation to Middelfart Marina. This survey, in particular, is able to be compared to the sailors in regards to what they expect from the Danish marina.

The surveys for the sailors are minded towards both the Danish sailors altogether as well as the foreign sailors from Germany, the Netherlands, Sweden,

and Norway, since this is where most of the sailing tourism in Denmark originates from [DST 2015, 16.02.16] The needs of the sailors are compared and used alongside the results for the locals in Middelfart, where their relation to the marina is investigated.

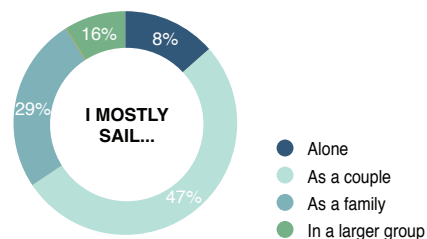
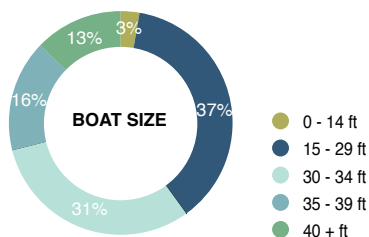
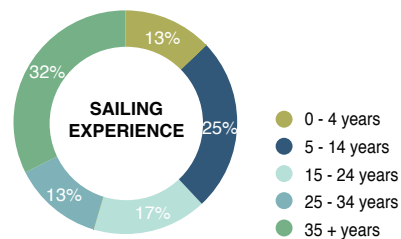
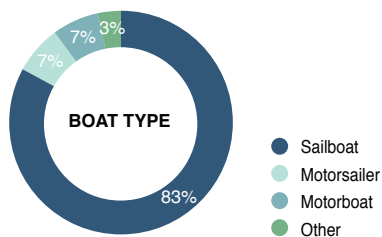
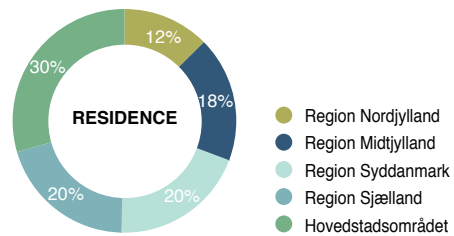
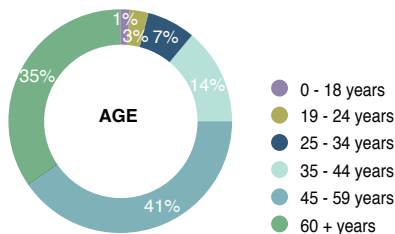
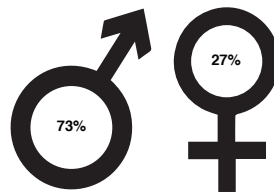
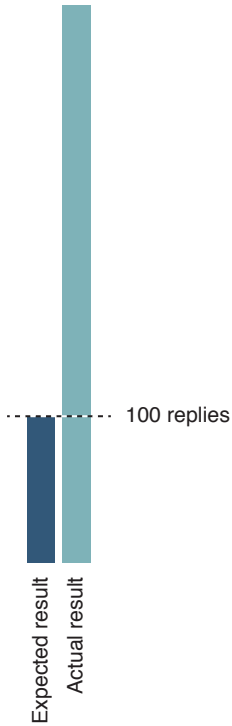
The three surveys will primarily be analyzed by using the univariate method, which will make them easier to compare. Moreover, some questions will be compared with each other by using the bivariate method, which will contribute with a knowledge regarding the locals familiarity when it comes to facilities, activities, and their use of the same.

USER 01: THE DANISH SAILORS

This survey is wished to result in an insight into the use of the Danish marinas as well as the needs and preferences regarding facilities, activities, and the physical environment, in general. Moreover, it is expected to result in knowledge about the way Danish sailors travel by sea; to which extent the traveling is planned and which parameters affect their choice of marina.

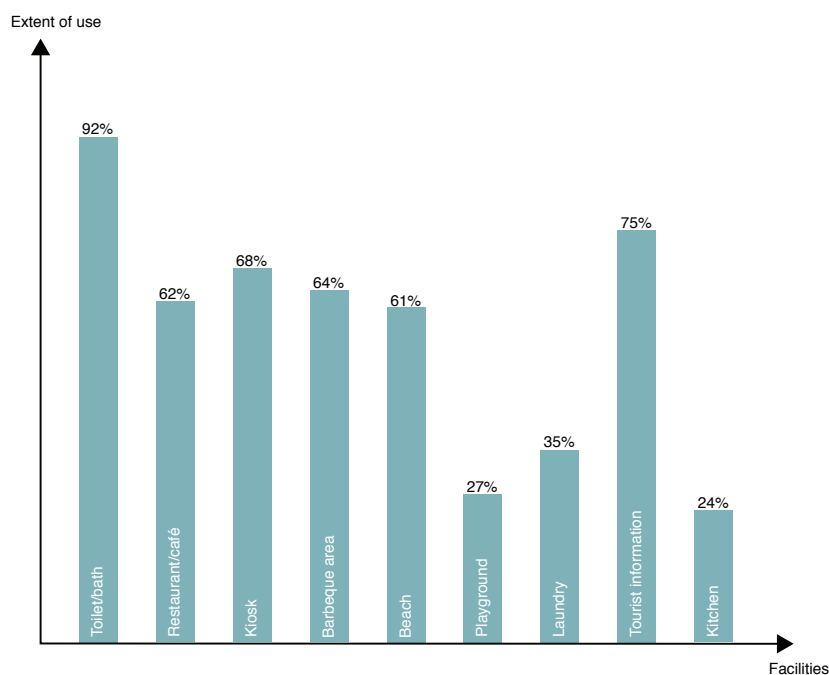
As a foundation for this survey, basic information about the respondent will tell the gender, age, residence, type and size of boat, sailing experience, and how they mostly sail.

The respondents are mostly men, 76 % is over 45 years of age and almost represent equal parts of Denmark, 83 % owns a sailboat, most have either 5-14 years of experience or +35 years of experience, the majority owns a boat of the size between 15 and 34 ft. and mostly sail as a couple or as a family with children.



To what extent do you use the facilities in the marina?

Immediately, a hierarchy of importance became apparent; toilet and bath are very important as 47 % of the respondents answered “to a very high extent”, whereas, playground, kitchen, and laundry are less important facilities as 52 %, 44 %, and 33 % answered “not at all” respectively.



ill. 48.

The majority of the facilities, mentioned in this paragraph, are WIFI, free bike rental, accessibility to public transportation, and grocery shopping nearby. Mentioned is also the following: a shop with boat equipment, closeness to city and nature, club house, winter storage, “life on bridges”, room for guests, “free-port-agreement”, the environment, parking spaces, facilities to wash dishes, room for fishing, tent spaces, rendezvous, bakery, fitness and sports activities, shelter in bad weather, weather information, entertainment; music and communal eating, tables and benches, fireplace.

As more technical/practical facilities the following is mentioned: pontoon bridges so the boat fits the pier regardless of the water level, waste- and oil station, engine stands, mast crane, service quay, room to work and repair the boat, slipway, workshop, water hose, boat launch, pump station, and waste station.

“I have used the club houses, if the weather was bad. Here we met with other sailors.”

“I love a marina with a short distance to the city.”

“Meeting places, where it is natural to get into conversation with others from the marina.”

“Spaces for tents close to the marina - I often sail with more than there is sleeping accommodations for.”

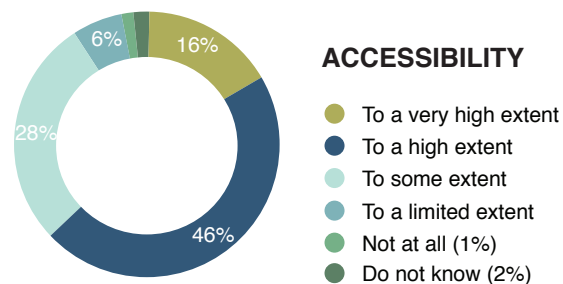
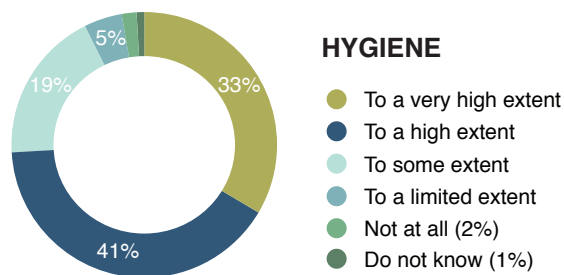
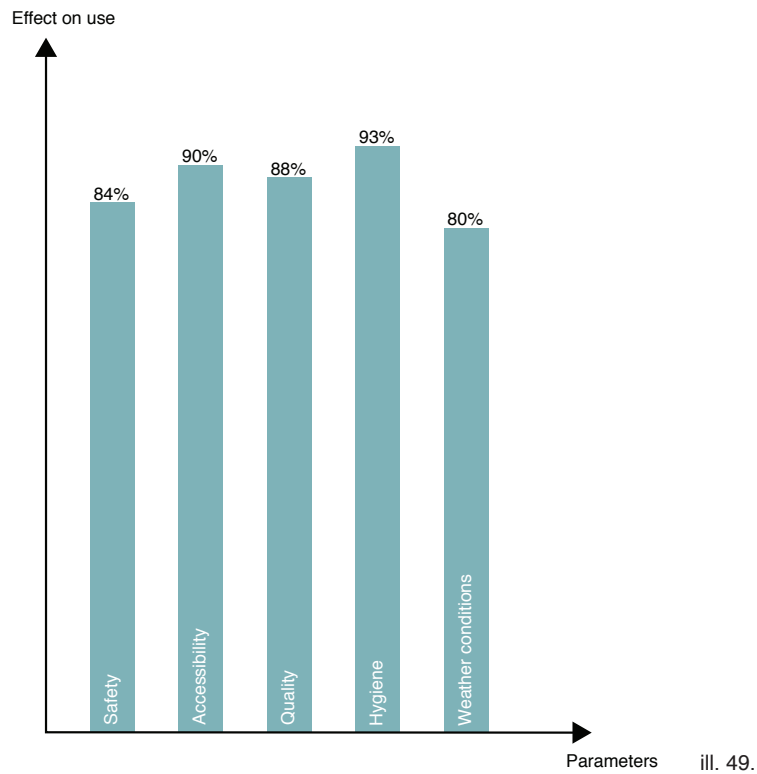
“The most important thing is of course the berthing and mooring conditions. Next, the possibilities of getting water, fuel and provisions. Moreover, the staff’s ability to give me the feeling of being welcome. I don’t visit the machine-harbours anymore.”

Fact: Free-port-agreement:

“A free port agreement is a contract between harbours, where sailors can borrow each other’s harbour area, without paying guest rent.” [Frihavne 2016, 14.03.16] own translation, cf. appendix A12

To what extent does the following parameters affect your use of the marina's facilities?

All parameters seem very important when it comes to which affect it has on the use. Hygiene tops, followed by accessibility, quality, safety, and, lastly, weather conditions. One can argue that most of the facilities are used in any weather, because of the necessity; e.g. bath and toilet, as Jan Gehl argues in his notion of 'necessary, optional, and social activities' (cf. inviting spaces pp. 44).

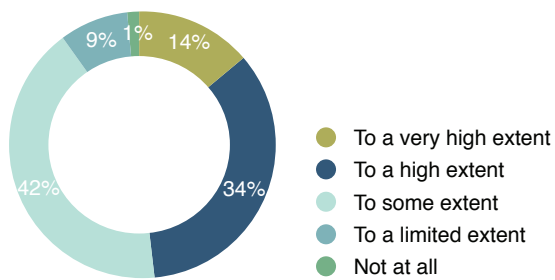


Use of facilities based on how the respondents mostly sail

Mostly sail...	Rank	Facility
Alone	1	Toilet/bath
	2	Information
	3	Kiosk
As a pair	1	Toilet/bath
	2	Information
	3	Barbecue areas
		Beach
Family	1	Toilet/bath
	2	Beach
	3	Barbecue areas
In a larger group	1	Toilet/bath
	2	Barbecue areas
	3	Restaurant/café

To what extent do you plan your vacation at sea, in terms of routes and stays?

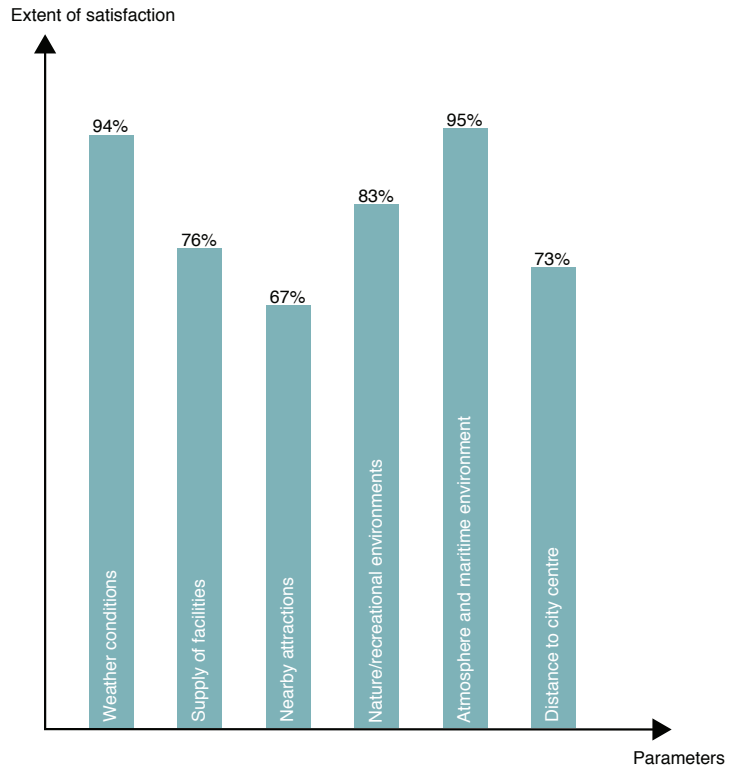
42 % of the respondents plan the vacation “to some extent”, but also 34 % plan it “to a high extent”. The planning can depend on the weather conditions; especially wind, but also family situations; traveling with children can require more planning and longer stays at the marinas.



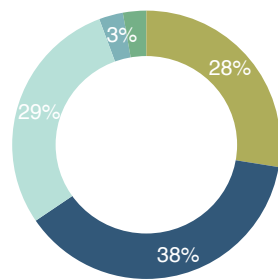
ill. 51.

To what extent does the following parameters affect your choice of marina?

The maritime environment and atmosphere has a high score for the respondents. It is followed by weather conditions, nature and recreational environments, supply of facilities, distance to city centre, and, lastly, nearby attractions.

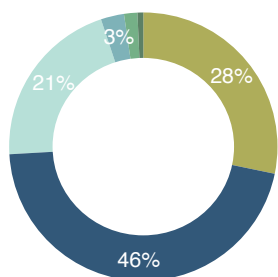


ill. 52.



WEATHER CONDITIONS

- To a very high extent
- To a high extent
- To some extent
- To a limited extent
- Not at all (2%)
- Do not know (0%)



ATMOSPHERE AND THE MARITIME ENVIRONMENT

- To a very high extent
- To a high extent
- To some extent
- To a limited extent
- Not at all (2%)
- Do not know (1%)

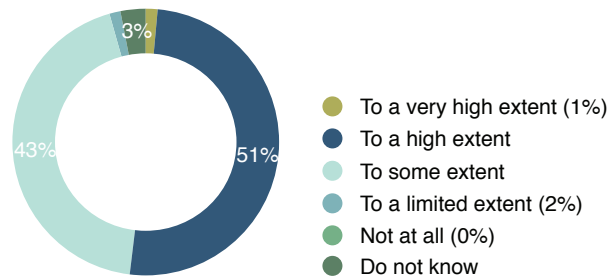
ill. 53.

Choice of marina based on age

Age	Rank	Parameter
0 - 18 years	1	Weather conditions
	2	Nature/recreational environments
	3	Distance to a city centre Atmosphere and the maritime environment
19 - 24 years	1	Weather conditions
	2	Atmosphere and the maritime environment
	3	Nature/recreational environments
25 - 34 years	1	Atmosphere and the maritime environment
	2	Weather conditions
	3	Supply of facilities
35 - 44 years	1	Atmosphere and the maritime environment
	2	Weather conditions
	3	Supply of facilities
45 - 59 years	1	Nature/recreational environments Atmosphere and the maritime environment
	2	Nature/recreational environments
60 + years	1	Atmosphere and the maritime environment
	2	Weather conditions
	3	Distance to a city centre

To what extent does the Danish marina fulfil your wishes?

The Danish maritime users seem generally satisfied; 43 % “to some extent” and 51 % “to high extent”.



ill. 54.

CONCLUSION

This user group; the Danish sailors, has a lot of practical needs in the shape of different facilities as well as performing a selection of necessary activities, but they also seek community and events that benefit their social engagement and unity. The maritime atmosphere ranks highly as a strong value, as well as the access to nature and recreational environments.

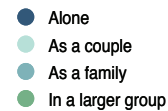
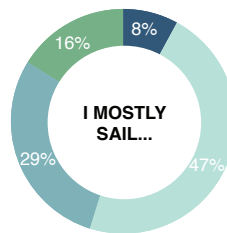
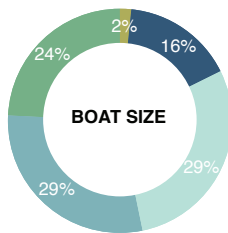
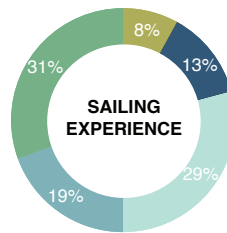
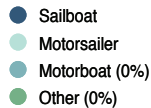
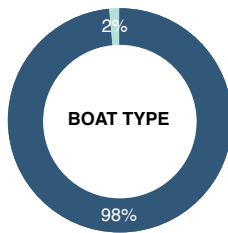
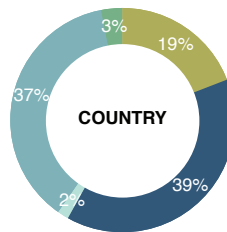
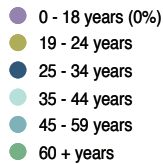
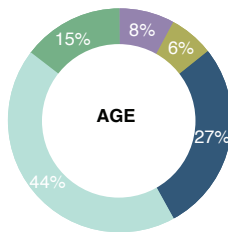
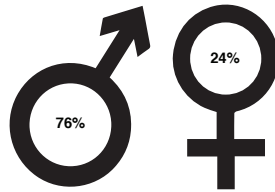
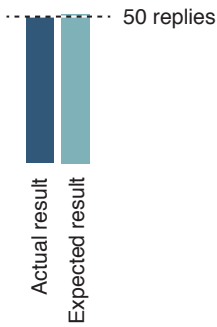
As for the more practical facilities; accessibility to public transportation, bike rental, WIFI, and grocery shopping are most important. The weather conditions, especially wind, is an important parameter, since many users and boats are affected by these and the conditions often determine the travel route.

USER 02: THE FOREIGN SAILORS

Through the survey, we wish to gain an insight into the use of the Danish marinas, the general needs and preferences of the facilities, activities, and physical environment. Moreover, we expect for the survey to result in knowledge regarding the way foreign sailors travel when visiting Denmark; to which extent the traveling is planned, and which parameters affect their choice of marina. We also wish to know why, how often, and for how long they visit Denmark.

As a foundation for this survey, basic information about the respondent will tell the gender, age, country, type and size of boat, sailing experience, and how they mostly sail.

The respondents are mostly men, 59 % is over 45 years of age, the majority is from Norway and The Netherlands, 98 % owns a sailboat, most have either 15-24 or +35 years of experience, the majority has a boat over 30 ft., where most sail as a couple or as a family with children. As a preliminary question, we ask if the respondent has ever visited Middelfart Marina. 69 % answers “no”. This information is followed by clarifying questions about ‘why not’. If “yes”, we ask about their opinions of the marina, regarding supply and appearance.

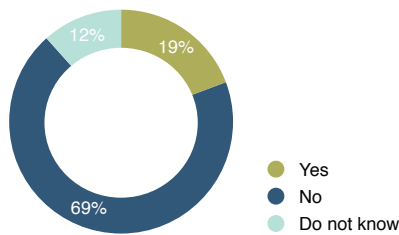


Have you ever visited Middelfart Marina?

One fifth of the respondents have visited Middelfart Marina. Of these, 40 % find the supply of facilities sufficient.

“Fredericia happened to be a more convenient stopover in trips through the Little Belt.”

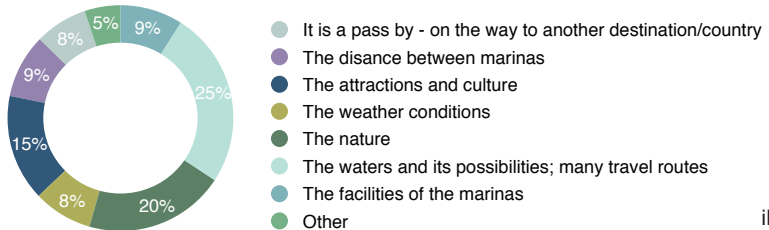
“We prefer Gamle Havn. Good maritime atmosphere and Strib Fisk. Closer to city centre.”



ill. 56.

What is the most important reason for you to visit Denmark?

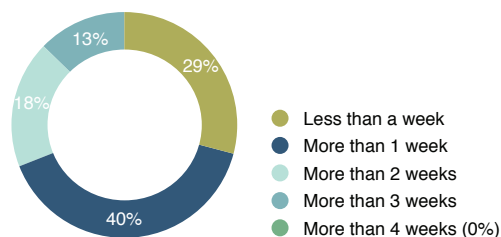
One fourth of the respondents choose Denmark as a travel destination because of the waters and its many possibilities and travel routes. One fifth of the respondents choose Denmark because of the significant nature it possesses - the reason for that is the attractions and culture Denmark offers.



ill. 57.

When visiting Denmark, for how long do you stay?

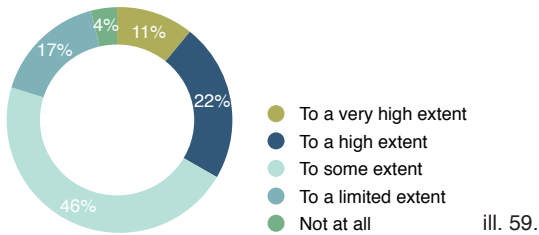
The respondents usually stay in Denmark for about a week; 29 % less than one week and 40 % more than one week.



ill. 58.

To what extent do you plan your vacation at sea, in terms of routes and stays?

A convincing 46 % of the respondents plan their vacation “to some extent”. It discloses that it is somehow unpredictable; many factors have to be taken into consideration during the trip. Unpredictable weather conditions are an example of that.



“A comfortable passage is more important than following a planned route. We need to be flexible.”

“This is what sailing is about: Freedom to choose.”

“I evaluate all the harbours and waterways for safety purposes.”

“We want to optimize the hours of sailing in combination with sailing wind.”

“Lack of sea experience, children are too small.”

To what extent do the following parameters affect your choice of marina?

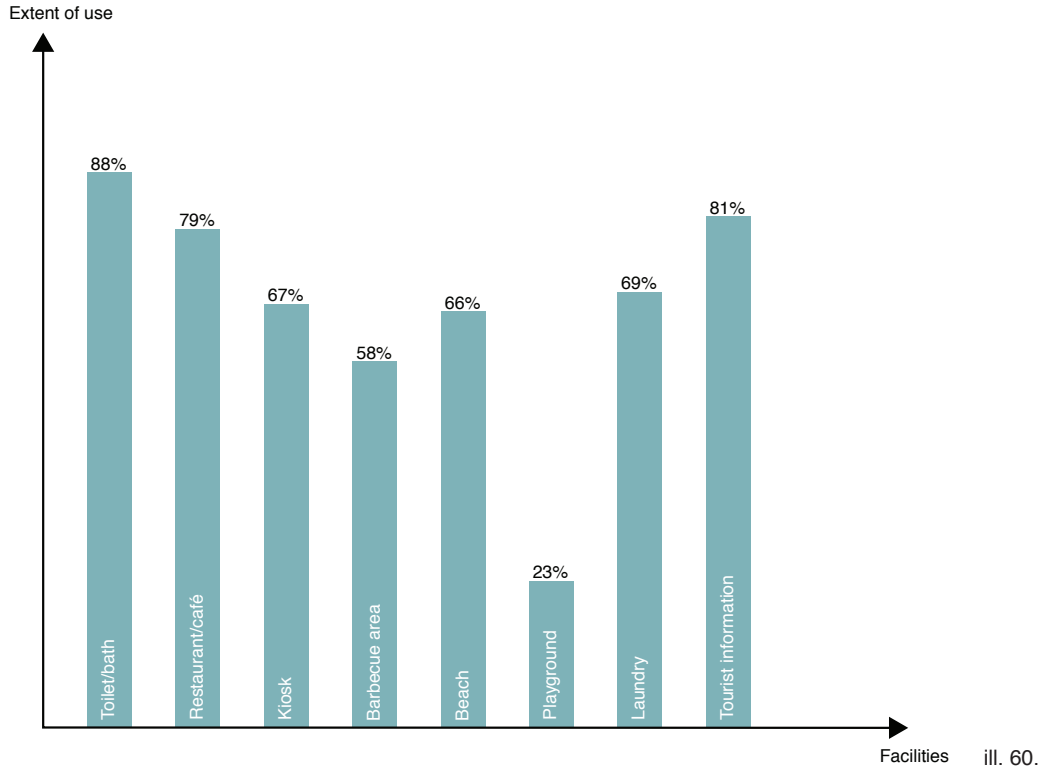
The maritime atmosphere and environment tops, when it comes to choosing the marina, but the weather condition is also a vital factor; maybe one is “forced” to choose a marina that was not scheduled from home because of bad weather conditions. Nature and the recreational environment is the third most important parameter.

Choice of marina based on age

Age	Rank	Parameter
0 - 18 years	-	
19 - 24 years	1	Weather conditions
	2	Atmosphere and the maritime environment
	3	Distance to a city centre
25 - 34 years	1	Weather conditions
	2	Atmosphere and the maritime environment
		Nature/recreational environments
35 - 44 years	1	Nature/recreational environments
	2	Atmosphere and the maritime environment
		Weather conditions
45 - 59 years	1	Nature/recreational environments
		Atmosphere and the maritime environment
	2	Weather conditions
60 + years	1	Weather conditions
	2	Atmosphere and the maritime environment
	3	Supply of facilities

To what extent do you use the facilities at the marina?

Toilet and bath are very important, maybe due to boat type; 98 % of the respondents own a sailboat of about 30 ft., which mostly do not have a shower. On the contrary, the playground is the least important facility for the foreign sailors; 52 % do not use it, but that most likely also corresponds with age and the civil status; if, for instance, one is traveling as a family with smaller children. The respondents also mention WIFI, bike rental, grocery shopping nearby, bakery, boat service, electricity, waste disposal, and fuel.

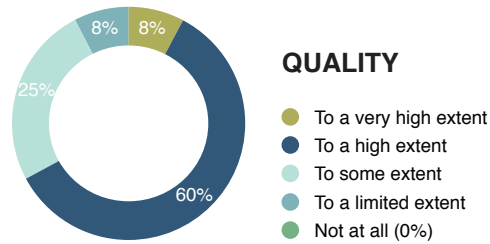
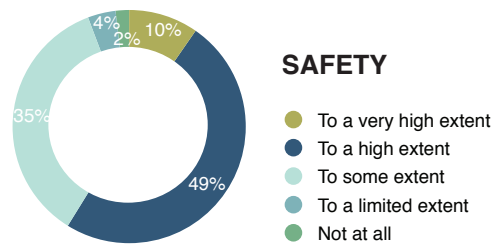
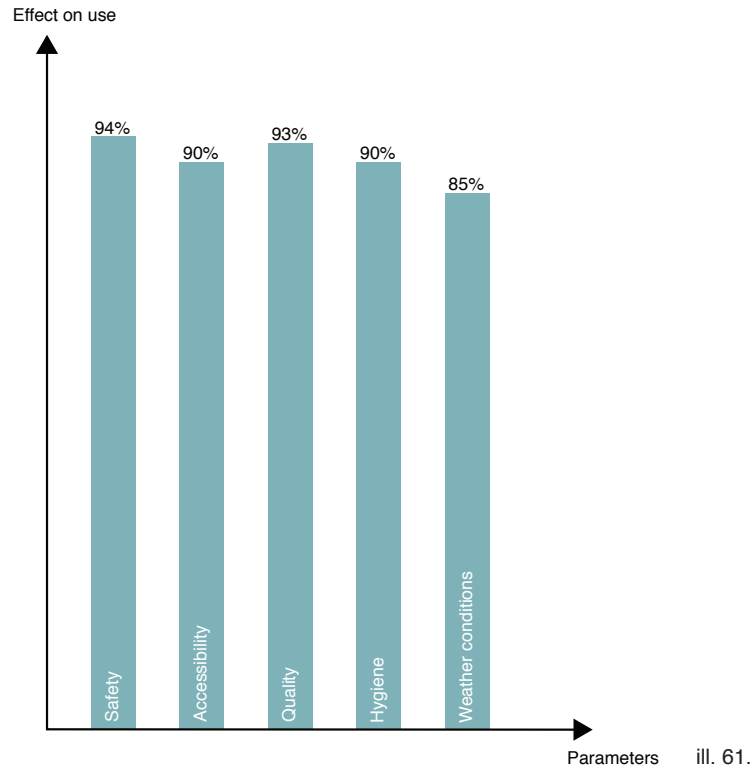


Extent of use based on how the respondents mostly sail

Mostly sail...	Rank	Facility
Alone	1	Laundry
	2	Toilet/bath
		Restaurant/café
As a pair	1	Toilet/bath
	2	Tourist information board
	3	Restaurant/café
Family with large children 13-18 years	1	Barbeque areas
	2	Kiosk
	3	Tourist information board
Family with small children 0-13 years	1	Playground
	2	Toilet/bath
		Kiosk
In a larger group	1	Toilet/bath
	2	Kiosk
	3	Beach
		Laundry

To what extent does the following parameters affect your use of the marina's facilities?

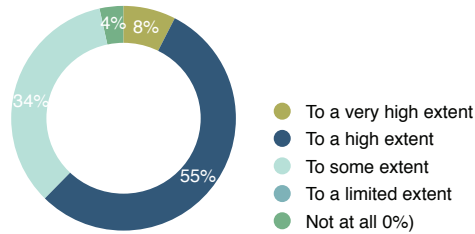
Safety is the most important factor, followed by quality.



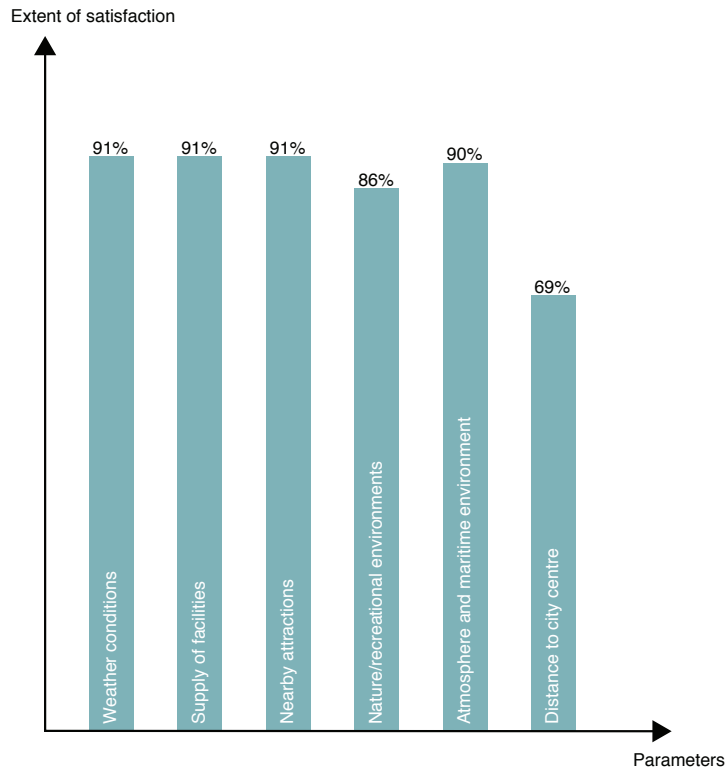
ill. 62.

To what extent do the Danish marinas fulfil your wishes?

55 % answered “to a high extent”, which points out that more than half of the respondents are happy with the Danish marinas on an overall level.



ill. 63.



ill. 64.

CONCLUSION

This user group; the foreign sailors, is mostly satisfied with the Danish marinas, where 55 % think that the marinas live up to their expectations and wishes. The planning of travel routes is of course highly dependent on weather conditions, but also sailing experience, because they are a long way from home and are maybe not used to the Danish waters.

When it comes to facilities; WIFI, bakery, and grocery shopping are important, as well as a guest house with television for days with rainy weather. For those, who have visited Middelfart Marina, the response is that the marina often functions as a stop on the way; for example one respondent explains, how Fredericia happened to be a more convenient stopover for trips through Lillebælt.

USER 03: THE LOCALS

This survey is wished to result in an insight into the citizens' relationship to the recreational areas that Middelfart has to offer, as well as their relationship to the marina and the surrounding area. Moreover, we expect to gain knowledge about their use of the marina; which activities and facilities they are familiar with - and use.

As a foundation for this survey, basic information about the respondent will tell the gender, age and status as single, couple, or family with children.

The respondents are mostly women, and all age groups are represented, though with the majority being between 45-59 years of age. Approximately one third is a family, one third is single, and one third is in a relationship.



ill. 65.

Middelfart offers, among others, Hindsgavl Dyrehave, Hindsgavl Halvø, Fænø Park, Kongebroskoven, Galsklint and Søbadet. Do you visit these attractions?

80 % of the respondents visit these attractions.

“Kløverstjerne” is a project containing four routes that gather the experiences, trails and attractions of the city as well as bring new exercise opportunities. Are you familiar with the project, Kløverstiprojektet?

57 % of the respondents is not familiar with the project, indicating that the project can benefit from extended dissemination, maybe through new initiatives.

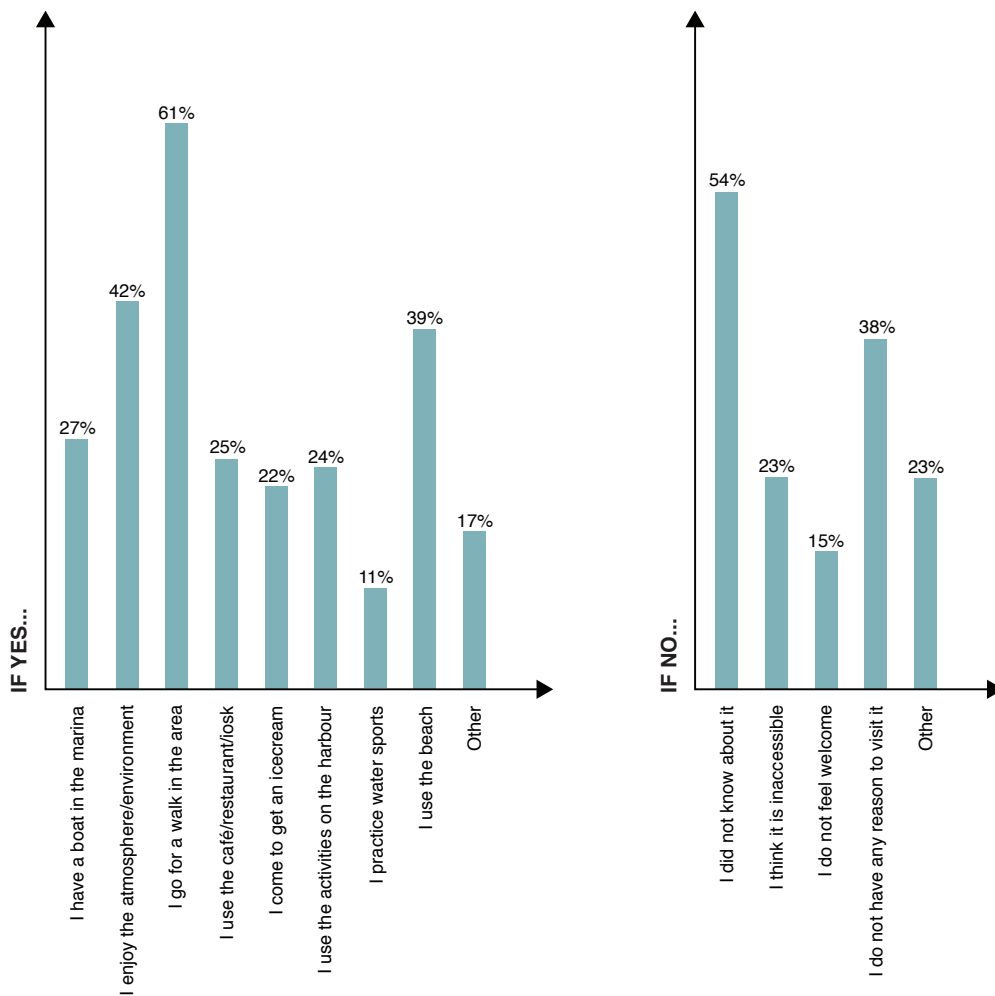
Do you ever visit Middelfart Marina?

Almost half of the respondents answered “yes, some times” of which 51 % go for a walk in the area, 42 % enjoy the atmosphere and environment and 39 % use the beach. 11 % answers “no, never” of which 54 % do not know about its existence, 23 % think it is inaccessible and 38 % do not have a reason to visit it.

“I help sailors pick up things from the bottom of the ocean”

“I usually don’t get around to visit the marina in the every days, but I like going for a walk and gathering my thoughts.”

“I didn’t know it existed, but now that I know, I will definitely make some more use of it this summer.”



ill. 66.

When crossing this question with age, most of the 0 to 18 year olds answer “no, never”; 41 % answer “yes, sometimes”. On the other hand; when it comes to the age between 19 and 24 years old 73 % answer “yes, sometimes”. It is clear that the age group from 35 to 44 years is visiting it most often. It is interesting that the young generation does not use the many activities that the marina offers - especially for their age group.

Visits to Middelfart Marina based on age

If no...

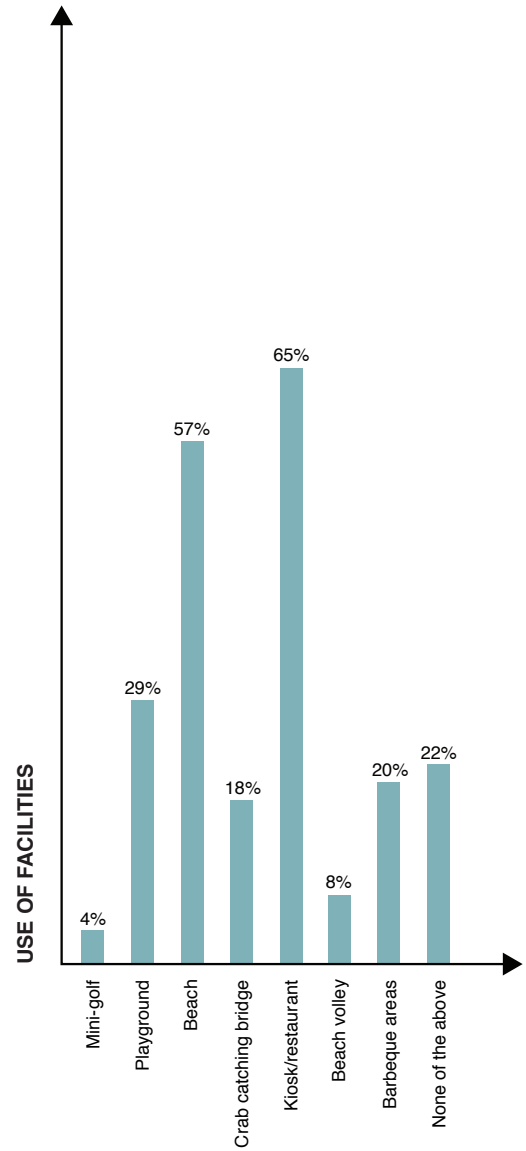
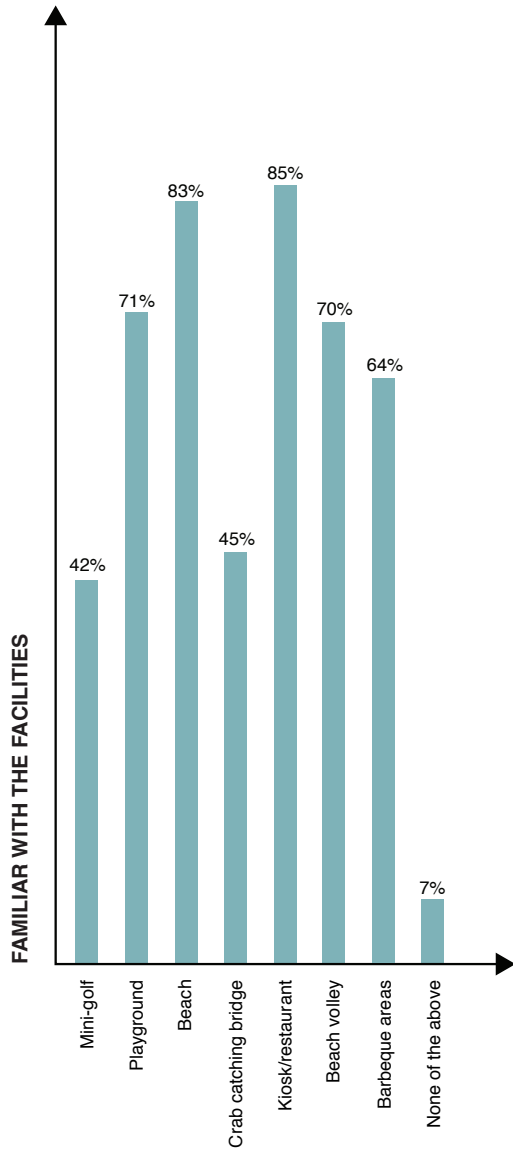
Age	Reason
0 - 18 years	I did not know about it
19 - 24 years	-
25 - 34 years	-
35 - 44 years	I do not have any reason to visit it
45 - 59 years	I did not know about it I do not have any reason to visit it
60 + years	I did not know about it I do not have any reason to visit it I think it is inaccessible I do not feel welcome
<i>In total:</i>	I did not know about it

If yes...

Age	Reason
0 - 18 years	I go for a walk in the area
19 - 24 years	I go for a walk in the area
25 - 34 years	I use the beach
35 - 44 years	I go for a walk in the area
45 - 59 years	I go for a walk in the area
60 + years	I go for a walk in the area I enjoy the atmosphere/environment
<i>In total:</i>	I go for a walk in the area

Are you familiar with the fact that the marina offers the following facilities? If yes, which ones?

The majority of the respondents are familiar with the fact that marina offers kiosk and restaurant, beach, playground and beach volley.

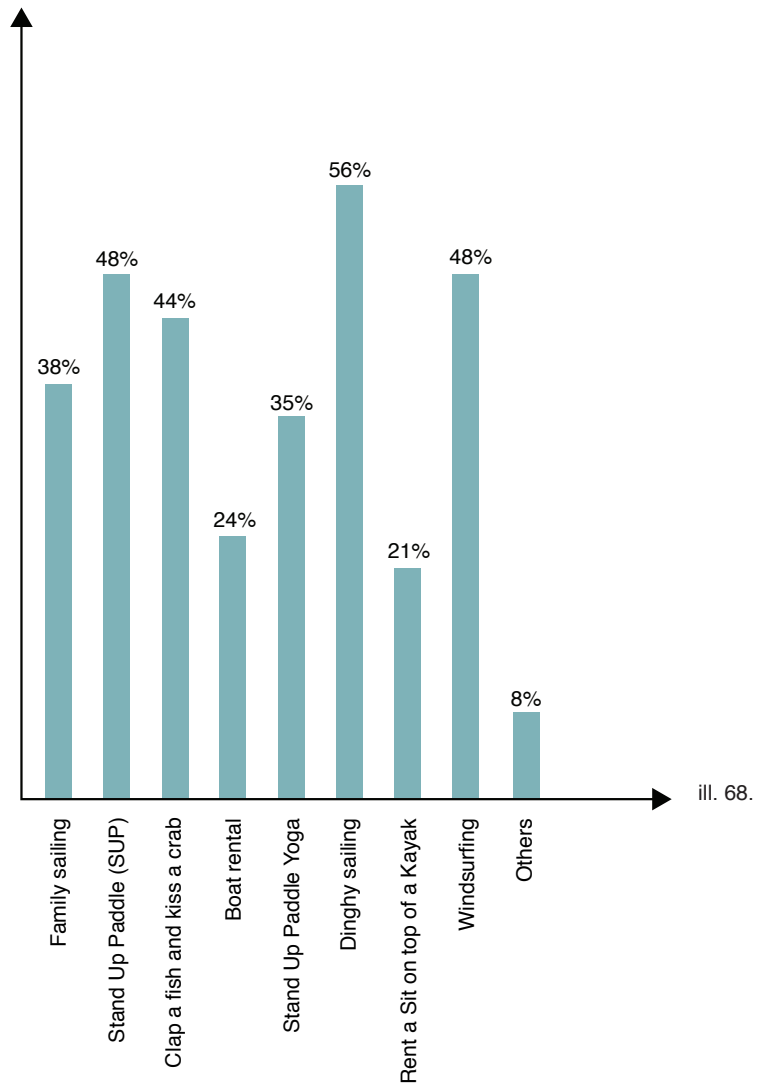


ill. 67.

One can wonder, why they enjoy going for walks in the area, but does not use the facilities and activities. They know about the facilities, and what the marina has to offer, but they do not use it nearly as much. Supply vs. use is clearly demonstrated here; especially when looking at the beach volley and mini-golf courses.

Are you familiar with the fact that the marina offers the following facilities? If yes, which ones?

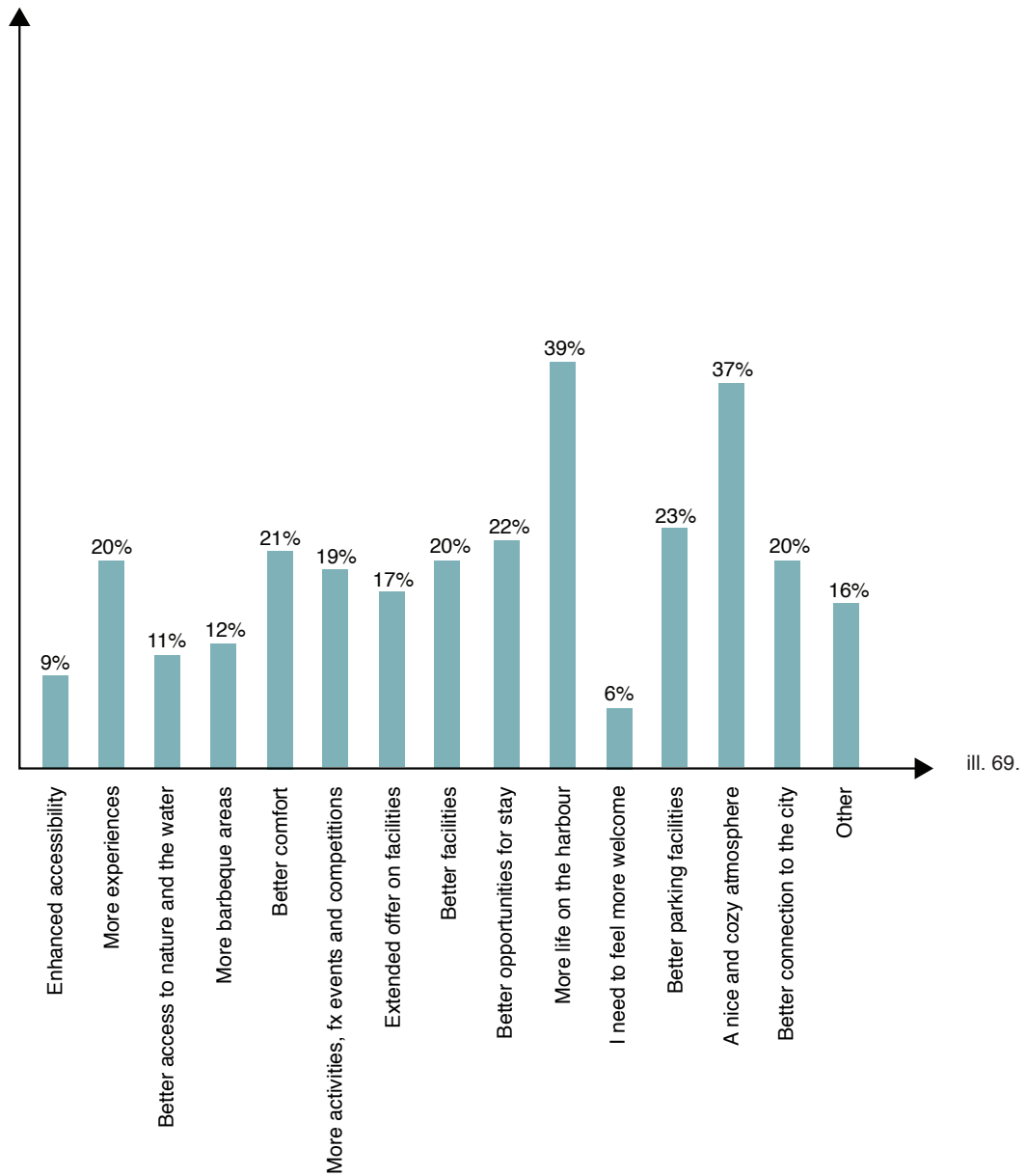
The majority of the respondents are familiar with the fact that the marina offers kiosk and restaurant, beach, playground, and beach volley.



What should the marina offer, for you to visit it more often? It could for example be the following... (please check off several boxes)

The two most important factors for the respondents, are “more life at the marina” and “a nice and cozy atmosphere”. It is surprising that the feeling of welcomeness has such a low significance, as well as enhanced accessibility, which are the two parameters, we initially thought to be the main issue.

16 % of the respondents have answered “other”; expansion and cleaning of the beach, places for house boats, path along the water to Fænøsund Park, better information about what happens at the marina, and better winter bathing opportunities.

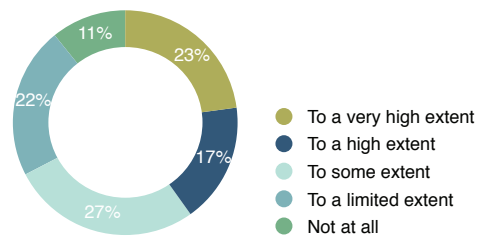


What Middelfart Marina should offer, for one to visit it more often, based on age

Age	Rank	Parameters
0 - 18 years	1	Better facilities
	2	Better comfort More life in the marina
19 - 24 years	1	Better opportunities for stay More life in the marina Better parking facilities A nice and cozy atmosphere
	1	Better opportunities for stay More life in the marina Better parking facilities
	1	Better opportunities for stay More life in the marina Better parking facilities
	1	More life in the marina A nice and cozy atmosphere More experiences
45-59 years	1	More activities
	2	More life in the marina
	3	A nice and cozy atmosphere
60 + years	1	More experiences Better connection to the city
	2	Extended offer on facilities Better parking facilities
	3	A nice and cozy atmosphere
In total:	1	More life in the marina
	2	Better parking facilities
	3	A nice and cozy atmosphere

To what extent do you have a sense of belonging with Middelfart Marina?

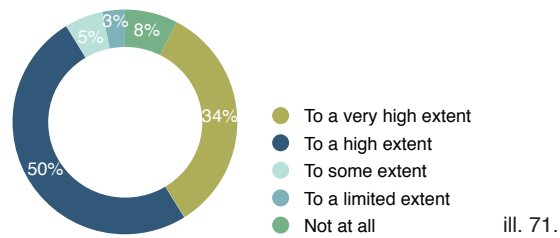
The respondents' answers are almost distributed evenly with 23 % answering "to a very high extent".



ill. 70.

To what extent does Middelfart Marina fulfil your needs and wishes?

84 % of the respondents believe that the marina fulfil their needs and wishes. One can ask, what their expectations are? Permanent residents of the marina have high expectations to its physical condition and the necessary activities, as it primarily applies to them. On the contrary, the locals might have low expectations, as the area is not originally intended for “non-sailors”. Their level of satisfaction might come across in this survey.



Fulfillness of needs and wishes based on age

Age	Extent
0 - 18 years	To some extent
19 - 24 years	To a high extent
25 - 34 years	To some extent
35 - 44 years	To some extent
45 - 59 years	To some extent
60 + years	To a high extent
<i>In total:</i>	To some extent

CONCLUSION

This user group; the locals of Middelfart, is highly attracted by the atmosphere that the marina provides. They use the marina to go for walks; gather their thoughts and look at the boats. It is almost a sanctuary for some of the respondents. Yet, they seek more life at the marina and more visibility of the attractions.

The supply of facilities seem to be sufficient; most of the respondents know about the facilities and activities that the marina offers, but the fact is that a lot less use them. One can question what the reason for that might be.

The survey also indicates that the younger generation is not as present in the marina area, as the other generations, which is consistent with the fact that the younger generation is declining.

METHODOLOGY CRITIQUE

We chose Facebook as the best way to spread the survey, because we are able to reach the target groups through various Facebook groups; e.g. *Middelfart*, *Middelfart Sejlerskole*, *Middelfart Online*, *VisitMiddelfart*, *Tursejlads og sejlsport*, *HMI*, *Kjøp og Salg av Seil og Seilutstyr*, *Segeln*, *Zeilen*.

Using Facebook has its pros and cons. It is an easy way to reach many in a short period of time; we reach a diverse audience via Facebook groups that are targeting a particular group of people. For example, we reach the younger generation in Middelfart through Middelfart Ungdomsskole and Middelfart Gymnasium og HF. Also, we do not need a mediator to distribute the surveys for us. On the contrary, Facebook has a fairly limited target group - not everyone has a Facebook profile, especially not the elder generation.

It is an indirect way to contact people - as opposed to handing out surveys in person - it is not as personal, making it easier for the respondents to ignore the post. To target as many users as possible, we apply for membership of a large amount of Facebook groups with a high number of members; but in the groups with several members, the notice will disappear rather quickly, because of subsequent posts.

By posting the notice, it provides the group members with the possibility to comment further, which has advantages and disadvantages. For example, people who want to comment further, because the survey has not been sufficient or comprehensive enough, or people, who see it as an occasion to raise other Danish urban design issues, which are not relevant for the scope of this thesis. One can say that the anonymous part of the survey disappears, when the respondent is able to comment directly on the post. This problem could have been solved by adding a possibility to leave a comment at the end of the survey. Therefore, it is easy to reach more respondents in less time, but it is also easy for the respondents to ignore it. For that reason, it has been important for us to distribute the link to as many Facebook groups as possible, but still be critical about it. As a reminder, it has been necessary to post it twice in some of the groups.

The surveys were first released on Wednesday the 24th of February. Afterwards, they were dispersed to more groups on Monday the 29th, where we especially placed great emphasis on the target groups of the different Facebook groups, for example Hou Maritime Idrætsefterskole. Moreover, we were lucky to get in touch with Benjamin, editor of *duelighed-*

sklubben.dk. He was willing to distribute the survey, targeting the Danish sailors, as the association has about 2-3.000 members.

It would have been helpful for the study to actually develop five different surveys; three general surveys and two with focus on Middelfart. To get a more in depth study of the locals near a marina, it would have been helpful to open up the distribution of that survey to, for example, ten different cities in Denmark. Then, the survey would not have been minded towards Middelfart in particular. And to get a more in-depth study of the sailors of Middelfart, it would have been helpful to distribute surveys for that target group as well.

Last summer, we visited the harbour master of Middelfart Marina, who experiences the challenges the marina faces first hand. But, the survey shows that the locals of Middelfart seem to be satisfied; and overall the Danish sailors seem pleased with the construction of the marinas. Relating to this, it would have been helpful to focus more on the permanent residents of Middelfart Marina. In that way, we would be able to compare their needs and wishes with the locals of Middelfart.

The number of received answers is very satisfactory. Especially from the Danish sailors, which exceeded the expected outcome fourfold. On the contrary, one can question the quality of the number of responses from the foreign sailors.

MY MARINA



We have talked to four sailors; a couple with a sailboat at Middelfart Marina (Jonna and Poul), a chairman from Aalborg Lystbådehavn (Hans), and a young man who is attending a maritime school at the moment (Niklas).

The aim is to get some more in-depth views on the Danish marinas. They explain, how and what they look for, when visiting a new marina, how they travel, and how they use the nearby city and its attractions. We also talked about how weather dependent sailing is, when it comes to planning a new route or vacation.

The following sections shall be read as informal talks with questions based on the previous survey research.

MY MARINA

Jonna



ill. 72.

NAME	Jonna
AGE	54 years old
CIVIL STATUS	Married to Poul, 2 children
OCCUPATION	Self-employed hairdresser
RESIDENCE	Vejen
HOME MARINA	Middelfart Lystbådehavn
SAILING EXPERIENCE	Since she was born, but had a break for 12 years
BOAT TYPE	Sailboat
BOAT SIZE	34 ft.

Jonna is married to Poul, and is a self-employed hairdresser from Vejen. They have a sailboat at Middelfart Marina, and she has been sailing for most of her life.

“I’ve been sailing since I was born, until 1999, where I was on summer holidays with my parents in an old wooden boat. Then I had a break for 12 years, because we needed to find the economic means - we had to make sure that the whole family wanted this. Now I have been sailing for the past four years.”

Jonna is originally from Middelfart, so there is something emotional attached to that area. But, the choice of having the home marina in Middelfart, was also nature - she explains how outstanding the surroundings are - that it is nice to feel at home, because they practically live there during the summer. They do not participate in many of the social events, because they do not have the time for it. Although, they go to see the match-racing in July, where the whole pier is field with tents, where you can buy foods and beers and witness the race from the stone pike.

Since Jonna’s parents also sailed, we talked about how essential it is to pass on knowledge and experiences to the next generation. *“My father taught me so much. We have tried to give that to our chil-*

dren as well. It made it so much easier to take the leap and buy a boat. I wouldn’t have dared that if it wasn’t from my childhood.” When Jonna and her family travel, they plan the overall route, the direction, they have an idea of which marinas they would like to visit, and they think it is exciting to see new places and not always travel in the same waters, especially during summer holidays. *“We try to combine new and familiar marinas. We have some that we want to go back to, so sometimes we have a new route but with familiar marinas incorporated.”* In the weekends, they visit nice marinas in the local area, because it is limited how far you can travel in a sailboat. She mentions Bogense, Assens, Haderslev, and Kolding.

Personally, Jonna looks for decent bath facilities, which she cares a lot for; she does not feel good if it is dirty at the marina. The facilities should be modern. In this relation, she also mentions how she does not really feel secure in the evenings and explains that the whole family usually go together. For her, a good marina has great facilities and a lot of barbecue areas - and beautiful nature. *“I can see that we come back to the marinas with a nice beach. That is actually also something that we highly value.”* She smiles, when she mentions that it is nice to have the possibility to shop in a city nearby. She likes to be let off the boat, cooking dinner once in awhile, because it takes a lot of time on a boat with a tiny kitchen with only two gas burners. Actually, kitchens are something she thinks there are too few of in the Danish marinas (cf. appendix B).

We talk about the physical appearance of the marinas, and Jonna mentions that she prefers a marina that is a combination of rustic and modern. It is very different; sometimes they choose it exclusively because of the surrounding nature (she mentions Langøre at Samsø), and other times, they like to visit larger marinas with more urban life.

MY MARINA

Poul



ill. 73.

NAME	Poul
AGE	53 years old
CIVIL STATUS	Married to Jonna, 2 children
OCCUPATION	Business Relationship Manager
RESIDENCE	Vejen
HOME MARINA	Middelfart Lystbådehavn
SAILING EXPERIENCE	6 years
BOAT TYPE	Sailboat
BOAT SIZE	34 ft.

Poul is married to Jonna, who we have also talked to. Together, they have two children. They have a sailboat at Middelfart Marina, and he has 6 years of experience. *“We chose Middelfart Marina, because it is a good place to sail out from. You can sail south, east, and north. It has a good location for trips around Denmark.”*

Other than the location, Poul mentions the environment at the marina. It has a lot to say; the atmosphere is very important. They live in Vejen, which is in the middle of Denmark, so, it is important to be able to go out on the boat. He explains that it is like camping. *“We don’t always come to sail - it also just to be in the environment and Middelfart has beautiful surroundings with forests.”* Nature and cosiness are two parameters that Poul appreciates. (cf. appendix D)

Poul and his family do not attend social gatherings at Middelfart Marina, due to limited leisure time. The sailing club has a few events, but he has not heard of events held by the marina. He is a part of the sailing club, and it has a lot of events that he would like to participate in - but the time and distance from Vejen to Middelfart puts a stop to it.

“If I lived in the city, I would take my bike to the marina and go there more often!”

Poul’s children also sail, and he says that he and his wife have done a lot to pass on the knowledge to their children. They go on longer weekend trips, from thursday afternoon to sunday evening. And during the summer holiday, they travel from start to end - all three weeks and they do not want to go home. *“We just live life! That is it. After three weeks*

we aren’t ready to go home, but we don’t have any more vacation days, so we have to. It kind of becomes your home, and I can make a comment on that: I remember one of the first years, we were on our way home. It had been three weeks with sun and great Danish weather. When you go south for the summer to for example Italy or France, you look forward to come home again, but I told Jonna; it’s funny, I don’t have that feeling of joy in going home. For that Jonna answered; it’s because it’s your second home. And that is what it feels like.”

He thinks for a short time, when we ask how they plan their vacations. *“You just take one marina at a time, depending on inclination and weather.”* They plan the direction; north, south, east, or west. He tells a story of how they last year wanted to go to Nordsjælland, but never made it because of the wind direction. It was possible to get there, but difficult to get home. He compares it to riding a bike in headwind.

Poul looks for marinas with a maritime atmosphere and nature, when he chooses a marina to stay at. Those are the main points, and it can be everything from a place, where nothing happens such as Langøre on Samsø to Bogense on Fyn, where he loves to come because it has a lot of atmosphere, restaurants, and vacation life. It means a lot to him that he feels welcome, and that the area is cozy; idyllic and intimate. These are the words he uses. Of course it is always in combination with the weather. *“If the weather is bad, it’s nice to be in a short distance of a somewhat larger city with the possibility to shop and a eat at restaurants.”* Some of Poul’s favorite marinas are Bogense, Kerteminde, and Brejning. The first two have a lot of similarities, but Brejning is a smaller marina, and he thinks it is very cozy, intimate, and beautiful. Also, it is often sheltered from the western wind, which also has an importance.

MY MARINA

Hans



ill. 74.

NAME	Hans
AGE	61 years old
CIVIL STATUS	Married, 2 children
OCCUPATION	Early retirement, Chairman, Vestre Bådelaug Aalborg
RESIDENCE	Frejlev
HOME MARINA	Aalborg Lystbådehavn, Vestre Bådelaug
SAILING EXPERIENCE	Since he was 11 or 12 years old
BOAT TYPE	Motorboat
BOAT SIZE	20 ft.

Hans is chairman of Vestre Bådelaug in Aalborg. He is married to Susanne and together they have two children, who also have a love for water. He has been sailing since he was 11 or 12 years old - his wife has the same experience.

Hans begins by talking about their boats:

“Now we have a motorboat of only 20 ft. We just sold the other one. It was much bigger than this one - it was practically a floating vacation home.”

We all laugh.

Why choose Aalborg Lystbådehavn? Hans explains that it is because of the environment and the great social life - the environment is an important factor for him. But, it is also close to their home in Frejlev. *“You know this is where people go to get an ice cream in the summer.”* The great association life brings a few social events a year, where sailors can meet. *“This Saturday the sailing season begins, so of course we don’t have plans the day after.”* He laughs and talks about the party, they are going to throw. A loyal crowd shows up every time - a bunch of party animals. There is probably one event a month during the season - and family trips in the boats.

We hear that many sailors find it important to pass on knowledge and experience to the next generation, and Hans agrees with that. His children also sail; his son has his own boat and his daughter kite surfs and has a license to speedboats - she also water-skies.

Hans and his family visit a lot of other marinas, and we ask about the planning in relation to this. *“Well, you can plan a whole lot, but the Danish weather during the summer makes it difficult, so it doesn’t always prove correct. You can have ideas about, where the trip should go - and sometimes it’s possible, but sometimes it isn’t. It’s very weather dependent.”* If the weather is okay, they like to travel throughout the whole summer holiday, but they also go on shorter weekend trips. And when they do, they often visit the marinas in the local area, such as Hals, Løgstør, and Nibe, because of the time limit. During the holidays, they often go to Skagen. When traveling, Hans sometimes uses the city nearby. *“We like to see the city and its special sights. If we are 8 days in Skagen, we visit the museum, but that is also weather dependent.”*

We talk about “the good marina” and what that is to Hans. He explains that the good marina has good, clean toilet and bath facilities. Also, good barbecue areas, which is greatly used around the marinas - and it is also something to spend a considerable amount of money on. Quality and cleanliness is important. *“The choice of marina also depends on wind and weather. If the weather is bad, it’s nice to come to a larger city and if the weather is great, it’s nice to come to a marina with a beach nearby. It differs a lot.”* It is also the weather that makes Hans stay at a marina longer than expected, because *“then you have to.”*

When we ask about what kind of marina Hans prefers - a rustic or modern, he thinks for a while and answers: *“An older marina has an environment with a lot of soul, but I also prefer modern facilities such shower rooms. So a mix of both.”*

MY MARINA

Niklas



ill. 75.

NAME	Niklas
AGE	17 years old
CIVIL STATUS	In a relationship
SCHOOL	Hou Maritime Idrætsefterskole
RESIDENCE	Hou
SAILING EXPERIENCE	8 years
MARITIME SPORTS	J80, Match-Racing
BOAT TYPE	Sailboat

Niklas is a 17-year-old boy, who has been sailing for about 8 years with his parents and is now attending a maritime continuation school in Hou. Here, sailing is a great part of daily life, where he practices and races in a J80 sailboat.

"I chose a maritime continuation school, because I love to sail. I have sailed a lot and I just think it's awesome to be on the water."

We talk about the Danish marinas, and Niklas tells us that he sometimes participates in social events at Hou Havn; they have meals together, barbecues, and just have a good time with the other sailors. But, he does not know of any events minded for the younger generation, except for Match-Racing in Middelfart.

Niklas' parents also have a sailboat, and we ask him how he has learned so much about it. *"I have attended a sailing school for two years, and I have learned a lot from and together with my parents. Also here at Hou Maritime Idrætsefterskole I still learn a lot."* He explains that there are a lot of things one needs to know and learn; a proficiency check, a certificate, and a theoretical- and practical exam.

“I have a huge dream of sailing around the world.”

Niklas wants to buy his own sailboat someday. We smile and find it inspiring for a young man to have such a dream.

Before Niklas buys his own boat, he travels with his family - three weeks during the summer holiday and sometimes shorter weekend trips. *"We sail as the wind blows and the distance depends on it."* He mentions Juelsminde as one of his favorite marinas,

because it is a nice marina with a beach, and then they have this special thing, where they play music, when the sun rises and sets - it brings a great cosiness to the marina. Good facilities and beautiful nature are what Niklas looks for, when choosing a marina. The facilities that are important are good standard toilets and baths, table and bench sets, and barbecue areas from where one can enjoy the beautiful surroundings. *"There must be a lot of things to experience, so there's a reason to stay longer."* Niklas likes the modern marinas close to a city, because he and his family use the city a lot, when traveling.

We talk about how it is for children and the younger generation at the Danish marinas. Niklas likes to be active, when he is ashore. Sports activities would be nice to have, such as beach volley. Not many of his friends sail, and it is quite difficult to meet people of the same age. Although, he met his girlfriend last summer. She also sails, and they met, when they were both sailing with their parents. Here, he (and his parents) chased her across the ocean, so he could be with her as much as possible, during his vacation.



RECAPITULATION

The following content will go through the previously gathered information by concluding which elements help us in the next phase of the project.

CONCLUDING REMARKS

To sum up, the marinas, in general, are suffering from a decline of 42 % in overnight stays over the past 25 years [DST 2015, 16.02.16]. This is visualized in vacant moorings, a decreasing economy, and a dominating elder generation.

In the previous research, the physical environment, use and perception thereof, has been investigated through a historical perspective, theory, case analysis, and user involvement. Each has been concluded in the sub conclusions, so this section will sum up what a marina is today, and what its potentials are in the future, by shortly answering the research question, leading to the beginning of an inspiration catalogue.

THE MARINA AS A RECREATIONAL AREA

The marina is a place of leisure and affiliation. It is an area with a vacation purpose, compared to e.g. harbours, and are physically characterized by boat masts protruding towards the sky, an often beautiful scenery, and a maritime atmosphere. One can compare sailing with camping; the marina being the campsite and the boat being the caravan. The constant replacement of boats causes movement and an exchange in tourists.

THE MARINA AS A PUBLIC SPACE

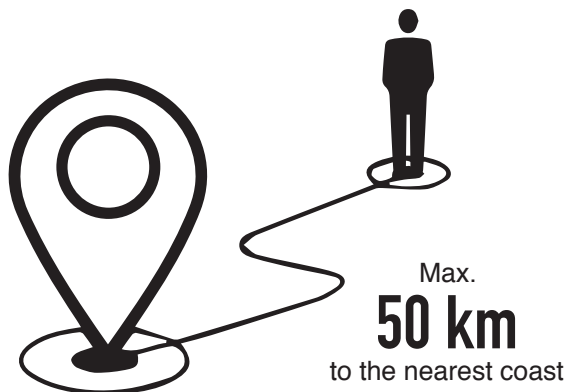
A public space promotes and encourages contact and exchanges between users, socially, culturally, or commercially (Gehl, Svarre 2010). The marina is a public area, but has the potential to become a public space, as it contributes with an character and cultural heritage that stands out from the remaining public spaces and should be considered as a part of the city's network of urban spaces. The maritime environment can attract different people, which makes it versatile and dynamic.

THE MARINA AS A MEETING PLACE

The marina is the meeting place for sailors after a long day at sea, a destination that is sometimes planned and other times not. The marina should not only frame the performance of necessary activities, but also facilitate social exchanges and gatherings of a larger, more diverse group of people.

Can the contemporary sociological issues be met by adapting and improving the physical environment of the marina?

To shortly answer the research question; the physical environment can be adapted and improved to meet the contemporary sociological issues, by carefully planned, small interventions as a part of a thorough site-specific strategy. The following catalogue will present inspiration for how to adapt and improve a marina's physical environment.



Danish marinas
have experienced a
42% decrease
in overnight stays in the period
from 2000 to 2015

84%
of all sailors are over
50 years old



More than
300
marinas

Since 2008 the “Marina of the Year”
has been elected by 9.000 members



7.300 km
of coastline

CONCLUSION

When the city was developed 10-20 years ago, it appears that the city expanded around the marina, but the marina was not included in the development. But, times have changed and now we seek more recreational pockets and leisure opportunities, while the way we consider the city has changed as well, with an increased focus on urban life [DAC 2014, 18.05.16] Here, marinas can provide an individual and distinctive character with a strong connection to water (singular for the marina). The marina has the potential to become a natural attraction for urban life, tourism, leisure, and water activities.

If marinas are left untouched, marinas that suffer the most economically, will be forced to close, and the city will lose a tourist based recreational potential.

The most obvious way to solve the contemporary sociological issues that marinas are facing is to increase the number of sailors. Yet, this is also the most difficult and maybe even utopian way, due to the development of our society. For this reason, we argue that the marinas' problems cannot be solved by the previous notion alone - they need to change their singular life-path. Instead of being a singular space for maritime use, it needs to be adapted to invite locals and to accommodate more forms of relevant overnights stays, like camping, tent camps, and hostels to increase revenues, while creating an environment that invites people to stay for longer periods of time and to take part in the city's other activities. As of the high mobility in boats, it is fairly difficult to 'convince' sailing guests to stay for longer than a night or two.

The Danish marinas do not need a full makeover to invite a broader user group. It is about smaller interventions and well organised planning. By connecting and creating intuitive paths through the marina and to the city, the accessibility to and from the marina is increased, which should be accommodated by inviting entrances, not just by car, but especially by foot. In the marina, one should have the possibility to walk safely around by accentuating/putting pedestrians first pedestrians over cars, where the functions within the area should/ought to be gathered by close locations or by connecting them with, for instance, a promenade.

A public square could benefit from being placed in relation to the functions, where it can benefit possible restaurants, while inviting people to stay and use the activities to help create a lively space. Where people come, people stay. The marina generates a lot of flow, exchange, and orchestrations among the boats, creating a lively flow and functioning as

a natural attraction. A square should be a meeting place, where the three user groups; permanent residents, maritime tourists, and locals can meet and interact, while being able to facilitate social events, creating an unexpected physical environment that leads to unforeseen forms of stay as well as spontaneous meetings. This can incite/create/generate interaction, where creative and integrated installations invite people to stay and be active.

The marina shall become a public space on equal terms with other public spaces in the city. It contributes with a distinct atmosphere and an important cultural heritage that make the environment unique to the city and the coast. Here, the environment has the potential to attract a broad group of people, making the marina versatile and a dynamic facilitator for urban life.

THE GOOD MARINA

The good marina is a public space with a strong character, where the maritime cultural heritage is preserved or improved to provide a distinct maritime atmosphere. It is a lively place, a meeting place for locals as well as maritime users, where it offers a diverse program of functions, activities, and events to invite both older and younger people to take part. The good marina is versatile, dynamic, and well organised with uncultivated elements to symbolise its coastal location. It has a public square or promenade, where functions are gathered by short walking distances, where it invites people to stay and walk. It is a space with no building backside and an inviting arrival not just for cars, but especially for pedestrians. It is a space minded for activity, strolling, sitting, and meeting up in scenic surroundings, where pedestrians are accentuated by connected paths and shared spaces. Through an intuitive trajectory with way-finding systems, connected path shall lead maritime users as well as locals to and from the marina and the city. The good marina has facilities of high quality set in an authentic environment, with an increased accessibility to water.



iii. 118.

REFLECTION

Finding and gathering research and conducting an analysis was a very time-consuming process, where researching for relevant information, while considering the demarcation, took us into a great assortment of relevant fields, like tourism and other larger urban development perspectives. In addition, we made a conscious choice to not involve the technical installations, such as petrol tanks, cranes, electricity and water supply for the marina, despite their relevance, as it requires extended knowledge regarding their function, use, and the needs of the specific marina. In order for us to gather as much relevant research as possible, we wanted the research to touch upon a great amount of fields to secure a broad perspective of knowledge to put into our inspiration catalogue, especially since marinas generally lack academic insight. It was challenging to find information regarding the history and development of marina. With a limited amount of research to lean on, it made it essential for us to start from the beginning, trying to understand the physical composition of the marina and its environment, potentials, and problems, as a basis of guidelines and inspiration for a later development and design. Here, we chose to focus on the social aspects of urban design, because we consider it to be the best way to solve the problems that the marinas are facing. We saw the development of the marina as a two way street, where the city will benefit from it as well. The problem related to the generation gap is not empathized by applying a sole focus on the younger generation. We evaluate that it can be mended through improving the physical environment of the marina. Yet, it could be an appropriate topic to investigate further especially through the user involvement.

The case analysis can be improved by including a user survey and a dialogue with the harbour master and the municipality of each city, to receive a more subjective evaluation of what makes the particular marina special enough to win the marina of the year. As it is a time-consuming process, it would have required more time. Interdisciplinary cooperation is an important factor, especially in an area such as a marina, where many actors and professionals are present. The interdisciplinary cooperation can be conducted in the later development and design process, where user involvement should be conducted to anchor the project among the three user groups.

The user survey we conducted on the three user groups was distributed via Duelighedsklubben and Facebook, which was a fairly easy way for us to reach a diverse audience and to gather a lot of information, in a short period of time. Yet, it also has its cons, it is an impersonal way to contact people,

where meeting face to face is direct, making the distribution of surveys more personal. Facebook might reach a diverse, large audience, but it is also easier to ignore a post, as the post also disappears quickly due to following posts. Online distribution does not offer the chance for an unplanned meeting with a user, for a face to face talk of personal insight.

The foreign sailors was hard to reach and with a limited number of replies, the data is questionable. The number of replies could have been increased by contacting a sailing organisation for guidance or to function as a local facilitator.

The research resulted in a huge amount of information to evaluate, which made the transition from research to selection of design parameters very challenging. The design parameters needed to be general enough to be applied to any marina in an urban relation, while still being specific enough to set a clear direction - it needed to be balanced. The large selection of initiate design parameters was too extensive for us, and instead of removing and re-evaluating some of the parameters we found complex, we kept pushing, making it even more complex, so, the process ended up confusing us more than helping us. It was not until we re-evaluated the design parameters; their title, and gathered them in the sustainability model that we saw them as a unit with a clear direction. They had a purpose, but not an applicable direction.

The design strategy for Middelfart Marina could be improved by a greater dialogue and cooperation with Middelfart Kommune and the harbour master. As time dedicated to the design strategy is limited, due to its conceptual level of detail, it would be too time consuming. Yet, it is of course highly relevant, if you are hired to advise and conduct a master plan. In this relation, we found it difficult to keep the conceptuelle level, since we, due to habits, often went into details just to zoom out again, as it was acknowledged. Through the thesis, we have constantly strived to find the right balance of a conceptual project, without it being too general or too detailed.

If we were to work further with this thesis, we ought to go deeper into the research of the marina as a place for tourism. Seen in a bigger picture, regarding other forms of tourism and their cohesive impact and relation to the city in an economic and branding perspective (der mangle et aktivt verbum i sætningen). How can the marina contribute to the city's tourism? Furthermore, the result of the user survey can be further investigated by extracting more data,

by cross referencing data, and by extending the user survey to make for more in-depth user involvement with elaborate interviews, workshops, and dialogues.

Later, we have found it most obvious to end the thesis after the creation of the design compass, since it is the product of the preliminary research. As the case is neither a master plan nor principles. Yet, the compass become sharper as it went through another iteration, if it was the right way can be questioned.

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LIST OF ILLUSTRATIONS

- 01: Own illustration
- 02: <http://politiken.dk/indland/ECE2153782/oejenvidne-i-gillele-je-havnen-er-fuldstaendig-smadret/>
- 03: <http://voresborn.dk/familie/sadan-far-du-en-stressfri-ferie-start-i-lufthavnen>
- 04: Own illustration
- 05: Own illustration
- 06: Own illustration
- 07: Own illustration
- 08: Own illustration
- 09: Own illustration
- 10: Own illustration
- 11: <https://www.airbnb.com/rooms/6270276>
- 12: Own illustration
- 13: Own illustration
- 14: Own illustration
- 15: Own illustration
- 16: Own illustration
- 17: Own illustration
- 18: Own illustration
- 19: Own illustration
- 20: <http://www.landgangen.se/forum/index.php?topic=3754.30>
- 21: <http://www.vibekeroenow.dk/page18.html>
- 22: Own illustration, based on Jan Gehl's diagram in *Byer for mennesker* p. 31
- 23: Own illustration
- 24: Own illustration
- 25: Own illustration
- 26: Own illustration
- 27: www.krak.dk
- 28: Own illustration
- 29: Own illustration
- 30: Own illustration
- 31: Own illustration
- 32: Own illustration
- 33: www.krak.dk
- 34: Own illustration
- 35: Own illustration
- 36: Own illustration
- 37: Own illustration
- 38: Own illustration
- 39: www.krak.dk
- 40: Own illustration
- 41: Own illustration
- 42: Own illustration
- 43: Own illustration
- 44: Own illustration
- 45: Own illustration
- 46: Own illustration
- 47: Own illustration
- 48: Own illustration
- 49: Own illustration
- 50: Own illustration
- 51: Own illustration
- 52: Own illustration
- 53: Own illustration
- 54: Own illustration
- 55: Own illustration
- 56: Own illustration
- 57: Own illustration
- 58: Own illustration
- 59: Own illustration
- 60: Own illustration
- 61: Own illustration
- 62: Own illustration
- 63: Own illustration
- 64: Own illustration
- 65: Own illustration
- 66: Own illustration
- 67: Own illustration
- 68: Own illustration
- 69: Own illustration
- 70: Own illustration
- 71: Own illustration
- 72: Own illustration
- 73: Own illustration
- 74: <http://www.aalborglystbaadehavn.dk/bestyrelse-og-noeglepersoner.aspx>
- 75: Own illustration

APPENDIX

APPENDIX A

Original quotes

A.1

"Staten skal sørge for de bedst mulige rammer for kommunernes klimatilpasning. Staten skal sikre et fælles vidensgrundlag og løbende vejledning om konsekvenserne af klimaændringerne. Der skal koordineres på tværs af myndigheder, erhvervsliv og borgere. Der skal fokus på vækstpotentialet i at udvikle nye innovative løsninger, der bidrager til den grønne omstilling. Danmark arbejder for at reducere konsekvenserne af klimaforandringerne internationalt og for en ambitiøs klimatilpasning i EU."

A.2

"Vi anbefaler, at man tager på ferie tættere på, hvor man bor, og gerne rejser færre gange men i længere tid. Vil man til Thailand, kan man f.eks. gøre det i tre uger hver andet år, i stedet for at gøre det i én uge en gang om året"

A.3

"Hele 84 % af landets lystsejlere er over 50 år"

A.4

"Et årtusindes maritime kulturudvikling og tradition har givet kysten sin unikke karakter, men autenticiteten er også i fare for at forsvinde mellem hænderne på os. Det er vor generations ansvar, at det særlige ved stedet bliver udviklet i stedet for at blive afviklet."

A.5

"Den tætte sammenhæng mellem menneskers brug af byens rum, byrummet kvalitet og graden af omsorg for den menneskelige dimension er ikke overraskende et generelt mønster, der kan påvises på alle skalatrin. Ligesom byer kan invitere bylivet, findes mange eksempler på, hvorledes ombygning af enkelte rum eller blot ændring af møblering og detaljer kan invitere til helt nye brugsmønstre."

A.6

"Når uderumskvaliteten øges, er det især de valgfrie aktiviteter, der får mulighed for at udvikles, og med det øgede aktivitetsniveau følger også en omfattende forøgelse af de sociale aktiviteter."

A.7

"At byen er overskuelig og let at finde rundt i, bidrager også værdifuldt til oplevelsen af tryghed. Det er en god kvalitet, at man enkelt og direkte kan opsøge de destinationer, man søger, uden usikkerhed og omveje. Klar struktur og overskuelighed betyder ikke store dimensioner og bredde, lige veje fra punkt til punkt. Gaderne kan udmærket være snoede og gadenettet varieret. Vigtigt er det, at de enkelte led i netværket har klare visuelle særpræg, at rummene har selvstændig karakter, og at vigtige gader kan kendes fra de mindre vigtige."

A.8

"Oplevelserne af livet i byen er også afvekslende og stimulerende underholdning. Sceneriet veksler fra minut til minut. Der er meget at se på: adfærd, ansigter, farver og følelser. Yderligere er der tale om oplevelser relateret til det helt centrale tema gennem hele menneskelivet: mennesker."

A.9

"Kerteminde Marina har forstået at udvikle et spændende og aktivt miljø i havnen, som gør den attraktiv for både sejlere, turister og byens borgere."

A.10

"Der er masser af muligheder, uanset om man kommer til byen fra land- eller vandsiden. Lystbådeområdet og resten af byen er fantastisk godt integreret, så der opstår en atmosfære af ferie og hygge."

A.11

"Vi kan være utrolig stolte af en smuk havn, der forstår nytækning med et stærkt fundament af de gamle værdier, siger turistchef Thomas Klostergaard og understreger, at prisen er et resultat af mange års arbejde og opbakning fra hele byen."

A.12

"Frihavnsordningen er en aftale mellem havne, hvor bådejere kan låne hinandens havneplads, uden at betale gæsteleje"

APPENDIX B

Boats: type, size, and living conditions

Boats vary in size and form, providing alternations in the living conditions on the boat, some barely has a kitchen, and others a fairly large one. One thing they have in common is the primitive 'secondary' toilet, which is mostly used when nothing else is accessible.

SAILBOAT small
 Year: 1986
 Size: 27 ft.
 Length: 8,10 meters
 Width: 2,9 meters
 Price (used): 155.000 dkr.



<http://www.yachtbroker.dk/baad/lm-mermaid-270/1848>



MOTORBOAT small
 Year: 1990
 Size: 22.9 ft.
 Length: 7,00 meters
 Width: 2,40 meters
 Price (used): 150.000 dkr.



<http://www.yachtbroker.dk/baad/bella-7000/2337>



SAILBOAT medium
 Year: 1990
 Size: 34 ft
 Length: 10,40 meters
 Width: 3,50 meters
 Price (used): 615.000 dkr.



<http://www.yachtbroker.dk/baad/sweden-yachts-340/2086>



MOTORBOAT medium
 Year: 1985
 Size: 36 ft.
 Length: 10,85 meters
 Width: 3,85 meters
 Price (used): 636.000 dkr.



<http://www.yachtbroker.dk/baad/storebro-36-fly/2177>



SAILBOAT large
 Year: 2006
 Size: 42.4 ft.
 Length: 12,62 meters
 Width: 3,4 meters
 Price (used): 1.499.500 dkr.



<http://www.yachtbroker.dk/baad/faurby-424-de-luxe/2149>



MOTORBOAT large
 Year: 2007
 Size: 39 ft.
 Length: 11,76 meters
 Width: 3,72 meters
 Price (used): 1.549.000 dkr.



<http://www.yachtbroker.dk/baad/galeon-390-fly/1687>



APPENDIX C

The five principles by Jan Gehl at Middelfart Marina

“Gather verb [gath-er]
 1. to bring (things or people) together into a group
 2. to choose and collect (things)
 3. to get or take (things) from different people or places and bring them together”



“Spread verb
 1. to open, arrange, or place (something) over a large area
 2. to place (things) over a large area
 3. to become larger or to affect a larger area
 4. to move into more places”

“Integrate verb [in-te-grate]
 1. to combine (two or more things) to form or create something
 2. to make (something) a part of another larger thing
 3. to make (a person or group) part of a larger group or organization”



“Segregate verb [seg-re-gate]
 1. to separate groups of people because of their particular race, religion, etc.
 2. to not allow people of different races to be together in (a place, such as a school)”

“Invite verb [in-vite]
 1. to ask (someone) to go somewhere or do something
 2. to ask (someone) formally or politely to do something
 3. to request (something) formally or politely”



“Reject verb [re-ject]
 1. to refuse to believe, accept, or consider (something)
 2. to decide not to publish (something) or make (something) available to the public because it is not good enough
 3. to refuse to allow (someone) to join a club, to attend a school, etc.”

“Open verb
 1. to move (a door, window, etc.) so that an opening is no longer covered
 2. to move and no longer cover an opening
 3. to cause (something) to no longer be covered, sealed, or blocked”



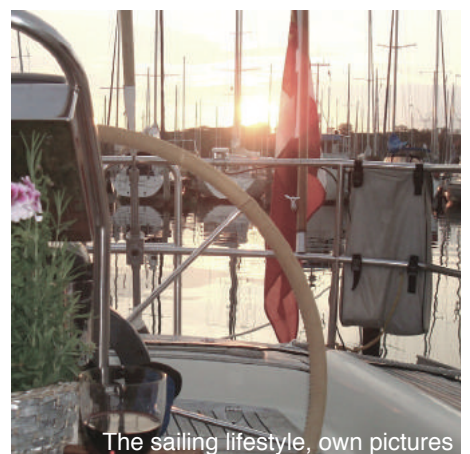
“Close verb
 1. to move (a door, window, etc.) so that things cannot pass through an opening
 2. to cover the opening of (something)
 3. to bring together the parts or edges of (something open)”

“Enhance verb [en-hance]
 1. to increase or improve (something)”



“Reduce verb [re-duce]
 1. to make (something) smaller in size, amount, number, etc.
 2. to cause (someone) to be in a specified state or condition
 3. to cause (something) to be in a specified form by breaking it, burning it, etc.”

APPENDIX D
The sailing lifestyle



The sailing lifestyle, own pictures

APPENDIX E

Historical pictures of the marinas



Århus havn, 1924

<http://www.danskkulturarv.dk/indhold/arhus-havn-nordre-mole-med-lystbådehavnen-og-søndre-mole-med-kongeskibet-dannebrog-2/>



Skovhoved havn, 1897

<http://www.danskkulturarv.dk/indhold/skovshoved-havn-en-sensommerdag-1/>



Hellerup havn, 1912

<http://www.danskkulturarv.dk/indhold/parti-fra-den-nyanlagte-hellerup-havn-i-forgrunden-den-ostre-mole-med-en-række-fortøjede-sejlbåde-1/>



Hellerup strandpark, 1950

<http://www.danskkulturarv.dk/indhold/hellerup-havn-kysten-ved-lystbådehavnen/>

APPENDIX F

Boat types



SAILING SPORT
Size: Small
Use: Sport
Wind sensitivity: High



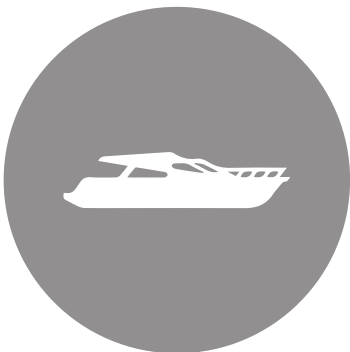
DINGHY/INFLATABLE BOAT
Size: Small
Use: Leisure
Wind sensitivity: High



SPEEDBOAT
Size: Medium
Use: Leisure
Wind sensitivity: Medium



FISHING BOAT
Size: Large
Use: Business
Wind sensitivity: Low



YATCH
Size: Large
Use: Leisure
Wind sensitivity: Low



MOTORBOAT
Size: Medium
Use: Leisure
Wind sensitivity: Low



MOTORSAILOR
Size: Medium
Use: Leisure
Wind sensitivity: Medium



SAILBOAT
Size: Medium
Use: Leisure
Wind sensitivity: High

REVIVING MARINAS

A NEW LIFE-PATH FOR THE DANISH MARINAS

PART 2: inspiration catalogue



MSc04 URB11
Master Thesis, May 2016
Department of Architecture, Design and Planning

by
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MSc04 urban design

Department of Architecture, Design and Media Technology

Project title

Reviving Marinas - a New Life-path for the Danish Marinas

Group number

ma4-urb11

Theme

Design strategy

Project period

01.02.2016 - 25.05.2016

Supervisors

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Number of pages

87

Number of words

13.414

Number of prints

05

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TABLE OF CONTENT

RESEARCH REPORT (PART 1)

- 04. Read me
- 04. *WHY develop the marina?*

DESIGN GUIDE

- 08. Introduction
- 09. The process
- 10. *HOW to develop the marina?*
- 12. A design compass
- 14. Manual
- 15. Process critique
- 16. Design compass - Social discourse
- 18. Design compass - Local values discourse
- 20. Design compass - Nature discourse
- 22. Design compass - Economy discourse
- 24. Design compass - Environment discourse

Case: Middelfart Marina

- 28. Middelfart - the city in between
- 30. Lillebælt
- 32. The vision for Middelfart city
- 33. Ongoing initiatives

SITE ANALYSIS

- 36. Site introduction - Middelfart Marina
- 38. Serial Vision
- 40. The Image of the City - Kevin Lynch
- 42. Structures and facilities
- 44. Infrastructure
- 46. Climate

RECAPITULATION OF MIDDELFART MARINA

- 50. The maritime heritage
- 50. The sense of place
- 53. SWOT

DESIGN STRATEGY

- 56. A design strategy
- 57. The design compass for Middelfart Marina
- 58. Design concept
- 59. Design strategy for Middelfart Marina
- 60. Vision
- 62. *WHAT to develop on the marina?*
- 64. Area 01: The pier
- 72. Area 02: The center area
- 80. Area 03: Kløverstien

REFERENCES

- 96. List of literature
- 97. List of illustrations

APPENDIX

WHY

DEVELOP THE MARINA



To sum up, the Danish marinas have suffered a decline in national– and trans-national tourism, where they, compared to other forms of overnight stays, have suffered the largest decline with a decrease of 42 % since 1990 [minbaad 2013, 05.02.16] With a large generation gap and a narrow minded use, the marina needs to be improved and adapted in order to secure its prosperity.

Marinas hold a great potential of being anchored as a genuine space in the city. Here, it can offer places to stay and walk, and recreational opportunities for locals, tourists, and maritime users, where the marina becomes an attraction, offering site-specific activities. Adapting contemporary urban design principles to meet the distinctiveness of the maritime environment will help create a lively and inviting public space with an authentic and strong narration of local and maritime affiliation.

Based on the preliminary research and analysis conducted in the research report (part 1); it is evaluated that to develop the marina in a holistic and sustainable way is important.



DESIGN GUIDE

The following content introduces a design guide with urban design parameters. The guide is an exploration of 15 design parameters that will help develop the marina. It contains a description of the process of developing and determining the design parameters, an introduction to a design compass, where each parameter is set in relation to a sustainable discourse, a manual of how to use the design compass, and a presentation of the parameters seen in the context of a marina. It is completed with a process critique.

INTRODUCTION

To integrate the marina within the urban framework, it is relevant to consider the constellation of the design parameters to meet a holistic adaptation, based on the achieved knowledge of the marina's physical- and social environment.

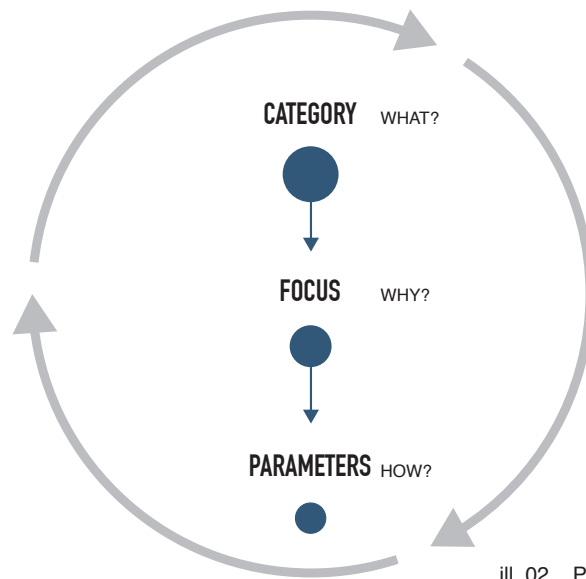
The knowledge gained through the theoretical research constitutes an environment that applies to not only social activities, but also necessary activities, since the marina is perceived as a second home area, holding both functional- and recreational facilities. Sailing combines the notion of second homes with the term mobility, where the boat is highly mobile and, therefore, not bound to a certain area. This addresses the need to consider the tendency for overnight stays, which can be improved by adding value to the marina's physical structure and environment in close connection with the social dynamics between its users. In the end, it benefits the user's sense of belonging; an affiliation with the marina, where it together with the tourist experience increase the chance of longer stays and returns in the future as well.

An area with an evidently close relationship to water, creates a strong local character, in combination with the maritime heritage. The physical structure of the marina often appears enclosed and disconnected, creating a scattered and incoherent structure with a vague and in-cohesive connection to its urban context. The marina's close location to the ocean provides issues regarding climate change and adaptation as well as its relation to the coastal landscape and the urban spaces. The marina balances between being a place for locals and a vacation spot for tourists.

The design compass has its starting point in the abovementioned.

This design guide has the purpose of assisting us in structuring a design strategy for the marinas. We want to underline that this guide only consists of guidelines and design parameters in how to understand and develop the Danish marina in a sustainable, holistic and site-specific way.

THE PROCESS



ill. 02. Process diagram

28 design parameters are selected from the knowledge gained through the preliminary research, all containing relevant properties to increase urban qualities and -life (cf. appendix B)

STEP 1

As we consider the design parameters to be dynamic tools, we want to challenge the parameters' relation to 7 directions of focus, on a meta-level to set a direction. The 7 directions of focus are; to integrate, to adapt, to invite, to secure, to involve, to attract, and to offer. An iteration of each direction of focus is conducted, where the parameters, we found to be a relevant match, was selected and listed. (cf. appendix pp. B).

STEP 2

Afterwards, we took it one step further, adding a second parameter, the urban design categories, based on a holistic approach to urban development, but seen in relation to the marina.

The urban design categories are; landscape, urban structure, cultural heritage, urban space, climate adaptation, activities, and user involvement.

Here, we reevaluated the tools listed in step 1, in relation to not only their direction of focus, but their relevance to each of the 7 urban design categories as well. The irrelevant parameters are subtracted. This reevaluation results in 49 iterations.

STEP 3

To gather the results of the iterations, 7 diagrams were made, one for each of the 7 directions of focus, where hierarchy among the design parameters are discovered as well.

The design parameters are first listed in a circle around the direction of focus, seen in the middle. (cf. appendix C) The results from step 2 are plotted into the diagrams, forming a web of lines. The coloured lines symbolize the connections between the categories and parameters, where each category is illustrated by a colour. The lines show the most relevant urban design category in relation to the focus of directions, where the most relevant urban design category is marked with the largest dot, since it has the most connections to a range of parameters.

The parameters with the most connections to a range of categories are generally seen as the most important, since they appear relevant in a variety of urban design categorisations.

STEP 4

The result of the 7 nets is collected in a scheme (cf. appendix D), where the direction of focus is paired with the largest urban design category. All of the 28 design parameters are listed above, where the dots below illustrate the hierarchy among them.

The design parameters set the frame and direction for further work, but can change in relation to the needs and structures of the given site.

HOW TO DEVELOP THE MARINA ?

The objective is to shed a light on new ways to develop Danish marinas. It is met through this inspiration catalogue, holding a sustainable, holistic, and flexible framework for site-specific solutions. A strategic foundation built on research, urban renewal principles, best-practice case analysis, and user research shape the premises of the inspiration catalogue to contribute with inspiration and ideas to qualify the marinas.

To qualificate the marina, its development needs to be...

SUSTAINABLE

with an assessment based on the city

to future-proof its development

→ Discourses for sustainability

HOLISTIC

with a user related approach

to add value and to create urban qualities

→ Urban design parameters

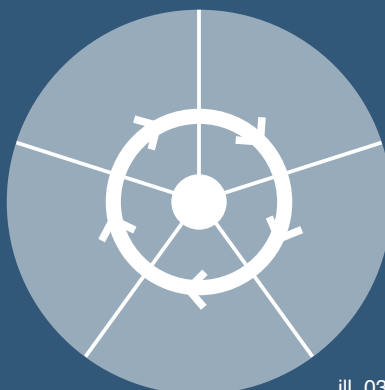
SITE-SPECIFIC

with a local point of departure

to create integrated initiatives and solutions

→ Site analysis

These three approaches are all integrated in a design compass. Through its use, it identifies relevant design focuses.



iii. 03. The three approaches

A DESIGN COMPASS

A compass is an instrument to determine a certain direction. “A device used to determine geographic direction, usually consisting a magnetic needle or needles horizontally mounted or suspended and free to pivot until aligned with the earth’s magnetic field.” [Thefreedictionary 2016, 22.04.16] In this relation, the compass determines a direction for the design, where it illustrates the parameters that can contribute to the potentials and qualities of a specific marina. It is forging identity and is a strong tool for communication that can be used as a mediator between the actors and users at the marina.

The following design compass consists of five sustainable discourses and 15 design parameters. Our work with sustainability takes its point of departure in the well-known model that focuses on environmental, economic, and social sustainability; three discourses, to which we have added two more; nature and local values, since we believe that those five together constitute the ‘full circle’ in relation to the marina. They are all important, when it comes to the development of a marina that strives for sustainable and durable development. Each discourse is further elaborated on page 16 and forward.

The design compass is simple, yet dynamic, for it to work in various situations and on various scales.

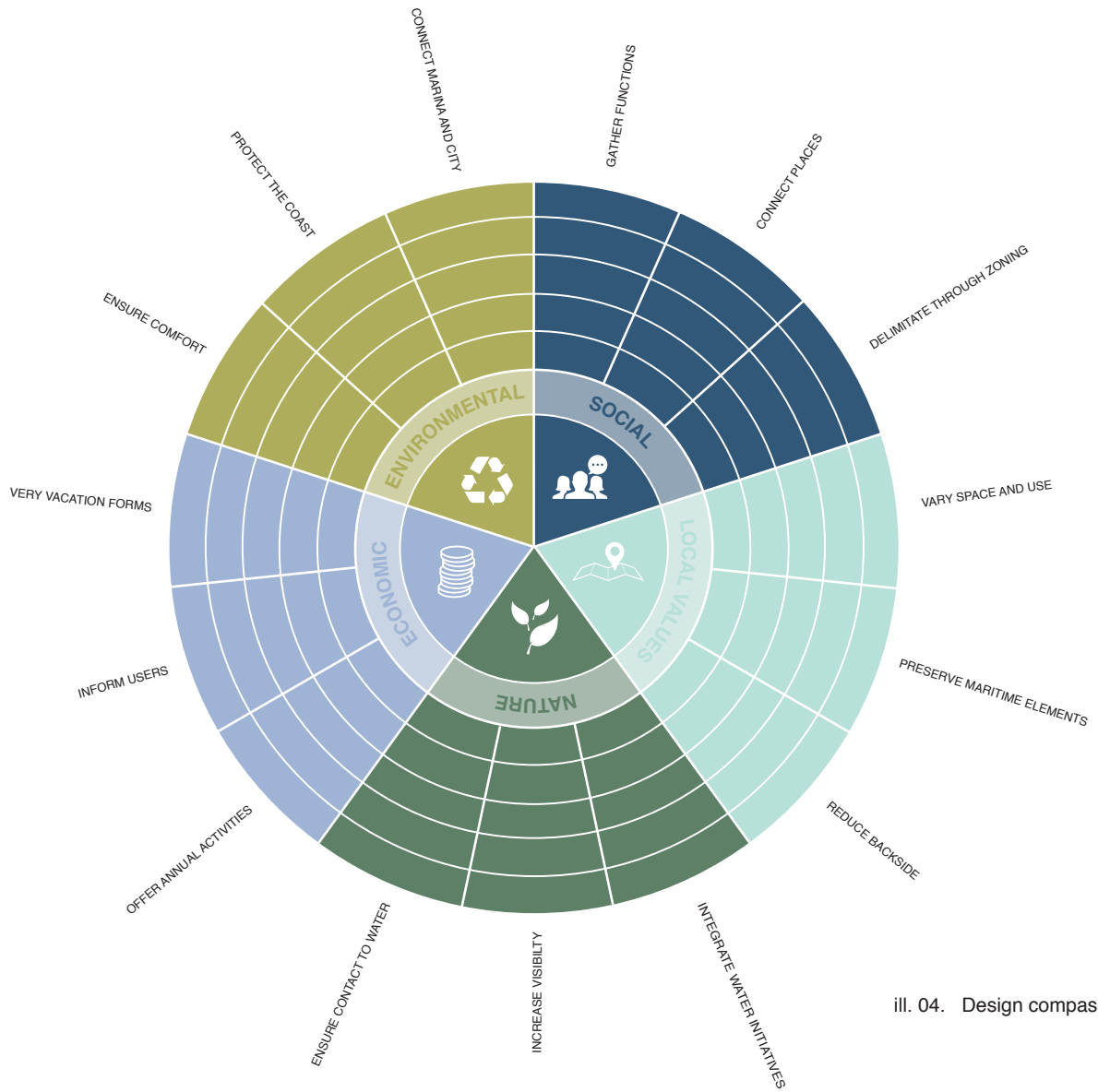
THE THREE APPROACHES

The thesis has a wide approach to sustainability, where a holistic assessment of the environment, social conditions, nature, economy, and local values are graphically illustrated as a ‘cohesive design palette’ in the design compass. It seeks a prioritization of design focuses for the individual site and project based on the site-specific problems and potentials.

Basically, **sustainability** is about common sense. A site analysis has the purpose of illustrating the most important places to take action, because everything is not equally important everywhere. It is essential to work with sustainability in relation to the neighborhood and city as well, so the site is not perceived as an isolated area, but as an integrated part of a city’s sustainability. On city level, overall structures and cohesions are investigated, on neighborhood level, local entreties are analysed, and on site level, the physical appearance and life is explored. [Aalborg 2016, 26.04.16] In that relation it is important that the marina is looked upon as an integrated part of the sustainable strategy for the city.

The five core values that characterises the **holistic** approach are: integrated solutions, significant urban value, site approach, user involvement, and value added. A synergy effect has the potential to be created by a total effort, but it is easy to lose the full picture of sight if the problems are isolated to the specific site. Instead it is important to look at its relation to the surrounding areas and the city. (MBBL 2014)

The term **site-specific** is a dynamic and broad concept that involves experiential, cultural and people oriented resources. The potentials of the site-specific lie within the geographical or infrastructural location of the place, in the landscape, the culture, the people or the industry, or even in the changes a place has been through; its history of development. An example is how the identity and character of a place can change from being a place with focus on industrial fishery to a vacation spot with maritime attractions. [Stedet-tæller 2008, 16.05.16]



ill. 04. Design compass

MANUAL

How to use the design compass

The design compass is a holistic approach wrapped in a sustainable model for urban development. It is a dynamic tool to create a 'good' marina, where it provides a palette of design parameters - actions to improve and adapt the marina's physical environment. The compass is perceived as a whole, where the sustainable discourses are evaluated and prioritized in relation to the city's municipal- and local plan.

The design compass is used as a bridge between the preliminary research, analysis, and process that formed the design parameters placed in the design compass. These design parameters are useable on various scales. It is your own choice, whether or not you wish to work with a few design parameters or combine a larger amount, depending on your needs and level of ambition.

Since it is a holistic approach, it is practically impossible to meet all the sustainable discourses to the same extent. Therefore, it is important to consider the priorities of the municipality's visions and future planning, but also their wishes for the marina, from here the sustainable discourses are mutually regulated.

With a basis in the municipal plan, you need to evaluate the hierarchy between the sustainable discourses. What is your primary sustainable focus, and what is your secondary? Afterwards, you need to conduct a site analysis that will help you find the problems and potentials of your marina. The understanding of the site is used as a starting point to evaluate, which design parameters you find relevant to work with, at the given site.

Perhaps, some of the design parameters are already solved, maybe some can be improved, or maybe some are not present at the moment?

From here a professional assessment, of how high or low the individual design parameters are weighed at your marina, is performed. Weighing each design parameter will help you figure out what to emphasize in the design strategy. How many design parameters you choose is, as mentioned, up to you. Here, you can benefit from dividing them into primary, secondary, and tertiary parameters.

The use of the design compass will be illustrated through a case: Middelfart marina on page 57.

PROCESS CRITIQUE

When challenging the design parameters, we went far and wide to achieve an understanding of the possibilities of each parameter, but at the same time, it was difficult to maintain a sense of perspective, which forced us to take a few steps back several times.

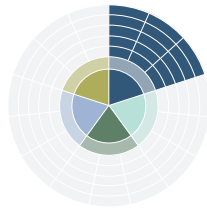
Initially, we started out with too many parameters, and many of them are interconnected, and can be collected under the same parameter, making it difficult to keep track of all of them. Yet, we wish to explore the potential in all of them. The main challenge with the parameters is likely not the amount, but rather their titles. In the initiate iterations, their titles have different levels of detail; some are specific and others are general, which affect the result gained through the process. It also makes it important to us to personally evaluate the result before extracting the 15 parameters we valued to be the most important to put in the design compass. It is also in this process that we evaluate the titles of the 15 parameters to give them the same level of detail, but also to make sure to set a design direction - something one can do, like 'gathering functions'.

The design parameters have a tendency to end up in a box-like structure, despite the process and hierarchy between them (cf. appendix D). The design compass is used to break the box-like structure by creating a palette of design guidelines to adapt and improve a marina. Placing them in the model for sustainability illustrates their holistic approach, while making them compatible with sustainability in relation to urban planning.

To make the design compass, as comprehensive as possible, all unnecessary information was removed. Leaving only the top layer of information for the reader. For this reason, the direction of focus and the urban design categories are not visible in the final result, but has been used in the process to guide us and to ensure a holistic approach and evaluation. Removing this unnecessary information and applying the sustainability term in the design compass, makes it comprehensive and accessible in relation to the working method of the municipalities, while ensuring a holistic approach and, thereby, ensuring quality in urban development.

DESIGN COMPASS

Social discourse in a marina context



Social sustainability has a people centric approach. It is about health and well-being as well as the cohesiveness of an area, where it empathises the good life in the city and spaces for everyone. [Aalborg 2016, 26.04.16] In relation to a marina, the social discourse points towards an area with variation and differentiation in spaces, both functionally and spatially, where it provides the possibility to perform optional and social activities. It processes internal and external connections as well; coherent paths and a division of private, semi-private, and public areas.

“Social sustainability also includes a significant democratic dimension that prioritizes equal access to meet ‘others’ in the urban spaces. In general, this requires accessible and inviting public spaces, which can serve as attractive environments for both the organized and informal meetings.”
(Gehl, Svarre 2010 pp. 119) own translation, cf. appendix A1

DESIGN PARAMETERS



GATHER FUNCTIONS

This parameter seeks to centralize larger functions such as restaurants, stores, hotels, markets or the like, to generate a catalyst for urban life. With short walking distances and vibrant spaces, centralizing is a facilitator for activity and stay.



CONNECT PLACES

This design parameter seeks to improve conditions for walks and stays, by linking pedestrian paths to places at the marina. Creating intuitive paths, way-finding systems, and reducing barriers are important to comfort and guiding, whilst also connecting the internal infrastructure to the external, guiding people from and to the marina and the city.



DELIMINATE THROUGH ZONING

This design parameter seeks to improve the internal organisation, by staging places for stays and for transits, while increasing safety and activity. The different zones can also be characterised by private-, semi-private- or public appearances. The human scale is improved by defining zones in a large area, where it creates intimate and inviting spaces.



ill. 05.



ill. 06.



ill. 07.

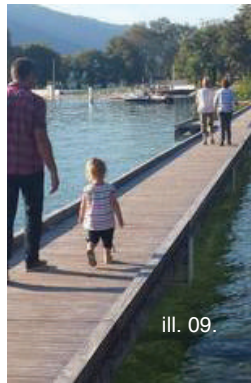


EXAMPLES

- Gathering functions in a central area
- Ensure short walking distances
- Vary the supply of functions
- Create a public space for meetings and social events



ill. 08.



ill. 09.



ill. 10.

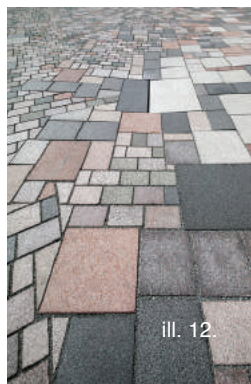


EXAMPLES

- Connect internal and external paths
- Guide and inform through semiotic and geo-semiotics
- Connect two places by crossing the water (bridge or pонтons)
- Create a promenade to assemble the marina; its structure, functions, and facilities



ill. 11.



ill. 12.



ill. 13.

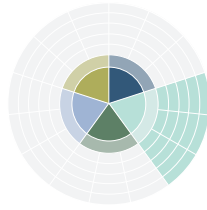


EXAMPLES

- Delimitate through lowered or elevated platforms or surfaces
- Define through choice of materials in the pavement
- Use vegetation, flower boxes, and boulders to define a space or an edge

DESIGN COMPASS

Local values discourse in a marina context



Local values of sustainability are elements that are perceived to be of productive value, for a particular area. It can be activities, architecture, cultural heritage, and landscape, the elements that makes a place special, its identity. [Aalborg 2016, 26.04.16] In relation to marinas, the discourse of local values points towards a preservation of the cultural heritage, and its supply of activities. It also concerns improving quality, while ensuring that the maritime identity is not lost in modern architecture. These values are accompanied by a diverse physical environment with intuitive paths and views that frame significant features, as well as an environment that facilitates temporary and possibly annual events, and a range of activities.

“People has always had the need to know their own cultural heritage, as necessary basis for existence, and as an important part of their own and country’s identity.” [KUM 2016, 15.05.16] own translation, cf appendix A2

DESIGN PARAMETERS



VARY SPACE AND USE

This parameter seeks to improve the embodied experience through spatiality, where a correlation between patterns of use and invitation, appeals to stay and use, while providing space for unplanned activities.



PRESERVE MARITIME ELEMENTS

This parameter seeks to improve and secure the marina’s identity through preservation of maritime elements; its cultural heritage. It is important to identify the maritime elements before being able to preserve them; they are seen in objects, materials, structures, and the like.



REDUCE BACKSIDES

This parameter seeks to open up the area, as buildings in the marina often faces the ocean turning their ‘back’ on the city.



ill. 14.



ill. 15.



ill. 16.



EXAMPLES

- Mixed programming
- Varying spatiality and materials
- Creating seasonal activities and events



ill. 17.



ill. 18.



ill. 19.



EXAMPLES

- Use natural materials such as wood, stone, gravel, grass, concrete or willow
- Be true to the environment; is it neat, rustic, uncultured, or more urban?
- Preserve a maritime architecture



ill. 20.



ill. 21.



ill. 22.



EXAMPLES

- Create buildings with more than one frontside
- Avoid a wall of building backsides
- Limit large unbuild areas between the marina and its urban context

DESIGN COMPASS

Nature discourse in a marina context



Nature sustainability involves a green city that increases people's well-being and health, while beautifying its appearance. It also concerns biodiversity, climate adaptation, and recreational areas. [Aalborg 2016, 26.04.16] In relation to a marina, the nature discourse points towards a cultivated and uncultured nature. It is the dynamic between the cultivated urban nature and the uncultured coastal landscape that both contribute to beautiful surroundings. It is a balance between protection and utilization. Nature (here: trees in particular) in the cities affect people and the surroundings in several ways; it reduces sun exposure, flows and nutrients in stormwater, as well as air pollution. It provides shade on hot summer days, habitats and greater biodiversity. Moreover, it encourages outdoor activities, reconnects children with nature, and reinforces a sense of place and city identity. [Melbourne 2016, 28.04.16]

"At the present time, we see an increased focus on biodiversity in cities... There are many ideas, from the large to the small projects, that can be shared across the country, says Jan Ejlsted, where he hope that more cities will start to focus on the value of a rich and diverse nature to the delight of the citizens." [Friluftsrådet 2015, 28.04.16] own translation, cf. appendix A3

DESIGN PARAMETERS



ENSURE CONTACT TO WATER

This parameter seeks to provide direct contact to the water from enhanced accessibility or installations that offer possibilities to sit and walk - and touch the water. Water is an attraction in itself and is a significant part of the marinas' surroundings. People are naturally drawn to water, therefore, it is important that people are able to see, touch, and feel it.



INCREASE VISIBILITY

This parameter seeks to improve the people's ability to comprehend and interact with the space they move in. Here, it includes short visual distances, interesting views, and a feeling of safety.



INTEGRATE WATER INITIATIVES

This parameter seeks to provide sustainable water features with multiple purposes, where water initiatives invite to stay and to be active, while providing a differentiated use by collecting and reusing rainwater.



ill. 23.



ill. 24.



ill. 25.



EXAMPLES

- Make the edge between water and land a place to meet, to sit, and to walk
- Create a promenade with/or stairs and platforms that enable water contact
- Create ponton bridges that makes people move on water
- Improve the beach



ill. 26.



ill. 27.



ill. 28.



EXAMPLES

- Ensure good lighting at night
- Create seating at scenic views, squares, and promenades
- Implement a way-finding system



ill. 29.



ill. 30.



ill. 31.



EXAMPLES

- Create rainwater beds with a practical and aesthetic purpose
- Reuse rainwater for cleaning boats or equipment
- Reuse and filter rainwater for water play
- Reuse and filter rainwater for outdoor showers by the beach

DESIGN COMPASS

Economy discourse in a marina context



Economic sustainability focuses on durable and long-lasting solutions and it concerns value for money and security of livelihood. [Aalborg 2016, 26.04.16] In relation to a marina, the economic discourse points towards lively spaces, minimization of costs, long-lasting, and prospective solutions such as materials that can withstand the coastal climate, as well as climate adaptation solutions. It also concerns the possibility to meet other people, to create active ground floors, a differentiation in functions, supply of experiences, and meeting places to increase use and overnight stays.

“Marinas hold good properties for recreational vehicle, as marina often lay peri-urban, are cozy and are therefore attractive. It is also easier to create a recreational vehicle parking than a campground for them as in Aabenraa, since it does not require a rental permit under the ‘holiday home legislation’, and thus the camping regulations.”

[Autocamper-info 2016, 18.05.16] own translation, cf. appendix A4

DESIGN PARAMETERS



VARY VACATION FORMS

This parameter seeks to increase the possibilities for overnight stays, where an extension in tourism aids the marinas economy. It also adds value to the social life at the marina.



INFORM USERS

This parameter seeks to improve the information communicated to locals about the marina and to tourists about the marina and the nearby city. Increasing the knowledge about the city and the marina will make both more accessible.



OFFER ANNUAL ACTIVITIES

This parameter seeks to prolong the marina’s season by introducing annual activities that can provide purposes to visit the marina during the off-peak season, while introducing new user groups. The marina is a seasonal area that “pops up” during spring and starts to “close” in the autumn. By offering activities all year, it will create extended purposes for use and can contribute with life and an economic growth.



ill. 32.



ill. 33.



ill. 34.



EXAMPLES

- Facilitate an area for tents
- Integrate shelters
- Place a nearby camping site
- Create spaces for autocampere
- Add a hostel or a hotel



ill. 35.



ill. 36.

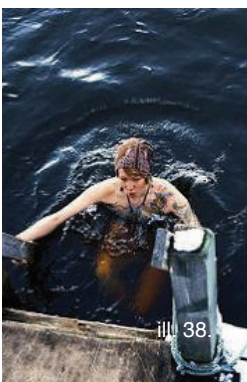


ill. 37.



EXAMPLES

- Distribute maps and information at the harbour office
- Mark routes and paths in the area
- Information boards
- Illustrate the route and distance from the city centre to the marina.
- Promote the attractions in the city and marina



ill. 38.



ill. 39.



ill. 40.



EXAMPLES

- Winter swimming
- Mountain bike rental
- Food or secondhand markets
- Fishing
- Ice sailing and -skating
- Greater and smaller events

DESIGN COMPASS

Environment discourse in a marina context



Environmental sustainability concerns better local environments and optimization of, especially, transportation systems. [Aalborg 2016, 26.04.16] In relation to a marina, the environmental discourse points towards an improvement of the infrastructure and parking opportunities, as well as creating a network that connects the marina and adjacent city areas. It also concerns local recycling of materials, sorting of waste, and protection against climate change; here, a special emphasis on protecting the coast and use of local drainage of rainwater.

“The great future for LAR lies in the many opportunities the system provides for attributing value to the urban environments. Being able to create harmony, both environmentally and aesthetically, from the changing climate and anthropogenic green spaces, is one of LAR’s greatest qualities.”
(Milford 2015 pp. 3) own translation, cf. appendix A5

DESIGN PARAMETERS



CONNECT MARINA AND CITY

This parameter seeks to connect the urban structure with the structure of the marina, making the marina an integral part of the urban structure. This originates from an interpretation of the marina as often having a vague relation to its context, even though it is a recreational space located in close connection to a city. By anchoring the marina as a public space, on equal terms as other public spaces in the city, both of them begin to see an advantage.



PROTECT THE COAST

This parameter seeks to secure the coast through integrated solutions, where installations for coastal protection can invite people to stay. Due to the Danish climate, coastal protection is required; especially if the marina is located in a high risk area, where storm floods often occur. These extreme events are fairly rare, but have expensive costs - especially for the built environment.



ENSURE COMFORT

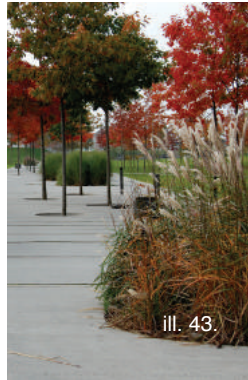
This parameter seeks to improve the general use of the marina, where a comfortable urban environment invites people to stay longer, while enhancing the amount of interaction between people. Due to the unreliable Danish weather and the notion that the sailing lifestyle is highly dependent on weather conditions, it is important to be aware of the supply of facilities in relation to these. There should be things to do in spite of less attractive weather.



ill. 41.



ill. 42.



ill. 43.



EXAMPLES

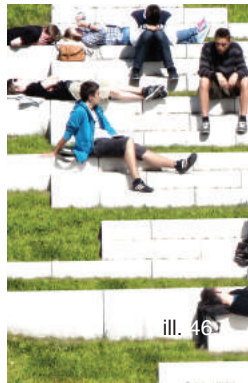
- Create intuitive routes by connecting paths and way-finding systems
- Draw on adjacent landscapes or elements from the urban structure to create an urban coherency
- Connection to public transportation systems like bus and train
- Bike rental opportunities



ill. 44.



ill. 45.



ill. 46.



EXAMPLES

- Create a promenade with elevated elements
- Create a screen that protects from flooding
- Create changes in terrain
- Create pontoon boat piers
- Elevate the whole area or buildings



ill. 47.



ill. 48.



ill. 49.



EXAMPLES

- Set pedestrians in focus by separating them from cars or creating shared spaces
- Create seating areas with a view of the area
- Create a pavilion to shelter from wind and rain
- Create places to stay with a canopy to provide shade
- Build a lounge for sailors and autocampers with, for instance, TV, pool table, kitchen, and playroom to provide indoor activities.

An aerial photograph of a coastal town, likely Middelfart, Denmark. The town is built on a peninsula and is surrounded by a large body of water. A prominent suspension bridge spans across the water. The landscape is a mix of green fields and urban development. The sky is clear and blue.

CASE

MIDDELFART MARINA



ill. 50. Lillebælt

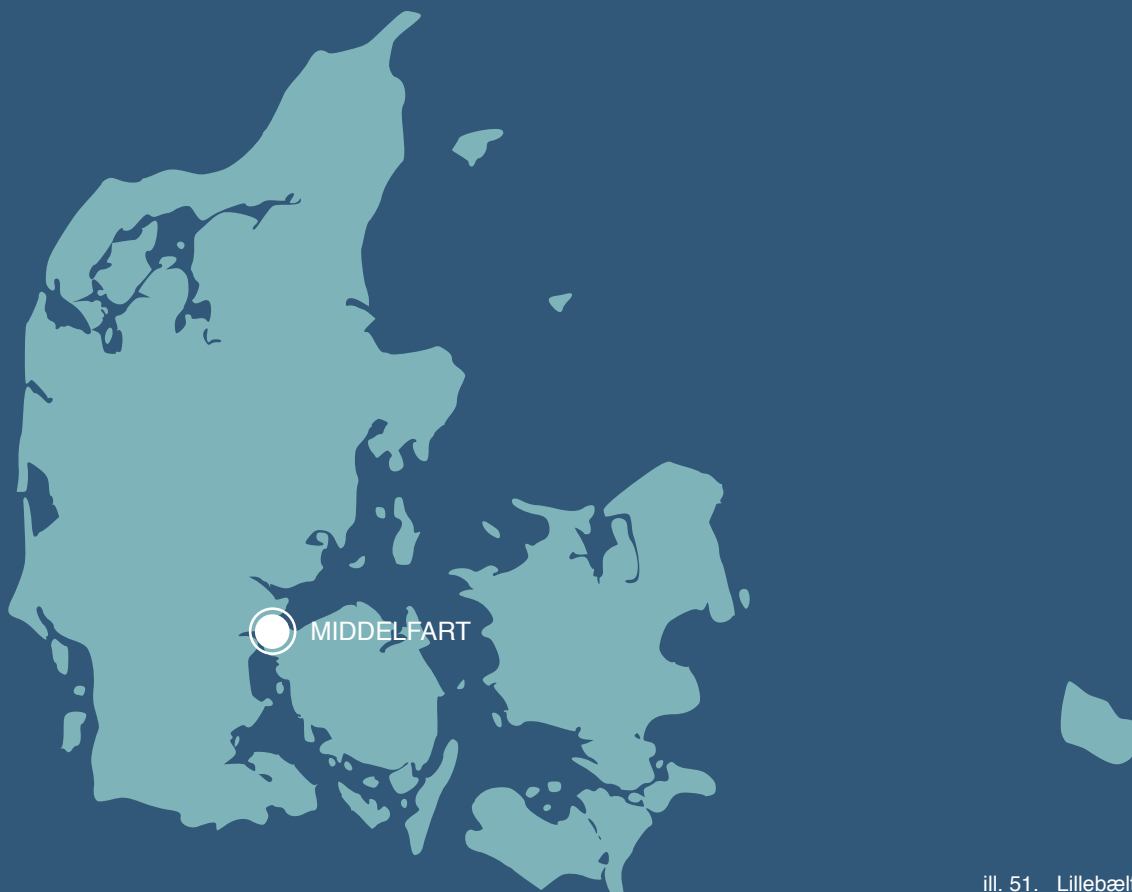
MIDDELFART - THE CITY IN BETWEEN

A two hour drive from Aalborg and likewise from Copenhagen, right in the middle of Denmark, the city of Middelfart is located; a borough on Fyn. Middelfart is a part of Trekantsområdet; a traffic hub, centre of growth with big ambitions, good prospects, and 1.500 new companies every year. [Trekantsområdet 2016, 25.02.16]

From 1890, Middelfart has been an industrial city, especially corn trade and the clothing industry blossomed in the 19th century. But, the establishment of Den Gamle Lillebæltsbro from 1925 to 1935 contributed with the most significant city growth. [Denstordanske 2015, 25.02.16] The bridge is an edifice that secured the very first fixed link between Fyn and Jylland; a massive feat of engineering with a length of 1.178 meters, a height of 57 meters, and a price of 32 million Danish Crowns. [VisitMiddelfart 2016, 25.02.16]

Today, the bridge is not only used by trains, drivers, bicyclists, and pedestrians; Bridgewalking Lillebælt is the top attraction in Middelfart, wherefrom, one can take a walk over the structure of the bridge and take in the scenic view of the city, belt and, beech forest. [VisitMiddelfart 2016, 25.02.16]

In 2013, the number of inhabitants was 37.521 in Middelfart Kommune. The area is characterized by growth in the larger cities and decline in smaller towns. The municipality has experienced a decrease in the number of children and youngsters, but an increase in the number of elderly. That, and the expectation that the population will grow to 39.000 in the year of 2026, create challenges for the framework of the municipal development. [Middelfart 2016, 29.02.16]





ill. 52. Gl. Havn, Middelfart

TOP 10 attractions

1. Bridgewalking
2. CLAY Keramikmuseum Danmark
3. Whale safari and fishery
4. Hindsgavl Halvø and deer park
5. Activities on water
6. Humlemagasinet
7. Middelfart Museum
8. Snorkeling- and diving adventures
9. Strib Automobilmuseum
10. Gl. Havn, Den Gl. Bydel and pedestrian street

[VisitMiddelfarttop 2016, 28.02.16]



ill. 53. Den Nye Lillebæltsbro

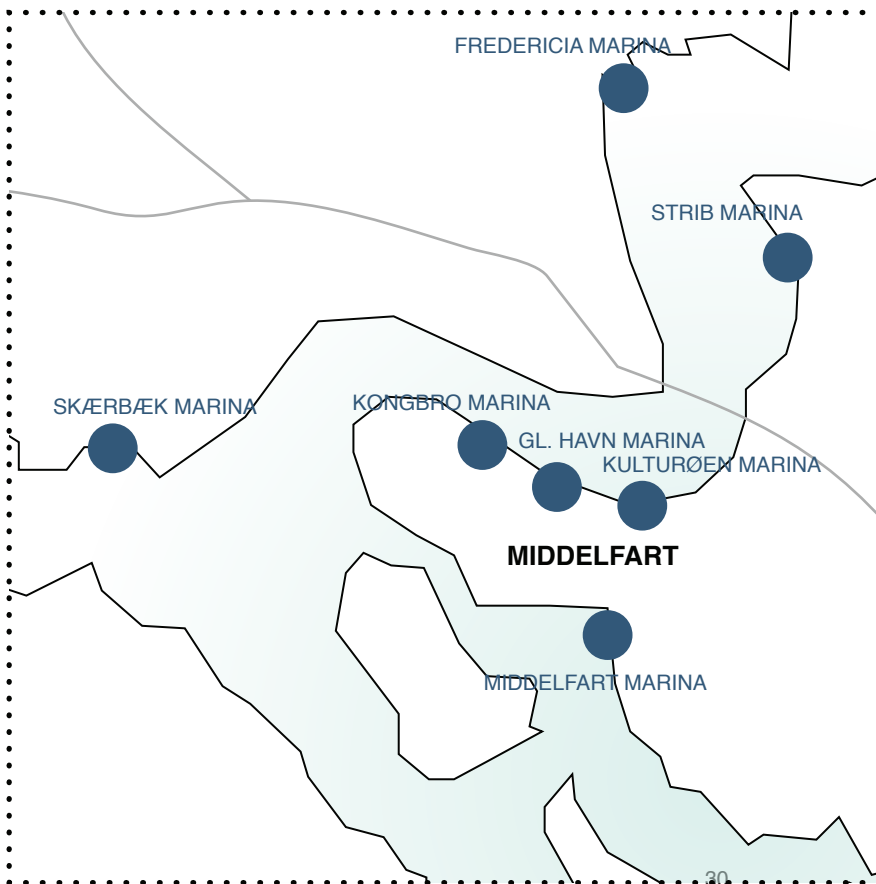
LILLEBÆLT

Lillebælt is the strait between Jylland and Fyn that connects Kattegat and Østersøen. It is shaped like an S and is both one of the most narrow and deep waters in Denmark. [VisitMiddelfartfyn 2016, 02.04.16]

The illustration shows the distribution of marinas in Lillebælt. On one hand, one can argue that there must be a lot of competition between the marinas, as they are located as if on a string, but on the other hand, they must benefit from each other, because a lot of sailors go on longer weekend trips in the local area. For these shorter trips, the destinations have to be within a short distance, as a standard leisure sailboat sails with just about 12 km/hour with a good wind [Dream 2016, 03.04.16].

Middelfart is situated at the most narrow spot in Lillebælt, between Lillebæltsbroen and Den Gamle Lillebæltsbro. From before the 13th century, the city has functioned as a service city for ferry traffic between Jylland and Fyn, which also is the meaning behind the previous name *Melfar*. [Denstoredanske 2015, 25.02.16] Up until 1897, the ferry crossing was the main nerve for life and food in the city (Dragsbo, Hansen 1996).

In the northern region of Lillebælt, one of the world's largest groups of whales is present. Porpoises is big part of the history of Middelfart; from 1593 up until 1880, porpoise hunting was an organised event south of Middelfart. [Lillebælt-waters 2016, 25.02.16]



FREDERICIA MARINA
Number of moorings: 475



STRIB MARINA
Number of moorings: 140



KULTURØEN MARINA
Number of moorings: 50



KONGEBRO MARINA
Number of moorings: 44



GL. HAVN MARINA
Number of moorings: 60

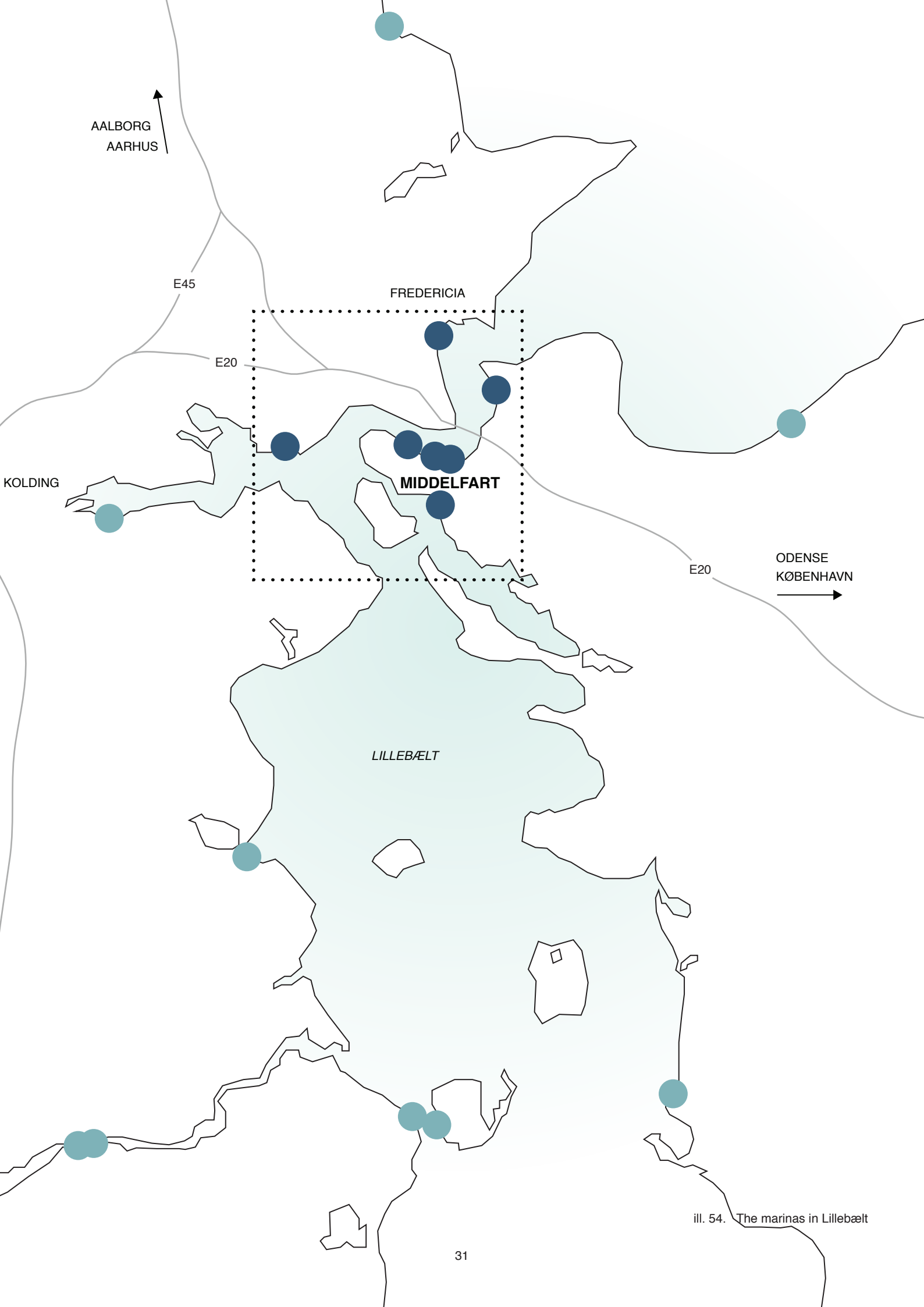


MIDDELFART MARINA
Number of moorings: 550



SKÆRBÆK MARINA
Number of moorings: 165





AALBORG
AARHUS

E45

FREDERICIA

E20

MIDDELFART

KOLDING

ODENSE
KØBENHAVN

E20

LILLEBÆLT

ill. 54. The marinas in Lillebælt

THE VISION FOR MIDDELFART CITY

The municipality's vision

The 2020 vision for the municipality of Middelfart contains the story about Middelfart, overall goals for urban development, and two signature efforts, one of them being Middelfart Marina and the other; a climate laboratory. [Vision2020 2015, 13.03.16]

A key-word in the vision is “connection”. The municipality seeks to connect the history and future of Middelfart; to connect Denmark, east and west; to connect people, and create community across borders. Moreover, they believe in becoming Denmark’s green municipality of growth. [Vision2020 2015, 13.03.16]

“**We call it the direct route.
We don’t believe in limits.
We believe that
there’s always a bridge.”**
[Vision2020 2015, 13.03.16]
own translation, cf. appendix A6

The political goals of the vision focuses on tourism as a high growth potential and rainwater management as well. [Vision2020 2015, 13.03.16] One of the two signature efforts; the vision for Middelfart Marina, focuses on a more versatile and attractive area - a marina for the entire city. The other; the vision for the climate laboratory, focuses on prevention of climate changes, adaptation to the future climate, and performance of concrete projects that function as a showcase for good and durable climate solutions. [Vision2020 2015, 13.03.16]

The municipality has, as mentioned, a goal to become a green municipality of growth, where sustainability is naturally included - from the notion of sustainability the municipality thinks, develops, and plans, as Middelfart Kommune focuses on a holistic mindset. The sustainable urban development is achieved by creating a balance between protecting and using, by economising the areas, and focusing on quality over quantity. It is important to create varied and compound city life, where choice of

materials can withstand climate and sea water. All supporting the identity, health, and the environment of Middelfart. [Middelfart 2016, 29.02.16]

Below, it is illustrated which of the five sustainable discourses the municipality of Middelfart estimates to be the of most importance. The illustration (ill. 55) is based on our perception of the plan strategy and municipal plan for Middelfart.

In relation to **social** sustainability Middelfart focus on densifying and transforming the central urban areas, to create good urban spaces and increase experiences. The **nature** discourse addresses protecting the city against climate change, with Klima-byen as a showcase of durable solutions, and to use the coastal landscape as a growth carrier.

The **environmental** discourse is the largest as they highly value climate adaptation, as seen in Klima-byen, while prioritising the creation of good infrastructure and high mobility. Here they wish to involve nature, activity, health and recreation in the planning of new pedestrian paths, which can be a strong assent to the development of the marina.

The **economic** sustainability is the least prioritised discourse, which includes designing the physical environment with focus on quality over quantity, where nature and landscape is used to strengthen tourism, by incorporating tourism into its development. Middelfart has a well-developed tourism with more tourism initiatives like Kløverstjerne, which are likely the reason why it is not highlighted in the vision. In relation to **local values** they find it important to create variation in the urban life, to create a multifaceted and lively city. Use the existing urban framework to create new environments for urban- and cultural life, where there is a greater visibility of the cultural heritage.



ill. 55. The five discourses

ONGOING INITIATIVES

Middelfart Kommune has several ongoing projects - two are worth mentioning in this relation; Klima-Byen and Kløverstien. Two very different projects, but they do have something in common - the desire to create beautiful and educational experiences.

KLIMABYEN

Realdania, Middelfart Spildevand A/S, and Middelfart Kommune are behind the project, Klimabyen - a trial project in the neighborhood surrounding Kongebrovej located in Middelfart. From June 2014 to March 2015, the city held an architectural competition regarding urban development through climate adaptation. The six competing teams brought proposals for climate adaptation as a lever for the development of green areas and urban spaces, as well as suggestions for added value of the climate adaptation now and in the future. [Klima-byen 2016, 17.04.16] It is one of the largest climate adaptation projects in Denmark. [Middelfart 2016, 29.02.16]

A project related to KlimaByen is "De 7 Regnhaver", which are seven privately owned gardens on Egevej in Middelfart, where people have provided their garden for the testing of new solutions for managing rainwater locally. [Middelfart 2016, 29.02.16]

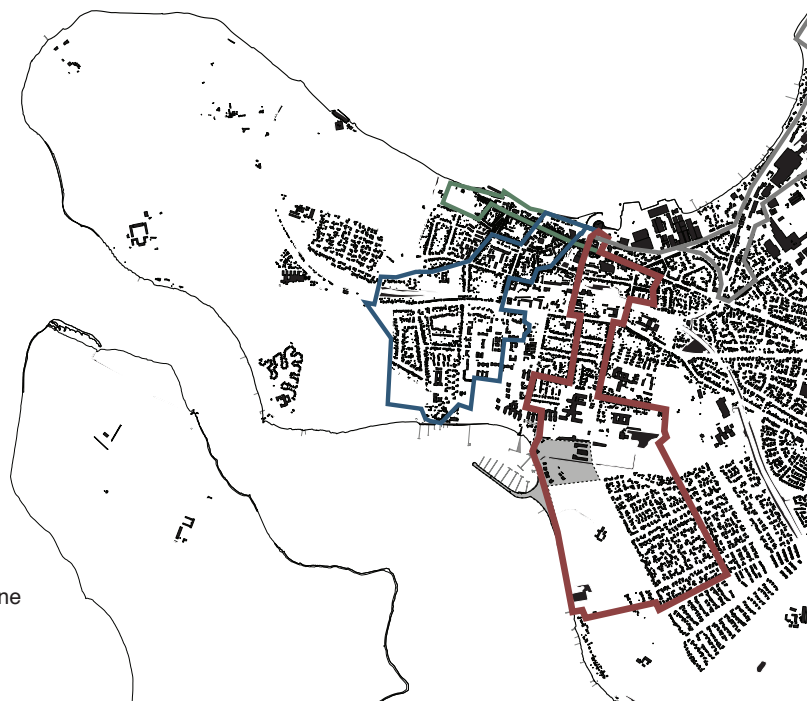
The goal with Klimabyen is to create innovative climate adaptation solutions and to secure a durable, more beautiful, and funnier city, by creating solutions that manage rainwater on the surface as a supplement to underground pipes. Hereby, contributing to the quality of life in the city. [Klima-byen 2016, 17.04.16] The management will provide a greener city and will add quality both when it rains and when it does not. [Klima-byenmiddelfart 2016, 18.05.16]

The 2nd of May 2016 has been a milestone for KlimaByen, as they cut the first sod. The area is 450.000 m², is located in the western part of Middelfart, and it contains three different waterways passing through three different neighborhoods. [Klima-byenmiddelfart 2016, 18.05.16]

KLØVERSTIEN

The national wide project, Kløverstierne, are four marked paths that matches the city they are located in. The essence is one path, four routes that are all tied together. It originates from a point in the city centre, from where four routes of different lengths originates. The routes are color coordinated and will take the user through the city, experiencing attractions, nature, culture, and the outdoors. [Middelfartkløversti 2015, 15.05.16]

In Middelfart, the project initiates at Kulturøen, a cultural center at the harbour front [Middelfartbibliotek 2016, 15.05.16]. The routes run alongside existing paths and roads that includes different experiences and bring the guests to some of the most beautiful and exciting sights that Middelfart has to offer. The red route connects the marina with the inner city and is also the second longest of the four routes. It runs by the train station, Ø-kvarteret, central housing areas, two schools and a high school as well as the beach. The routes combines exercise, storytelling, and experiences. [Middelfartkløversti 2015, 15.05.16]



ill. 56. Kløverstierne

SITE ANALYSIS

The following content will take the reader through an analysis of the chosen case, Middelfart Marina. It gives an introduction to the case and explores its relation to the city through mappings.

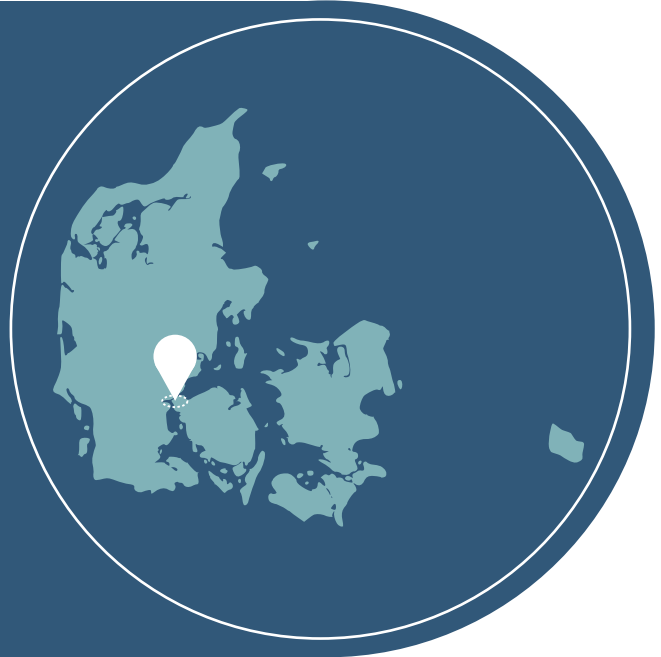
The purpose of the site analysis is to identify and clarify site-specific problems and potentials that will be used later to define our design strategy for Middelfart Marina.

SITE INTRODUCTION

Middelfart Marina

LOCATION	Middelfart
CITY TYPE	Borough
YEAR	-
NUMBER OF KM TO THE CITY	Approx. 1,5 km
NUMBER OF INHABITANTS	14.815 (2014)
NUMBER OF MOORINGS	550 moorings
NUMBER OF GUESTS/YEAR	11.000 (2010)

*



Middelfart Marina is located 1,5 kilometers south of the city centre of Middelfart. The marina is situated in scenic surroundings at Fænø Sund, surrounded by nature and recreational activities such as a playground, beach, mini-golf, restaurant, and café as well as maritime activities, clubs, and associations. With a beach volley course, crab catching bridge, several sailing clubs and a golf-course, care home, and psychiatric hospital as neighbours.

“If you look at the location of this place, you will not find it better anywhere in the country. The marina is surrounded by beautiful nature and there is always shelter somewhere in Lillebælt.”

Harbour master Middelfart Marina, Kaare Bak [Melfarposten 2010, 12.02.16] own translation, cf. appendix A7

As earlier mentioned. (cf. vision, pp. 32) Middelfart Marina is one of two signature initiatives in the municipal plan. A new local plan published in 2016 focuses on holistic planning management, where they wish to expand and improve the framework of the marina. By creating new activities and by strengthening the qualities within green growth, tourism, and outdoor life all year round, the marina becomes a recreational area for the entire city. [Lokalplan163 2016, 18.03.16]

FIRST IMPRESSIONS

We arrive at Østre Hougvej, a main road, and the area along the road seems very open and empty. To our right, a large area for winter storage appears, while the road turns a bit, and we pass the marina office. The parking facilities are quite spread out, but kept on larger surfaces. We park the car in front of a restaurant and walk towards the pier. To get access to the outer pier by car, one has to pass a barrier, but pedestrians can easily go around. In fact, the pier is only for unloading stuff, but the cars seem to be permanently parked along both sides, and we have to navigate around them, which makes it difficult to move on foot. The pier also functions as a kind of promenade, from where the boat bridges begin. It ends in a circular form. From the pier we walk down, onto one of the boat bridges.

* [Melfarposten 2010, 12.02.16]
[Denstoredanske 2015, 25.02.16]



ill. 57. Middelfart Marina

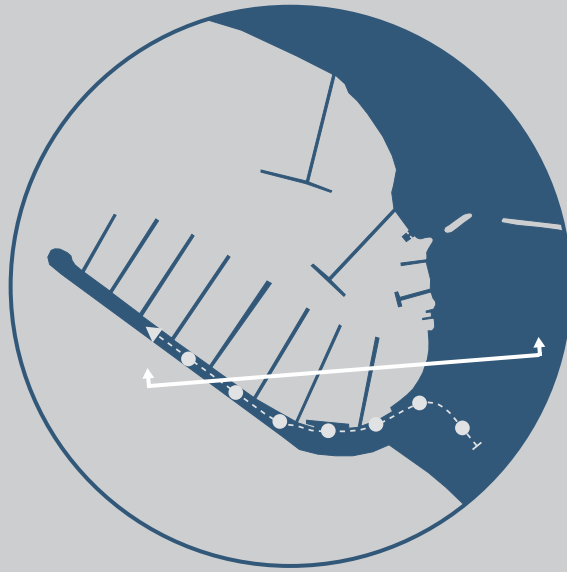
SERIAL VISION

When moving through the marina on a predefined route from the center area, which holds a beach, harbour office, kiosk, toilets/bath, playground, and restaurants along the pier, one gets the impression of an area that is dominated by cars, due to the extensive parking lot and asphalt surfaces in particular. The route has very scenic surroundings, authentic maritime atmosphere, and a light uncultivated appearance, holding both autocampers and a marina.

The route along the pier has an undefined pedestrian path, where the original outline separating pedestrians from cars appears worn down, making cars park over/on the path minded for pedestrians. The pedestrian path is later cut off by waste containers and the cars parked on the right side, creating a wall. It appears that the once clear planning has faded over the years as nature has taken its toll. This has pros as well, because it provides a rustic appearance to especially the stone pike on both sides of the pier, holding seaweed, grass, and rosehip bushes.

As one passes the waste containers, the pier open up with a view of the boats on one side and the open water on the other. Here, one is met by a barrier to separate public traffic and traffic to the boats. A sign communicates that the pier is only for stopping, not parking. Yet, one is later met by two walls of cars on each side of the pier, blocking the view of the scenic surroundings. The pier also holds two small buildings in traditional maritime architecture, with red paint and white details. One is a toilet building and the other a 'TV-broadcast' building used during match racing.





ill. 58. Section of Middelfart Marina



ill. 59. Serial vision of Middelfart Marina

THE IMAGE OF THE CITY - KEVIN LYNCH

The illustration below shows a mapping of the five concepts by Kevin Lynch.

- The edges are illustrated by the coastline and the road that wind east of the marina, as well as the main road that leads to the city center.
- The paths are illustrated by the boat bridges and the paths along the harbour front.
- The districts are illustrated by subareas; the beach, the golf course, and the harbour basin.
- The nodes are illustrated by places with critical points of contact; going in and out of the marina and paths or edges crossing.
- The landmarks are illustrated by object for navigation and meeting; as the mast of boats that form a seasonal landmark.

The analysis illustrates that the infrastructural nodes are located in front of the harbour office and kiosk, where the pedestrian paths intersect with the access road, and by the toilet and car barrier on the pier as well.

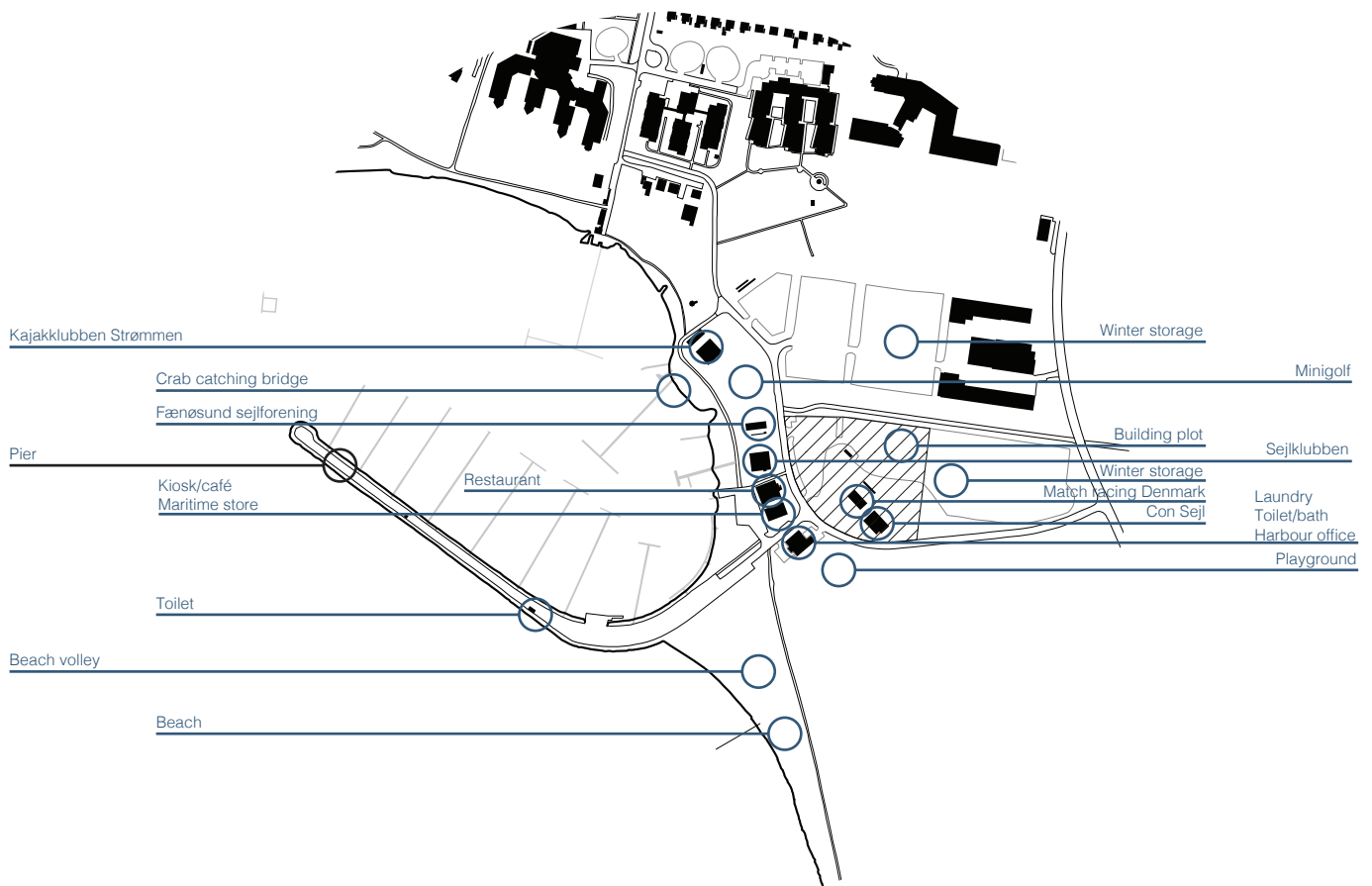


“ *Middelfart is a marina with a strong maritime atmosphere, holding scenic views that make you want to stay* ”

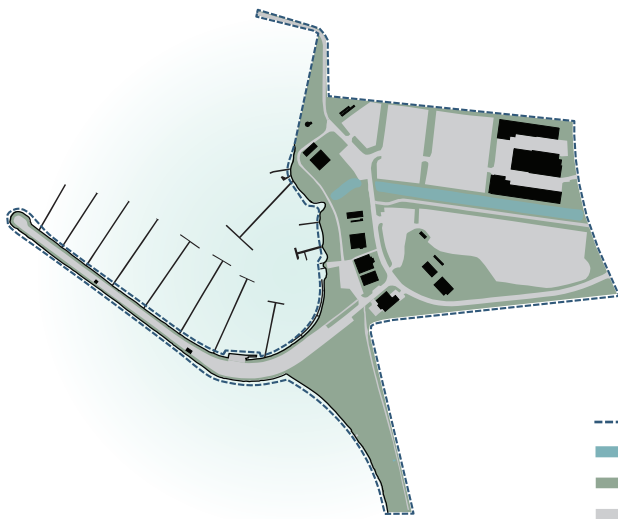


STRUCTURES, FUNCTIONS AND FACILITIES

The illustration shows the structures, program, and facilities on the site, some of the main structures of the marina is a beach, a large pier from where most of the boat piers ascent, and behind the existing building front is a newly designated/designed building plot, illustrated in the local plan [Lokalplan163 2016, 18.03.16], where it withdraws a part of the exiting winter storage areas. The marina is programmed with/consists of private clubhouses, a restaurant, a kiosk/café, a maritime store, harbour office, toilet/bath, and laundry, and the activities include mini-golf, playground, beach volley, and a crab catching bridge in addition to temporary events. See also appendix E for mapping of public spaces in Middelfart.



ill. 62. Structures, functions and facilities

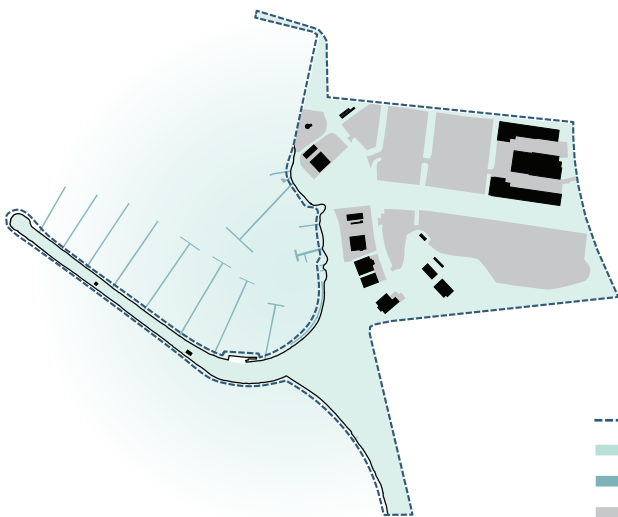


- Site
- The blue
- The green
- The grey

ill. 63.

THE BLUE, THE GREEN AND THE GREY

The illustration (ill. 63.) shows the overall structures of surfaces within the project site. They appear to be somewhat equally “dominating”, if one takes the surrounding water into account. Furthermore, the green surrounds and creates a frame of the grey.

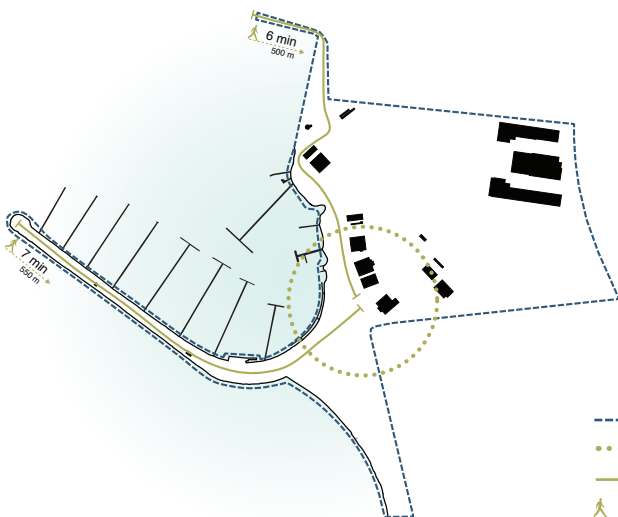


- Site
- Public area
- Semi-private area
- Private area

ill. 64.

PUBLIC VS. PRIVATE ZONES

The illustration (ill. 64.) shows the private, semi-private, and public areas within the project site. Off-hand, the majority is the public and private areas respectively, which especially includes the center area, pier, and the areas for winter storage. But, the significant part about the semi-private areas is the boat bridges. It is quite subjective, whether one feels an area is public or private (if there are no clear boundary), but the boat bridges are somewhere in between, because you are allowed to go there, but you will be very close to the privately owned boats.



- Site
- Center area
- Walking path
- ⤴ min m Distance

ill. 65.

LOCAL DISTANCE

The illustration (ill. 65.) shows the distances within the project site. The “destination” for the two routes is the center area, holding harbour office, toilet/bath facilities as well as restaurant and kiosk. The route along the pier is chosen to show the distance for guest sailors on the outer boat bridge to the center area. The other route was chosen to show a part of the distance to the city center. Put together, it takes about 12 minutes from one end of the marina to the other.

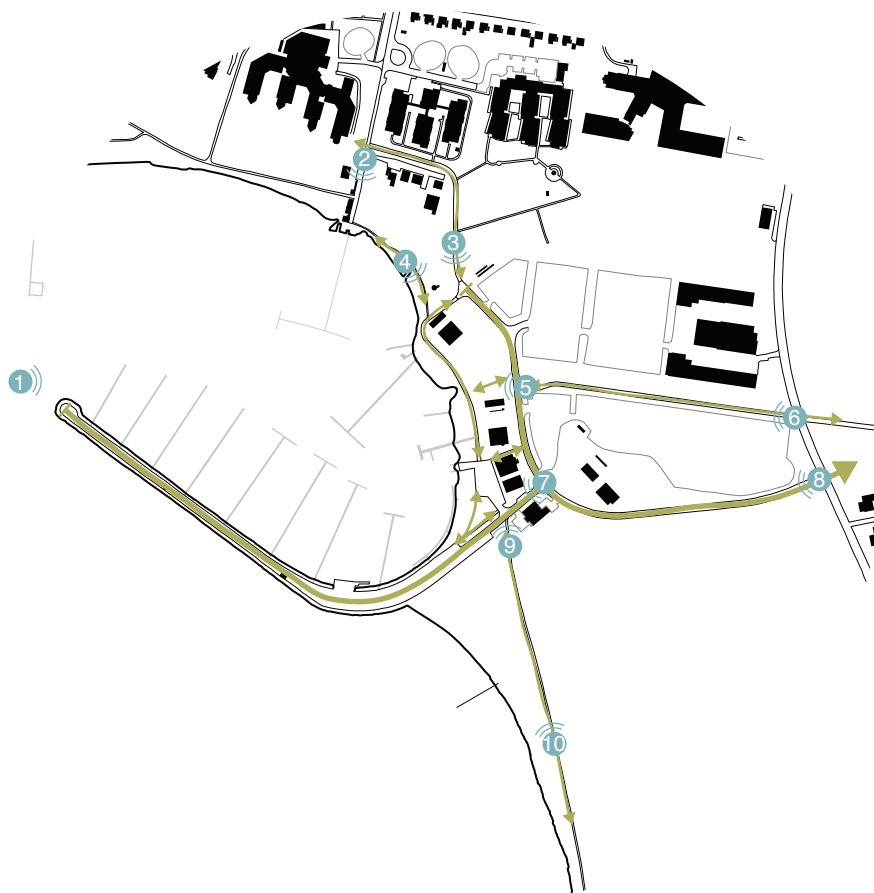
INFRASTRUCTURE

The diagram below shows the main roads and paths in the area, as well as ten different points of arrival (the six primary points are listed to your right). The area is highly dominated by cars and characterized by an intuitive system of disconnected paths, creating barriers for the pedestrians.

Infrastructurally seen, the cars dominate the area, as there is no separation between cars and pedestrians. It is clear that the cars have the highest priority in the physical planning.

From Lillebælt:

When arriving by boat, one has a clear view of the marina and the city located behind it. It is a rather flat landscape, from where boat masts rise, forming a transparent wall.





1 VIEWPOINT from Lillebælt



6 VIEWPOINT from Østre Hougvej



2 VIEWPOINT from Vestre Hougvej



8 VIEWPOINT from Østre Hougvej



3 VIEWPOINT from Vestre Hougvej



10 VIEWPOINT from Kløverstien

CLIMATE

The climate at the marina is the same as many other places in Denmark in relation to wind direction, precipitation and sun. As the sun sets in northwest it provides good conditions to witness the sunset from the marina, while facing the ocean at the same time (ill. 68.). May, June and July are the driest months with only 12 to 14 days with rain, where they additionally are those with most sunshine. (ill. 69.)

The sea level will in the future rise (ill. 70.), where the diagram illustrates a rise in sea level of 1 meter, which is approximately a 75 year horizon (Task Force for Klimatilpasning 2012). The rise in sea level will cause a flooding of the outer pier and the beach, as well as the area in front of the built.

The outer pier is difficult to secure as it is highly exposed. Since it is surrounded by water the rise in sea level will flood it more easily. The pier is built as a shield to protect the marina in case of storms, but as the sea level rise the protecting effect of the pier decreases, as it poses as a smaller barrier. The pier poses an important protecting function, it is therefore important to make it live up to its purpose in case of a storm. Flooding of the beach is not crucial as it does not pose a great threat, yet, it is relevant to consider erosion and the need for extended cleaning, and the potential flooding of the parking space subsequent to the beach. The built area is important to protect as the physical damages can be destructive to the economic means of the marina. [DR 2013, 14.05.16]

The future climate will increase the amount of rain. Instead of leading water from the surfaces into the underground drainage system or into the ocean, it can be collected e.g. filtered, and reused, or used as LAR solutions, all to benefit Middelfart's sustainable mindset (cf. vision pp. 32).

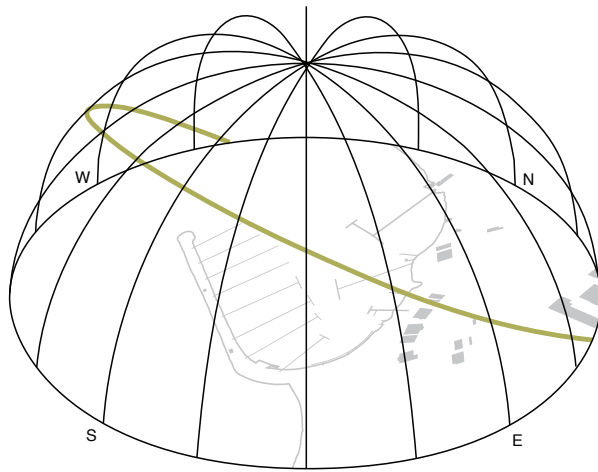
As described earlier (cf. ongoing initiatives pp. 33) Middelfart is a long way in developing and transitioning itself into a city with focus on climate adaptation. Middelfart will use knowledge gained from the project, KlimaByen, as a background and inspiration for development and transformation of other areas.

“ Rainwater shall be managed locally and surface near and only be derived to the sewer, if it is necessary.”

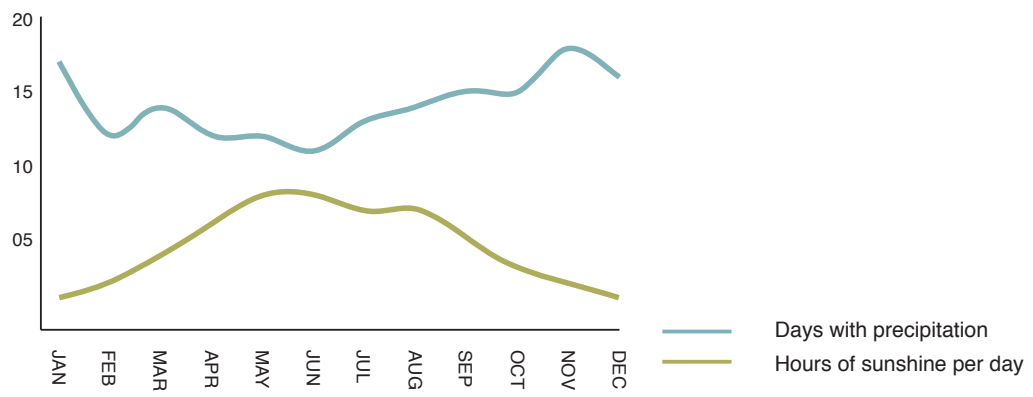
[Middelfart 2016, 29.02.16 pp. 18]
own translation, cf. appendix A8

When working with a near coast location, such as the marina, especially two themes are highly relevant; flooding caused by cloudbursts and flooding caused by storm floods (cf. research report (part 2), pp. 09).

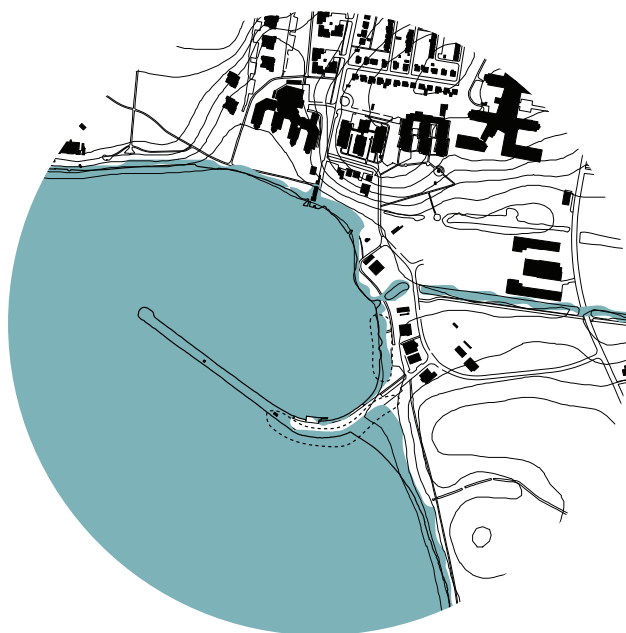
The previous analysis of Middelfart Marina (cf. site analysis pp. 34) explains how important it is to secure the marina against storms floods and cloudbursts.



ill. 68. [Almanak 2016, 15.05.16]



ill. 69. [Mitrejsevejr 2016, 15.05.16]



--- Exposed areas
 — Existing coastline

ill. 70. [Kortforsyningen 2016, 20.02.16]

RECAPITULATION

The following content functions as a sub-conclusion, as it recapitulates Middelfart Marina, by identifying its maritime cultural heritage and sense of place, drawing knowledge and experience from the obtained research and theory.

Rounding off the site analysis and the sense of place, a SWOT analysis is used to illustrate the strengths, weaknesses, opportunities, and threats at Middelfart Marina. This will provide the reader with an overview of the problems and potentials.

THE MARITIME HERITAGE

At Middelfart marina, the maritime cultural heritage is seen in its architecture; its form, colours, and materials. The buildings are constructed as a winged house of wooden planks painted red, black, or green with white details and pitched roofs. The surroundings have great nature with boulders used to define spaces, a stone pike ascending into the water, uncultivated greenery, gravel coated paths, installations made of wood, for instance, barbeque areas, flower boxes, and the crab catching bridge. The entrance to the marina has an anchor placed by it. These maritime elements are placed all around the area; elements such as small boats stored on land, robes, bouys, masts, and kayaks.

SENSE OF PLACE

Middelfart Marina consists of maritime elements that identify with the maritime environment. The buildings are located along the coastline, with a winter storage as a backdrop. The winter storage area is divided into smaller segments, defined and mostly shielded by greenery. The older buildings have been renovated and repainted, the buildings are of the same architecture, constructed with pitched roofs and with wood painted in red, black, or green, with white fascia boards on the red and black buildings. The atmosphere at the marina is open and airy with wide and scenic views. It has a green landscape mixed with a large asphalt surface. The marina has many small paths dispersed around the area, some areas consists of asphalt and others consists of fine gravel in a light colour. The area has a large flat surface, where the pavement alters between grass, asphalt, and gravel, places for walks are non-defined, as one walks on the road or the parking lot. Maritime elements combined with scenic views and a pier that goes into the ocean, create the feeling of being close to nature, combined with the ocean cooling the air on a hot summer day.

Materials: stone, sand, wood, grass, asphalt, concrete, gravel

Colours: grey, green, red, white, black, blue





SWOT

STRENGTHS:

- System of paths along the coastline
- Supply of activities and events
- Close contact to nature and green surroundings
- The beach
- Sites for recreational vehicles
- Intimate, and maritime atmosphere
- Fills its capacity with the number of boats

WEAKNESSES:

- Cut off and incoherent paths and absence of hierarchy hereof
- Distance to the city and infrastructural barriers
- Many smaller left over areas
- Undefined private and public zones
- The transit on the pier
- Locals' limited use of the facilities and activities
- Lack of parking spaces during the summer period
- Reduced use of the pier
- Reduced contact to the water
- Lack of relation between pier, beach, and center area

OPPORTUNITIES:

- Connection to the city
- Streams
- Access to water from the pier
- Attractive views
- Intuitive connections
- Improvement of the incoherency between beach and pier
- The central area as a place for meetings
- Better parking conditions
- Better conditions for pedestrians, including opportunities for stay

THREATS:

- Storm floods and cloudbursts
- Distance to toilet and bath from the outer bridge
- No differentiation between pedestrians and cars
- Long time parking on the outer pier
- Larger private areas (winter storage) near the city and public areas to the water side (front- and backside)
- Tourists stay for a short period of time, often for a single over-night stay

DESIGN STRATEGY - MIDDELFART MARINA

The following introduces the design strategy for Middelfart Marina, holding our vision, focus areas, and actions, as well as the implementation of design parameters, resulting in design concepts.

A DESIGN STRATEGY

The following section elaborates on the design strategy for Middelfart Marina. But, what is a design strategy, how do we see it, and why is it useful to us?

The purpose of the case is to test the design parameters, to go back to refine them, and to provide inspiration for their use in relation to design solutions.

Definition:

Strategy *noun* [strat-e-gy]

“a careful plan or method for achieving a particular goal usually over a long period of time the skill of making of carrying out plans to achieve a goal”

[Merriam-webster 2016, 08.05.16]

The foundation for any design concept is a clear strategy. First of all, we need to know the why, before it is possible to answer the how (cf. research report), so, the creation of a strategy involves different types of analysis and investigations. The purpose of the design strategy is to create a common understanding and focus of the project. [Rumfang 2016, 06.05.16]

We are developing a design strategy for Middelfart Marina based on ongoing initiatives such as the municipal- and local plan, site analysis, and research. It contains a vision, areas of interest, and actions. The strategy is useful, because this project is a research project, and it highlights the most essential areas to work with.

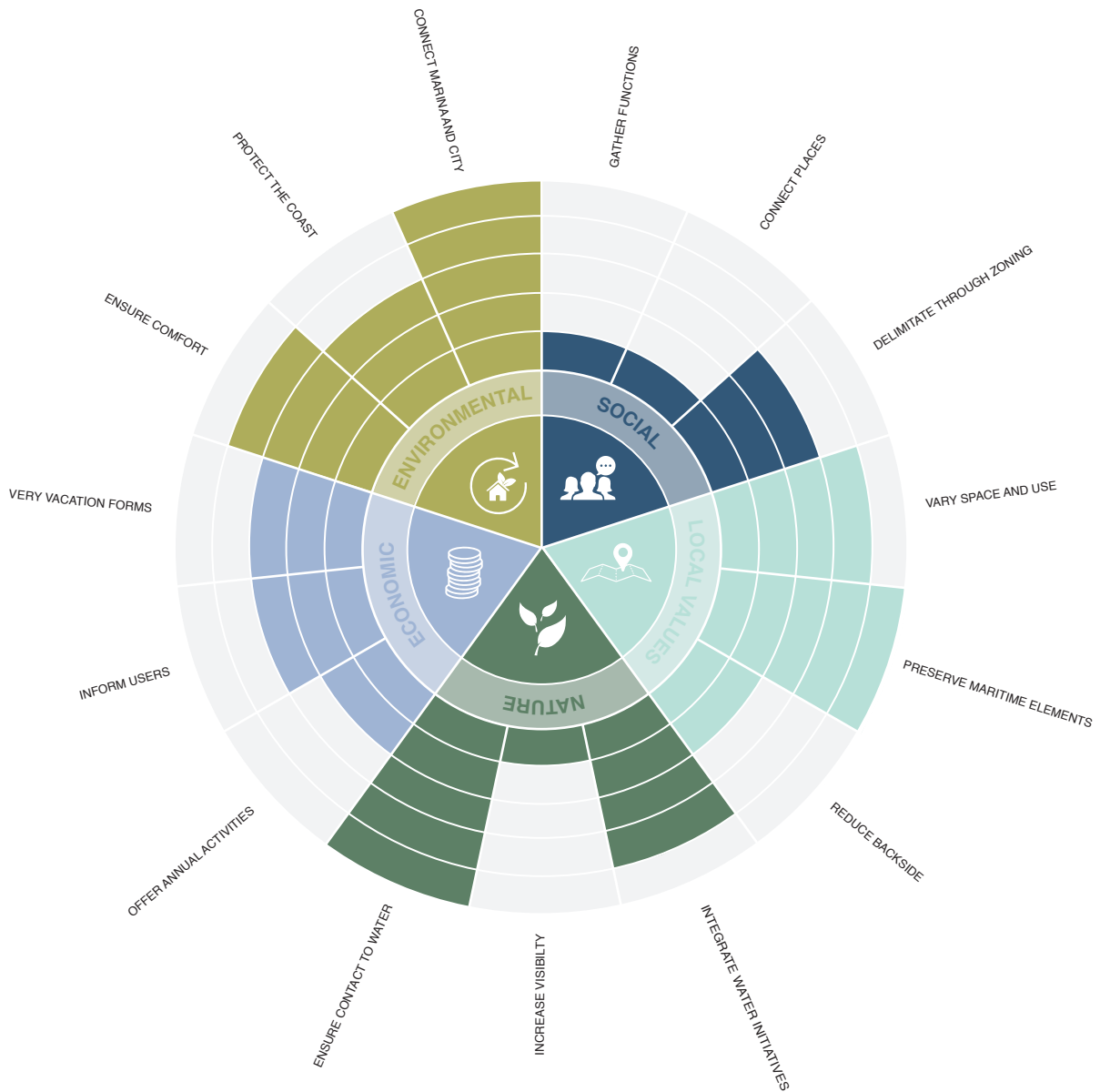
In this thesis: First off, the reader has already been through the site analysis of Middelfart Marina, which has provided a site-specific knowledge regarding the problems and potentials in the area. In the following section, the reader will be taken through our vision for Middelfart Marina, an overall concept that sheds light on three areas of interest as well as actions of how to develop the marina.

THE DESIGN COMPASS

For Middelfart Marina

With a background in the local plan, the site analysis (cf. site analysis pp. 34), and the user involvement of the locals in Middelfart (cf. research report (part 2) pp. 82). The 15 design parameters are assessed and weighed individually and illustrated below. Due to the fact that the municipality of Middelfart has the overall goal for the marina to become a place for the entire city, the parameter “connect marina and city” is highest value, as well as the two parameters; “preserve maritime elements” and “ensure contact to water”.

From the abovementioned a design concept is developed.

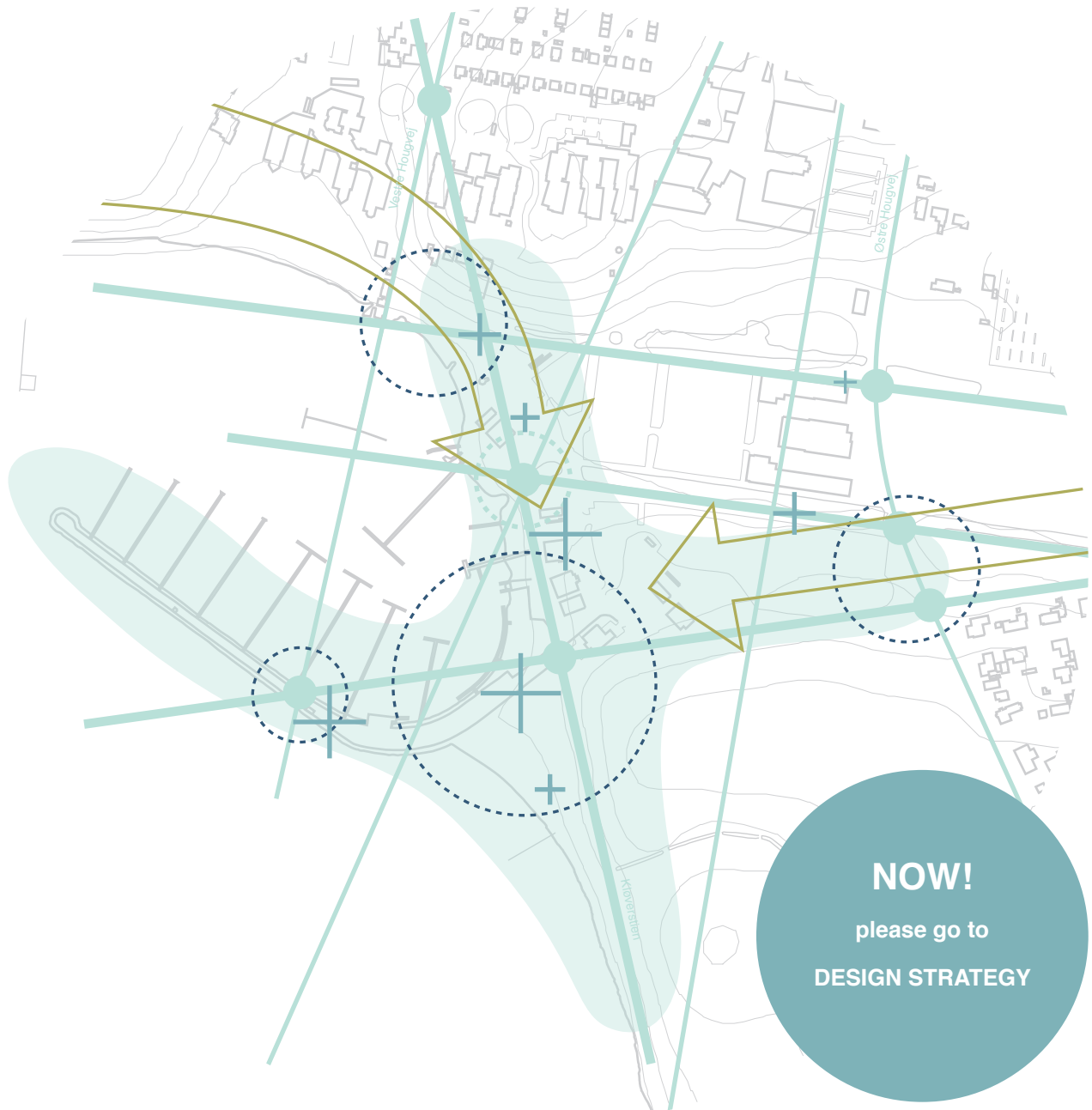


ill. 73. The design compass for Middelfart Marina

DESIGN CONCEPT *For Middelfart Marina*

The concept for the design strategy takes its point of departure in the site analysis. Its main purpose is to create a connection between city and marina and to map the areas of interest, all with a primary base on significant features and xx in the context. Eye catching lines in the urban structure create a web of particular routes with great interest. Also their crossings create a critical point of contact (Jensen 2013). Two surrounding landscapes (a forest to the west and grass field to the east) meet at the marina, which can be drawn upon in the development of the marina.

With these in mind, three areas with significant potentials are illustrated and further elaborated (cf. the three areas of interest, pp. 62).



ill. 74. Concept 1:2000

DESIGN STRATEGY

For Middelfart Marina

We wish to combine the urban design parameters to create a great urban space known from Jan Gehl (Gehl, Svarre 2010), and integrate it with special characteristics of the marina; maritime cultural heritage, 'sense of place' and near water location. To create a unique urban space, that is connected to the rest of the city, it is interesting to draw on the features of the surrounding landscape, pursue infrastructural connections and include the marina in the sustainable development of the Middelfart.

The design parameters have been mapped one at a time, based on the knowledge gained from the previous work. The design strategy poses as the bridge between site-analysis and concept, and subsequent the vision, where it highlights actions to improve the marina's physical environment, and to strengthen the local values.

10 out of the 15 design parameters are selected as the most important. They are as follows below. Moreover, three primary parameters are selected; "connect marina and city", "preserve maritime elements" and "ensure connect to water".



The design parameters are illustrated in the design strategy as pictogrammes. Here the pictogrammes on the map are to be paired with ones placed around the map. The color of the outline is its sustainable discourse, where the design parameters are mapped at their point of action. The size of the pictogrammes illustrate how we prioritize each parameter; they are divided into three sizes, representing primary, secondary, and tertiary parameters.

*We want to
create Byens Marina,
by connecting the city
and marina and
creating a community
across user groups*

WHAT

TO DEVELOP ON THE MARINA



AREA 1: THE PIER

The pier is seen in two sections; the inner pier and the outer pier. The inner pier is characterized by car parking on both sides. From here the structure takes a turn, embraces the eight adjacent boat bridges and is then sort of cut off by a barrier. On the other side of the barrier, the outer pier begins, which is characterized by an area of transit, but not like any other promenade. Due to its construction, it does not end in anything - it does not have a destination. Its purpose is mainly to facilitate the boat bridges. On both sides of the outer pier, cars are parked illegally making it difficult for pedestrians to navigate - they create a barrier between the perceptor and the water. Also a stonewall and reshaped bushes create the same distance.

AREA 2: THE CENTER

The area is a natural attractor for life, due to its programming; a maritime store, restaurant, kiosk, toilet/bathrooms and harbour office are all located here, but the area does not invite to stay. The previous is rooted in a good amount of traffic, which is generated by a parking area in front of restaurants and a large open grass area, where several pedestrian paths terminate. This is producing inconvenient organizational dynamics between pedestrians crossing towards the beach and parked cars, where it is combined with a boat-loading platform and restaurants, with seating placed directly on the asphalt of the parking space.

AREA 3: KLØVERSTIEN

Kløverstien connects the city's attractions, where one of them runs naturally through the area. The path makes a transition, when it hits the marina, as it goes from a close urban structure into an open space, from where continues along the coast, connecting the city and the rural landscape. It is the primary path of the area, starting in asphalt with a transition to fine light gravel as it goes further into the marina, with an indirect connection to other paths. Barriers, combined with unlinked and scattered pathways, constrict the internal network of paths, creating an unintuitive and confusing system that makes it difficult to navigate within the area - all deteriorated by the lack of wayfinding-systems.

THE THREE AREAS OF INTEREST



ill. 75. Areas of interest

AREA 1: THE PIER

Problems and potentials

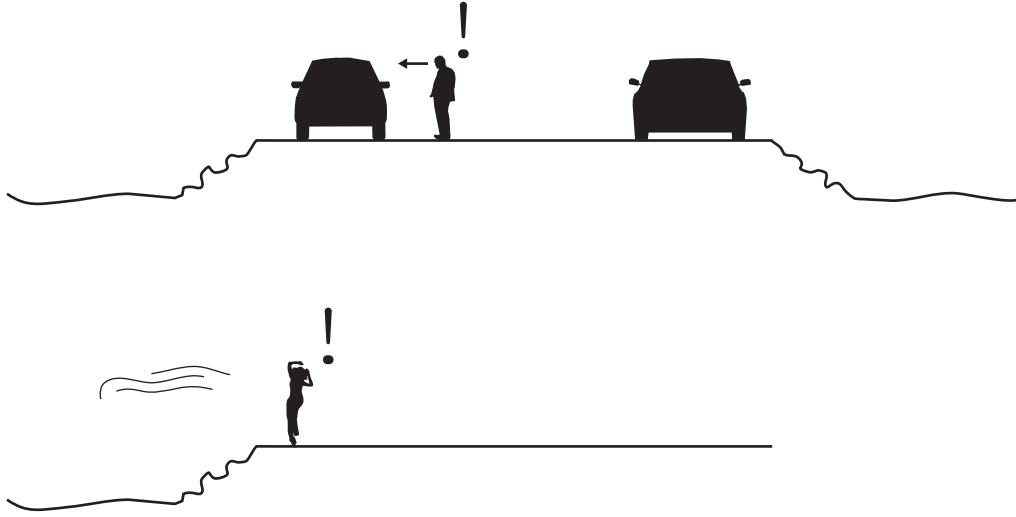


PROBLEMS:

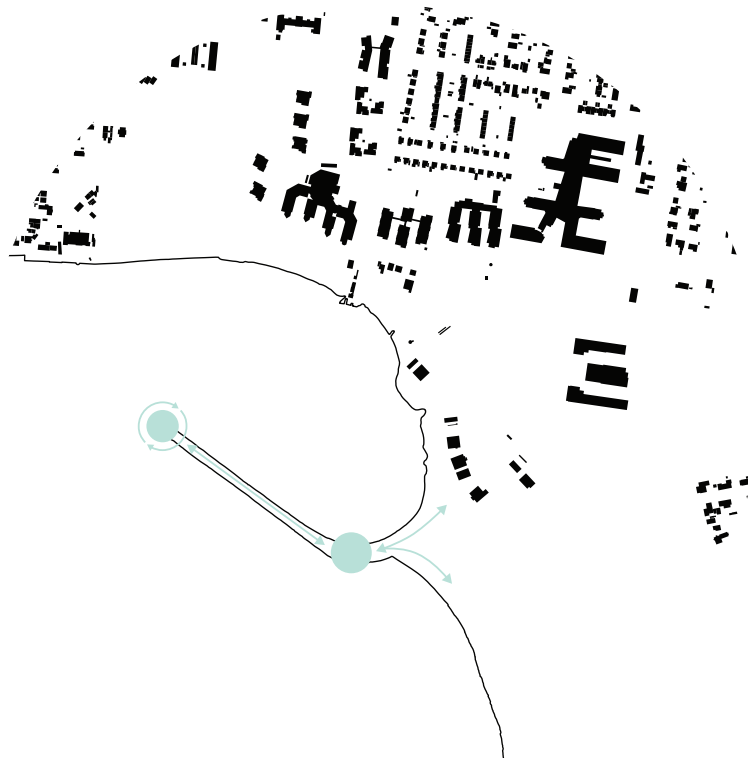
- The weather conditions with wind from SW
- It has no destination
- It is closed off by a bar
- The bad conditions for pedestrians, because there is no separation between pedestrians and cars
- Illegal long term parking of cars on both sides of the outer pier
- It is not possible to have direct contact with the water, unless one crosses the stone wall
- Rising sea level
- Distance to toilet/bath
- The pier is a public area, while the boat bridges are semi-private areas

POTENTIALS:

- Direct contact to the water
- Great viewpoints
- A connection between the pier, the beach and the central area
- Close contact to nature
- Better conditions for pedestrians by a coherent trajectory
- Opportunities for stay
- That the stretch is an experience for the user/pedestrian
- A destination - something to walk towards

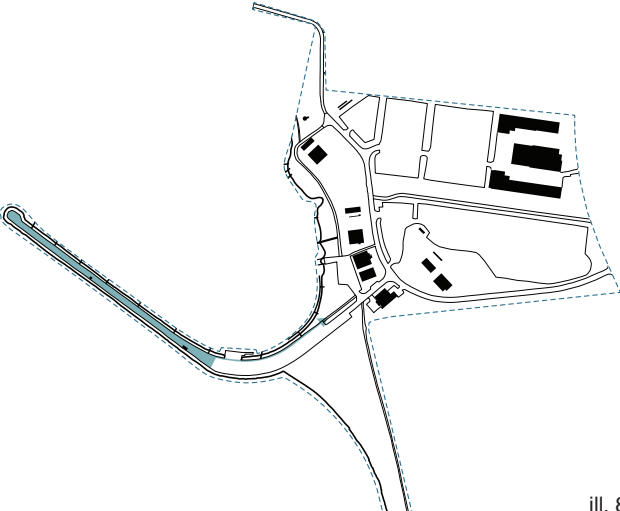


ill. 78. Sight and wind problems



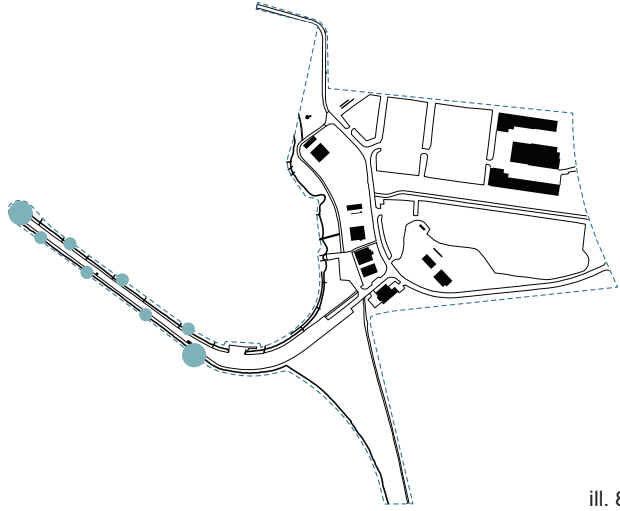
ill. 79. Concept

1. THE SURFACE



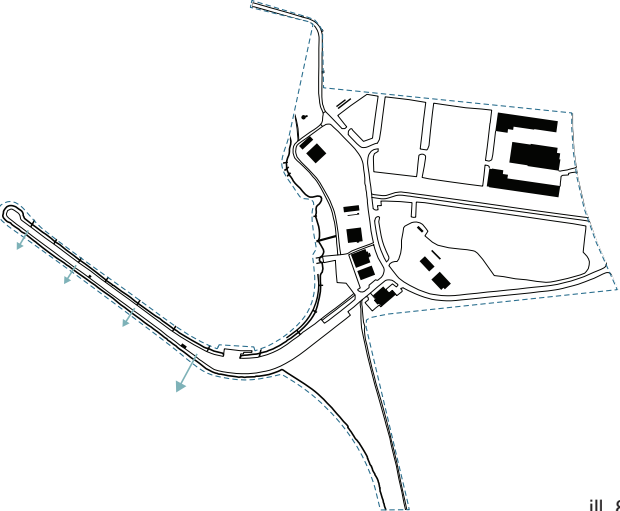
ill. 80.

2. THE STAY



ill. 81.

3. THE CONTACT TO WATER



ill. 82.



ill. 83.



ill. 84.



ill. 85.



ill. 86.



ill. 87.

AREA 1: THE PIER

Presentation

The pier is improved by accentuating pedestrians and water contact, as well as inviting to stay. The inner pier is still minded for parking as it is necessary, because it provides easy access to boats, beach and additional functions, where a separation of pedestrians and cars is created by a promenade to make it clear for pedestrians where to walk. The wooden promenade is placed as an extension of the pier to the SW with the open view to the ocean. It invites to stroll and stay by a clear and coherent trajectory, and integrated seating elements. Stepping platforms accentuating into the water make the water accessible, while creating spectator seats for sailing events or a place for an afternoon swim.

The promenade stretches from the center area to the beginning of the boat bridges, where it ends after the parking space and car barrier. It connects the harbour office and toilet/bath facilities with the beach, and the toilets on the pier, while providing an experience through the scenic view and the installation. These two together invites to meet and stop by the water, maybe while enjoying an ice cream? The promenade has the possibility to integrate storm flood protection, formed as a vertical shield between the parked cars and the walking pedestrians, while containing seating elements and light installations. The shield can be constructed in concrete for durability, and with seating elements in wood for comfort.

The promenade and inner pier ends where a pedestrian space takes over, staged by tiled paving, where cars are only allowed to stop as sailors unload baggage. The outer pier is secluded, offering a quiet space minded for strolling and people using the barbecue facilities.

To provide a destination the end of the pier offers a small saltwater basin for children to play- and adults to cool off their feet in, with seating elements towards the central based saltwater basin, but also towards the ocean, these elements can be formed to provide shelter for wind.



ill. 88. The platform
1:150





ill. 89. The pier

AREA 2: THE CENTER AREA

Problems and potentials

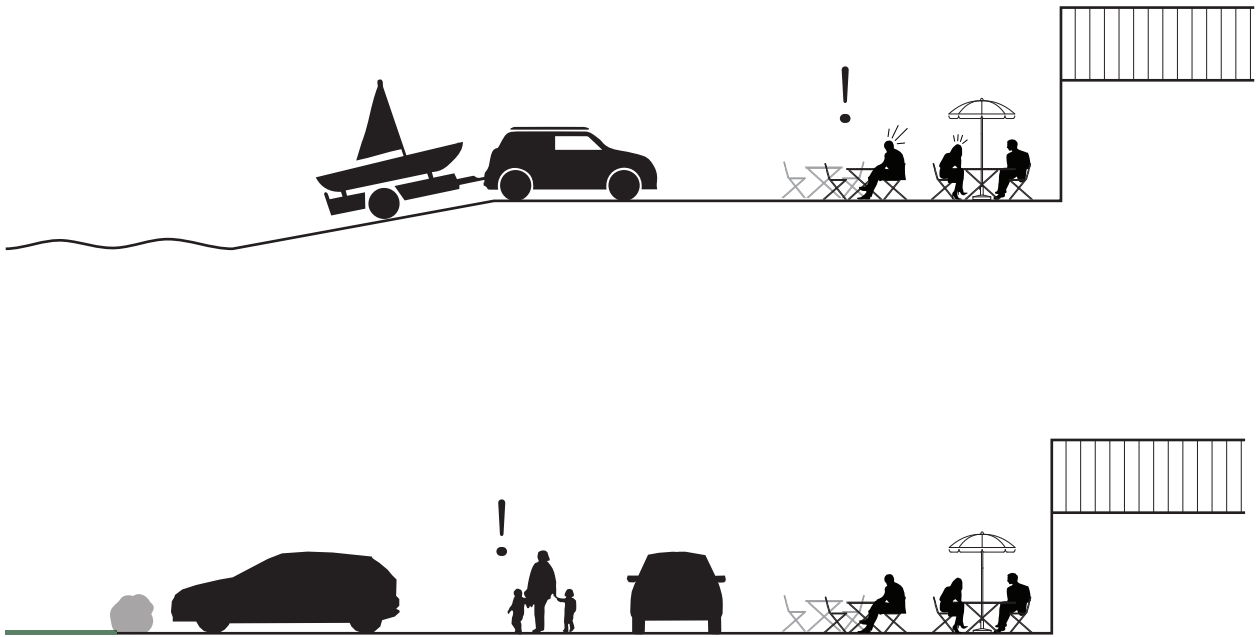


PROBLEMS:

- The weather conditions with wind from SW
- It has no destination
- It is closed off by a bar
- The bad conditions for pedestrians, because there is no separation between pedestrians and cars
- Illegal long term parking of cars on both sides of the outer pier
- It is not possible to have direct contact with the water, unless one crosses the stone wall
- Rising sea level
- Distance to toilet/bath
- The pier is a public area, while the boat bridges are semi-private areas

POTENTIALS:

- Direct contact to the water
- Great viewpoints
- A connection between the pier, the beach and the central area
- Close contact to nature
- Better conditions for pedestrians by a coherent trajectory
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- That the stretch is an experience for the user/pedestrian
- A destination - something to walk towards

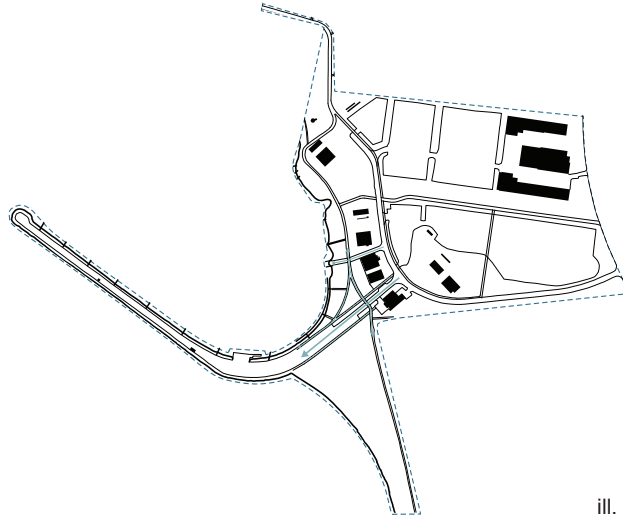


ill. 92. Problem areas



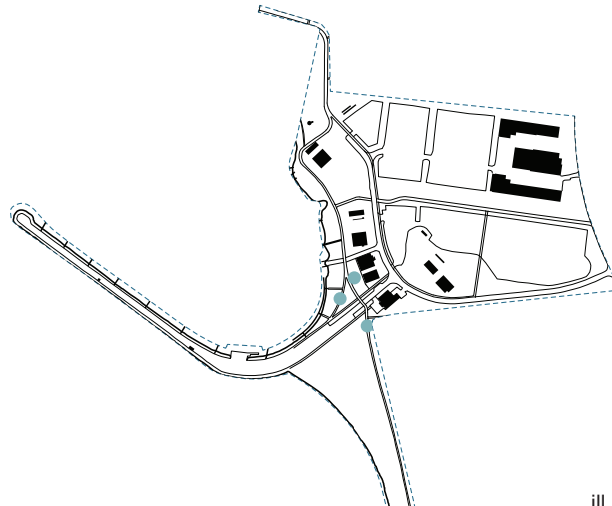
ill. 93. Concept

1. THE INFRASTRUCTURE



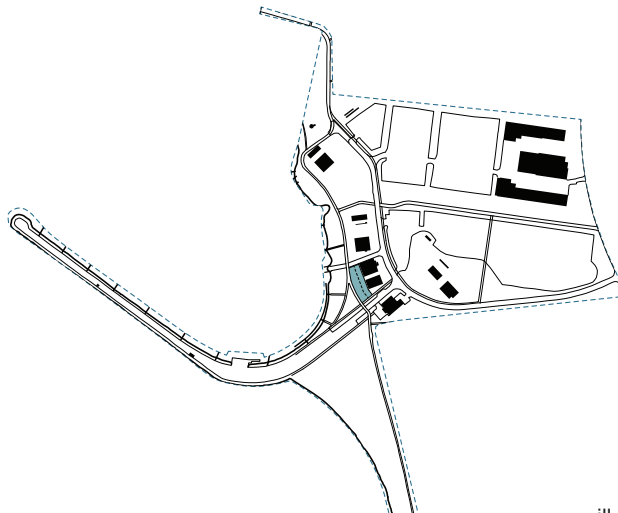
ill. 94.

2. THE STAY AND ACTIVITY



ill. 95.

3. THE SQUARE



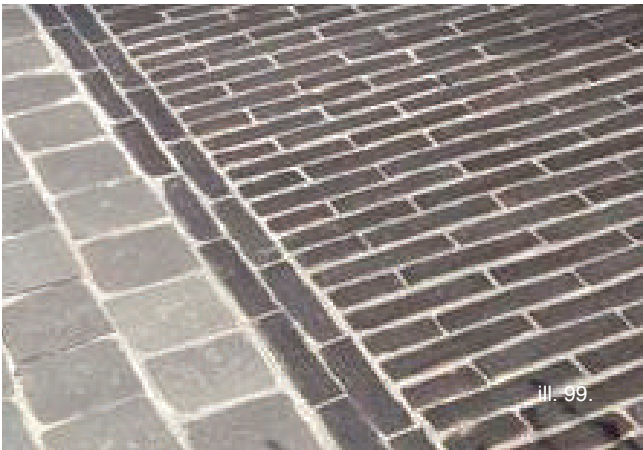
ill. 96.



ill. 97.



ill. 98.



ill. 99.



ill. 100.



ill. 101.

AREA 2: THE CENTER AREA

Presentation

The parking space in the center area is converted into a public square, changing it from a car-dominated domain to a space for stay, walk and interaction, by accentuating it as a space for pedestrians, activities and events. Areas for stay and walk is staged by the use of materials in the pavement. A tiled paving illustrates a car-free space, where the restaurant and kiosk/café can pull out their seating onto the square.

Kløverstien's trajectory dominates and cuts through the paving of the square, accentuating its connecting importance, where it indicates a path where pedestrians can move safely and freely between the square and the beach. Kløverstien separates into two at the square, where its trajectory continues, while a smaller path derives following the curve of the coastline towards the parking space at the inner pier. As this area is exposed to flooding the path includes a concrete shield, for seating as well, where one can sit facing the square or the boats. The path cuts through the grass area, where the area nearest the coast is for unplanned activities such as ball games, while the smaller lawn is programmed with outdoor hammocks that can be moved between the embedded wooden poles.

A new access point to the boat-loading platform is created, by expanding the path leading directly to the platform to accommodate the needs. Directing them away from the square without major interventions, like moving the boat-loading platform. The outdoor seating of the restaurant next to the access road is shielded by the use of a wickerwork fence or greenery.

The public square serves as the hub of the marina, constituting a gathering point and meeting place for locals, sailors and the like, generating urban life and a vibrant atmosphere. The square can offer restaurants, barbecue areas, water play, live music, communal eating and a market, all with a view to a scenic landscape.

Collecting and reusing rainwater from the surface is filtered and used for a water installation that is both decorative and interactable. It is formed as sprinklers in the paving splashing water out in different heights and at different times, where a slightly sloping surface divert the water, while forming an obsolete water surface.



ill. 102. The center area
1:150





iii. 103. The center area

AREA 3: KLØVERSTIEN

Problems and potentials

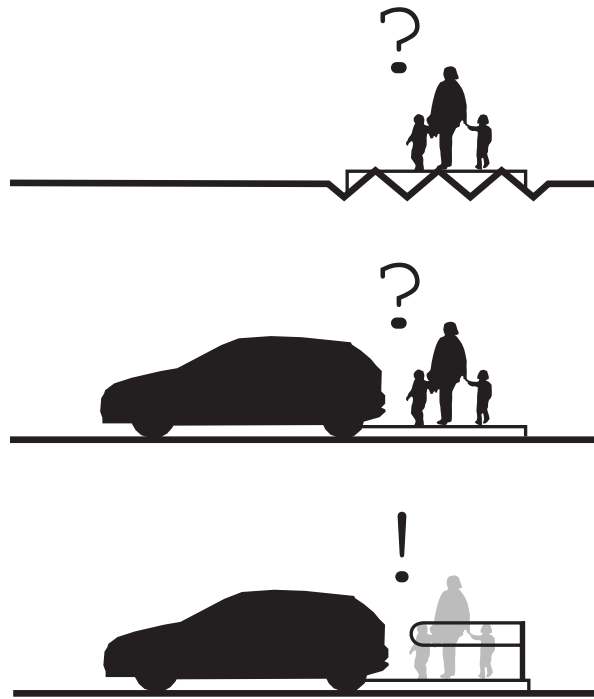


PROBLEMS:

- Broken connections
- No information of the paths
- Distances and directions are unclear
- Orientation

POTENTIALS:

- Can become a strong corridor through the area, while connecting functions
- Path along the coast
- Scenic surroundings
- Path for experience (framing, staging, cover)
- Views, stay
- Guiding – wayfinding
- Information
- Can create a connection to the city
- A path in the landscape

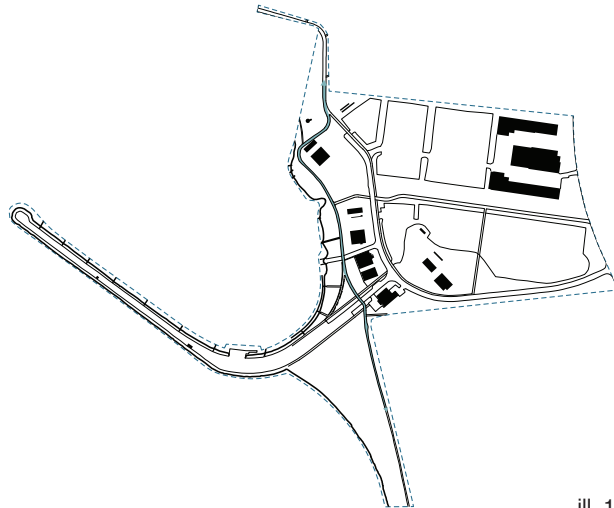


ill. 106. Problem areas



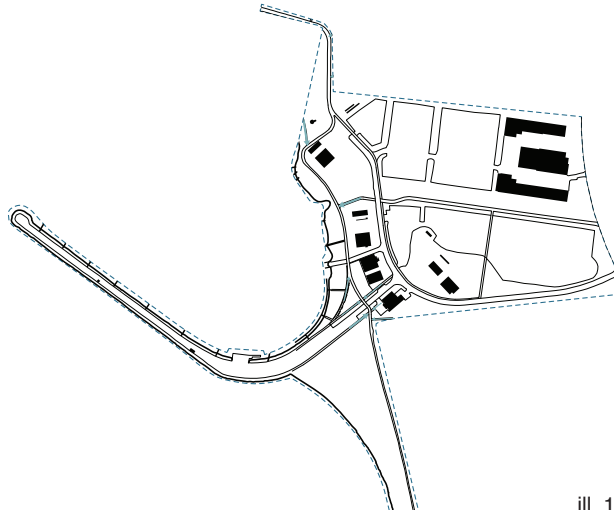
ill. 107. Concept

1. THE TRAJECTORY



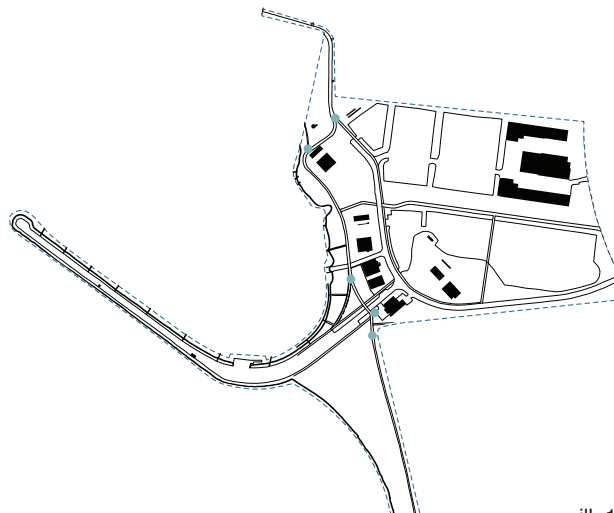
ill. 108.

2. THE ACCESS PATHS



ill. 109.

3. THE STAY AND ACTIVITY



ill. 110.



AREA 3: KLØVERSTIEN

Presentation

Kløverstien is improved by accentuating its importance as a clear connection between Middelfart city and the marina. The path guides tourists and locals to and from the city by foot or by bicycle, while conveying the story of Middelfart and connecting its attractions. To stage its importance the trajectory of Kløverstien dominates and cuts through all additional surfaces through the marina, where it runs along the scenic coast, through the square, and to the beach area. Here it connects the sailing clubs, crab catching bridge, mini-golf course, restaurant, kiosk/café, maritime store, the square, harbour offices, toilets/baths, playground, and beach.

Since sailing tourists are limited to foot as they hit shore, it is important to ensure connections, where the option to rent a harbour bike can be used to make the 1,5 kilometers distance to the city more sustainable, manageable and accessible. Simultaneously, Kløverstien provides a tourist attraction in its own. The project of Kløverstierne is made more visible at the marina by information boards providing information of the project and the routes and the existing mobile-application, a QR-code on the information board and the pillars marking the routes makes it user-friendly for people accessing the route from random places along its trajectory.



ill. 116. Kløverstien
1:150





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APPENDIX

APPENDIX A

Original quotes

A.1

"Den sociale bæredygtighed omfatter også en væsentlig demokratisk dimension, der prioriterer ligeværdig adgang til at møde 'andre' i byens rum. Der forudsætter generelt, at der er lettilgængelige og inviterende offentlige rum, der kan fungere som attraktive rammer for både organiserede og uformelle møder."

A.2

"Mennesker har altid behov for at kende deres egen kulturarv som et nødvendigt udgangspunkt for tilværelsen og som en væsentlig del af både deres egen og deres lands identitet."

A.3

"På nuværende tidspunkt ser vi et øget fokus på biodiversiteten i storbyerne... Men fra de store til de små projekter er der mange ideer, der kan udbredes til resten af landet, siger Jan Ejlsted og håber, at flere byer får fokus på værdien af en rig og mangfoldig natur til glæde for byens borgere."

A.4

"Havne har den gode egenskab for autocampere, at de ligger bynært, er hyggelige og derfor er attraktive for autocamper turister. Det er også lettere at skabe autocamper parkering end en campingplads for autocampere som i Åbenrå, da det ikke kræver udlejningstilladelse efter sommerhuslovgivningen og dermed campingreglementet."

A.5

"Den store fremtid for LAR ligger i de mange muligheder systemet giver for at tillægge værdi til de urbane miljøer. At kunne skabe harmoni, både miljømæssigt og æstetisk, imellem det omskiftelige klima og de menneskeskabte grønne områder, er en af LAR's helt store kvaliteter."

A.6

"Vi kalder det den direkte vej. Vi tror ikke på grænser. Vi tror på, at der altid er en bro."

A.7

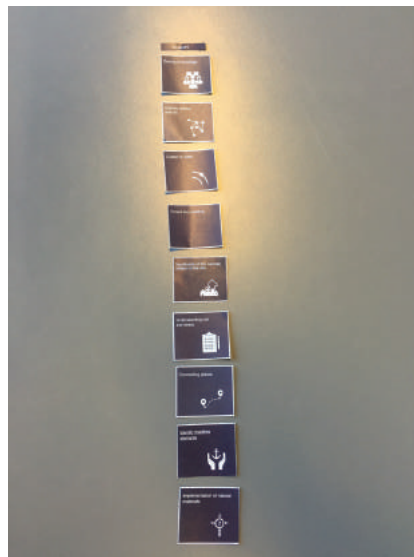
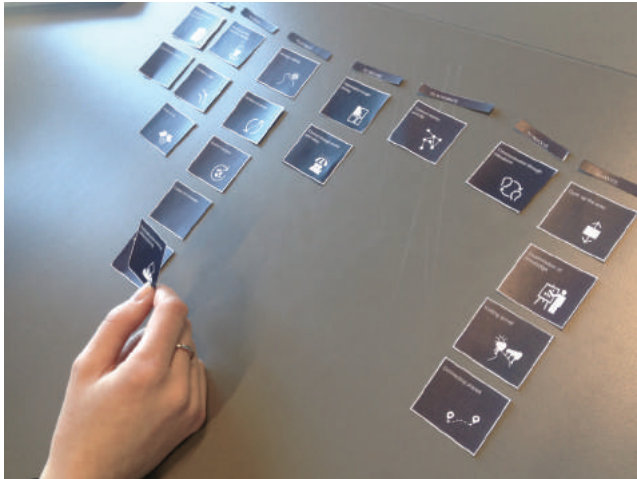
"Ser du på stedets beliggenhed, så finder ingen bedre i hele landet. Marinaen er omgivet af smuk natur, og der er altid læ et eller andet sted i Lillebælt."

A.8

"Regnvand skal håndteres lokalt og overfladenært og kun afledes til kloakken, hvis det er nødvendigt."

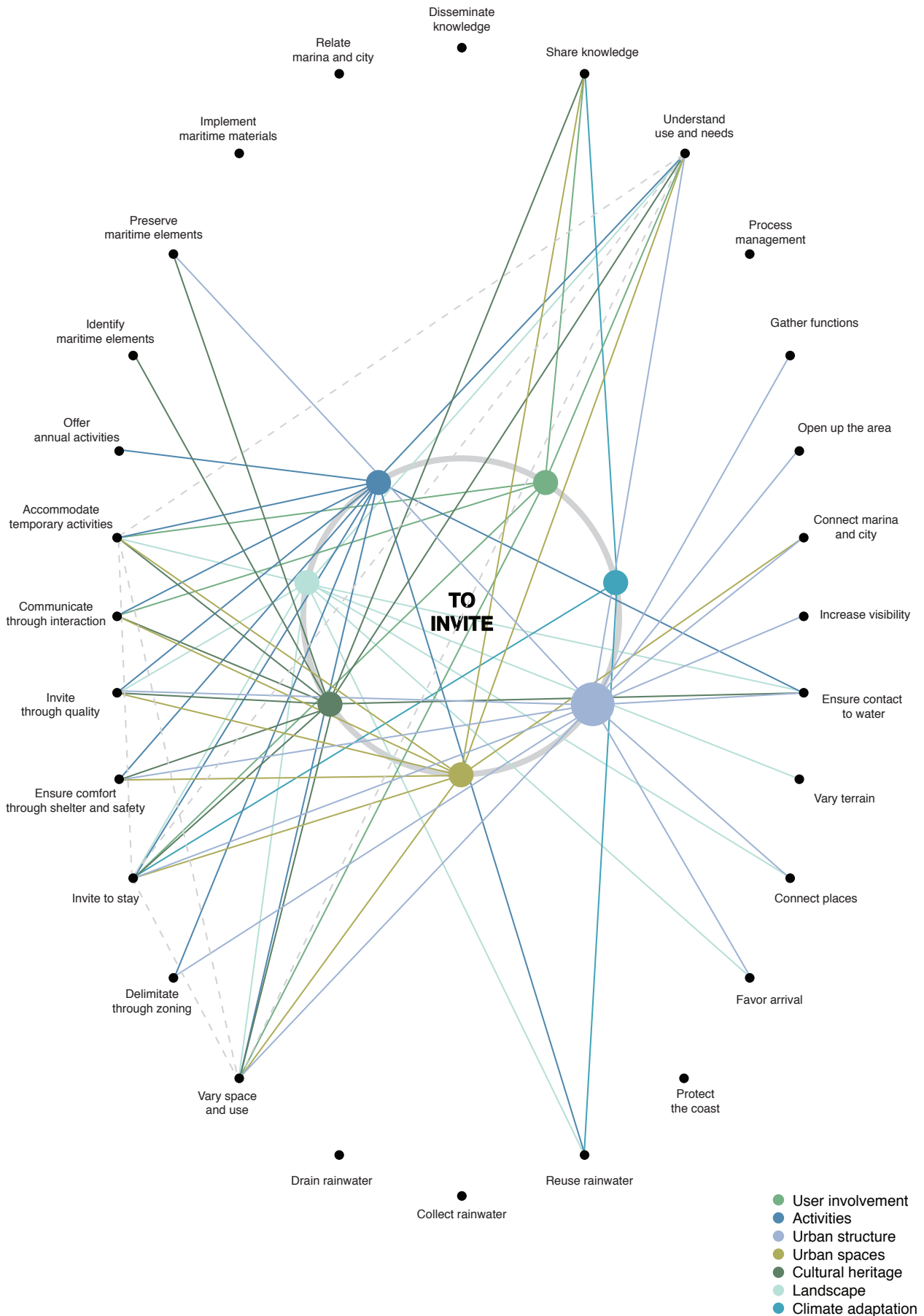
APPENDIX B

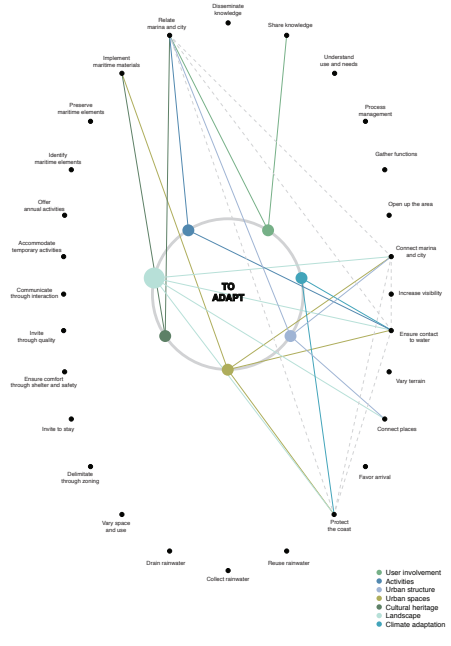
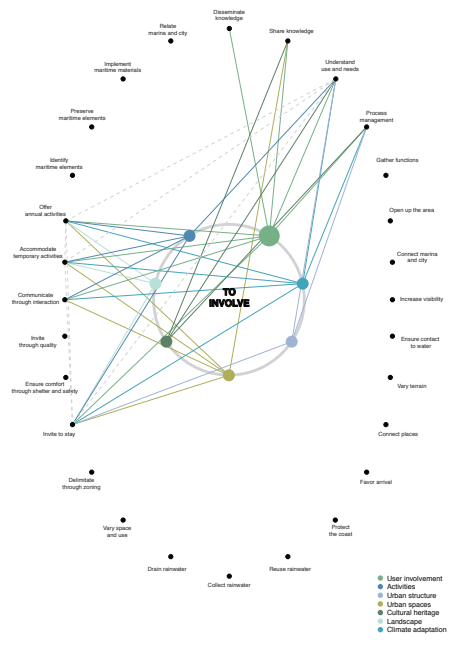
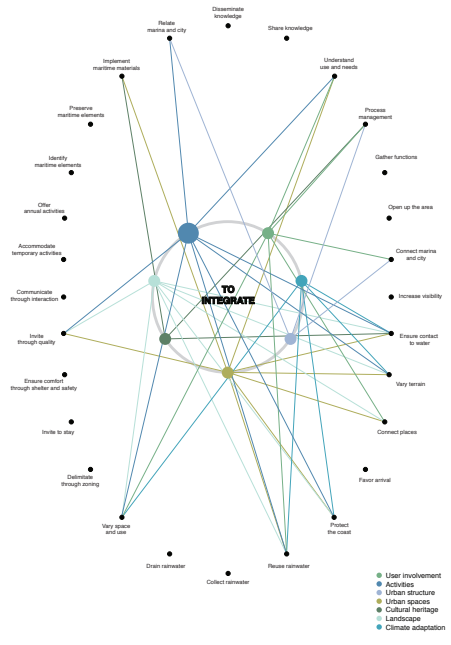
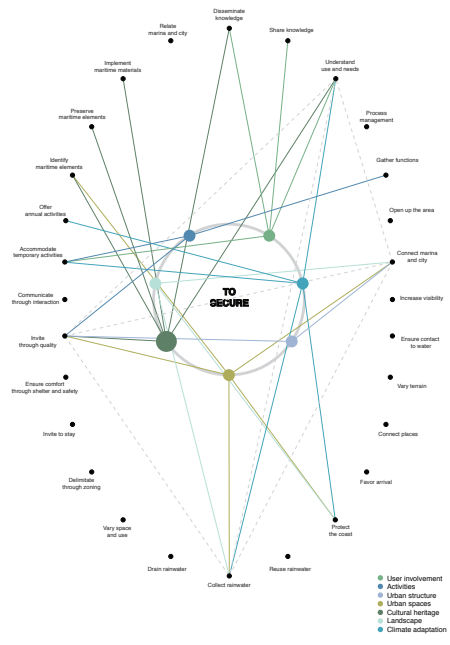
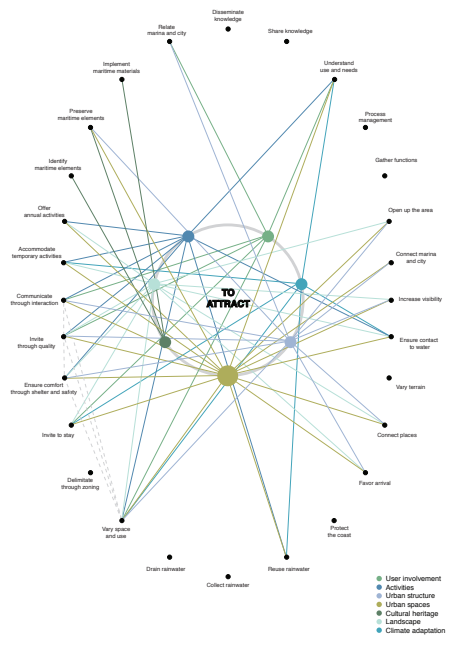
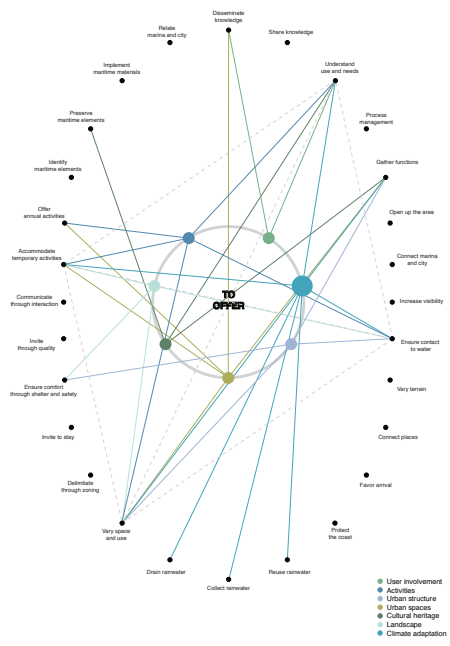
Process in pictures



APPENDIX C

Process - a web of design parameters





APPENDIX D

Hierarchy of design parameters



- Social
- Local values
- Environment
- Economy
- Nature

Categorisation of design tools in relation to sustainable discourses

TO ADAPT
LANDSCAPE

TO OFFER
CLIMATE ADAPTATION

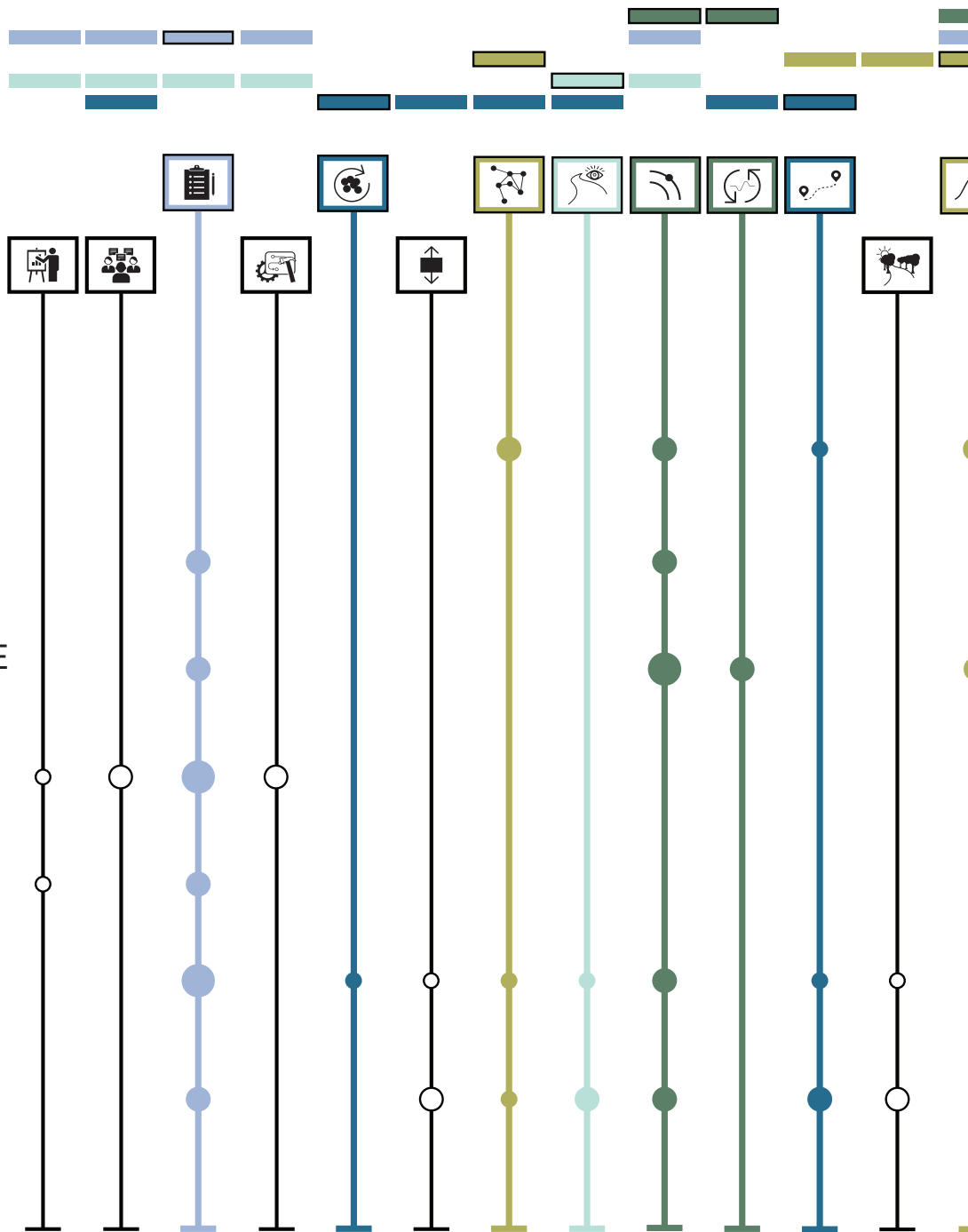
TO INTEGRATE
ACTIVITIES

TO INVOLVE
USER INVOLVEMENT

TO SECURE
CULTURAL HERITAGE

TO INVITE
URBAN STRUCTURE

TO ATTRACT
URBAN SPACE



APPENDIX E

The blue, the green, and the grey



- Blue areas
- Green area
- Grey area

