



## Research Project Report

### *The role of the dyke in recreational activities along the Wadden Sea area in vicinity of Delfzijl (Groningen)*

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This research addresses the question on how *Delfzijl* can take advantage of the *dykes* referred to *recreational activities* within the next five years. In order to investigate this problem statement, the elaboration was started with the definition of research questions and secondary research. Here, brochures, websites, books and other researches were used to gather significant information about Delfzijl. Next, quantitative and qualitative research methods were used in order to collect data and information about the different stakeholders, the current situation of the municipality and the expectations of the people concerning the future. Thus, a fieldtrip was done to interview stakeholders and to distribute questionnaires to the sample. Additionally, a benchmarking was done with the German city `Nessmersiel` in order to compare and discover development possibilities. The research outcome is that Delfzijl suffers from a decreasing population number, a low level of recreational attractiveness and lack of money. Many people claim that the dyke is a significant resource that should be used for recreational developments. Hereby, developments can be done on a small budget such as a barbeque spaces or website improvement to present the existing offer.

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This report focuses on the city of Delfzijl located, in the Northern part of the Netherlands and its aim to link leisure activities with its dykes to increase overall attractiveness. This chapter gives an introduction into the problem and describes the research in general.

The Wadden Sea is an UNESCO World Heritage site, which attracts thousands of people each year to the coast (Harrison & Hitchcock, 2005). One of the reasons for its attractiveness are the leisure activities which are provided, like for example mud walking as well as its main attraction, the flora and fauna (ibid.). Delfzijl is one of the towns, which are located at the Wadden Sea (McDonald, 2009). More detailed, it is a small port in the north of the province of Groningen, Netherlands (Weevers & Agudo, 2007). In the last years, the municipalities announced their wish to increase the city's attractiveness and image, as it is mainly known for its chemical industry. Hereby, it is believed that the dykes could be used more efficiently in order to provide leisure activities. As a future development of the sea defence related to the rising sea level is necessary, regard should be taken on the combination of safety, recreational activities and leisure equipment. Based on this, the municipalities commissioned this research group to elaborate this issue to identify the current situation and to receive some recommendations for the future plans.

## Aim

The aim of this research is to gain information about the current situation of Delfzijl as an attractive city for leisure activities. Additionally, it aims to build up profound knowledge about the recreational functions of the dykes. Thus, these resources can be understood and used more explicitly for making Delfzijl more attractive for inhabitants, visitors and tourists.

## Problem statement & Research questions

As the municipality wishes to increase the attractiveness of Delfzijl, the research group was asked to focus on the role of the dykes and the leisure activities linked to them. From this, the research group formulated the problem statement **How can Delfzijl take advantage of the dykes referred to recreational activities within the next five years?** Within this problem statement different issues are mentioned. Firstly, the role of the dykes in attracting people, the current availability of leisure activities at the dykes and the possible improvements in the future.

attracting people to the city of Delfzijl?

2. What current leisure and recreational activities exist at the Waterfront area of Delfzijl?
3. How do people perceive the Waterfront area of Delfzijl?
4. What are the expectations and recommendations concerning the leisure and recreational activities development?

## Assumptions

Within this research, all respondents of the quantitative and qualitative research are expected to give honest answers. Inhabitants of Delfzijl are expected to be willing to answer our questions honestly and the municipality are assumed to be cooperative in terms of information sharing and meeting the research group.

## Delimitations

Delimitations of this research study are that only a small proportion of the inhabitants were asked due to time constraints. Additionally, no tourists are explicitly targeted and asked as it is out of the tourist season. The municipality aims to use their leisure activities in order to attract more tourists from neighbouring cities or Germany to Delfzijl. Asking them could therefore reveal a different outcome as they might value activities differently. Comparing the different perceptions could also represent a better outcome for attracting more people also outside the town. Apart from this, a visit to the destination is planned to interview the municipality and talk to the inhabitants. Due to the fact that the representatives of the destination have not been very cooperative, only one visit to the city of Delfzijl was undertaken. More time at the destination and more observations could also provide a more in-depth understanding of the town and its inhabitants. Moreover, it could support a more clear understanding for the stakeholders' expectations and positions.

## The importance

1. Provide the municipality with in-depth knowledge about existing leisure activities.
2. Give recommendations for future steps in optimizations of leisure activity offers.
3. Point out the strength and weaknesses of Delfzijl's leisure offers.
4. Develop a stakeholders' overview and provide in-depth knowledge about the different expectations.
5. Describe the inhabitants' perception of Delfzijl leisure activities.
6. Describe which leisure activities -located next to the dykes- are valued by inhabitants.

Secondary data about the Wadden Sea and its recreational activities is available on a great scale. Even though there is sufficient information about the history of Delfzijl and the dykes, there is a gap in information about leisure activities. This chapter gives a clear overview about the available secondary information to give an introduction into the topic.

## Wadden Sea in general

The Wadden Sea is a UNESCO World heritage site, which ranges from the northwestern part of the Netherlands to the southwestern part of Denmark, more precisely from Den Helder to Esbjerg (Hogan, 2009). The length of sea is 450 km with a medium wideness of 10 km up to 25 km and down to 4 km (ibid.; Stevens & Associates, 2006). Its natural boundaries to the North Sea are the Friesian islands, the mainland of Germany and Denmark (Harrison & Hitchcock, 2005).

The Common Wadden Sea Secretariat (2010) states that the Wadden Sea area has developed since the previous glacial ages due to climate change use by man or sea level rise. Today, as Gittenberger et al. (2010) identified, the Wadden Sea area has become a perfect living environment for several animals and plants due to its salt marshes, mud and sand flats or sandbanks. Many animals such as up to 12 million birds per year use the area in and around the Wadden Sea as winter quarter, resting places or breeding area (UNESCO, 2011; UNESCO, 2011a).

In 2009, the UNESCO announced around 66% of the Wadden Sea area to be a natural world heritage (UNESCO, 2011a). Hence, this unique and sensible ecologic system in Europe its preservations for the future joins huge value (ibid.). As many other natural sites in the world, the Wadden Sea is faced with environmental problems like water pollution, rising sea levels due to climate change as well as human made intervention in the natural processes (Harrison, & Hitchcock, 2005). Tourism development can also be seen as an interruption (ibid.). On one hand, it is a needed income source of locals but on the other hand it is a way of damaging the nature (ibid.). In 1997, already the trilateral Wadden Sea plan was set up in order to guarantee the preservation of the Wadden Sea region as the consequences based on its unsustainable use became visible (Common Wadden Sea Secretariat, 2010a). From that on, there has been a high focus within professionals, city managers and environmental groups on the preservation of the flora and fauna (ibid.). Nowadays, the main area is appreciating overall environmental guardianship that is provided by the close partnering of



## Recreational activities in the Wadden Sea

The Wadden Sea, a unique but endangered area, offers a range of recreational activities to millions of tourists every year. Being one of Europe's biggest protected marine areas, it is also home to a variety of species living and breeding only in this area. Throughout the last decades, tourism has developed rapidly and recreational activities, which will be presented in the following section, are being offered in a relatively wide scope. Moreover, tourism in coastal areas like the Wadden Sea can either be land or water based which emphasizes the importance of an intact natural environment. In the Wadden Sea, possibilities on land include the beaches, the dunes and the natural surroundings. Concerning water-based activities in the area, the focus lies on mud walking and fishing as well as on other water sport activities explained below (Waddenzee NetForum, 2000).

During the summer time, tourists mainly come for beach holidays, which, apart from the islands, take place for example in Harlingen, since the town provides a great opportunity for beach holidays on the mainland (Yang et al., 2011). In addition to that, biking and hiking activities are common recreational activities, encouraged by the flat landscape and the view across the sea (ibid.). Tourists can either rent a bike for a few Euros per day or bring their own bikes with them. These activities are especially popular because people of all age classes can enjoy them. The same applies for walking, since the dykes offer a sound possibility of being close to the shore and have an overview of the Wadden Sea area. Nevertheless, Yang et al. (2011) mention that there needs to be additional effort in supporting further walking paths and sitting possibilities to extend the routes for tourists. Moreover, bird watching, often offered in guided groups, is another recreational activity highly valued in the Wadden Sea (ibid.). Because of the uniqueness of species and habitats, birdwatchers can experience their hobby in the quiet surroundings of the sea and watch animals in their natural environment. Another recreational activity, tidal flat walking, is an action many tourists take during their stay. According to Common Wadden Sea Secretariat (2010), 74,241 participants were registered for the walks in and the numbers are continuously increasing. Tidal mud walking is an activity, which is advised to be executed in groups since it can be difficult to find the way back without orientation (Wattenmeer.de, n.d.). Also, sometimes the levels above the water can become foggy and therefore dangerous for inexperienced tourists since the way back to the shore is hard to see. Nevertheless, it is the number one activity to do when visiting the Wadden Sea since experiencing the mud hands-on cannot be experienced anywhere else (ibid.). Concerning water-based activities, boating



across the Wadden Sea (Common Wadden Sea) activity, 115.651 ferry passengers were counted for the year 2007. Furthermore, activities like sailing, windsurfing, fishing, horseback riding and hunting continue to grow in the Wadden Sea (ibid.). These leisure-time pursuits are still in their growing phases, however can become of major importance for future tourism since people are experiencing the Wadden Sea as a unique holiday destination with unique activities that can be taken here (ibid.). There are several horse farms, which offer trails for beginners, intermediary and advanced riders who want to indulge in the atmosphere of the Wadden Sea shore. Furthermore, several fishing farms invite tourists to come and take part in angling, which is also increasing in popularity. As Waddenzee NetForum (2000) states, guided tours are an increasingly popular way of taking part in the above-mentioned activities, and are also a way of ensuring fair and sustainable treatment of nature. Tourists, who go mountain biking along unmarked paths, can disturb nature and breeding birds for example (ibid.). Another fact, which needs to be considered, is that water-based activities such as canoeing and jet-skiing are becoming firmly established activities in the area, however can interfere significantly with nature. The same applies to harbour activities (ibid.), an important factor to consider since there are 17 yacht harbours in the Wadden region alone (Ecomare, n.d.). In addition to that, the Wadden Sea area and its surroundings are increasingly becoming known for their golf courses, which many tourists like to visit during their stay, and indoor water parks, which appeal especially to families (Waddenzee NetForum, 2000). Furthermore, tourists can go swimming and rowing as Holland.com (n.d.) states.

The above-mentioned activities can be summed up in two categories, namely land based and water based. Most of the recreational activities in the Wadden Sea area are offered during summer time when tourist numbers are at their peak and they could be seen as a major pull factor to the region (Harrison, & Hitchcock, 2005). However, on the other hand Stevens and Associates (2006) claim that tourists are mainly attracted to the Wadden Sea area because of the unspoiled nature, the magnificent scenery and the richness of different animals rather than special activities offered which is contradictive to the researches before. Thus, it becomes visible that there is not much research on the actual drivers but rather a general description.

In short, the Wadden Sea can be described as a natural resource, which provides many possibilities to attract people whereby much focus must be laid on the actual drivers and preferences on the targeted segments.

According to the Oxford Advanced Learners Dictionary (2005) a dyke is a long thick wall that is built to stop water flooding onto a low area of land+ (p.478). In the Dutch history dykes have a long tradition and their aim is to protect the inhabitants against floods and increased water levels. They can be classified as primary dykes, which are built around coasts and rivers, and secondary dykes which have been constructed around canals (Van Baars, 2004).

The history of the defense to sea-level rise in the Netherlands dates back to 500 BC when the *terpens*, which are mounds, have been created by the Frisians in order to provide a place for refuge in case of rising water levels (Rosenberg, 2011; Koningsveld, Mulder, Stive, Valk, Weck, 2007). First reports of sea-walls, the so-called *zeeburghen* date back to the Middle Ages, as already William I, count of Holland protected his territory with coastal dykes (Harlier, Chaineux & Morcos, 2005). Peat and sand dunes at the coastal areas provided a natural protection against sea-level rise in the Netherlands, but due to usage of peat for fuel much of this natural protection disappeared. In 1287 the storms and increased water levels led to the fact that the region *Zuiderzee*, which has been agricultural land before was flooded (Koningsveld et al, 2007). Due to these major floods, the Dutch started to introduce the dyke rings around most of the threatened areas by the thirteenth century. This was a turning point in the Dutch water management, as the accommodation strategy with the help of the *Terpen* was turned into an actual protection with the help of sea-walls (ibid.).

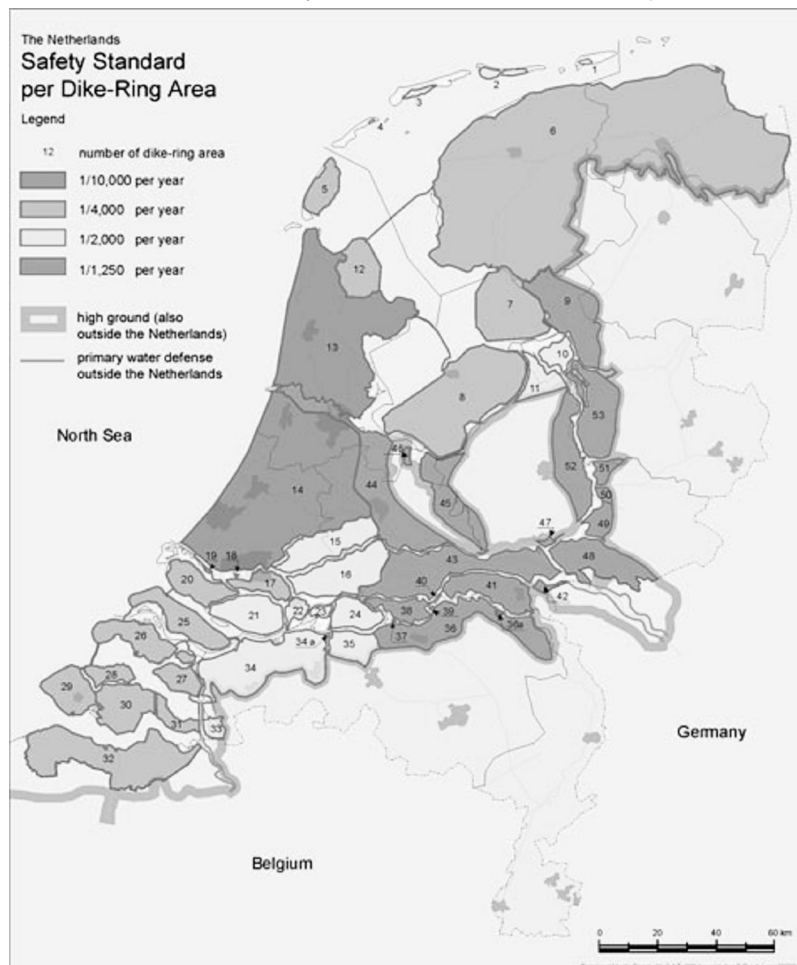


Exhibit 1: The dyke rings in the Netherlands and their risk assessment (source: Rijkswaterstaat)

In these early years windmills served as water pumps to reclaim back the land from the water (Rosenberg, 2011). The major dyke of the Dutch History is the so-called *afsluitdijk* which

id has a total length of 30.5 km. This dyke separates from the North Sea. In the Netherlands, many regions could be claimed back from the water and thus the American Society of Civil Engineers selected the Dutch dyke system as one of the Seven Wonders of the Modern World (ibid.).

The study %Flood Risk Assessment in the Netherlands+by Jonkman et al. (2008) indicates that without the protective dykes, dunes and hydraulic structures over 50% of the country would suffer from floods regularly. This is due to the fact that about 27% of the Netherlands lies below sea-level and over 60% of the population live in these areas therefore, the dykes are important for the existence of many regions of the country (Rosenberg, 2011). Today, the Netherlands are surrounded by over 3,200km of primary dykes (Van Baars, 2004).

Throughout the history, the Dutch suffered from severe floods whereby the major flood took place in 1953 with over 1,800 people losing their lives (Jonkman, Kok & Vrijling, 2008). In order to increase the safety of the dykes, the Delta Committee was created. Areas have been assessed on their flood risk and protected by the so-called ring dykes with varying safety standards. For the region of Delfzijl the dyke ring 6 is applicable (Exhibit 1). After the disastrous flood of 1953 the safety standards and researches on the Dutch dykes have increased immensely in order to minder the risk for the future and to ensure the existence of the Netherlands (Suburban Emergency Management Project, 2006).

### The town of Delfzijl

Delfzijl is a little town located in the northeast of the province of Groningen, Netherlands, with around 27,674 inhabitants in 2010 (Gemeente Delfzijl, n.d.). Its first record goes back to 400 BC and in 1303 the first importance of the



Exhibit 2: Location of Delfzijl

city and its naturally formed harbour are mentioned at which the river Delft connects with the Ems (ibid.). Moreover, the city is known for its chemical industry, which plays a key role in the European chemical industry (Groningen Seaports, n.d.). Around 15 % of all chemical industry output of the Netherlands is from Delfzijl. The chemical park of the city covers around 210 hectares and currently employs 1,250 people (ibid.).

The city center of Delfzijl is an old historic one in which the past is still visible. But Delfzijl is first of all well known as a seaport with its large ships, and with one of the three ports in the province of Groningen and one of the most important ones in the Netherlands. Vessels from

comes on the quays. The town provides employment to 17 % of the national production of chemical products comes from Delfzijl (Gemeente Delfzijl, 2011).

### Recreational activities in Delfzijl

In order to get an first insight to answer research question 2, **What current leisure and recreational activities exist at the Waterfront area of Delfzijl?**, desk research on the recreational activities in Delfzijl in general was done.

Delfzijl has different services for recreation like a camping-site, museums, a beach, a promenade near to the harbour and an indoor swimming pool. The surroundings are ideal for walking and cycling tour, like the **Kustlijn Delfzijl**+tour along the coast of the Delfzijl region (Groningen Seaports, 2011).

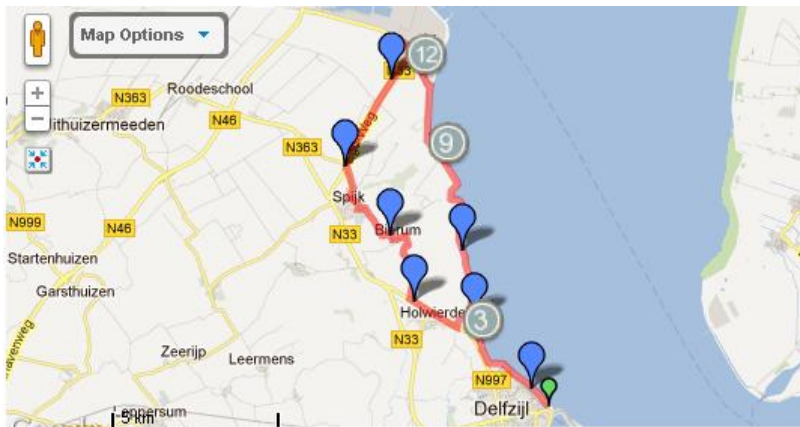


Exhibit 3: Kustlijn Delfzijl

Boat trips towards the German Wadden islands Borkum leave from Delfzijl (Gemeente Delfzijl, 2011). The ferries start eight times a day and in the winter season there is one departure per day (Groningen Seaports, 2011).

In Delfzijl itself there is a Sea aquarium located in a bunker from the Second World War and it represents a unique visitor attraction in the region. The museum shows different unique collections like a megalithic tomb, treasures, a stalactite cave, stones, fossils, crystals, minerals and shells from all over the world such as model boats. The aquarium has also a huge number of fish species native to the North Sea and the mudflats, some of which can even be touched. (Muzeeaquarium Delfzijl . Zeeaquarium Delfzijl, 2011)

Since 1986 Delfzijl has successively attracted million of visitors with the famous international sailing event **Delfsail**+. This traditional sailing event is an unforgettable experience with its world-famous A and B class Tall Ships, concerts and its big crowd. The event attracted



the event does not take place every year; the last one (Gemeente Delfzijl, 2011).



Exhibit 4: Coast of Delfzijl

## Gaps

The literature review shows that there is a significant number of secondary information available on the topics of the Wadden Sea, recreational activities at the Wadden Sea and the dykes. However, there is a lack of focus on the actual pull drivers of the Wadden Sea since most of the activities are often described as important for visitors whereby a large target group is taken and a focus on special segments is lacking. Additionally, there is a clear lack of information about Delfzijl itself as well as its leisure activities. The municipality should provide more information in order to generate more tourists awareness about the destination Delfzijl. New development of leisure activities could be based on this information in order to make future plans for the attractiveness of the municipality.

This part of the report deals with a critical analysis of significant literature and gives an overview of the research topic. Therefore the first section deals with the general role of dykes as a tourism attraction in Delfzijl. Furthermore, current leisure activities are listed, followed by an investigation on how people perceive the waterfront in Delfzijl. Lastly, this review identifies the expectations concerning the development of activities in the area. These topics will be covered by the overall problem statement **How can Delfzijl take advantage of the dykes referred to recreational activities within the next five years?**

As Hogan (2009) stated, the Wadden Sea is a UNESCO World Heritage Site, ranging from the northwestern part of the Netherlands to the southwestern part of Denmark with an overall length of 450 km. The specialty of this area lies in its unique natural habitat and the variety of diverse animals breeding only in this region. This was the reason for announcing the Wadden Sea World Heritage in 2009 (UNESCO, 2011a). Due to its natural exquisiteness the Wadden Sea became an attractive place for tourism recreations including land and water based activities (Waddenzee NetForum, 2000). One important aspect of the Wadden Sea can be found in the dykes, which help to protect the inhabitants against floods and increased water levels (Van Baars, 2004). There are two types of dykes namely primary, built around coasts and secondary erected around canals (ibid.). According to Flood Risk Assessment in the Netherlands by Jonkman et al. (2008), without the dykes over 50% of the country would be affected by floods regularly. Due to the fact that about 27% of the Netherlands is below sea-level and home to over 60% of the population, the dykes play a crucial role for the survival in the country (Rosenberg, 2011). The same applies to Delfzijl, which is located at the Wadden Sea coast in the province of Groningen with around 27,674 inhabitants (Gemeente Delfzijl, n.d.). Concerning trading relationships the harbor of Delfzijl plays an important role since it is today the fifth biggest one in the Netherlands. Apart from these industry activities the amount of recreational opportunities has been increasing in the past years and is especially high in the summer time (Yang et al., 2011). Particularly popular are biking and hiking, which are attractive because of the flat landscape and the view across the sea (ibid.). Tourists can rent a bike directly on site, a possibility which is appreciated by people of all age classes. Besides that, walking paths provide the chance to experience the shore and the view of the sea. Yang et al. (2011), furthermore mention bird watching, as another recreational activity in the Wadden Sea. According to Common Wadden Sea Secretariat (2010), tidal flat walking is also highly valued by tourists and is the number one activity in the Wadden Sea area. Concerning water-based activities like sailing, windsurfing, fishing as well as boating and can be mentioned whereas the former one is used for transportation across the Wadden Sea (ibid.). The importance of these activities should not

increasing and will do so in the coming years (ibid.).  
 ated, fair and sustainable treatment of nature is  
 guaranteed by guided tours, which are offered on a regular basis for tourists. In addition to  
 that Ecomare (n.d.) argued that activities like jet-skiing can have a severe impact on nature  
 and should be considered for the planning of recreational activities in the Wadden Sea area.  
 Harrison and Hitchcock (2005) claim that recreational activities are seen as the main pull  
 factors for the region. These include golf and indoor water parks, which are attractive to  
 families (Waddensee NetForum, 2000). Besides that Delfzijl also offers the sea aquarium,  
 swimming and rowing possibilities as attractions (Holland.com, n.d.). Additionally, Stevens  
 and Associates (2006) argue that tourists are coming to the Wadden Sea area because of  
 the rich natural scenery and less for recreational activities.

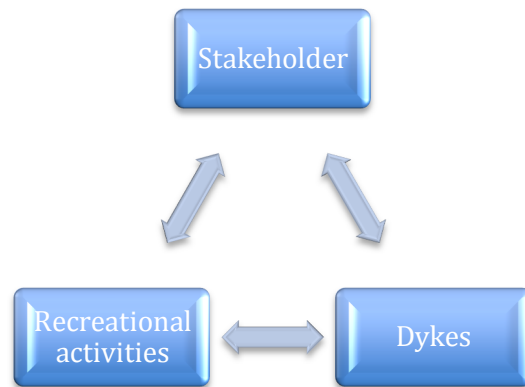


Exhibit 5: Conceptual Map

As can be seen in the figure above (Exhibit 5) the conceptual map consists of the  
 stakeholders in Delfzijl, the dykes as resources on site as well as recreational activities. It is  
 important to stress that these factors are all interlinked and dependent on each other since  
 they are all necessary parts in creating a tourist experience. The stakeholders include  
 inhabitants, tourists, shop owners, hotels, restaurants and other industry related groups.  
 Regarding recreational activities a variety exists that can be divided in land and water based  
 activities, which have been laid out in the text. The third component of the map, the dykes,  
 is another necessary part for protection. Apart from this, the dykes could be used for tourism  
 recreation. Concluding, the relationship between these three factors will be investigated in a  
 detailed research at the vicinity of Delfzijl.



### **1. What is the role of the dykes in attracting people to the city of Delfzijl?**

The intention of this research question is to clarify whether the dykes only purpose is to protect the emerged land from the sea or if they also invite people to come to and stay in the city of Delfzijl for purposes of recreation. To find an answer to the above-mentioned research question, interviews have been conducted directly with the local stakeholders and analyzed afterwards.

### **2. What current leisure and recreational activities exist at the Waterfront area of Delfzijl?**

The intention is to find out how the dykes of Delfzijl are used to offer recreational activities and what current leisure activities already exist at the Waterfront area of Delfzijl. To specify which kinds of activities are already offered and in how far these are connected to the dykes, stakeholders were interviewed and a street survey was conducted at the destination. In addition, a desk-research was done.

### **3. How do people perceive the Waterfront area of Delfzijl?**

In the future, Delfzijl's Waterfront can play a major role for the city. Therefore, it is important to find out how the city's inhabitants themselves see their Waterfront. Thus, some conclusions can be drawn on which role the Waterfront plays today and which it might play in future for the tourism sector as an activity and recreational area. To get an impression of the inhabitants' opinions a questionnaire was conducted.

### **4. What are the expectations and recommendations concerning the leisure activities development?**

It is important to understand how stakeholders of Delfzijl see the recreational and touristic future in order to identify potential steps in developing the area. Therefore, it is important to understand the different expectations and to define which stakeholders have the highest power on the development of the dykes. Thus, a clear overview can be obtained which supports an efficient planning of future steps. In order to answer this research question, interviews have been conducted and the findings from the questionnaires have been considered. They have been asked about their expectations concerning leisure activities development. Additionally, during the stakeholder interviews their expectations for the future became obvious.

## Research design

This research is an explanatory research as it is based on the aim of getting more knowledge about Delfzijl, its leisure activities at the dykes and therefore something which is not well known or explained yet (Creswell & Creswell, 2009). In order to gain more knowledge, both qualitative and quantitative research methods were used. First of all, it is important to understand the stakeholders' expectations on the future development. Secondly, it is then important to understand the samples' perception of the leisure activities at the dykes (ibid.). The quantitative method is mainly used for the research on the sample. Here, the focus on facts and numeric data allows comparing the outcomes of each person asked (ibid.). Therefore the research questions, **What current leisure and recreational activities exist at the Waterfront area of Delfzijl?** and **How do people perceive the Waterfront area of Delfzijl?** were mostly answered with the help of the results which were gained by quantitative research. Whereas the questions, **What is the role of the dykes in attracting people to the city of Delfzijl?** and **What are the expectations and recommendations concerning the leisure activities development?** were answered by making use of observation and stakeholder interviews.

## Populations & Sampling

The population of this study is all the inhabitants of Delfzijl, as well as visitors and commuters. The total inhabitants of Delfzijl are 27,653 (Blixem Internet, 2011). Concerning the visitor numbers coming to the city of Delfzijl no reliable sources could be found. Due to the fact that the research was undertaken in the winter season, a sample size of 70 respondents is selected to complete the questionnaire on the recreational activities at the dykes and the corresponding visitor perceptions. The street survey was carried out in the city centre of Delfzijl at 6<sup>th</sup> December 2011 in the afternoon. In addition to that, a site survey was carried out at the destination Delfzijl. Due to the weather conditions it was the case, that not many people could be interviewed at the waterfront area. The selection of the respondents was done by random sampling, which means that all members of the population had the same chance to be included in the sample (Veal, 2006). For the interviews with the local stakeholders the Eemshotel, a regional café, Groningen Seaports, representatives of the industrial area and the municipality of Delfzijl have been contacted in order to gain an overview of their expectations and views on the waterfront area. However, only two of the stakeholders volunteered for an interview.

At the beginning of this research, the focus was mainly on secondary data as it gives an insight into the existing knowledge (Creswell & Creswell, 2009). Hereby, the majority of the sources used were books, websites and journal articles. After receiving an idea about the existing knowledge and combining all the information, gaps were found and defined. In order to answer the gaps or rather the problem statement, a familiarization visit was planned in which municipalities were interviewed and information was collected via brochures or interviews with the stakeholders. Apart from this, as the next step of the primary research, the sample was asked so that data could be collected (ibid.). Finally, all the results were compared and evaluated. In order to collect the data, a questionnaire was designed, which focused on the knowledge about leisure activities at the dykes, the perception of the leisure activities and the expectations from the municipality. Moreover, a brief demographic section gave insight into the characteristics of the sample (ibid.). For the interviews with the stakeholders, some basic questions and topics were prepared whereby a semi-structured interview technique was used in order to be flexible and allow space for new possible questions (ibid.).

## Data analysis

The analysis of the survey was undertaken with the help of SPSS. In the survey respondents have been assessed on the variables motivation to visit Delfzijl dykes and their perception of the quality of the facilities at the coastline. Moreover, some demographic information in form of the variables gender, age and origin has been analyzed. Frequency tables were prepared in order to see how many respondents were female and male. In order to identify the most common activities undertaken at the dykes, frequency tables have been used. By making use of cross tabulations correlations between the age group and the activities undertaken have been identified. Additionally, bar graphs demonstrate the results for the variables age and the frequency of visit of dykes in summer and winter season, which have been analyzed by using an ordinal measurement level. With the help of Likert scales, the quality of the recreational activities in Delfzijl was evaluated. Descriptives including a mean and standard deviation of all responses, as well as the minimum and maximum values were provided for the variable quality. Comparing means of these two groups identified the similarity in the quality rating of female and male respondents. Recording and transcribing the interviews evaluated the stakeholder interviews. Afterwards they were analyzed and discussed by the project team.

First of all the results of the questionnaire undertaken with a sample of 70 respondents are presented. In the questionnaire people have been asked about their demographic background, the activities they undertake at the dykes, their perception of the Waterfront area and their leisure time behaviour. Secondly, an analysis of the two stakeholder interviews is provided. Afterwards, the result of the benchmarking with the destination Nessmersiel is shown. In addition to that, the outcomes of the stakeholder analysis are presented. Lastly, major limitations of the study have been identified.

## Demographics

Concerning the demographic background of the respondents the variables gender, age and origin have been evaluated.

### What is your gender?

It is a positive fact that there is balance between female and male respondents as it is important to have meaningful results. 54.29 % of the respondents were female and 45.71 % were male. Concerning the differences in the several answers of male and female respondents, it can be said that there are no significant differences in the answers of the two gender groups.

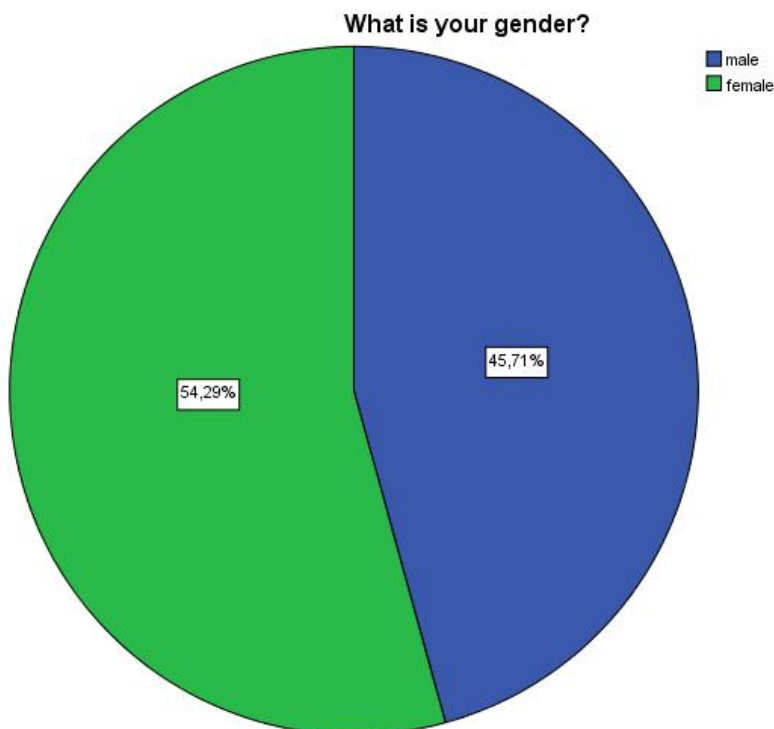


Exhibit 6: Gender

26-40 was applicable, as nearly 27 out of the 70 respondents in terms of frequency this age group was followed by the respondents aged 41-49 who made up 34.3 % of the total respondents. About 21 % of the polled people count to the age category 41-59, whereas the smallest part of the participants, only about 6%, was aged over 60. The exact results can be found in the table below.

### Age distribution of the respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 15-25	15	21.4	21.4	21.4
26-40	27	38.6	38.6	60.0
41-59	24	34.3	34.3	94.3
> 60	4	5.7	5.7	100.0
Total	70	100.0	100.0	

Exhibit 7: Age distribution

Next the respondents have been asked to indicate their origin. Here, the most frequent answer category was the region of Delfzijl, as about 54 % of the sample came from there. In addition to that about 29 % of the respondents came directly from the city of Delfzijl, so that it can be concluded that these people tend to know the surrounding and Delfzijl well. About 9 % of the respondents came from the province of Groningen. The rest of 9 % is spread among the regions Hoogezand with 3 respondents, Leeuwarden with 1 respondent and Siddeburen with two respondents. The exact numbers can be retrieved from the table below.

### Where do you come from?

	Frequency	Percent	Valid Percent	Cumulative Percent
city of Delfzijl	20	28.6	28.6	28.6
region of Delfzijl	38	54.3	54.3	82.9
Groningen	6	8.6	8.6	91.4
Hoogezand	3	4.3	4.3	95.7
Leeuwarden	1	1.4	1.4	97.1
Siddeburen	2	2.9	2.9	100.0
Total	70	100.0	100.0	

Exhibit 8: Origin

In order to answer the research question, **‘How do people perceive the Waterfront area of Delfzijl?’**, the following three questions about quality facilities, seating accommodations and leisure value of the dykes have been evaluated in this part of the report.

With regard to the perception concerning the quality of the facilities at the coastline, it can be said that on average the participants rated the quality as being rather neutral with a mean of 3.17. The minimum rating chosen was 1, which demonstrates that the quality of the facilities was perceived as bad. However, a few respondents chose the maximum of 6, which equals a very good rating. The standard deviation of 1.191 shows that on average the quality ratings differed about 1.2 points from the calculated mean.

**How do you rate the quality of the facilities on the coastline?**

	N	Minimum	Maximum	Mean	Std. Deviation
How do you rate the quality of the facilities on the coastline?	70	1	6	3.17	1.191
Valid N (listwise)	70				

Exhibit 9: Quality total

Concerning the differences in the perception of quality of male and female respondents, it can be said that there are no significant differences, as on average man, as well as women, rated the quality of the facilities at the coastline between 3.16 and 3.18. The data can be found in the table below.

**Quality rating according the gender**

What is your gender?	Mean	N	Std. Deviation	% of Total N
male	3.16	32	1.051	45.7%
female	3.18	38	1.312	54.3%
Total	3.17	70	1.191	100.0%

Exhibit 10: Quality gender

As already shown in exhibit 9, the quality is seen as rather low which is visualized in the pie figure below. With regard to the seating facilities one can see that 85.71 % of all respondents rated the quantity of the seating accommodation as not enough. This shows that nearly 90 %

seating spots at the dykes and does it provide an improvement of Delfzijl.

Do you think there is enough seating accommodation offered at the dykes?

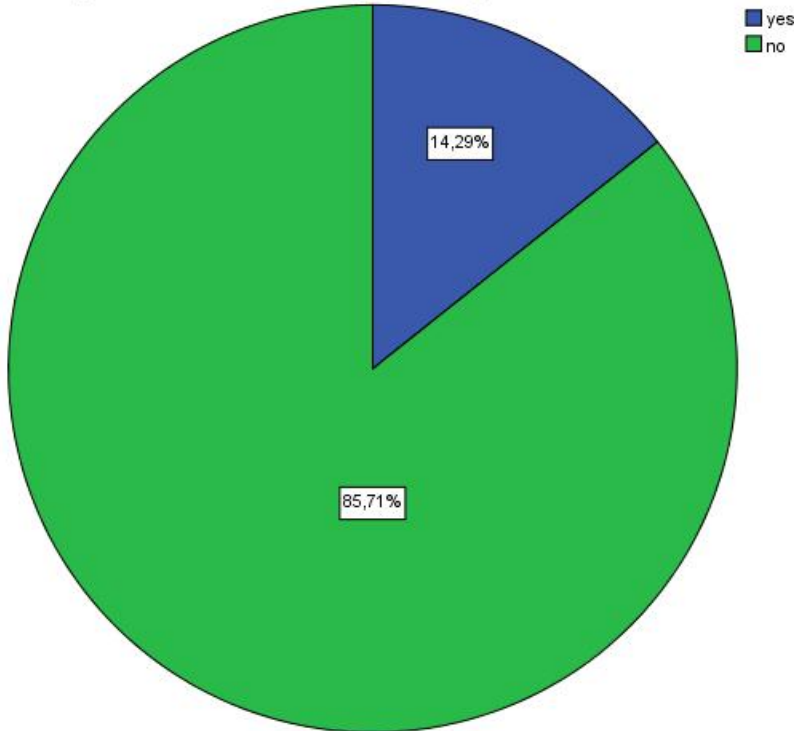


Exhibit 11: Seating accommodation

**The dykes have a protective purpose. Do you see also leisure value in the dykes?**

Concerning the question above, information should be received whether the population sees leisure potential in the dykes or not. The sampled population had the possibility to choose between the answers %Yes, I see leisure value+and %No I don't see leisure value+. The most respondents thought that there is leisure value, as 50 (71.43 %) of the 70 respondents indicated that in their opinion the dykes could be used for leisure. While just 20 (28.6 %) of the respondents fell into the category, which do not see leisure value. This means that more than two thirds of the respondents already see an existing value or a future potential in terms of leisure activities at the dykes. The data can be found in exhibit 12.



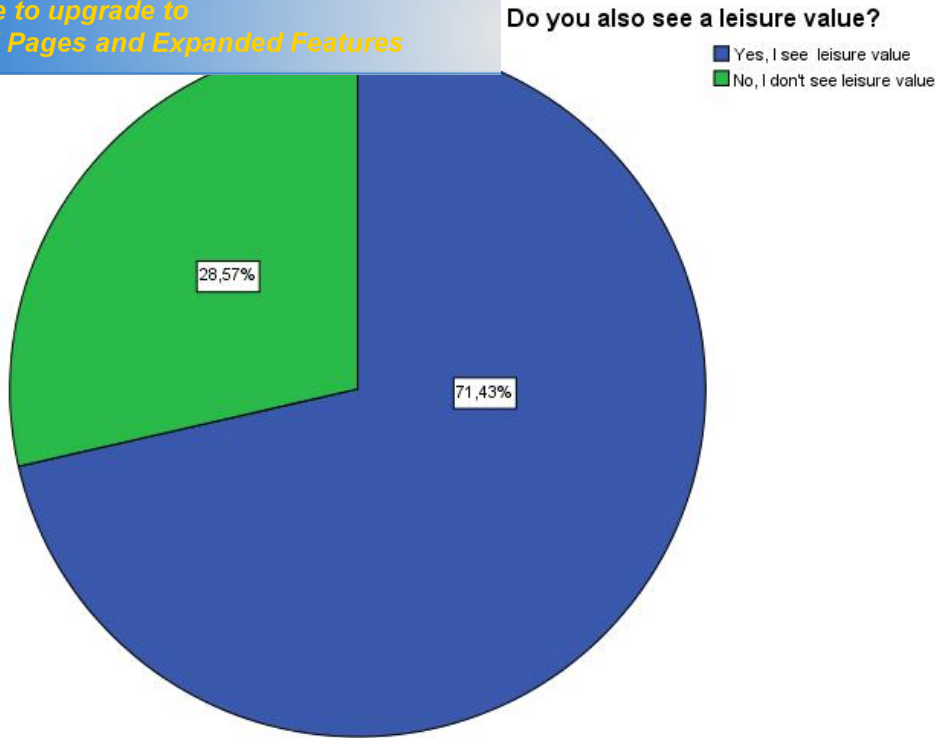
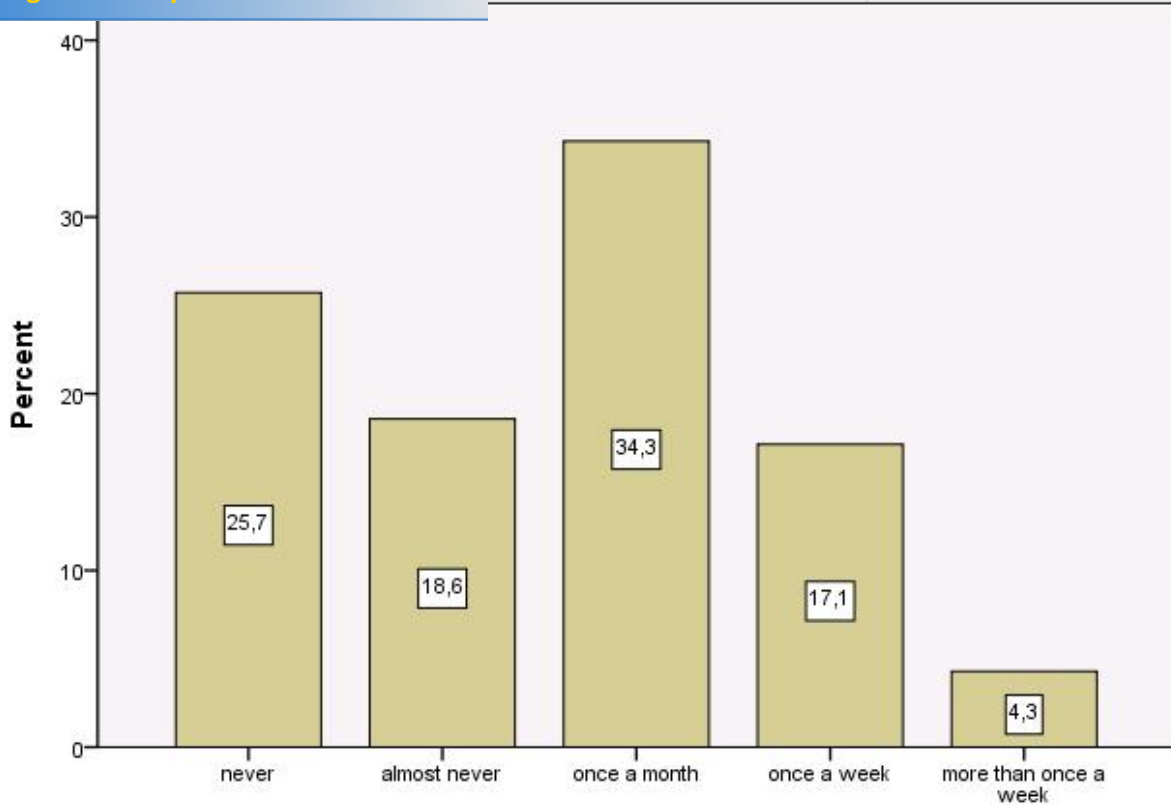


Exhibit 12: Protective purpose

### Leisure time behavior

As one can see in the bar chart (exhibit 13), the leisure time behavior of the respondents in summer has been assessed in order to identify how often people spend time at Delfzijl waterfront area. The sampled population had the possibility to choose between the answers never, almost never, once a month, once a week and more than once a week. As clearly visible, the most chosen answer was once a month with 34.3 % followed by never with 25.7 %. The answers almost never (18.6 %) and once a week (17.1 %) have been selected nearly equally. More than once a week was lagged far behind with 4.3 %. Reasons for these different answers could be the fact that just 29 % of all respondents are direct inhabitants of the city Delfzijl or as mentioned by the surveyed during the questionnaire tour that the beach and the waterfront in general are not inviting to spend time there. This could result from the small size of the beach or the small number of seating accommodations.

time at the coast of Delfzijl in summer?

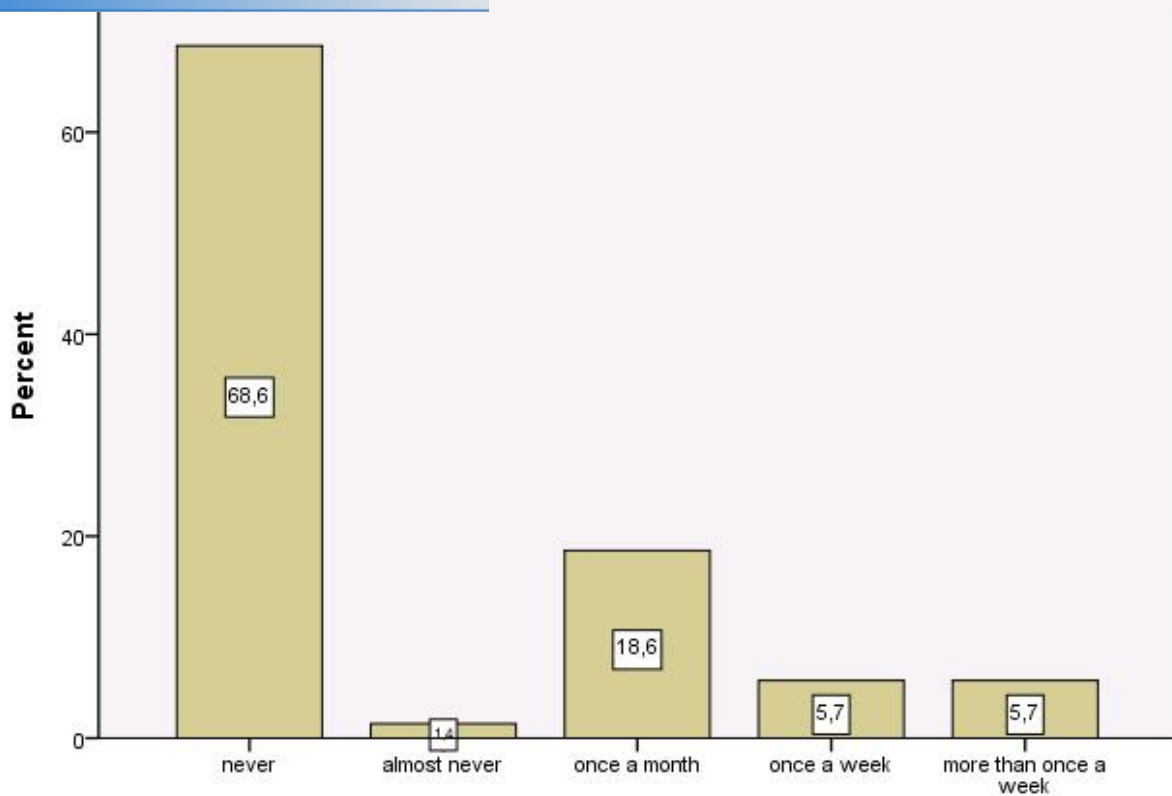


**Do you spend your leisure time at the coast of Delfzijl in summer?**

Exhibit 13: Leisure time, summer

Since the leisure time behavior in summer has been analyzed, a focus needs to be made on the wintertime behavior in order to understand whether there are significant differences for both seasons. The respondents had the same answer possibilities as for the previous question. Regarding the outcome, one can see that the most chosen answer was never with 25.7%. The second most rated answer was once a month with 34.3%. Once a week and more than once a week (4.3%) are equal on the third place followed by almost never with 18.6% on the last place. Reasons for this spread of answer could be that the weather during the wintertime is not inviting people to visit the waterfront.

Do you spend your leisure time at the coast of Delfzijl in winter?



Do you spend your leisure time at the coast of Delfzijl in winter?

Exhibit 14: Leisure time, winter

### Relation between leisure activities and age

Concerning the activity bird watching only 5 out of the 70 respondents indicated that they do this activity at the coast of Delfzijl. With regard to the various age groups it can be said that about 16.7% of the people aged from 41-59 chose the option bird watching and thus age group makes up the highest percentage, which undertake bird watching at the coast of Delfzijl. Contrasting only 1 out of the respondents under 41 indicated that they did bird watching at the coast of Delfzijl. Thus, it can be concluded that a low number of older people undertake bird watching at the coast of Delfzijl.

Due to the fact that the age group over 60 with only 4 respondents in the questionnaire is not sufficiently represented, cross tabulations, which show the differences of the activities undertaken with regard to age of the respondents were not discussed for the further activities like biking and walking.

8 of the 70 respondents, answered that they do biking  
56% of the respondents mentioned that they "walk" at

the coast of Delfzijl in their leisure time. Walking was the most chosen activity undertaken by the respondents, as 39 out of the 70 respondents indicated to do so. This activity was followed by the activity swimming, because 21.4% of the sample; which equals 15 respondents; said that they do this activity at coast of Delfzijl. The activity "boating" was only chosen by 7% of the people included in the questionnaire. Hence this activity is hardly undertaken at the waterfront area of Delfzijl. None out of the sample stated that they do "surfing" and "fishing" and only one out of the 70 respondents indicated to "walk the dog" and "work" at the coastal area of Delfzijl. From this result it should be concluded that especially the activity surfing should be developed further, as several people indicated that they are interested in this activity. Another activity, which could be developed further at Delfzijl's coastline is "eating and drinking". Only two respondents answered that they do so. For this reason it is advisable to develop more attractive facilities offering eating and drinking at the coastline. Special regard should be taken to the waste management if such facilities are developed. Furthermore, can the activity of playing with children at the coast of Delfzijl seen as a gap of facilities at the Waterfront, as only one out of 70 respondents answered to do this. However, nearly 40 % of the participants were in the family-friendly age group from 26 . 40. More agreement joined sunbathing from 3 respondents. This outcome could be also respected for future development regarding to the leisure value the inhabitants see in the Waterfront of Delfzijl. Conspicuousness is presented at the last possible answer, no+ 24.3 % of the participants confirmed that they do not do anything at the coast of Delfzijl. As the major part of the chosen sample is regional, the unattractiveness of the Waterfront area including missing facilities and equipment became clear.

## Expectations for the future

During the questionnaire the participants have been confronted with the question, **Do you think the waterfront area should be developed further in terms of leisure activities?** In addition to that, after the completion of the survey the respondents have been asked to state their expectations for the future.

Next, the above-mentioned question has been asked to indicate if the sample thinks that the Waterfront of Delfzijl should be developed further. The sampled population had the possibility to choose between the answers **Yes** and **No**. The result is really clear as more than 94 % (66 respondents) of the respondents are for the development and just 4 out of 70 respondents against. It is interesting to see, comparing the present question with that one before, that there are respondents who would like to see the Waterfront of Delfzijl developed

...me they do not see leisure value in the dykes. This clearly indicates that the Waterfront was perceived too less developed in terms of facilities like cafés, sitting possibilities or a beach.

**Do you think the waterfront area should be developed further in terms of leisure activities?**

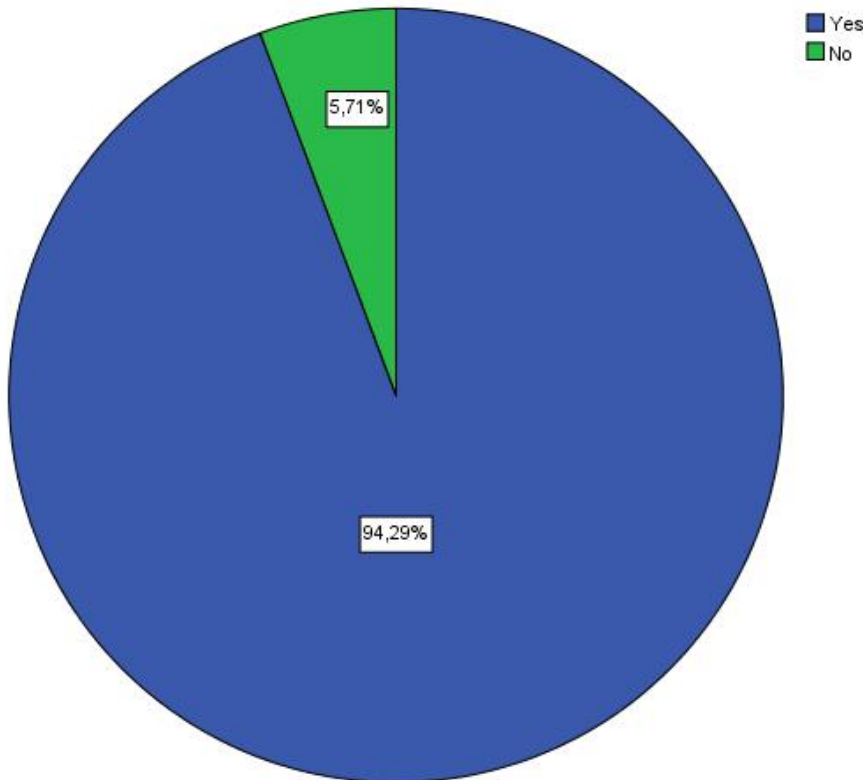


Exhibit 15: Leisure development

The surveyed people indicated several expectations for the future. Mostly mentioned were desires for more seating accommodations or public barbecue areas at free disposal for everybody. Furthermore, the demand for new investors because of the lack of money in the municipality became clear. Direct inhabitants of Delfzijl miss extension of the beach as well as further facilities like a beach bar. Additionally, people expect more events like, exhibitions, concerts and sport related attractions at the Waterfront area.

In order to gain further information for the research questions number 1, **‘What is the role of the dykes in attracting people to the city of Delfzijl?’** and number 4, **‘What are the expectations and recommendations concerning the leisure and recreational activities development?’** stakeholder interviews have been conducted.

Hereby, it became clear that individuals do not value the dykes as something special in Delfzijl. Moreover, a clear lack was found on the offer of activities at the dykes of Delfzijl and the general knowledge about them within the stakeholders. In total two interviews were held and the results are presented in this part of the report.

The first interview was held with Mr. Gerard de Vries who is a local inhabitant and owns a little restaurant called *De Kleine Zeemeermin* at the dykes of Delfzijl. Within the interview, Mr. Gerard de Vries described his experience as a restaurant owner. First of all, he mentioned that the main reason why people live in Delfzijl is that they mainly work in the chemical park, which is located here. From his point of view, Delfzijl is an industrial city rather than a beach or leisure city.



Exhibit 16: Restaurant at the Dykes

Another reason is that many seniors or people have been living here for many years and that they prefer to stay in the place which they know and where they can reach everything easily. Looking at the tourists, Mr. Gerard de Vries mentioned that Delfzijl is more a transit location rather than a recreational city where tourists stay for some days. Instead, people stop over in Delfzijl on Friday, enjoy some food in the restaurant and then take a ferry to Borkum for a weekend. Many people, who stop in Delfzijl are on their ways to other bigger towns and cities such as Appingedam or Borkum. Additionally, Mr. Gerard de Vries added that the people think that since Delfzijl is located directly at the beach, many fish restaurants could be found here and that one can eat fresh and good fish in the town. Thus, they come to Delfzijl and look for a nice place to eat.

Other facts why people come to Delfzijl are, that there are possibilities to drive along the sea by car for a long time. At many places in the Netherlands, people are not able to drive along the sea while also being able to see the sea since the dykes are in between the road and the sea. Therefore, this is something special for Delfzijl. Here, routes are present which are located before the dykes so that people can enjoy the view by car as well as by foot or bikes.



Gerard de Vries mentioned that there are only very few all, he referred to the before mentioned routes along the sea and secondly the Seeaquarium which is a museum. Moreover, he mentioned the little beach, which is used in the summer and the  $\pm$ loodskotterq which is an old sailing ship and used today as an excursion or round trip ship within the summer season. Additionally, in Delfzijl an event is organized all four years namely the world championship of kiten and there is also the possibility to do sunbathing at the dykes. In addition to that, Mr Gerard de Vries described the event of mudflat walking, which is taking place behind the dykes. This event attracts hundreds of visitors every year. However, this does not seem appropriate for him since the nature is disrespected by as the amount of people walking around is too high.

Asking Mr. Gerard de Vries about the role of the dykes and its importance for him personally, he answered that the dykes are not special as they can be found in every city in the Netherlands which is located next to the sea. He added that their role is only the protection from flooding and that he does not regard them as anything special. However, he also added that in summer, the dyke separates the nature from the city. For him, it is a very good recreational activity in the summer time as he can walk along the dykes and enjoy the nature.

When talking about his expectations from possible developments, Mr. Gerard de Vries explained that importance should be given to the recreational factor of the area. Hereby, he meant that not many new buildings should be built on the dykes because this would affect the waterfront area's image negatively but for example the walking and bike paths should be expanded or improved. Thus, the city should make more advertising about these leisure activities that exist. For him, it would be great to have more people visiting his small restaurant but he added that the problem is not that there are not sufficient tourists but that the city of Delfzijl has problems with its shrinking number of inhabitants and the decreasing number of young people, as they prefer to move to the bigger cities such as Groningen. Hereby, he explained that the city requires taking action in order to make the city more attractive for those who live there and have been living here. The young professionals, from his point of view, can become future investors when they stay in the town. As for example, they can open restaurants, shops or offices and keep the money in the city while supporting an efficient development of the city. The dykes could be used as an advantage but he added that the city council defines the main problem as the lack of money and requires to first filling in this gap.

To conclude it can be said that from the view of Mr. de Vries the dykes play not a major role in attracting people to Delfzijl as they are not unique because they can be found all over the



In the future, Mr. de Vries mentioned that it is important to offering activities or attracting people to the dykes. In his opinion, it is important to offer leisure activities on the one hand but conserve and protect nature on the other. Lastly, he desires more financial support for the future development of the destination Delfzijl by focusing more on keeping the inhabitants in Delfzijl.

A second interview has been scheduled with Mrs. Marjolein Zwerver, who is the marketing manager of Groningen Seaport in Delfzijl. Concerning the reason of living or coming to Delfzijl, Mrs. Marjolein Zwerver mentioned the employment possibilities of the industrial cluster. However, she added that people start moving away as they prefer to live in the towns or cities around. The majority of the people working here do not live in Delfzijl anymore. Additionally, young people move away to go to university or education trainings and afterwards they prefer to stay in other cities as they offer of recreational activities as well as career options is bigger. Based on this, the majority of population of Delfzijl is seniors.

Concerning the recreational activities, Mrs. Zwerver mentioned that Delfzijl has two attractions the sea aquarium and the hotel next to the dyke, which is the only one in the Netherlands, built on stilts. In her opinion, the dyke of Delfzijl does not play an important role in terms of recreational activities or in the attraction of people. Furthermore, she added that the only recreational activity she can think of is a walking path of nearly 5 kilometers, which invites inhabitants and visitors to do cycling and walking activities. This path provides a view over the sea and up to the Germany islands. Moreover, Miss Zwerver listed the most popular and typical activities during the summer time such as mud walking, doing a trip on a boat or vessel.

Besides that, she talked about the project of the municipality, which considers improving the city center in order to keep the inhabitants and attracting tourists and visitors. In her opinion, many changes have been going on over the last few years, including the beach, the walking path and the aquarium. She also mentioned the Zoo project located at the dyke as well as the aim of the city council to place some restaurants next to the dyke and waterfront area.

When asking about her personal expectations, Mrs. Zwerver explained, that improvements need to be made at the dykes of Delfzijl. As an example, she mentioned that for instance developing a beach, which can be visited all around the year without raising it every summer could be one important step. Apart from this, she added the towns in that area work closely in developing that region. Some of these already have a good tourism reputation. Here, the city should use its network to learn from the others experience and should look for improvements

positive contribution to the city of Delfzijl. Hereby, she mentioned that the neighboring regions could provide information about Delfzijl as well or that more information should be provided to the young adults about education possibilities in the region. Here, the different educational institutions could be advised to work more closely. Mrs. Zwerver also mentioned that the neighboring cities do not want to lose their tourists to other neighboring cities but the development of Delfzijl could support to bring more people to the region for both living and leisure.

## Benchmarking

A benchmarking with Nessmersiel was done in order to provide recommendations for Delfzijl to attract more tourists for the future. Nessmersiel is an officially recognized seaside resort in Northern Germany and belongs to the community of Dornum. Known for its peacefulness, Nessmersiel attracts especially families with small children and visitors with pets (Dornum-Nessmersiel, n.d.).

Furthermore, the beach area includes 25000m<sup>2</sup> and offers a separate section for surfing activities (Nordsee, n.d.). In addition, a harbour for private yachts and ferries to the island Baltrum is located directly in Nessmersiel (ibid.). The 3000m<sup>2</sup> indoor playground %Nessmersiel Sturmfrei+ was created in 2007 and presents a sound opportunity for families, since it does not only provide activities for children from 3-15 years but also sauna facilities for parents. For this reason also activities for the winter season are offered (Nessmersiel Sturmfrei, n.d.a). A special highlight outside the Wadden Sea itself is Paddel & Pedal, which describes the activity of renting a boat and paddling on canals towards Emden or Norddeich in a small boat (Nessmersiel Sturmfrei, n.d.b). Here, different signs along the small canals help finding an orientation. Moreover, Nessmersiel attracts tourists with its guided mudflat walking tours to Baltrum as well as trips to seal sand banks and horse-riding activities (Nordseeurlaub Ostfriesland, n.d.). Also, the %Urlauberbus+ can be used as a means of transportation, riding across Ostfriesland for just " 1 per day (ibid.). The schedule ranges from March to October and is actively running on seven days per week (ibid.).

The municipality Delfzijl is located at the Wadden Sea, but with the difference that it attracts fewer tourists. This is mainly due to the fact that activities linked to tourism are not offered in such a range as in case of Nessmersiel. Delfzijl provides only a small beach, which needs to be raised every summer because of the tide. This beach is near the industrial area as well as the dykes, which offer a walking path of nearly 5 km along the sea. Another attraction is a sea aquarium nearby the water where families with children can explore the nature of the sea. Besides that tourists and visitors come to Delfzijl because of the Pinksterfeesten, mud-walking activities and the sailing regatta. Apart from this Delfzijl is rather a halt in between

rkum or to other cities. To conclude can be said that  
ities, Delfzijl is less advanced and therefore needs

adjustments to attract tourists.

The comparison clearly shows that Delfzijl is lacking resources, which attract tourists, as also the awareness on the activities offered is low and there are no activities offered during the winter season. The example of Nessmersiel shows that a greater diversity of activities is needed in order to appeal to more visitors the whole year.

In order to enhance its touristic position, Delfzijl is therefore advised to take a closer look at the strategy that Nessmersiel is relying on, namely creating a larger resource base all year around. Nessmersiel, just like Delfzijl, is a peaceful, family-attractive location which is known for its natural habitats and breeding animals. Nevertheless, Delfzijl does not possess the large beach area, which Nessmersiel provides for its tourists. This disadvantage can cost Delfzijl many visitors every year because no activities can be executed which are connected directly to the beach. Furthermore, Nessmersiel offers an inexpensive bus service during the high season, which attracts tourists to discover the area and its activities. Delfzijl does not offer such a service to its visitors but rather even acts as a stopover for tourists who want to experience the islands around. Nevertheless, this service could also help attract tourists and let them experience more of Delfzijl and its surroundings. In addition to that, Delfzijl does neither offer special activities in the winter season nor does it promote them as well as Nessmersiel. Also, the general lack of activities can be traced back to the lack of resources on site, which is the main reason for small visitor numbers.

## Stakeholder analysis

In order to answer the last research question, the expectations of stakeholders on future recreational developments at the dykes, a stakeholder analysis was done. During the process of secondary and primary research as well as benchmarking some stakeholders were identified which have a crucial role in the development of leisure activities at the dykes of Delfzijl. For this, the different stakeholders within the questionnaire sample such as inhabitants or shop owners were analysed again separately to identify their interest. This chapter highlights the outcome of the elaboration done and presents the role and expectations of the different stakeholders. However, within this analysis not all stakeholders are included due to the lack of information.

In Delfzijl, the current presence of leisure activities at the dykes as well as the attractiveness of the town for investors in terms of leisure activities was described to be low. The outcome of the interviews and the questionnaires showed that many people define the city as not

inhabitants, tourists and especially young people. Improving its leisure offer requires a clear understanding of the different people involved and their interests. Only when the majority of the interest is met, the future development plans can be successful (Werther & Chandler, 2006). During the collection of data and information both secondary and primary only a limited number of stakeholders were found which are visualized in appendix 2.

As mentioned in both interviews, the city of Delfzijl is currently dealing with a significant decrease in its number of inhabitants and a low number of visitors due to its low attractiveness, leisure offer and low employment possibilities. For this reason, the city wants to increase its attractiveness by building new leisure facilities and using the dykes as a competitive resource. Due to this, this research was commissioned. Looking at the appendix, some stakeholders can be pointed out which have influence and interest in this development process. Hereby, the neighbouring cities and their facilities also need to be considered as stakeholders, since they all can take advantage from the regional development (Werther & Chandler, 2006). Adding the fact, the different towns work closely together as mentioned by Mrs. Zwerver, it can be concluded that they all have some interest in the developments (ibid.). Additionally, the transportation is regarded as a stakeholder as they gain money from bringing people to the different areas (ibid). An increase of leisure facilities at the dykes of Delfzijl could also affect the number of visitors and the attractiveness of the neighbouring cities negatively or positively. Hereby, the area itself can even increase appeal for inhabitants.

As it was mentioned earlier, it is not only significant to receive an overview about the different stakeholders but also to understand their interests and power on the leisure activities at the dykes (ibid.). For this, an overview was prepared defining the different interests of the stakeholders based on the secondary and primary research done which can be found in appendix 1. Here, it becomes visible that some interests are very contradictive. As an example, the questionnaires showed that while the local companies want to increase their sales revenue, which is also linked to the buying power and the number of people living or visiting the town, it does not want to have more competition (Werther & Chandler, 2006). However, from the outcome of the questionnaires and the interviews, it became clear that inhabitants and the authorities want to have more employment possibilities to increase the number of inhabitants and their buying power which requires new companies at Delfzijl and as a result more competition. Another fact is that as Mrs. Zwerver and Mr. Gerard de Vries explained, the neighbouring cities form a network that wants to increase the whole region. Therefore, they have interest in increasing the attractiveness of the different cities or

er added they do not necessarily want competition and ng in Delfzijl, as they prefer to increase their visitor

numbers (Werther & Chandler, 2006).

For the city, it is therefore important to set priorities in terms of stakeholder interest (ibid). Therefore, it is important to rank the interest and power of each stakeholder and to define those who need to be considered most (ibid). Thus, a stakeholder mapping is required which is displayed in the figure below (ibid).

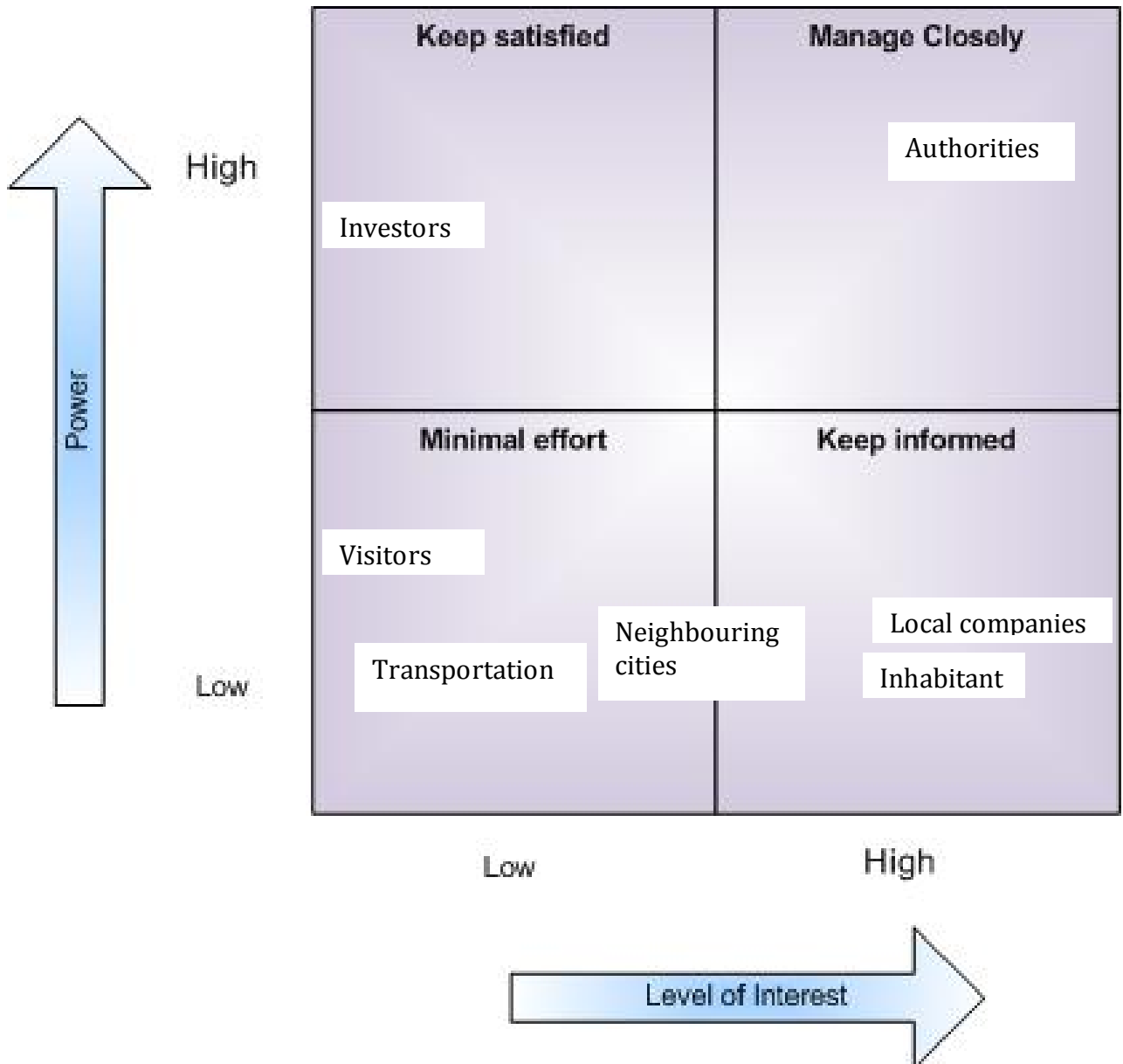


Exhibit 17: Stakeholder mapping

The stakeholder mapping shows that the authorities have a big role in the development and that they have a big interest as they wish to increase the number of inhabitants and attractiveness by placing more leisure activities at the dykes. In the process of developments

leisure activities, investors play a crucial role for the city. Moreover, investors have power in the development process whereby they do not have interest in the city and the leisure activities at the dykes but mainly on the rate of return on the long run. However, due to their financial importance, they have a significant role for the city. Visitors are one of the main groups, which need to be attracted to the city and therefore it is important for the city to concentrate on their wishes and demands. As a result, they have some power on the planning process based on them being a target group. However, they do not have a direct interest on the leisure activities at the dykes. Inhabitants and local companies have a very low degree of power on the development process but they have a big interest as described in the appendix 1 which is at some points similar to the authorities' interest which are listed in appendix 1. Hereby, the transportation providers also have a low degree of power on the development of leisure activities at the dykes but a medium size of interest as it could affect their sales revenue. Finally, there is the group of the neighbouring cities. Here, the power is also not very high but the interest is on a medium size as improvements on the dykes and the leisure activities could affect the neighbouring cities revenue, visitor and inhabitants' number.

As a result, it can be said that generally the authorities have the major power and share the interest of making the city more attractive by using the dykes with a lot of other stakeholders. However, as the city wants to attract more people - visitors and inhabitants-, it is important for them to focus more on the visitors' interest as they display the expectations of people being outside the city and on the other hand they must also consider the expectations of people living Delfzijl concerning the employment rate and leisure offers. The expectations for the future development of Delfzijl, which became clear during the stakeholder analysis, are that in general the awareness and understanding of people should be increased. Moreover, there is also desire for more cooperation with other destinations in the region. Additionally, the future plans need to focus on investors' wishes and demands when planning a special development at the dykes to proof the long-term efficiency to investors.

## Limitations

During the elaboration, many limitations were found. First of all, there was a lack of willingness of the municipality as well as other stakeholders to do an interview with the group. Some did not answer the mails at all, while others explained that they would not have time for an interview. Based on this, it was difficult to receive in depth information on the researched issue therefore a clear overview of the various stakeholders involved and their expectations could not been provided.

Based on the fact, that it was Christmas time and the lack of willingness of some stakeholders to do interviews, it was decided that the research group cancelled the



ip. After the first visit, the sample size for the  
hed and no more stakeholders were willing to do  
interviews. Additionally, the time frame for the elaboration of the research was rather short  
combined with the fact that it included the Christmas break. As the information provision was  
very limited more time and willingness in collecting data would have helped to receive more  
in-depth information. Apart from this, difficulties were discovered due to the lack of the Dutch  
language skills. The majority of the secondary data being present was in the Dutch language  
and therefore time was needed for the translation of the websites via programs. Hereby, the  
group also had difficulties with the translated version since some sentences could not be  
understood. In addition to that, due to the bad weather conditions at the 6th December -  
when the research was conducted- mainly employees of the shops could have been asked to  
complete the questionnaire as not many other inhabitants were on the streets. Thus, this  
might have a negative influence on the validity of the research undertaken.



In order to promote Delfzijl as a city with recreational abilities, several recommendations concerning the success of this project can be given.

### **Make a closer or in-depth research into the topic.**

As the information provision on secondary data is very limited, a deeper insight into especially Dutch material can be of significance. Furthermore, it is advised for the municipality to work together with the inhabitants and include their opinions in their plans. For this, the municipality should make a research, which focuses mainly on the expectation of the stakeholders as the stakeholder analysis of this research showed that a lot of information about the stakeholders is missing but they do have interest and power in the future developments of the dyke. A clear overview could also give the municipality a basis, which shows which stakeholders could support the developments for example financially.

### **Promote the activities, which are present.**

During the primary research in Delfzijl, the group detected that inhabitants often did not see Delfzijl as an attractive recreational place themselves. After talking to the different people, it became visible that Delfzijl has some recreational activities at the dykes such as walking and biking trails, a beach section in summer, festivals or the Sea aquarium. However, within the interviews and the questionnaire sample of 70 it became visible that people were only able to name some of the activities offered. From that, it was concluded that the knowledge about the offered possibilities within the population of Delfzijl as well as visitors is low. This can be linked to an experience, which the group had during the fieldtrip. When entering the tourism office, the group was asked to leave as the employee here stated that there is nothing to do in Delfzijl. No information was provided. From this, it can be recommended to increase the knowledge of the people living in Delfzijl about the different activities offered to support a more positive view on this topic within the population. Additionally, Delfzijl could start promoting itself in the neighboring tourism offices by for example handing in some brochures about the different activities, which are currently present. Thus, a more positive image of Delfzijl can be built up. It is believed that a more positive picture on Delfzijl could also support a higher willingness of the inhabitants and possible investors to invest in the town.

### **Start small with activities that do not need high investments.**

The outcome of the questionnaire showed that 71.43 % of the respondents see leisure value at the dyke of Delfzijl and within the interviews both stakeholders named the necessity of recreational offer and the lack of money. Thus, it is clear that the municipality needs to take

have much money for big investments. Looking at the decreasing number of visitors as Mrs. Zwerver stated, it is important to start improving the dyke area to show the inhabitants that change is happening and in order to attract investors on the long run. Investors will not invest when they do not see potential (Werther & Chandler, 2006). Starting up with small things could therefore support a better image of the area. Looking at the outcome of the benchmarking, small places for barbeque, small stands where food is sold or a small botanic garden could be build or rather offered. Thus, people would have been invited to come to the dyke, as their interested would have been raised through the new developments.

### **Focus especially on family`s and young adult`s wishes.**

As Mr. Gerard de Vries as well as Mrs. Zwerver mentioned the decreasing number of young adults and families are a problem of Delfzijl and as this is also the basis of this research, it is advised for the municipality to target these groups especially and to analyze their interest more explicitly. Thus, activities, which satisfy these groups, can be built at the dyke to make Delfzijl attractive for living but also for visiting. As the benchmarking showed, some example could be the playing grounds for children. Hereby, Delfzijl could also provide some budget tickets for the targeted visit such as when buying a ticket the next one cost half the price. However, this requires a close business relationship with for example the Eemshotel or the Sea aquarium and the municipality must work harder to convince its stakeholders.

### **Attract investors.**

The municipality is lacking money for bigger developments. Thus, the city should start to focus on attracting some investors for new projects and in convincing its neighboring towns to work closely and to support Delfzijl in its new plans. For this, the municipality should have in-depth plans, which are reliable and include all the necessary information. Hereby, the city could also start to focus on the industrial cluster and the existing companies that might be willing to support the developments, as they will also increase the image of the area and possibly the willingness of people to move here.

### **Make information accessible in English and German.**

Within the secondary research, not much information could have been found about Delfzijl. While some was accessible through the municipality's own webpage it was necessary to translate this into English as it was only in Dutch. Combining it with the responds of Mr. Gerard de Vries and Mrs. Zwerver that many visitors are from Germany, it is advisable to provide information also in English and German on the webpage. Thus, people can have an insight into Delfzijl and the possible recreational activities at the dykes before they come to



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n and on the other hand would give a first positive

In general it can be said that the goals of this project had been achieved, even if during the elaboration the group had difficulties like mentioned earlier in the limitations. The aim of this research was to get answers about the problem statement *How can Delfzijl take advantage of the dykes referred to recreational activities within the next five years?* Within this problem statement different issues were mentioned and included in some research questions, which were answered thanks to the support of the collected empirical data.

During the research - which included a visit to Delfzijl, interviews and questionnaires with different stakeholders and the analysis of the collected data - it became clear that Delfzijl can not be seen as a recreational city since it does not offer a wide variety of tourist activities. Focused on the dykes, and its advantages referred to recreational activities, it must be said that the results of this research clearly show that actually, the dykes cannot be seen as an important resource for recreational activities. Also for this reason, the project did not focus just on the dykes to develop but also on the waterfront, the city, the coast and its surrounding area in general.

With the help of literature it became clear that the Wadden Sea is an UNESCO world heritage site with unique surroundings and partnering for preservation. Furthermore, when it comes to recreational activities, land and water based activities can be found in the Wadden Sea (Harrison & Hitchcock, 2005). The dykes function is to protect the country from flooding since 27% is under sea-level. One of the biggest dykes is *Afsluitdijk*, separating the IJsselmeer (Rosenberg, 2011). Further information, which was derived from literature concerning Delfzijl, is that it is a small town in Groningen producing 15% of all chemical output in the Netherlands. Activities, which can be related to Delfzijl, are camping, museums, cycling tours, the sea aquarium and different events throughout the year (Gemeente Delfzijl, n.d.). Finally, gaps can be related to a lack of pull drivers of Wadden Sea information about Delfzijl.

The city is a transit location and the main reason why people live or come to the city is because they work in the industrial sector. It became also clear that the region has different problems like the shrinking number of inhabitants as well as the decreasing number of young people. Furthermore, due to a lack of money the city was not able to make significant changes in order to attract inhabitants and tourists. It was also noticeable that people who did the questionnaire had no positive pattern about Delfzijl and its attractiveness. In addition to that it became clear that the dykes have only one role: protection. Though their role is considered less for leisure activities, but more for the purpose of protection, people see also leisure value and they wish that the dykes and the waterfront area would be developed in order to make more recreational activities. Those attractions which already exist are the sea



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only one in the Netherlands built on stilts, as well as or the possibilities to walk and bike along the coast.

But as mentioned earlier in this report the outcome of the research showed that Delfzijl's waterfront will get more attention from inhabitants and tourists in the future, when improvements and developments are undertaken like by promoting existing attractions more and create new ones. Like in all destinations, improving Delfzijl's leisure offer requires a clear understanding of the different stakeholders involved and therefore the analysis of this research helps to understand better this issue: As a result, it can be said that generally the authorities, have the major responsibility to make the city more attractive. The future plans need to focus on investors' wishes, as it is important to find external funds and on the wishes of visitors and inhabitants to include them in their plans. For this future plans, the suggestions mentioned in this report are strongly recommended, as they are a chance to improve the offer of recreational activities in Delfzijl. The recommendations are focused on small investments and would not need a lot of funds but could increase the attractiveness of the dykes and the city in general within the next five years. These are small steps but effective ones, not just to welcome more tourists but also to stop the shrinking number of inhabitants, especially the young ones.

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### Appendix 1: Stakeholders interest

Local companies  
Food and beverage  
Leisure activities  
Accommodation



- Increase buying power of inhabitants.
- Increase number of visitors and tourists.
- Increase sales revenue.
- No too very low increase in competition.

Authorities



- Increase number of inhabitants.
- Increase number of visitors.
- Increase attractiveness and image.
- Increase employment possibilities.
- Attract more companies to the city.
- Increase competition to stimulate buying.
- Attract investors.
- Increase revenue of the city.
- Protect environment.

Visitors:



- A high number of leisure activities.
- A variety of fish restaurants.
- Number of special events or experience possibilities.

Inhabitants:



- Employment possibilities.
- Keeping the prices low.
- Protect environment and culture.
- Make the city more attractive for the younger people.

Neighboring cities  
and their facilities:



- Increase image of the region.
- Do not loose visitors or tourists.
- No competition increase with Delfzijl in terms of attractiveness.
- Increase visitor numbers.
- Increase sales revenue.



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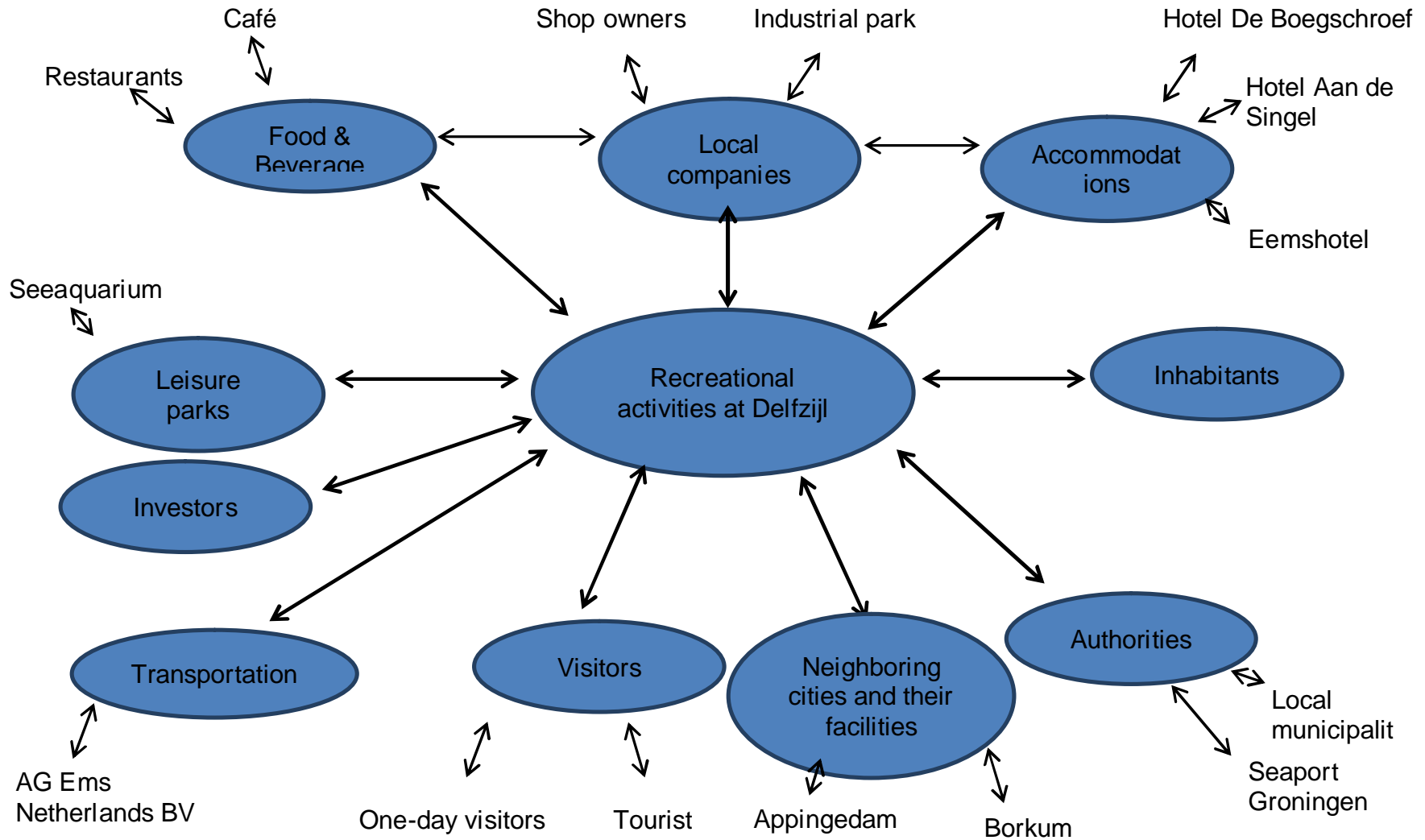
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Good return on investment on the long run.

Transportation:

- Increase sales revenue.



**1. Do you spend your leisure time at the coast of Delfzijl in summer?**

- never
- almost never
- once a week
- once a month
- more than once a week

**2. Do you spend your leisure time at the coast of Delfzijl in winter?**

- never
- almost never
- once a week
- once a month
- more than once a week

**3. What do you do at the coast?**

*With this question there are several answer possibilities.*

- animal watching
- biking
- taking a walk
- boating
- surfing
- fishing
- swimming
- other:.....

**4. How do you rate the quality of the facilities on the coastline? (6 is the best)**

1	2	3	4	5	6
---	---	---	---	---	---

**5. Do you think there are enough seating facilities offered at the dykes of Delfzijl?**

- Yes
- No

**6. The dykes have a protective scope. Do you see also leisure value in the dykes?**

- Yes, I see leisure value
- No, I do not see leisure value

**7. Do you think the waterfront area should be developed further in terms of leisure attractions?**

- Yes
- No

**8. What is your gender?**

- Male
- Female





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- < 15
- 15-25
- 26-40

- 41-59
- >60

**10. Where do you come from?**

- city of Delfzijl
- Germany
- region of Delfzijl
- Denmark
- other provinces of the Netherlands
- other: .....

**at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you do bird watching at the coast of Delfzijl?	yes	Count	1	0	4	0	5
		% within In which age group are you in?	6,7%	,0%	16,7%	,0%	7,1%
	no	Count	14	27	20	4	65
		% within In which age group are you in?	93,3%	100,0%	83,3%	100,0%	92,9%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you bike at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you bike at the coast of Delfzijl?	yes	Count	3	0	4	1	8
		% within In which age group are you in?	20,0%	,0%	16,7%	25,0%	11,4%
	no	Count	12	27	20	3	62
		% within In which age group are you in?	80,0%	100,0%	83,3%	75,0%	88,6%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you take a walk at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

		In which age group are you in?				Total	
		15-25	26-40	41-59	> 60		
Do you take a walk at the coast of Delfzijl?	yes	Count	2	0	3	0	5
		% within In which age group are you in?	13,3%	0,0%	12,5%	0,0%	7,1%
no	Count	13	27	21	4	65	
	% within In which age group are you in?	86,7%	100,0%	87,5%	100,0%	92,9%	
Total	Count	15	27	24	4	70	
	% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%	

**Do you take a walk at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

		In which age group are you in?				Total	
		15-25	26-40	41-59	> 60		
Do you take a walk at the coast of Delfzijl?	yes	Count	7	11	18	3	39
		% within In which age group are you in?	46,7%	40,7%	75,0%	75,0%	55,7%
no	Count	8	16	6	1	31	
	% within In which age group are you in?	53,3%	59,3%	25,0%	25,0%	44,3%	
Total	Count	15	27	24	4	70	
	% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%	

Do you do surfing at the coast of Delfzijl? \* In which age group are you in? Crosstabulation

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you do surfing at the coast of Delfzijl?	no	Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

Do you fish at the coast of Delfzijl? \* In which age group are you in? Crosstabulation

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you fish at the coast of Delfzijl?	no	Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you swim at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you swim at the coast of Delfzijl?	yes	Count	4	5	6	0	15
		% within In which age group are you in?	26,7%	18,5%	25,0%	,0%	21,4%
	no	Count	11	22	18	4	55
		% within In which age group are you in?	73,3%	81,5%	75,0%	100,0%	78,6%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you walk a dog at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you walk a dog at the coast of Delfzijl?	yes	Count	0	0	0	1	1
		% within In which age group are you in?	,0%	,0%	,0%	25,0%	1,4%
	no	Count	15	27	24	3	69
		% within In which age group are you in?	100,0%	100,0%	100,0%	75,0%	98,6%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%



**Do you eat and drink at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you eat and drink at the coast of Delfzijl?	yes	Count	0	0	2	0	2
		% within In which age group are you in?	,0%	,0%	8,3%	,0%	2,9%
	no	Count	15	27	22	4	68
		% within In which age group are you in?	100,0%	100,0%	91,7%	100,0%	97,1%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you work at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you work at the coast of Delfzijl?	yes	Count	0	0	1	0	1
		% within In which age group are you in?	,0%	,0%	4,2%	,0%	1,4%
	no	Count	15	27	23	4	69
		% within In which age group are you in?	100,0%	100,0%	95,8%	100,0%	98,6%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you play with children at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you play with children at the coast of Delfzijl?	yes	Count	0	1	0	0	1
		% within In which age group are you in?	,0%	3,7%	,0%	,0%	1,4%
	no	Count	15	26	24	4	69
		% within In which age group are you in?	100,0%	96,3%	100,0%	100,0%	98,6%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**Do you sunbath at the coast of Delfzijl? \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
Do you sunbath at the coast of Delfzijl?	yes	Count	1	0	2	0	3
		% within In which age group are you in?	6,7%	,0%	8,3%	,0%	4,3%
	no	Count	14	27	22	4	67
		% within In which age group are you in?	93,3%	100,0%	91,7%	100,0%	95,7%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

**I don't do anything at the coast of Delfzijl. \* In which age group are you in? Crosstabulation**

			In which age group are you in?				Total
			15-25	26-40	41-59	> 60	
I don't do anything at the coast of Delfzijl.	yes	Count	3	13	0	1	17
		% within In which age group are you in?	20,0%	48,1%	,0%	25,0%	24,3%
	no	Count	12	14	24	3	53
		% within In which age group are you in?	80,0%	51,9%	100,0%	75,0%	75,7%
Total		Count	15	27	24	4	70
		% within In which age group are you in?	100,0%	100,0%	100,0%	100,0%	100,0%

The following plan identifies an overview of the research project concerning to the role of the dyke in recreational activities along the Wadden Sea in the vicinity of Delfzijl. Moreover, the several tasks with their responsible persons as well as a realistic timeframe are presented.

Timeframe	Meetings	Tasks/Goals	Responsible persons	
<b>Week 1</b>	16.11.2011	- Getting familiar with the topic - Setting first appointment with Hans Revier	All group members Aylin	
	18.11.2011	- Presentation of the first research results	All group members	
<b>Week 2</b>	21.11.2011	- First meeting with Hans Revier - Division of the research proposal	All group members All group members	
	24.11.2011	- Feedback meeting to evaluate the outcome of the first chapters of the proposal	All group members	
<b>Week 3</b>	28.11.2011	- Meeting with Hans Revier - Hand in first draft of the proposal to get feedback on - Division for finalization of the proposal - Setting date for the trip to Delfszijl - Setting appointments with the stakeholders in Delfzijl	All group members Fanny Fanny, Birgit, Fabio, Sina, Lilli All group members Lilli,	
	01.12.2011	- First conference meeting - Designing a questionnaire - Establish individual interview questions - Editing the research proposal	Fanny Fanny, Birgit, Fabio Sina, Aylin, Lilli, Sarah Fanny	
	<b>Week 4</b>	05.12.2012	- Preparation for the trip - Printing questionnaires - Task division on the trip - Checking all appointments	All group members Fabio All group members Sarah
		06.12.2012	- Trip to Delfzijl	All group members
	07.12.2012	- Meeting for peer feedback	All group members	

		g with Hans Revier	All group members
		g with the assessed group to	All group members
		give personal feedback	
		- Meeting with Hans Revier to discuss the further steps	All group members
	13.12.2011	- Evaluation of the impressions and findings on the trip	Sarah, Lilli
		- Evaluation of the conducted interviews	Aylin, Sina
	15.12.2011	- Evaluation of the questionnaires with SPSS	Fanny, Birgit, Fabio
<b>Week 6</b>	20.12.2011	- Last meeting with Hans Revier before Christmas	All group members
		- Analysis of the research including further task division	All group members
<b>Week 7</b>	09.01.2012	- Feedback on the parts done during the Christmas holidays	All group members
		- Editing all parts	Fanny
	10.01.2012	- Meeting with Hans Revier to present the draft	All group members
		- Feedback session	All group members
<b>Week 8</b>	16.01.2012	- Evaluation of feedback	All group members
		- Finalization of the report including editing and proof reading	All group members
	19.01.2012	- Preparation for the conference	All group members
		- Designing a Power Point presentation	Fanny
		- Training of presentation	All group members
<b>Week 9</b>		- Conference	All group members
	27.01.2012	- Hand in research project report	

Table 1: Project plan

The project plan describes all meetings including their tasks, goals, content and other issues. Furthermore, the timeframe can be seen as the expected deadlines relate to all group members. Each member of the research team is contributing equally to the project regarding desk research, trip organization, proof reading, feedback and all other necessary parts. Due to the fact that students process this project, the costs can be expected to be relatively low.



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...resulting from the trip to Delfzijl, which can be seen as  
... Delfzijl will be realized by train, one round-trip ticket  
for the train will cost 28,40 " per person.

## Appendix 6: Interview Questions

1. Why do people come to or live in Delfzijl?
2. What would you consider as the main attraction of Delfzijl?
3. What role do the dykes of Delfzijl play for you and or the people living in or visiting Delfzijl?
4. Do you know about the current leisure activities linked to the dykes of Delfzijl?
5. Could you mention some of the current leisure activities offered at the dykes?
6. How did you experience the development of recreational activities in Delfzijl?
7. Do you think that improvements concerning recreational activities should be done? And why?
8. What improvements would you suggest?
9. What are your expectations from possible Improvements at the waterfront region?
10. Could give us the names or contact-addresses of people that we can interview for our research?