

Sustainable commuting Summerhouse owners in Odsherred



A semester project by Nina Roitmann Spring 2022

Preface

This master thesis has been conducted in the study program MSc. Sustainable Design at Aalborg University in Copenhagen. The thesis is written in the period of 01.02.2022 to 17.06.2022 and the empirical data has likewise been collected throughout this period. I would like to thank my supervisor Maj-Britt Quitzau for her supervision and all the stakeholders contacted in this project for delivering knowledge for writing the project.

The reasons and motivations for choosing to write my master thesis about the topic of reduction of the car traffic in Odsherred stem from my personal experiences and frustrations of traveling with the public transport between Nykøbing Sj. and Sydhavn during the past five years of my studies at Aalborg University at Copenhagen as well as observing the rise of car congestion in Odsherred. Between the years 2014 -2018 I worked as a journal distributor at Rørvig and during summertime, it was practically impossible to cross the road at Rørvigvej-Toldbodvej when delivering journals to the mailboxes, due to all the summerhouse owners and tourists traveling in cars towards the beaches and the harbor of Rørvig. In most summerhouse areas in Odsherred, there's a bus running only twice a day. I have experienced how people regularly lose train-correspondences at Holbæk station because the timetables of the trains did not match. In summer 2021 the timetables of the trains were adjusted solving this issue, but this has just created other problems of public busses not matching the new timetables of the local train. School children and public transport users wait for nearly an hour for their busses to come at the train stations at Odsherred. Because of these issues, most people choose to travel by car. Ugly constructions for car parking lots have recently been built removing nature to facilitate space for the cars. 30 years ago, when I was a child, I and my sister at the age of 5 and 7 years old could cross the road of Rørvigvej during summertime with no problems and without the surveillance of our parents when we had to bring bread from the local merchant at Rørvig, who is no longer existing today. Would it ever be possible to return to such a harmonic state again in our modern society?

As an educated sustainable designer and planner at Aalborg University, you become extremely aware of the consequences of these transport issues, but you also feel that you have a certain responsibility to do something about it. This is the reason why I have chosen to apply my skills of PBL in this project to investigate the barriers and challenges and how to take action.

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1. Introduction

1.1 The variation of population density in peak seasons in recreative rural areas

In this thesis, I will address the traffic problems that arise in rural areas at peak-seasonal periods with a great number of second homes that have low accessibility to public transport and lack of bike lanes. It prevents people from traveling easily and quickly by public transport or by bike from A to B. Tourism is an important factor for the economy and the development of certain rural areas but tourism and second home residents create significant seasonal variations in the level of demand of services in high seasonal periods compared to low seasonal periods. This creates planning challenges when satisfying the demand in the high season and low revenue in the low season (Mounce et al. 2020). Because of the low population density when the second house owners are absent, facilitating a high frequency of public transport becomes economically inefficient (Poltimäe et al., 2022). The planning of the supply of public services such as infrastructure, waste treatment and social services are often based on data considering people only live at one place, where the seasonal variety of second home use is ignored (Slätmo et al., 2019). In traffic planning in rural areas, there's a tendency to plan and provide mobility mainly for school children going to school and elderly people traveling during day times (Movia, 2022). Ironically municipalities with a great variety of population density tend to run a higher frequency of public transport during workdays when the second house owners have left the area, and a lower frequency during weekends and holidays (Rejseplanen, n.d.) when the population density increases. As a result, often the supply does not meet the demand during the high season.

1.2 The negative consequences of tourism if not managed

Expansion of tourism and leisure-time visitors is linked to growth in transportation demand and traffic created by tourism is often one of the most cited impacts of tourism (Dickinson & Robinson, 2008). Newly constructed buildings, roads, parking lots and facilities can have an impact on habitats and can damage visual resources. Environmental pollution due to tourism from car congestion noise and littering has a great impact on the quality of resident's daily life. It creates negative impacts on tourism such as local community disturbance, cultural authorization and adversarial relationships between permanent residents and temporary residents (Chang et al., 2018). Lack of parking spaces is particularly damaging for nature-based



Figure 1: A picture captured near the harbor of Rørvig of bicycles forced out on the main road as cars have parked on the path drawn for bicycles

tourist destinations as it causes tourists to park illegally on bike lanes and grass lawns (Curtale et al., 2021)). It creates situations where the bicyclists are forced out on very congested roads. It is urgent that alternative solutions to the car must be found. If the municipality does not carefully design and plan for sustainable development of tourism and people traveling for weekend trips there's a risk that anger among permanent residents towards the tourists increases. Residents in such rural destinations are directly in contact with the changes that happen due to tourism. An important consequence of the traffic congestion is the worsening of the permanent resident's perceived image of the second house

owner's traffic behaviors. They construct a sense of intolerance and frustration towards tourist flows, especially from those who have no economic or social interests in tourism. As (Curtale et al., 2021) found intolerance is directly linked to perceived crowding. It can lead to clear support of restrictions on tourism development because of the concerns about improved accessibility and increased number of visitors while still maintaining the wildness and attractiveness of the destination (Høyer, 2000as cited in Le-Klaehn & Hall, 2015)

1.3 The need for new planning methods for temporary residents

Multiple research studies have been concerned with everyday travel needs between places of residence and work-places most often in an urban context with a high density of population. In tourism research transportation focus has mainly been on long distances and air travel. Research about second home travel and sustainable mobility at destinations in rural areas is still lacking (Poltimäe et al., 2022) and the attention of traffic planners to develop methods for planning for temporary demand in traffic planning seems absent in some municipalities (Odsherred Municipality, 2022). There's a need for municipalities with a great seasonal variety of population density to develop new planning methods for sustainable transportation that meets the demand of a holistic group travelers including temporary residents on weekends and holidays in traffic



Figure 2: Bicyclist filming his attempt to pass the cars that have parked on the bike lane in front of Rørvig Street food uploaded at Facebook



Figure 3: Nordvestnyt, the local journal, writes about the parking problems in Rørvig and how it has resulted in fast unthought solutions, that do not solve the core of the problem

planning. Even though it is acknowledged that leisure time visitors have a great influence on the local conditions the solutions to the problem are rarely investigated. Picture 3 shows how the municipality of Odsherred has tried to solve the parking problems of tourism without any real clear strategy. It has been frequently debated by the public in newspapers and at Facebook, how ugly the solution looks and how it seems like an “action of panic” by the municipality. (Picture 3 shows the solution to the car parking problems shown at picture 2).

The climate crisis pushes the requirement for finding environmentally, socially inclusive and economically viable rural mobility solutions forwards, but financial problems, conflicts between stakeholders and the lack of support are often some of the problems for implementing the solutions. In order to switch car drivers to other more sustainable transport modes, there needs to be a commitment among the stakeholders and the second house owners. Without this commitment, the traffic problems are not going to be solved in near future without appropriate marketing and management tools that can encourage less car use. (Le-Klaehn & Hall, 2015). Encouraging behavioral change is challenging but a shift is possible if it is attractive enough (Guiver et al., 2007; Lumsdon et al., 2006 as cited in Le-Klaehn & Hall, 2015).

1.4 Little support for restriction of cars in rural peak season destination

Back in 1999 Hall argues that it is rarely discussed in transport literature the priority for or discrimination against tourist transportation (Hall, 1999). It still seems to be the case today as he writes in 2015 that the governance of mobility in rural areas dominated by second homes is more chaotic than ever (Hall, 2015). Hall argues that the influence of attitude change, application of other technologies, integrated land use planning, priority of public transport and economic incentives or disincentives are a row of policies that can restrict motorized modes (Hall, 1999). However, because of the low population and low usage of public transport and due to the dispersion of destinations it is hard to offer a public transport system that appeals to the majority of people (Poltimäe et al., 2022). Elements such as distances, difficult route access on bike or walking, terrain and personal constraints such as health issues and physical handicaps may cause the non-motorized transport modes are not suitable for certain groups. However, if planned properly public transport can be an option for a larger segment providing access to more places (Le-Klaehn & Hall, 2015). Car restrictions and mobility solutions that limit the accessibility of car usage are often negatively perceived by the public while alternative transport initiatives are less accepted by the public and politicians (Le-Klaehn & Hall, 2015). Alternatives to the car are usually perceived as poor, and measures that limit car access are perceived as damaging to the economy because local stores and activities risk getting fewer consumers if they cannot arrive by car (Dickinson, 2006). The low population density result in longer commuting distances traveled by fewer people which encourage reliance on car use. The longer the travel time compared to the private car the more attractive the car becomes. Public transport is seen as a poor competitor to the car. Greater flexibility often requires higher operational costs. The lower the population density the higher the

need for passengers but higher operational cost leads the higher ticket prices. The higher ticket prices of the public transport the more it reduces it's attractiveness as an alternative to cars. Therefore a combination of different mobility approaches is needed. It is necessary to investigate what works well where and why. Rural transport including tourist-related transport requires financial and political support from local and national governments (Hall, 2015).

1.5 Conditions in rural areas

In urban context, the use of the bicycle is often suggested by sustainable city planners as an alternative to substitute fossil car driving but outside cities bicycling may have different motivational factors and does not seem to be able to substitute car travel and the infrastructure may have a different impact on the resource needs for bicycling



Figure 4: typical rural roads at Odsherred

(McAndrews et al., 2017). Usually, the infrastructure of the rural roads does not consist of bike lanes. Rural areas are usually defined as special dispersion of economic, social and cultural activities. Except for peak tourism periods typically rural areas do not have transportation problems such as congestion, scarce parking, noise and air pollution (McAndrews et al., 2017). The roads are often quite narrow allowing little or no space for bicycles, when two cars cross each other in opposite directions. When observing the roads floating in the picture of the landscape often there is not a vehicle to observe, but sometimes the roads may contain heavy vehicles from industrial traffic or private cars driving at a high speed (McAndrews et al., 2017). It provides the sensation of insecurity for bicyclists, even when there are no vehicles on the roads (Cyklistforbundet, n.d). Sometimes the roads have been turned into 2-1 roadss, meaning that the cars driving in both directions are driving on the same road lane allowing space for bicycles



Figure 5: rural roads with no bike lanes



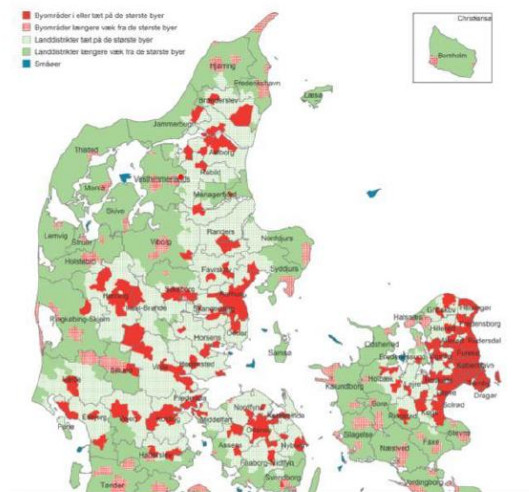
Figure 6: Dolls created by locals to remind car drivers to lower their speed at a 2-1 road (Photo taken at Vesterlyngvej)

and pedestrians at the sides of the road. But unfortunately, this solution still seems to feel insecure for bicyclists and pedestrians. The picture shows dolls created by residents that has been put up to raise the awareness of the car drivers to lower the speed of the cars. Because of the dispersed settlement, the distances to the closest bus stops are generally longer in rural areas than in urban areas. The longer the distances to the stop and the more changes among various of modes, the less public transport is preferred. Trips to the bus stop is also related to safety if the trip to the public transport is perceived dangerous with no bike lanes (Hansen et al. as cited in Poltimäe et al., 2022). Out to the coast sides, beautiful bike routes without the presents of cars are sometimes found, but the distances of the routes are long, and they do not bring bicyclists quickly from A to B.

1.6 Definitions of rural areas

There are different definitions of rural districts. In order to meet the demand in rural areas it is important for traffic planners to identify what kind of rural areas they are dealing with. There are the so-called peripheral regions that are situated far away from city centers characterized by a population with low education and a high average age. These areas often experience a regression in development. Secondly there's the "sleeping small cities" the so-called settlement areas that are enlarged and joined with the landscape, where people live but they travel elsewhere for work. Lastly there are the rural districts that are calm during winter time but in

summertime it explodes with live and people. Examples of the last mentioned type of rural area is Skagen and Rørvig. These rural spaces with nature and coastal areas has a great attraction of leisure time where people travel to relaxing and enjoying the nature and holidays. Unfortunate these areas when overcrowded there are complaints from permanent residents and summerhouse owners complaining about the activities, noise and disorders, that occurs in these very touristic crowded areas. It is these areas that experience a great variety of population density and great trafficable problems if not managed and planned properly.



FIGUR 2. Danmarks kort over forskellige områdetyper (livogland.dk, 2013)

Figure 7: Map showing different kinds of rural and urban areas in Denmark. The green areas show the areas that have great distances to the big cities

1.7 Introduction of Odsherred

In this study Odsherred is applied as a case of investigating how to implement new transport management that meets the varying user demand. The municipality of Odsherred is one of the rural municipalities in Denmark that experiences a great variety of population density during winter and summer in weekends and holidays. In Denmark there are 200,000 holiday homes (Danmarks Statistik, 2018) and in Odsherred there are 23,871 holiday homes. It is the municipality with the greatest number of holiday homes in Denmark. There are 16,391 all-year-round houses in Odsherred with 32,923

permanent residents where as 10.300 has the age 60+. Odsherred has a line of coast of 157 km with many attractive beaches and 28 km² forest (Odsherred Kommune,n.d.). It is usually in summer, in weekends and during national holidays that peak visitors travel to the destination. The amount of leisure time visitors may even overweigh the number of permanent residents.

A property tax is posed on all summerhouses in Odsherred. The tax is based on the property value. The urban and rural law from 1970 has divided Danmark into rural urban and recreative zones and second homes are only allowed to be constructed in zones recreative zones (Gammelgaard as cited in Slätmo et al., 2019). A second home is only supposed to be occupied during summertime, the reason why they are termed “summer houses” in Denmark. They are not to be used for overnight stay during wintertime from the 1. of November to the end of February except for short-term stays or short holidays. Second homes can be used for 34 weeks. It was a rule that were changed in 2017 where it was only allowed to use the summerhouses 26 weeks (Erhvervs og værksministeriet, 2016). The purpose of this rule is to avoid that the recreative areas get

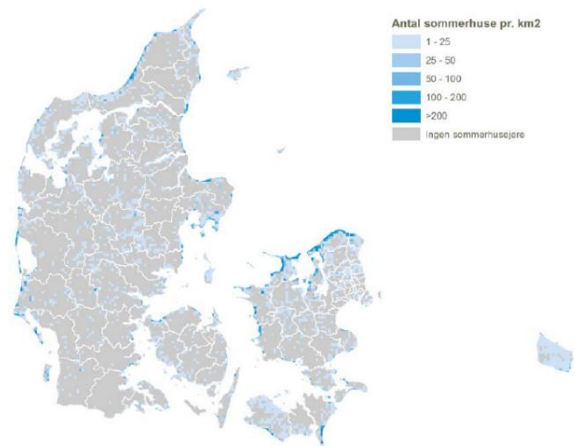


Figure 8: Map showing the location of second homes in Denmark. The red circle indicates Odsherred Municipality (Danmarks Statistik, 2018)

Figure 9: Second homes at Odsherred



overused to protect environment and landscape values. It is only retired people that are allowed to live their for permanent stay (Holmegarard 2018) but it is observed that the second homes are used more frequently (Adamiak et al., 2017 as cited in Slätmo et al., 2019).

1.8 The importance of the economy of the second homes in Odsherred

Second homeowners and tourists are of a great importance for Odsherred. Odsherred is one of the three municipalities in Denmark where tourism play an important economical role. With an turnover of 1,6 billion kr., 1,1 billion kr. is provided by the second home owners. It is the local commercial life, craftsmen and the life of culture that drives the economy. Many cultural institutions are dependent on the summerhouse owners (sn, 2022). In total one second home has the same economic impact as a permanent home for an entire year (Visit Odsherred, 2018). Odsherred differ from other municipalities in Jutland with a great amount of second homes, because Odsherred do not have as many international tourists and the second homes are not rented out as much as in Jutland. About 10 % of the second homes in Odsherred are used as permanent residencies. Although there are still significant peak periods. The second homes are occupied in average 65 days a year. Winter and summer are like night and day. Second house owner constitute a large group whose presence needs to be included in planning work. In comparison to other municipalities that is nearly closed down during official holiday period this is the moment where Odsherred needs to open up even further, than is the case today (Slätmo et al., 2019).

1.9 Challenges of planning for temporary residents

It is a challenge to keep the urban areas alive during winter time, but they are filled up with life during weekend and summer. The parking lots create empty borrowing unpleasant wide urban spaces during wintertime and do not contribute with anything positive to the ambiance of the cities in Odshherred, while in summertime, there are people who claim that the present of the cars create a “good energy of summer and happiness!”. The large inflow of people that does not pay municipal income taxes creates a challenge for the municipality since the municipality does not receive enough money that is required to offer the services that is needed, when the summerhouse owners are there. It is a municipality that does not have much money (Visit Odsherred, 2018). Dedicating money for bike lanes for tourists and locals goes in conflict with prioritizing money for other areas such as elderly care, kindergardens, schools and renovation of buildings. However improving public transport for second homes travelers not only benefit the permanent residents. It is also an advantage for attracting more tourists and thereby gaining an income for the municipality. Destinations with a good public transport is more attractive for tourists and it may influence visitors impression of an area (Thompson & Schofield, 2007 as cited in Le-Klaehn & Hall, 2015). The better the public transport the more competitive the destination is to attract tourists (Poltimäe et al., 2022). Lack of public transport may in contrary harm the tourism.

Not only at Odsherred but in general at many destinations in Europe most visitors reach the destinations with a car followed by public transport. Few arrives by bike or hiking. Because people has equipment on their travel this makes the car more convenient than non-motorized travel forms (Charlton, 1998as cited in Le-Klaehn & Hall, 2015). (Prideaux, 2000 as cited in Dickinson, 2006) states that for visitors the factors that dominates are finance, confort and time cost (Butler & Hannam, 2012 as cited in Le-Klaehn & Hall, 2015). Unfortunately people do not only travel by car to their summerhouse. It is observed that visitors to rural destinations are predominately car-users also for shorter distances even when there are alternatives such as walking or bicycling (Dickinson & Robbins, 2007). A newly not yet officially published Danish report of travel behaviors in the municipalities on Zealand from April 2022 states that 2/3 of the motorized traffic is leisure-time related, though the data does not clearly identify whether the travel are performed by permanent residents or leisure time visitors. The report does neither say at what time of the year the surveys has been performed. These are important criteria for transport managers to know about at seasonal rural areas such as Odsherred. This points to the fact that the data that is delivered to the municipalities is insufficient in order to be able to plan for a great variety of population.

1.10 Permanent Residents and second home residents' perception towards development

Traditionally, second home owners are put under the research of tourism (Poltimäe et al., 2022). This is a challenge since the difference of the transport behaviors and preferences of second home owners that has come to a destination for many years versus transport behaviors of tourists that are unknown to an area is not clearly identified. Planning for sustainability in a municipality that contains a mixture of permanent residents, temporary residents and single time visitors is a challenge because permanent citizens and leisure citizens have different social, cultural and economic traits, and they are different actors operating in the same rural space. Therefore they have different interests in the development of the rural areas. For the public transport it is a challenge to meet the diverse requirements of demand from the diverse user needs. Rural residents usually require transport services during week day while leisure time visitors require transport during weekends and holidays. (Poltimäe et al., 2022).

According to traditional literature the local permanent people depend on the municipalities ability to provide work places and encourage in-migration that sustains strong economy and welfare. Unfortunate this growth of economy risk to harm the idyllic landscape and softer qualities. The leisure time citizens on the contrary has an urban and consumerbased orientation towards the rural development. Therefore they have limited interest in preserving rural landscapes and communities since they are distant to it. For them it is very important to preserve the idyllic spots and attractions that are the reason for their trip to the area (Farstad & Rye, 2013). Jaakon stated back in 1986 that the local residents thinks that growth and development improve their quality of life while second homeowners want to preserve rural conservation. But this old view on the local leisure time citizens may have changed during the last decades, because we are dealing with a new

generation of visitors according to the former chef of tourism in Odsherred, Hans Jørgen Olesen (Sn.dk, 2022). It is a generation that wants to engage in local communities. It is a new generation with a higher income. In 1992 the house prices in Odsherred was nr. 54 on the list. Today the house prices is nr. 7 on the list. In Kalundborg the house prices have stayed the same on the list as a comparison. It is a generation that sets requirements to the services and adventures. When observing the development of how the gardens are maintained by the newcomers of the summerhouses at old times the gardens consisted of wild nature. Today when there are new buyers of summer houses they cut a lot of the old trees and slowly there's a sad development going on where the new leisure time visitors turn the wild nature into traditional villa gardens with straight green grass lawns with only a few trees left and the area start to look like the rich areas north of Copenhagen. At old time there was the idea that the area should be calm with wild nature. Today adventures and activities are popping up disturbing the calm environment creating conflicts between the old generation of summerhouse owners and locals and the new commers.



Figure 10: A summerhouse site in Rørvig where all the trees has been removed

Planners should ask how should temporary leisure time citizens and the permanent locals cooperate?

According to (Mayers & Machnaghtan, 1998 as sited in Ben Iaguinto, 2013) if people are to be encouraged to use more sustainable transport modes there should be a focus on what can people do in their everyday lives. For tourist researchers this is a challenge because holidays can disrupt behavioral norms. But studies has also started to point out that tourism can be seen as a part of everyday life, as holiday travel has become a common activity or norm. This can especially be seen in Odsherred where many second home owners travel to Odsherred every weekend. People have routines and habitual practice of their own (Edensor, 2009 as sited in en Iaguinto, 2013). Second home owners who have visited the area for years have developed daily routines and should be more familiar with the public transport network. In Odsherred municipality the second home owners are termed as “leisure citizens”, which indicates that they are not seen solely as visitors but as a group of citizens (Slätmo et al., 2019). Other tourists at Odsherred rents a summerhouse. They may be first-time-visitors to Odsherred and are unknown to the area when they arrive. Because theses tourists are unfamiliar with the bus routes and public transport network it is less likely that they will use it (Le-Klaehn & Hall, 2015). Therefore, it is important to distinguished between tourism as a routine and tourism as extraordinary.

1.11 The impact of social representations in rural areas

In rural context resistance of abandoning car usage is often found among locals – it is especially expressed at social medias such as Facebook. The social representative theory says that we construct shared perceptions and theories that create the social reality that people inhabit (Dickinson, 2006). People states that you cannot live in rural areas without are car, but these might be social representations that fluctuates in society among car drivers and they may not be particular true (Dickinson, 2006). Within the minority of the rural society there are profiles that has shown that it is possible to live without a car in rural areas, but car drivers needs explanations for not applying the bike or the public transport and thereby they conform to social representations that are adopted by the majority. The social representations are often stating that the distances for biking are too long or too dangerous or the public transport service is bad and if it was improved they would use it (Dickinson, 2006). But this might not always be the truth of the reality as the distances for biking may not be as long as they think and as the public transport may not be as bad as they say. The social representation theory states that the minority has the possibility to influence the majority. Identifying the social representations and investigating and amplifying the narratives of the minority that has sustainable transport habits could therefore be a method to convince car drivers to change attitudes and behavior. The social representation theory is therefore a subject that will be discussed in this thesis as one of the barriers but also as an opportunity for sustainable transitions.

2 Research Formulation

The introduction has shown that there's a gap in transport research of how to facilitate sustainable mobility in municipalities that are dominated by summerhouses. The consequences of car usage at tourist destinations have been known for many years and has been illustrated in many tourist studies. However, the field has received less attention in transport planning and among transport researchers of how to solve the problems. The introduction has also shown that tourist's literature has found that tourists are aware of the potential negative consequences of car use, but they do not see their own car driving as problem. An understanding of the permanent residents' and the temporary residents' perceptions towards sustainable mobility and development in Odsherred is necessary in order to know how to implement transport management that meets the varying user demand. In this study I will try to investigate what are the planning issues and what are the barriers of changing transportation attitudes and habits among temporary residents and visitors. The study will investigate what is needed in order to reduce car traffic. This work is necessary in order to know how to reach change.

How to reverse the development of car usage during high season and raise the awareness of the importance of facilitating transport planning that meets the varying user demand in Odsherred?

What are the barriers of improving sustainable transport modes that can reduce the car usage of the leisure time residents in Odsherred?

What are the perceptions of the permanent residents and leisure time residents towards the tourist development in Odsherred?

3. Application of theories to structure the project

In order to understand how summerhouse owners should be included in transport planning it is important to understand how the system work. As it is a problem that has been known for many and the car congestion just gets worse and worse, there is a need to understand the barriers. Without understanding the barriers, it is not possible to know how to obtain change. Therefore, the first part of the study consists of theories and approaches that are applied to understand, what can make the car usage so popular at tourist destinations and what can be done to change this negative development. This is followed up by a second part which is a case study of Odsherred, to identify and illustrate what are the first steps of turning the negative development towards sustainable transition. A third part discusses the theories of the first part and the results of the second part and delivers more theory explaining how the design intervention can be set up based on the case study facilitating change.

The approach of the thesis is inspired by a model developed by B.O. Jensen. B.O. Jensen states that there's a need to understand the co-evolution of norms, cultures, practices, institutions, and technology (Wikstrøm & Böcker, 2020). This is useful for understanding the interplay between technological and institutionalized settings when solutions are brought into play. He notes that staging mobility framework enclose the physical, social, technical, political and cultural conditions. It is mainly staged from above by planning, design, regulations, and institutions but can also be staged from below by grassroots and local initiatives. He divides transportation into three analytical domains: the physical setting and material spaces, the embodied performance, and social interactions. The "physical settings, the material spaces and the design" relate to the infrastructure that allow certain forms of mobility to operate in the built environment and it influence behavior. The "embodied performance" relates to people's interaction with the world. It looks at how meaning and norms are created in cultures. "Social interaction" looks at how people interact with each other while moving in the physical room. (Wikstrøm & Böcker, 2020)

Drawing from the perspective of B.O. Jensens model, in order to reach sustainable transition, it is necessary to understand and get an insight of the existing conditions to be able to identify the barriers to sustainable transition. This means that it is important to explore the existing infrastructure and built environment of Odsherred and how it effects the environment and the behaviors of the temporary and permanent residents of Odsherred . Understanding the institutional barriers by identifying the actors that are responsible for change and how they cope with existing regulations and framework of transportation is necessary. Furthermore the "embodied performance" such as an understanding of how summerhouse owners and permanent residents interact with the existing conditions, identifying their attitudes towards development exploring how they communicate and interaction with each other that influence norms and culture is necessary.

The BO Jensen is a broad model, and it looks into different perspectives of the systems and of the society and how the norms, cultures, practices, institutions and technology plays together. The study of this project therefore takes a broad approach. A broad approach is necessary to be able to create a general overview of the big scene, where many actors play. This is needed in order to understand who would be the relevant actors to activate and what would be the elements that should be activated and circulate to interest, engage, enroll and mobilize actors in a program, that has to be set up to facilitate change. This approach is inspired by Callon's actor network theory of the four moments of translation which is a theory applied for the third part of the project to illustrate how the design intervention is set up.

The state of art of the first part of the study consists of five approaches and theories. The first approach describes the general vicious circle of transport planning and why it is so hard to find the money that is necessary to deliver a good public transport service. It relates to BO Jensen model of understanding the instructions, regulations and technologies. This section is followed up by the mobility pyramid. The DK2020 project suggest 17 municipalities on Zealand Odsherred inclusive to work with the mobility pyramid in order to turn they negative development of car usage. Concito is a part of the project where they help the municipalities to meet the climate goals and how they can reduce emissions from the transport sector. This section is applied to understand what the actors in municipality is suggested to do by other experts. In appendix 17 a section can be found with reflection on how Concito's suggestions would solve the traffic problem in Odsherred.

The models are followed up by theories by Gehl, Calon and Moscovici. The first theory is the "function follow form" theory by Jan Gehl. It relates to the built environment of the model of BO Jensen and it explains how the development of the built environment with the presence of leisure time citizens influence travel behaviors and damage nature. The second approach is the theory of the economy of goods by Calon (2002). It explains the qualities of goods and how the qualities of the transport systems should be adjusted so it can attract consumers to use the service. The theory is followed up by a literature research, which consist of a mixture of research studies that has investigated, what car drivers, public transport users and tourists see as important qualities. This is relevant in order to understand what literature has already found can reduce car usage in destinations

The fourth approach is the social representation theory by Moscovici stating that people conform to norms. This theory relate to "The "embodied performance" of B.O. Jensens Model. The theory states that it is necessary to identify social representation that people confirm to. The act of a social representation such as the necessity of driving a car can be turned into a crucial act so it becomes maladaptive and people will then stop conforming to it. According to Moscovici the norm of driving a car should be turned into a crucial act so people will start questioning the act and look for other norms and social representations that are more adaptive that they can conform to. According to Calon it is at this moment where people start questioning

their habits that they should be met with interestment devices that seeks to trigger their interest to change their routine-based habits into habits that we want them to have (Callon et al., 2002).

The second part of the project consist of a case study of Odsherred. The case study is divided into three sections: 1. A site analysis of the infrastructures in Odsherred 2. A stakeholder analysis consisting of interviews with responsible traffic managers 3. A survey with the summerhouse owners and permanent citizens.

The case study has been applied to understand build environment and the embodied performance. It has also been conducted to understand the perception of leisuretime- and permanent residents of Odsherred towards the development car congestion in Odsherred in high season. It is an attempt to identify the context in which the same issues appears as already defined by the tourist literature and to be able to identify specifically with the of the theories of Jan Gehl and Calon and Moscovici, how to turn the negative development and obtain change.

As the discussion of the theories and the results of the first and second part of the project visualize, there's a need to work with the first step of the mobility pyramid dealing with increasing awareness among residents. As the result has shown there are many frustrated permanent residents and stakeholders who feel powerless. Mobilization is therefore applied in the design intervention to increase awareness and the power of the messages of the frustrated stakeholders. A mobilization is needed that supports change, if anything should ever change. Theories of mobilization has been applied to understand how the design intervention can be set up. Callons four moment of translation and his definition of interestment devices of how to engage people in a network is applied. It is supported by (Rao et al., 2009) stating that if radical change should ever happen there's a need to turn a topic into a "hot cause" mobilizing people support to support and innovative idea or product. Rao is supported by the "social impact theory" stating that the more people who are delivering the same message the bigger the impact. Statements from the Green Student Movement has been applied to understand how to stabilize a mobilization as they are experts in mobilization. Furthermore elements from Alversons definition of how to change culture is applied. A second contact to one if permanent resident who is a member in the fisher club of Rørvig and to Rørvig Street food has been conducted to confirm if mobilization is the right direction to go.

4. Application of theories, models and literature to understand the reason for the increase of car usage

As the introduction has shown the problems of car use in tourist destinations becomes worse and worse and therefore this section applies models, theories and literature to try to get a general understanding of why passengers and residents experience no improvement of the service of the public transport, only to become worse and worse and only to observe that the physical room becomes more and more filled with cars parking on bike lanes damaging nature the environment and the idyllic images. Often one theory or approach cannot stand alone and it needs to be supported by other theories and literature to explain a phenomena. Section 10 “Discussions of results literature and theories” captures up on the results of the case study and the theories and it explains more in depth why it has been necessary to use several theories. This section starts by the vicious circle explaining what the general transport literature says is the reason for why public transport bicycling and other vulnerable means of transportation is politically down prioritized. The model is supported by Jan Gehl stating that the better accessibility and the more convenient one transport mode is the more it will be used. The vicious circle and Jan Gehl is supported by Callon’s theory of “economy of goods” stating that the qualities of the transport systems should be adjusted according to the preferences and attitudes consumers. This section is followed up by a literature research of tourism and car users and bicyclism in rural areas defining how planners should meet the preferred qualities of tourists in order to detach them from their car driving to become attached to other sustainable transport modes. As literature has found, theories by Gehl and Callon is not sufficient and therefore it need to be supported by the social sciences. In this report the social representation theory is applied stating that we conform to certain attitude and norms but not if it is turned into a crucial act. It followed up a section with a greater focus on what are the solutions to reduce car usage. It consist of the mobility pyramid which is suggested by the DK2020 project that municipalities should work with in order to understand, what the experts are suggesting the municipalities to do to break free of the vicious circle.

In this project theories and models are applied to achieve a general understanding of what makes the car so popular and they are applied to investigate how they are expressed in the case of Odsherred in the second part of the report. In the third part there’s a discussion of how useful the theories are in facilitating change in Odsherred and what the theories and literature states should be done in order to reduce the car usage in Odsherred.

4. The explanation of literature of the growth in car usage and no improvement of sustainable mobility

4.1 The vicious circle

Denmark is one of the countries in the EU who has experienced the greatest removal of population from outer municipalities to the bigger cities (Landdistriktredeggørelse, 2011). As mentioned in the introduction the concentration of the population plays a significant role on the population geography and the economy of certain outer municipalities. In Odsherred during winter times it is often possible to observe empty busses with no passengers on the roads and rarely a bicyclist is viewed in the landscape on the roads. This sends a signal to the politicians that no one wants to use the public transport or wants to bike and that commuters prefer to travel by cars. The incentives for the politicians to provide funds that can facilitate a high quality of public transport service and to construct bike lanes and bike facilities in rural areas are therefore very poor, because politicians are afraid of wasting money on systems that the commuters does not want to use . But this is due to the vicious circle of transport management as shown below.

Figure 11 shows the vicious circle. The figure shows that more congestion and a reduction of demand in public transport leads to a reduction of the frequency of buses to save money and to avoid empty buses. Because of the reduction of the frequency of public transport, the cars become more attractive when the public transport service is reduced. This leads to more cars on the roads and fewer trips with the bus. It increases the operational cost because of a lower income from transactions from the reduction of public transport users. Therefore, the public transport operators need to increase the tariffs. This makes the public transport more expensive for the public transport users and then the car becomes more attractive. More cars arrive on the streets, it leads to more congestion and the cycle is repeated (Banister, 2008).

Another figure (Figure 12) also shows the vicious circle. When we have more congestion new infrastructure is built. This makes it easier

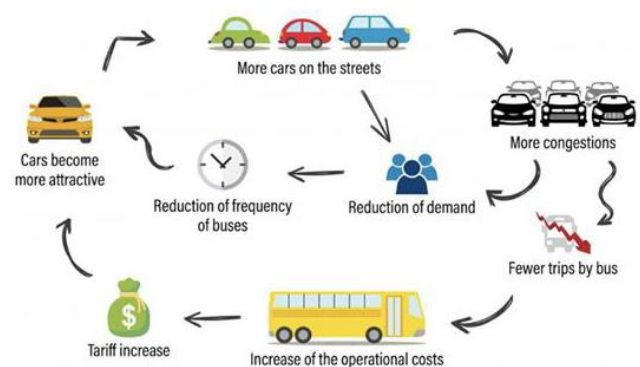


Figure 11: Model of the vicious circle of transport planning.
(Source: DTU learning material for transport students)

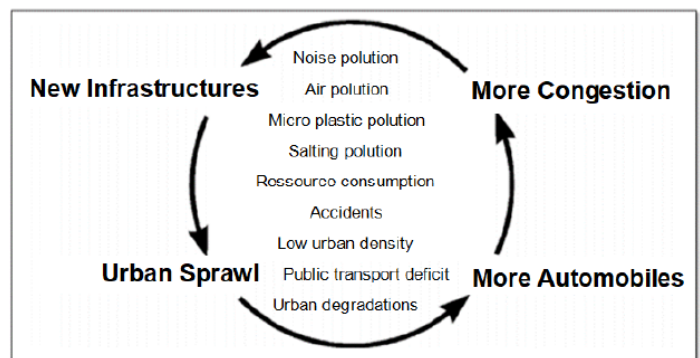


Figure 12: Model of the vicious circle of transport planning.
(Source: DTU learning material for transport students)

for people to move around. Urban sprawl happens because people can move further away from where they work with a longer commuting distance. It creates a lower urban density because of the urban sprawl. This makes public transport less deficit with low frequency and it can lead to urban degradation. This encourage people to buy more automobiles if they live in a rural area where the public transport is weak. Possibly they need two cars because both parents need a car and that leads to more congestion. This leads to a need of building more infrastructure and the circle repeats itself. More cars lead to more noise pollution, more air pollution, more accidents, more resource consumption because of the production of new cars and roads, more microplastic pollution from the usage of the car wheels and more drinking water pollution from the salting of the roads. (Mounce et al., 2020).

As the vicious circle shows and as explained in the following chapters, the accessibility of cars plays an important role in development of car usage. The site analysis of Odsherred explains how the main road 21 combining Copenhagen with the Molslines transiting Odsherred has made it very easy to access Odsherred by car compared to the public transport and this encourage people to use the car (6. Site Analysis). It has encouraged more people to settle in Odsherred. This is further elaborated in the site analysis. The following chapter explains the theory of Jan Gehl, which explains the phenomena of accessibility.

4.2 The importance of building the physical rooms for human dimensions

The Danish architect Jan Gehl highlights the easy accessibility of cars in his urban studies as a great problem of how of the physical rooms are built. He confirms the vicious circle by stating that since the beginning of the year 1900's during the beginning of the modernism managers has planned after the misunderstood concept "form follow functions". As it was observed in society, that more and more people moved to the big cities, high towers were built to embrace the increasing population density. Because more and more people owned a car, wide roads for cars were built to meet the demand of automobile usage. Because the industry was noisier and more polluting, cities were divided into zones to separate the noisy industry from housing. Cities were planned from a helicopter perspective from above not taking into account the experiences of the human senses within the physical rooms. Today, many of the isolated housing areas of high towers are known as the dysfunctional ghettos.

According to Jan Gehl this is a misunderstood way of planning and building the physical rooms where the physical room is built according to the behaviors of the population. He says that we should not follow the concept "form follow function". We should not plan the physical rooms according to the behaviors and the demand that we observe in society. Rather we should do the opposite and follow the concept "functions follow the form". He says that planners should ask what kind of cities and landscapes do we want? What kind of behavior do we want? How do we want the physical room to be applied and used by the citizens? Then we should build the infrastructure and the physical room so it fits for the desired behavior and the users will then automatically adapt to it. He points to a study in San Diego at California where a big motorway was

blocked for cars for a long period of time. The car users adapted to the situation and they started using alternative transport modes instead. Similar studies have shown that the users of the physical rooms adapt to the physical environment and therefore “functions follow forms”. As Gehl said “Nobody knew that the way that cities are built had influence on lifestyles and people’s lives” (Gehl ,2010)

Jan Gehl states that cities should be built for human dimensions building for the senses of human nature. When people look ahead, our vision is limited to a radius of 90 degrees to each side. If we look down or up, the field of view is limited even more. Therefore, it is basically only the ground floor you see when we move through a street, as well as what goes on in the street space. In addition, there is a big difference in what we experience over different distances. The closer one gets to a thing or a person, the more intimate and personal it is experienced. For example, narrow streets are typically experienced more intimate, while large spaces and wide streets are often experienced impersonal. This is also related to the fact that the smaller the distance, the more senses we can use. The sense of smell, hearing and touch do not function over as long distances as the sense of sight. If it is pleasant to walk and to bicycle, people are more likely to do it than if it feels insecure or unpleasant. This relates to Callon’s theory of what attach and detach the consumers from applying products and services.

4.3 Callon’s theory of the economy of good

Callon’s theory of economy of goods is a third approach explaining why more people tend to choose the car instead of other sustainable transport modes. Callon focuses on the characteristics of the products of innovators where he mentions the qualification of goods that defines the attachment or detachment of consumers which are the motivational factors that determine whether consumers want to engage in a network or not that supports a product (Callon et al., 2002). How can innovators visualize the qualities of a new product that can attach the consumers more to their products? In other words, how can the traffic operators define and make qualities visible that can allow consumers to attach more to the services offered by the transport operators and how can they detach car drivers from their car? The qualification of goods is what makes up the organization of market and economic competition among firms and organizations. This co-construction of supply and demand is where the firms try to construct the qualities, that can ease the attachment of the consumers and that leads to singularization of good differentiating one product from another. According to Callon, the attached consumer is caught up in routines. He uses the example of supermarkets where people have defined the qualities that they like, the tastes and the looks of the products that sweets them, and they are caught up in a routine of buying the same products. The evaluation of the qualities of the products is stabilized where they don’t need to reflect and think about them. Companies constantly try to disturb and destabilize these routine-based purchases by their advertisements, and they try to make them re-evaluate the qualities of the products. Consumers that are engaged in a requalification process hesitate. They wonder what they should buy (Callon et al., 2002). It is especially at this moment that companies should try to catch the attention of consumers at the right moment of the purchasing travel to

attract their attention towards their products. In competition, the firm's ability to modify the list of qualities can be seen as strategic attempts to position their goods within the market among many other goods (Callon et al., 2002).

4.4 Callons's theory in transport planning

The theory by Callon can also be related to transport planning. People are caught up in routines. Car drivers are driving in their car because it has become a habit, which they do not question. Public transport operators get subsidies for running their services. This is good because otherwise there would be no busses operating in Odsherred delivering service for people without driver licenses, due to the low usage and the lack of revenue (Movia, 2022). However, operators do not have an incentive to trigger the interest of car drivers that can attach more consumers to the public transport as they can just run the service as usual and they do not have the incentive to work towards obtaining a greater revenue. The operators are just maintaining the same service and they are doing their work in keeping the current passengers in the transport planning that can keep the existing service running (Banister et al., 2008). According to the theory of Callon, if car drivers are to support other more sustainable transport modes instead, traffic managers need to detach the commuters from car dependency. They need to perform market research to understand the commuters transport needs, practices, attitudes and preferences. By understanding the commuter's preferences and attitudes, the traffic managers can adjust the qualities of the services, technologies, and infrastructures of the transport systems accordingly, so they are able to meet the goals of the consumers. At the same time the traffic operators need to develop intersement devices that trigger the interest and which is able to change the preferences and behaviors of the commuters to support a sustainable new transport system. The intersement devices should detach the commuters from car dependency allowing for intersement and engagement that leads to attachment of green mobility services instead (Callon et al., 2002).

A model below shows the concept. The model is originally constructed based on market research theories of how the seller achieves sale by understanding his consumer through market research. If the seller understands his consumers he would know how to adjust the qualities of his products accordingly and how to develop intersement devices. He would know when to trigger the intersement devices to capture the awareness of the consumers at the right moment. Firms has to do market research to understand their consumers so they can develop their products accordingly. If the purpose is to attract more car users back into the public transport or to encourage them to use a bike, then the traffic managers would have to investigate how they should develop the services and infrastructures so they meet the demand of the users. By the use of literature about tourist transportation and car driving the following section is investigating what are the qualities that should be adjusted in order to attach car drivers to sustainable transport modes at tourist destinations.

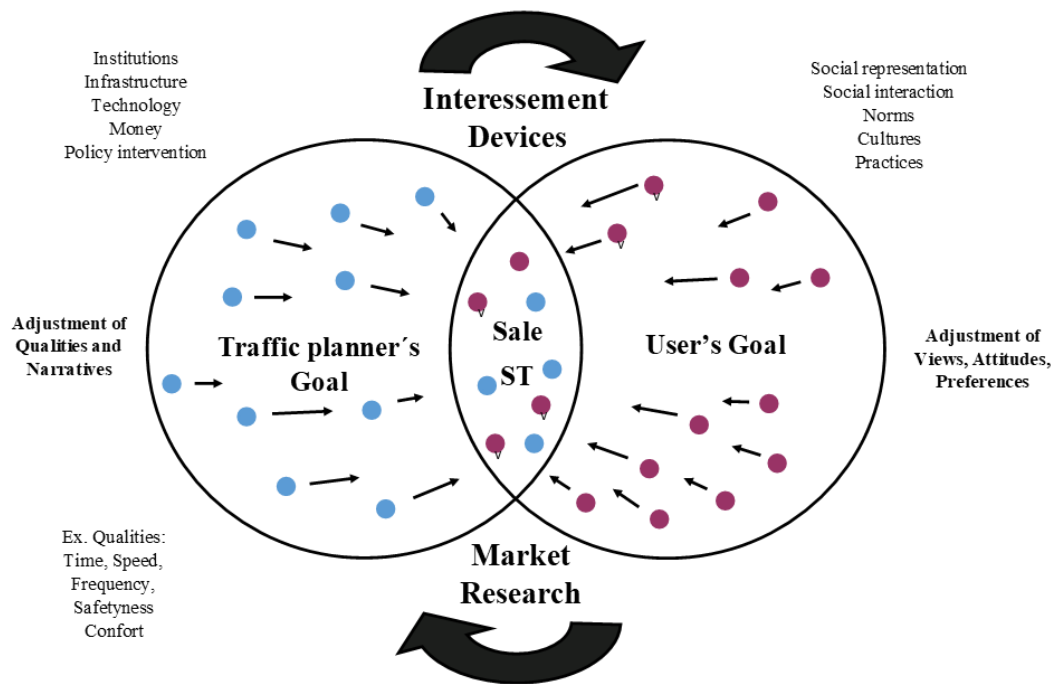


Figure 13. figure showing model of how sustainable transition is reached by adjusting qualities according to preferences. By performing market research planners can develop interessement devices influencing the preferences of the users toward a common goal

4.4.1 The qualities of the transport systems

In order to understand what could detach car drivers from driving a car which can change the habits of the summerhouse owners' car usage this section serves as an informative chapter that enlightens what are the qualities and preferences that should be adjusted, which literature have found could change the habits of car drivers to shift to other means of transport.

When asking the Danish traffic compaignies such as Movia, Passagerpulsen and DSB what they do to detach car drivers from car driving to become and attached consumers of the public transport, they say it is extremely difficult. DSB tries to create interessement devices such as campaigns explaining the qualities of the comfort of relaxing, working and being social during travel time in the public transport. Movia has started a concept of park and ride, where car drivers can park their cars at the stations taking the rest of the journey with the public transport. A part from these initiatives it seems that the traffic compaignies have nearly abandoned the idea of convincing car drivers to apply other modes of transport. They claim that it is much easier to attach cyclists or pedestrians to become users of the public transport. According to Passagerpulsen their surveys mainly focus on existing users. The Passagerpuls do not conduct surveys investigating what could move car drivers into the public transport (Passagerpulsen, 2022). This is confirmed by the literature (De Oña et al., 2020) stating that most studies focusing on investigating the satisfaction of public transport, concentrate on current users of PT. Less research exist about the perception of car users of the public transport. It is important to understand the preferences and needs of the car users if we are to

adjust the qualities and develop intersement devices that can convince car users to switch to more sustainable transport modes. The car is fast, convenient and comfortable and it gives a feeling of individual freedom (Gärling, Geertje Schuitema, 2007; Beirão & Cabral, 2007). These are all qualities that attach commuters to the car and makes the car a very attractive mode. The public transport and bike facilities needs to meet these qualities if it must compete with the car. Use of public transport is perceived as a waste of time by almost all car drivers, where waiting time and lack of information are challenges that detach consumers from the public transport. According to many research papers improving public transport can reduce car usage. Policies that aim at improving the public transport, so it becomes attractive and competitive with the car is necessary (Beirão & Cabral, 2007). The adjustment of qualities of the public transport such as the reduction of total travel time, reliability, comfort and cost has directly affected shifting from car to public transport (De Oña et al., 2020). Similar study by (Abdulrazzaq et al., 2020) has shown that travel time and distance travelled was found to be the most important qualities for the potential use of other transport mode when it comes to the reduction of car dependency. The stress of driving in traffic is for some commuters a reason for choosing the public transport. For them the possibility of reading a book or relaxing or socializing the public transport (Beirão & Cabral, 2007) are qualities that attach these users to the public transport and these qualities relate to the concept of slow travel (Noor et al, 2014). When it comes to bicycling qualities such as continuous bike lanes, good lighting at night, bike racks at destinations shower facilities at work and trees along streets can be mentioned. Qualities that detaches commuters from bicycling are too much traffic, too many hills, no bike lanes, too long distances, rough surfaces or roads are not maintained (Hull & O'Holleran, 2014)

To develop a service that meets the expectations and preferences of the commuters an understanding of the needs and expectations is necessary (Beirão & Cabral, 2007). In tourist context the accessibility of transport and the connectivity between the activities that visitors go to at a destination is essential for the transport mode choice of the visitors (Jia, & Jiang, 2012 as cited in Le-Klaehn & Hall, 2015). When attractions and destinations are not well connected it encourage for car use. Providing accessibility of alternative transport modes for the rural forests, beaches, street foods, shopping, sightseeing, sights and other tourist activities is important. For users of the public transport it is very important that the different public transport schedules interconnect (Poltimäe et al., 2022). Time is an important factor in destination based travel behavior (Dickinson et al., 2013). Residents that lives closer to the point of interest suffers less from time constraint than tourists. Frequency of the public transport, waiting time and reliability is essential to attract user to the public transport. Accessible and easy understandable information on routing booking and ticketing is also important for the users of all groups (Dickinson et al., 2013). Cost and estimated travel time has significantly negative effect on the individual utility and probability of choosing a transport mode. Increasing the price of public transport would reduce the demand. It has been estimated at tourist destinations that any change of price has an impact on shaping the mobility choice which indicates that the price is an important quality to

work with (Curtale et al., 2021). Most visitors are not aware of the actual cost that would come from parking charges, but studies has found that if tourists have previous experiences of not being able to find a parking place they may be prone to choose an alternative transport mode the next time. Progressive increase in parking fees would reduce car usage(Dickinson, 2006). Parking fees can there be seen as a quality that can be adjusted in tourist context to detach car drivers form car driving. Hovever it can be difficult to introduce at rural areas as there is lack of control.

A method to improve the qualities of the public transport that can attach more users is by introducing new means of transport modes. Tourists has shown to be quite positive towards systems of Park and ride with shuttle busses and E-bike network. The park and ride concept aligned with a shuttle bus might be an elements that can be applied to improve the qualities of the public transport (Curtale et al., 2021). An e-bike network might also be a solution that that can attach tourists to public transport (Curtale et al., 2021). Managers should test solutions to find the most suitable solution that meets the qualities that can meet the demand of the users (Curtale et al., 2021).

Change of habits is often seen when changes happen in life such as divorce, change of job, retirement, or removals children but also when new mobility services are introduced (Via Trafik). This is the moment where the commuters can be met with intereselement devices that can trigger their interest to change transport behaviors. In tourism context understanding travel behavior is complex. For each journey there is a different purpose. People have different choices between travel modes, they have different characteristics, and they have different advantages, disadvantages and costs (Beirão & Cabral, 2007). Different user segment has different evaluation of the services and therefore the preferences beliefs and attitudes will vary. This indicates that travel market segmentation of users should be identified to understand the underlying reason for their preferences (Andreassen 1995 as sited in Beirão & Cabral, 2007). A lot of people depend on a car but a car is not just a means of transport. With the purchase of a car also comes feelings such as status, power superiority, sensation and freedom (Jensen, 1999). In (Annex 19) can be seen my own attempt to classify different segments of users based on the literature by (Jensen, 1999). It is important to understand the psychological factors that influence mode choice. When only measuring on socio-democratic variables surveys often shows few differences in preferences. Therefore, it is important to understand the underlying patterns of travel and how the qualities of the sustainable transport modes should relate to these underlying patterns. Preferences and attitudes can vary a lot whether you are user of the public transport a bicyclists or not (Jensen, 1999). ViaTrafik categorises the car users in three categories: There´s the car driver that does not at all think of using the public transport and that enjoys the freedom of car usage. The public transport smells and is always late. These car drivers are very difficult to convince to take the public transport because they love their car. They care for their car and have strong feeling towards it and they have strong feelings against public transport. These users would need sticks to use the public transport. Others are car drivers of

necessity that has too long travel time with public transport and they are dependent on their car claiming that there is no alternative, if they want the lifestyle that they have. They need better solutions from A to B. The last category of car drivers is “The mobilist” that sometimes use a bike, sometimes use the public transport or sometimes he drive in his own car or with co-driving according to what is possible and suitable in everyday life. It’s a car driver who choose the car because of convenient, stating that the car is there and convenient to use. It gives the user a freedom and in being in control.

The section above has illustrated examples of qualities that attach car consumers to their car and it illustrates qualities that should be adjusted of the infrastructure and the technologies of the transport sector in order to attach more consumers to the public transport or to become bicyclists. It also shows, depending on what type of characteristics a person has, they set different requirements for the qualities of transport systems.

Unfortunately several studies have found that technology and management will not be sufficient to achieve emission reduction from tourism. It is not enough to adjust the qualities of the bike and public transport by improving infrastructures for bike bicycling and public transport systems. Restriction of car usage that makes the car less attractive and that detaches car-users from the car is necessary as well (Gärling, Geertje Schuitema, 2007). Furthermore studies such as (Hensher, 1998 as cited in Beirão & Cabral, 2007) states that it is not expected that the level of service of public transport can ever be sufficient to meet the car users appeal that can make them switch to public transport (Steg 2005 as cited in Beirão & Cabral, 2007).

Literature of bicycling at rural district areas has shown that bicycling is related to whether people like to bicycle or not. Introducing more bike lanes would maybe increase the amount of women bicycling as women tend to be more insecure than men, because bike lanes increase the quality of security of the roads. However, it is not expected that the implementation of more bikes lanes in rural areas will deliver an significant increase of users of the bike lanes. An example in the municipality of Vejle a bike lane was built for 3 million crowns but it only led to 3 more bicyclists (Guldberg & Hansen, 2022). Furthermore, as explained in introduction people tend to use the car even though there are bike lanes available. If the car users are to be encouraged to switch to other transport modes restrictions of car use, sticks and carrots are needed as well. (Gärling and Schuitema, 2007). However according (Lohmann & Duval, 2014) this is not easy to introduce in rural areas. Social and behavioral change is necessary to achieve sustainable tourism (Cohen, Peeters & Gössling, 2013). Therefore, Callon’s and Gehl’s theories cannot stand alone. The theories require to be backed up by other theories that belongs to the sciences of social practices. Moscovici’s theory is one of the theories that belong to the science of social practices that can be applied to understand how mobilization of new practices can happen to allow for a sustainable transition to take place. The theory of social representation is a third theory that can explain why people drive in a car without even questioning the consequences of their action, as it is a norm that is acceptable by the majority.

4.5 Social Representation Theory

A French psychology book by (Gerrig & Zimbardo, 2008) describes the theory of Moscovici, which is presented in this section. Moscovici is a Romanian psychologist born in 1925. Moscovici found that the communist did not have a good understanding of their lives. Moscovici stated that our underlying motivation in the way we engage with others have deep unconscious motives. We are not aware of these underlying motives in everyday life. The behaviorist also distressed in common sense. "Common sense language" relates to unconsciousness believes, desires and wants. Moscovici focused on "common sense" and "everyday understanding". He worked in France where he tried to introduce psychology to the French social scientist, and in America he tried to introduce social theory to psychology. He said that the way that attitudes are expressed and generated, they have some kind of underlying order. Without understanding this underlying order and generative mechanism he could not understand the attitudes. Therefore he stated that attitude studies are not particular interesting because they do not explain the underlying mechanism. He argues that attitudes are the property of the individuals. Each one has his or her own sets of attitudes, but there has been little research on where these attitudes come from how these attitudes are changed and how they changed in terms of communication. (Gerrig & Zimbardo, 2008)

According to the usual social sciences people have information deficit. They look to other people to meet that deficit conform to something that is obviously wrong simply because they worry about the consequences if they do not conform to it or because it is socially anonymous acceptable and norm. This leads to convergence and conformity and in doing so they are influenced. Groups tend towards convergence but Moscovici stated that this is only a partly understanding of what happens because there is attitude change and social change. If all processes lead to conformity, where attitudes, believes and opinions become more alike each other, how can social change then happen? Moscovici argued that the american theoretical research where guilty of conformity bias. The phychologist were overlooking the importance of innovative and social change. He had great interest in deviance. He critiqued the conformative bias and the social sciences stating that conformity is adaptive, that non-conformity is non adaptive, that society is homogenous and that majority influence minority. Moscovici said that society is not homogenous but it is stratified. Groups of society are engaged in all sorts of conflicts and arguments. Society is made of different groups with different interests that does not match each other. (Gerrig & Zimbardo, 2008)

He switch the above mentioned social sciences around and constates conformity does not always lead to adaptation. Conformity may be maladaptive. Situations that are dangerous that leads people to perform crucial acts may be maladaptive, while non-conformity which entails new ways of organizing our selves challenging conformity may be adaptive. In this way minority can influence majority.

Social representations is a stark of values, ideas, metaphors, believes and practices that is shared among the members of communities. Social representatives is a body of theories within social psychology. It is

understood as an collective elaboration of a social object by the community for the purpose of behaving and communicating. They are further referred to as a system of values, ideas and practices. They can be seen as very grounded and stable, but as Moscovici argued the minority can influence the majority and therefore they are possible to change. (Gerrig & Zimbardo, 2008)

Moscovici relates to anchoring and objectification. Anchoring is when we come across a new event or a new image. We come about something that is novel and we try to make sense of it by comparing it to things that we already know. It classifies new social stimuli by comparing them to things that we already know about. He calls it “derminism in genesis” and “transformation”. Something new comes along and we understand it by comparing it to something old, or something has been transformed, developed or elaborated. What is new loses its newness and becomes obvious. It becomes something that is thought about. It’s a process where new ideas of social objects are formed into our common reality of our common sense. When the new thing becomes obvious, they become automatic and natural. It’s a contractive process which he calls objectifying. Objectifying is where things are made natural. It is the process in which new ideas are formed into our everyday life and our common sense. (Gerrig & Zimbardo, 2008)

4.5.1 Moscovici’s theory in transport planning

Moscovici’s theory is interesting in transport planning as it indicates that if the act of car driving was turned into a crucial act it may become maladaptive and this could make people reevaluate how they organize themselves and they may look for new attitudes ideas and practices that they can conform to which are more adaptive. The feelings of status, power, superiority, sensation and freedom of owning a car that groups conform to because they are adaptive, could be turned into crucial acts with feelings such as shame and guilt about damaging and disturbing the environment, thereby making the ownership of car become a crucial act and maladaptive. There are minorities in the society that already has sustainable transport habits. By emphasizing the good narratives of the minorities it could challenge the conformity of driving a car.

Moscovici is known for his research on minority influence and social representations. Dickinson which is one of the authors of the tourist literature, that is frequently applied in this report to understand behavior and attitudes of the second house owners, has applied Moscovici’s theory of social representation. Not only the theory can help to understand how minority can influence majority. Moscovici’s theory can help to understand the social representations that fluctuates among residents in Odsherred that influence people’s attitudes, choice and behaviors.

The following section is investigating what the municipalities are suggested to do by experts. This will show how the municipalities are suggested to complement what the theories and transport literature states.

4.6 Mobility pyramid

Many municipalities in Denmark are developing climate plans of how to meet the climate goals of the Paris Agreement with the goal of becoming CO₂ neutral in 2050 (Realdania, 2022). The climate plans will have a great impact on the traffic, since the climate plans is about setting goals and plans for how to reduce CO₂ emissions from all sectors emitting CO₂. Odsherred municipality is one of the municipalities that are working on climate plans. However the climate emissions from traffic as shown in the newly developed climate plan of the municipality of Odsherred, that has currently been put into public hearing the 31st of May 2022, is only based on permanent residents. I do therefore not find the climate declarations of the climate plan reliable as it does not include the emissions of the summerhouse owners. Concito is helping the municipalities of how to meet the climate goals (Concito, 2022). In appendix 17 a section can be found with my own critical reflections on how effective the suggestions by Concito is in solving the traffic problems of Odsherred. As a part of the climate plan Odsherred municipality is going to develop a new mobility plan for Odsherred. The Municipality of Odsherred has asked DTU to deliver data. The municipality has therefore chosen to become a part of the secretary DK2020 which is a collaboration between the Region of Zealand, KKR Sjælland and Zealand Climate Forum who have launched studies of the passenger transport in 17 municipalities in the region of Zealand including Odsherred. A choice has been chosen not to present the results of the DK2020 report of Odsherred in this master thesis, as it is not relevant for the scope of the project, because it only presents the results based on data of permanent residents, presenting the travel behaviors during periods where the summerhouse owners is not present in Odsherred. However in their rapport they suggest the municipalities to follow the mobility pyramid. The mobility pyramid is a tool that can also be suitable to apply to improve the mobility for leisure time residents and tourists. The steps of the mobility pyramid is presented below.

Step1

The first step of the pyramid of mobility concerns raising the awareness among the residents about mobility and mobility solutions. This should trigger the resident's attention and reflection about the choice transport mode. Through campaigns and by making the solutions visible, attractive and effective in the urban and rural physical environment, habits and behavior can be influenced

Step2

The next step is to use the existing infrastructure and ensure that travel with the different travel modes can happen more smoothly. It can for instance be done by improving the communication about travel times and route directions, changing the price regulation of parkings and developing the ticket systems so they become more transparent and easier for the users to utilize.

Step 3

The third step states that the existing infrastructure should be adjusted to support a green profile. As example existing bike lanes can be turned into superbike lanes for bicycles. Reprioritization of areas, improving the safety of walk and bike transitions and busstops and improving bike parkings at stations and busstops making bicycling and walking more attractive. This also contributes to the work of improving combination travels making the public transport more effective and attractive.

Step 4

Last step includes supplementing new infrastructure to the existing infrastructure. It could for instance be new bike lanes, busroutes, parkinghouses, new railway or new infrastructure for loading electric cars.

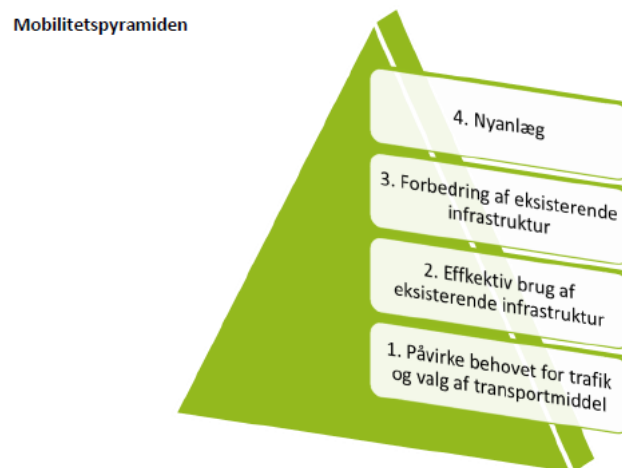


Figure 14: Mobility pyramid illustrating how transport planners can work with improving the transport systems

One particular recommendation of the DK2020 report regarding the first step of the pyramid of increasing the awareness includes citizen involvement. It seems to be particularly relevant for this study of leisure time citizens, as the introduction has shown that tourists do know the consequences of car usage but they are not aware of the consequences of their own transport habits. There is a need to understand leisure time and permanent's perception toward development in Odsherred and car congestion. It is important in order to know, how to improve the other steps of the pyramid. The DK2020 report suggest that citizen involvement is important in the development of new mobility offers to understand the background for the transport mode choices and to inform about ways to achieve better transport habits. Dialogue with citizens and businesses and involving citizens in mobility solutions can be beneficial because it can lead to mobility-solutions that target and meets the needs of the residents. Without this insight of the resident's transport needs and information given to the residents to inform the residents about the alternative choices, there's a risk that the implemented solution risk to fail because the solutions do not meet the needs of the users and it results in failure because of lack of usage.

Partial conclusion

The theories of Gehl, Callon and Moscovici has given three different approaches of how to reduce car usage. As Odsherred is an area where people travel to in their leisure time to enjoy nature and the built environment, it is a place where people use their senses. Therefore Jan Gehl's theory of building the physical room for the senses of the human nature is very relevant in a municipality such as Odsherred. Callon's theory has illustrated a lot of qualities that should be adjusted in order to detach car drivers from their car to become users of the bike systems of public transport. The steps of the mobility pyramid indicates how many of these qualities can be improved such as waiting time, reliability, speed and price by facilitating direct bicycle- and bus routes, better ticket systems and information systems etc. However, the section has also shown that the characteristics of the commuters has an impact on how easy it will be to detach car drivers from their car. The theory by Moscovici has shown that the act of car driving should be turned into a crucial act in order to encourage people to look for other attitudes and norms that they can adapt to instead. Other vice people will just continue driving, as the norm of driving a car is adaptive and acceptable by the majority.

The following section will explain the methods applied to develop the site analysis, stakeholder analysis and survey with the leisure time and permanent residents. The site analyses will investigate how well the transport systems and the built environment meet the qualities. It will investigate how well the physical room is built for human dimensions. The stakeholder analysis will investigate how the stakeholders work with the qualities of the transport system and the survey of the permanent and leisure- time residents will identify the social representations in the society and their perception of the car congestion.

5. Methodology

This section describes the methods used to instigate the case study of Odsherred. It describes the methods used to perform the site analyses. It describes the methods used to perform the survey of the permanent and leisure time residents and stakeholder analysis.

5.1 Site analysis

The site analysis relates to BO Jensens "built environment". It applies the theory by Gehl to investigate how the infrastructures are in Odsherred, that influence the accessibility of car drivers, public transport users and bicyclists. It also relate to certain steps of the mobility pyramid.

Since the train stations, most activities, shops and the food supermarkets of Odsherred are located in or near by the villages of Odsherred it is essential to look at the travel conditions between the summerhouse areas and the villages of Odsherred. The site analysis therefore consists of mapping out the distances and the bus

routes from the summerhouse areas to the closest villages in Odsherred. At Google Maps it is possible to look up the distances from the summerhouse areas to the villages. Rejseplanen and DOT indicates the bus routes. Therefore the information from these websites has been gathered and plotted into maps.

Furthermore, a bicycle inspection of the bike routes from the villages to the summerhouse areas has been carried out to identify the conditions of the bike routes and what the bicyclist are up for, if the summerhouse owners were forced to bicycle instead of using the car. During my first semester on my bachelor of urban-energy- and environmental planning I developed together with my study group a list of how to perform a bicycle inspection. It can be seen in Annex 19. Inspired by this list I have performed the bicycle inspection by bicycling from the train stations and the food shopping stores towards the summerhouse areas performing an ethnographic study applying observational studies of the “built environment”, which is a part of BO Jensens model. A map developed by VisitOdsherred of the bike routes in Odsherred has been followed when performing the bicycle inspection to identify the bike routes from the stations to the summerhouse areas.

A qualitative research of the bike conditions is necessary in order for the municipality to know how to invoke the mobility pyramid, and to be able to identify bike routes from the villages to the summerhouse areas. As this project has taken a quantitative approach and as the bicycle inspection is only a little corner of the design intervention, a decision has been chosen not to include a qualitative study of the road safety for bicyclists in this project. However, in annex 20 pictures mapped out on a map can be found. It identifies the bike conditions of the bike routes from Nykøbing toward Klint passing by Vesterlyngvej, which are popular summerhouse areas. At Vesterlyngvej there have been many claims on social media of cars driving too fast for the vulnerable road users. The purpose of getting out biking the distances from the stations to the summerhouse areas has been to get an overall impression of the bike conditions in Odsherred as a part of the built environment.

5.2 Stakeholder analysis

The second section of the case study is a stakeholder analysis where transport managers and operators are identified to understand how they operate and how they play an active role in the sustainable transition. Semi-structured and informal interviews has been carried out with the actors to understand how the actors are dealing with the issue of car congestion in Odsherred. By gaining this knowledge it is easier to identify the barriers that the actors are struggling with and to understand who are the responsible for providing action to obtain sustainable transitions. As (Silverman, 1993) states social-political research is about gaining insights in what is going on. It also relates to B.O. Jensens model stating that it is important to understand the co- evolution of institutions technology practices and norms. The actors that has been contacted are Movia, Lokaltog, Odsherred Municipality, Siemens, Rørvig Street food, Sandobberne Camping, Rørvig Camping and Passagerpulsen. Below a description of the relevance of each actor for the project and why they have

been contacted is described. The stakeholders can be divided into two groups. The first group are the transport operators and planners. The second group are companies that can support sustainable transportation in Odsherred through their businesses.

Traffic Operators and Planners	Compagnies with Opportunities of Supporting Sustainable Mobility
     	     

Table 1. Table showing the stakeholders divided into two categories: Those who plane and ooperate the transportsystems and those who can support sustainable transport modes

Transport operators and planners

Movia

Movia operates the busses in Odsherred, but they are also a traffic operator working with implementing other traffic solutions such as flex traffic, introducing the parc and ride concept and testing out systems of renting bikes in Odsherred. They are therefore an essential actor to contact to understand how they work with improving the bus network and the transport systems in Odsherred. One semi-structured interview with Anette Enemark and Jens Toedal Jessen has been conducted the 19th of April 2022 (Annex 5 and 6). Anette Enemark is head of Mobility of Movia and responsible for several projects at the stations at Odsherred and Jens Toudal Jessen is a project manager for Movia and he is a part of the development of a national tool that the traffic companies are developing for how the municipalities in Denmark should evaluate the bike train mode combination systems at the stations. A telephoneinterview has been held the 20th of May with Joe Jensen who is a project manager at Movia. He has carried out a survey at Nykøbing Sj. station where he has gathered knowledge about the users of Nykøbing Sj. train station.

Lokaltog A/S

Lokaltog runs the local train in Odsherred but it is a joint stock compagnie where 75 % is owned by Movia and the rest is owned by Odsherred and 13 other municipalities at Zealand. Odsherred Municipality only own 1% of Lokaltog A/S. Lokaltog A/S takes care of the rails, the trains and the spaces of the train stations at Odsherred. Local also owns the spaces where the bicycles are parked at the stations (Lokaltog, n.dk). Some of the train station buildings at the stations in Odsherred are still owned by Lokaltog but most of the train station buildings are sold to local people. In appendix a written replies from Lokaltog can be seen (Annex 12 and 13).

In January 2022 the former vice bourgomester Thomas Nicolaisen posted his letter to Movia on Facebook claiming that the municipality could not accept to have school children waiting in cold weather at the station of Nykøbing when the bus from Egebjerg does not fit with the timetable of the bus to Rørvig. I asked why they did not open up the train station buildings at the stations so passenger can get warmth, while they are waiting and Thomas Nicolaisen did not know the answer, saying that it is Lokaltog that are responsible for stationbuildings stations, This is why a letter has been sent to Lokaltog asking the same question.

Understanding how Lokaltog A/S work with improving the conditions for their passengers is necessary to understand why the stations seems left and forgotten by the traffic operators and many passengers do not experience improvements of the conditions at the train stations and time travel with the train. In order to attract more consumers to public transport there need to be attractive stations with conditions that are pleasant for the passengers.

An unformal interview has been carried out the 23rd of April 2022 with Ole-Chr. M. Plum a former retired commercial expert of Lokaltog, who is today the chief of the Odsherred Musseum (Annex 8). He was able to deliver a lot of knowledge about why the conditions at the train stations are as are which is a part of understanding how Lokaltog work with improving the qualities of the public transport. Unformal conversations with retired transport planners at Odsherred Museum has also taken place who delivered interesting views on transport planning at Odsherred.

Municipality of Odsherred

In cooperation with Movia and Lokaltog A/S the municipality of Odsherred has the responsibility for the urban areas of the train stations and bus stops. The municipality decides what public transport services that they want, and they pay Movia and Lokaltog A/S for running it. They are responsible for development of rural and urban areas and they are responsible for improving the bike lane network.

The climate and process coordinator of the Municipality of Odsherred, Nina Bruus, has been contacted the 23rd of February and 2nd of May 2022 to understand how the municipality work with reducing the CO2 emissions from transportation in Odsherred. She has been contacted two times because the first time she could not say much, since the municipality had not yet started their work of the mobility plans. However, the second time she was contacted because she had received data about the passenger transport of Odsherred which is a part of the DKDK20 project which is a cooperation between several actors such the Region of Zealand the Local government Denmark KL and Gate 21, where TU-data has been applied from DTU to create a report (Annex 14 and 16).

1st of February 2022 the architects Anne-Marie Steen Hansen and Titti Petrine Donsted, who are designing the urban renewal of Nykøbing Sjælland Station has explained, what their visions are for the new coming station at Nykøbing. There has been an attempt to get in contact with the traffic planners of the municipality of Odsherred to understand how they are working with the busroutes and the transport demand of summer homeowners. Unfortunately, this has not been possible during the semester because they have recently recruited new employees and they have been very occupied with arranging Tour de France for the summer 2022.

Conversations with four politicians in the city council of Odsherred has taken place to understand how transport policy is prioritized by the local politicians in the municipality. One of the politicians is the social democrat Felex Birger Pedersen who is also a representative in the directorate board of Movia. He is a one of my contacts on Facebook and he has said that he appreciates, when I sometimes write to him asking critical political questions. Another politician is from the Danish People Party Kim Buurskov who is a representative in the Committee of Climate Change in Odsherred. He was standing at the Tuske maket at Vig regarding the current election of the security policy of Denmark. This was the opportunity to ask how he works with the transport politics in the climate committee as it in the climate committee that they decide where there should be new construction of bike lanes. The newly burgomaster in Odsherred Karina Vincents from the new party called New Odsherred is a former politician from the Liberal party of Odsherred. She makes a great effort in getting in contact with the citizens of Odsherred by having citizen meetings. In this regard the burgomaster and chief executive officer Claus Steen Madsen was asked the 5th of April how they think the car congestion in Odsherred should be managed (Annex 9). Claus Steen Madsen has said that citizens can write to him if they have comments about the busroutes.

Region Sjælland

Region Sjælland has the responsibility of operating and financing the regional busses and 4 local rail ways in the region of Zealand . An unformal conversation with Malte Emborg Vinding has taken place at the day where the traffic compaignies were testing the new tool for bike-train-mode combinations the 16th of May.

Passagerpulsen

Passagerpulsen is cooperating with the traffic operators in improving the public transport. They state that they are the voice of the passengers of the public transport and they conduct surveys with the users of the public transport investigating their attitudes. They have been contacted to understand whether they investigate the attitudes of car drivers too and what should be done in order to attract car drivers into the public transport (Annex 10).

Compagnies that can support sustainable transport modes

VisitOdsherred

VisitOdsherred is working with improving the tourism in Odsherred. They are responsible for renting summerhouses and for providing information about the facilities and arrangements in Odsherred for the tourists and summerhouse owners. They have been contacted to understand how they work with informing the tourists about the current bike routes and other means of sustainable transport modes (Annex 9). It is an attempt to identify how they could play an important role of informing newcomers to Odsherred of how to achieve sustainable transport habits while they are at their stay in Odsherred. As the survey with the summerhouse owner has shown that there are tourists that would use the bike instead of a car if bikes were available at their rented summerhouse, questions regarding the work for delivering bike for the visitors has been asked.

Rørvig Camping and Sanddobberne Camping

Two Campings in Odsherred have been contacted to identify how they work with providing facilities that can encourage their visitors to achieve sustainable transport behaviors. Informal conversations in the receptions with the responsible of the campings has taken place (Annex 9).

Rørvig street food

Rørvig Street Food has been contacted to understand how they work with the traffic issues that arise in peak season because of their presence. Before the Rørvig Street Food was founded in 2019 there were no traffic issues at the location of Lyngkroen at Rørvigvej.

Siemens

As the local train of Odsherred is the backbone of the public transport in Odsherred it is essential to understand the potential of improving the qualities of the future trains. Siemens might be the tender of the new battery trains. Therefore Siemens play an important role as they are the designers of the trains.

As a part of the national plans of electrifying the railway in Denmark in 2026, there are plans of substituting the local trains and regional trains running between Holbæk to Nykøbing Sjælland and between Holbæk and Copenhagen Central station (Conversation with Felex Birger Pedersen, March 2022). There are going to be a direct battery trains from Nykøbing Sjælland to Copenhagen where passengers don't have to switch trains at Holbæk. The train is going to charge energy on the line between Holbæk and Copenhagen and then it is going to run on battery between Holbæk at Nykøbing Sjælland.

A letter with questions regarding the design of the new battery trains concerning the speed and the possibility of bringing bikes and christiania-bikes on the new battery trains has been sent to Siemens. The purpose of the letter to siemens is to understand the opportunities of the design of the future trains and how the design can support sustainable transitions. I have received a very nice letter back from Siemens which is possible to in (Annex 11) explaining the possibilities.

Lidl

Lidl is one of the supermarkets that are located less than 100 meters from the station of Nykøbing Sjælland. A conversation with people from the recruitment department of Lidl has taken place the 5. April 2022 at the career days in Forum. As many of the respondents in the survey said that they buy food in food stores before arriving in their summerhouse, Lidl could support sustainable transportation of the leisure time citizens by introducing new business concepts such as "too good to" – a concept that they said Bilka has started.

Rejsekort and Rejseplan A/S

Rejsekort og rejseplan is owned by the traffic companies and they deliver “Rejseplanen” which is a platform that delivers information about the travel possibilities with public transport. They also deliver the the rejsekort which is a ticket system for public transport used in Denmark. Movia has a project introducing renting bikes at the stations of Odsherred however there consumer that states that they don't like to pay an extra fee for and abonnement with renting bikes. Rejsekort and rejseplan was contacted to understand how the renting bike could be a part of the ticket system of the public transport. They were contacted by a phone call.

5.3 Interviews with summerhouse owners

As explained BO Jensens model includes the element “embodied performance” that looks at how meaning and norms are created in cultures. Interviews with the temporary and permanent residents has therefore been conducted to understand the existing culture, how people relate to matter and how they experience the car congestion. Based on the market-oriented model shown in the section explaining the economy of goods by Callon (Section 4.4) there's a need for transport operator to perform market research to understand the attitudes, opinions and preferences in order to know how to adjust the qualities of services that they offer. Therefore a survey has been conducted with the summerhouse owners. The purpose of the interview with the summerhouse has been to identify social representations by identifying what they see as barriers for changing behaviors and what could encourage them to change behavior.

The interviews has been carried out during Easter holiday the 16th April at Lyngen and the 17th of April at Rørvig as this was presumed to be a period where a lot of summerhouse owners with permanent residencies in Copenhagen would travel to Odsherred. According to the traffic plan of Odsherred Municipality from 2017, the traffic plan states that Rørvigvej and Lyngvej are the two most congested roads at the summerhouse areas during summer. Therefore the interviews has been conducted with the summer house owners at the parking in front Brugsen at Lyngvej and at the parking at the harbour of Rørvig. As there are more than one million visitors in the harbor of Rørvig each year travelling from all the summerhouse areas of Odsherred, and as Rørvig has some of the most beautiful and popular beaches, Rørvig is a very popular touristic place during high season in Odsherred. Rørvig is one of the summerhouse areas that are experiencing a great transition and Rørvig is greatly influenced by the development of the presence of a new generation of leisure-time visitors. Therefore this is an essential place to conduct the survey. As many car drivers arrives by car on the parking lot in front of Brugsen, which is located in the summerhouse area at Lyngen, this would also be an opportunity to meet the right target group. At these places and at this time of the year I would be sure to meet temporary leisure time citizens that are car drivers and summerhouse

owners. 10 interviews have been conducted at Lyngen and 10 interviews have been conducted at Rørvig with summerhouse owners.

The set up of the questionnaire has been inspired by Alvesson's way of understanding culture and how to work with it. According to Alvesson (2002) sustainable designers should go beyond the level of service and not just look at practices and statements. They should try to understand how people relate to matters instead of looking at how matters are performed. He states that cultures provide us with firm guidelines and sense making about reality. Culture builds meaning about things and gives security and safety, but it also frames the world in a particular stiff way where people are narrowed into seeing the world in a particular way. The more people are cultured in layered into opinions and meanings the harder it is to move away from them again. As culture gives us safety security sense of purpose and meaning it also set our autonomy and our ability to break free of these understanding. Alvesson states that when we arrive and we seek cultural meanings, they emerge, they are shaped, they are maintained and they change continuously in specific interactions between people at the microlevel. Societal cultural traditions and mass media impact cultures. Therefore it is interesting to identify how people see and identify themselves, how they find rest security and safety in patterns. Without this understanding it is difficult to influence and change these patterns. As Alvesson says by opening up people to reidentify their identities by reconstructing new narratives in new constructions there is a possibility to construct new culture and practices.

The purpose of the survey is therefore not just to identify preferences and attitudes or to understand how the qualities should be adjusted to meet the demand of the users of the transport systems. The purpose is also to identify how the summerhouse experience the car congestion and how they relate the environmental development of Odsherred. This is necessary to understand how people can be engaged in a network that supports sustainability as the studies by Dickinson has found that tourists do not see their own car driving as a part of the problem (Dickinson & Robinson, 2008).

The questions that have been set up in a questionnaire for a survey with the summerhouse owners can be seen in (Annex 2). The formulation of the questions is inspired by other tourist studies at destinations in Europe such as the studies made at Purbeck in England conducted by Janet E. Dickinson and the valley area of Tocino in Switzerland conducted by (Curtale et al. 2021). Common for both of these areas and Odsherred is that they are rural areas where people from within the countries travel to for short weekend trips and holidays. In (Annex 1) the notes taken from these studies can be seen showing interesting topics to ask the summerhouse owners about. Furthermore inspiration has been gathered from the literature Jensen, 1999 who tries to categorize people into personas based on their travel behaviors. In (Annex 18) a table has been created based on the characteristics of each persona that (Jensen, 1999) identifies. This relates to the identification of personas in market research applied to identify target groups stating that some personas would be easier to convince to switch to sustainable transport modes than other personas.

Questions regarding how long the summerhouse owners have known the area and how they experience the development of the area has been asked since it is interesting to understand how they experience the car congestion and development of the area. The survey tries to capture a light overview of activities that the summerhouse owners visit during their stay to identify where they travel to and how long the distances are, in order to identify what sustainable transport modes they could have used instead. This will deliver general impression of where the transport services are lacking to substitute car usage. At the end of the questionnaire solutions are described for the summerhouse owners asking questions to understand how they could see themselves in such situations with the described solutions. Inspiration for the solutions has been gathered from the tourist literature of Curtale and Dickinson and from several of the stakeholder interviews.

In the studies (Curtale, 2021) the tourists have shown positive reactions towards the introduction of shuttle busses restricting car usage at tourist destinations in Europe. This solution has also been proposed by one of the permanent residents living at Rørvig that is very annoyed by the car congestion. A study by (Noor et al., 2014) has shown the concept of “slow travel” where passengers enjoy the travel time in rail transport could encourage commuters switch to public transport. On many ferries there are restaurants on board where people use their time eating while they are travelling with a ferry. As it can be presumed that many leisure time residents need to make dinner when they arrive at the summerhouse, offering a services such as a restaurant onboard on the train from Copenhagen to Nykøbing Sjælland every Friday afternoon/evening during spring, summer and autumn when people travel for weekend trips in Odsherred, it would offer a service, where leisure-time citizens could eat their dinner and enjoy the traveltime in the train. Annemarie one of the architects in municipality, was curious to know if Odsherred should be inspired by the municipality of Fredensborg that has an intention of delivering electric bikes for people that let their car stand at home. Movia has a project of delivering electric renting bikes and cargo bikes at the train stations at Odsherred, which they are going to try out first at Asnæs, where the gymnasium of Odsherred is located.

Based on the above-mentioned potential solutions, scenarios such as the municipality offering electric bikes for people letting their car stand at home, facilitating renting bikes at the trains stations, allowing Christiania bikes at the coming battery trains and facilitating a restaurant where people could eat dinner in the train, were described for the summerhouse owners. Questions regarding the respondent's considerations of choosing alternative transport mode if these solutions were available, were asked. How the respondents could see the municipality work with improvements has also been asked. By asking such questions it would be easier to understand the qualities of the transport systems, that could attach the leisure time citizens to more sustainable transport modes and their reason for choosing the car. It allows to understand their travel behavior and how they relate to matters.

For the summerhouse owners in Rørvig a solution regarding making Rørvig car free zone with shuttle busses was therefore presented as scenario. As explained earlier tourists and summerhouse owners do not

particularly have the same interests and it is a problem that leisure time citizens are usually covered under to category of tourist literature. Therefore it is interesting to identify how the summerhouse owners in Rørvig would accept and adopt such a solution and if they would be as positive as the literature by (Curtale et al, 2021) has shown.

5.4 Interviews with permanent residents.

A survey among permanent residents has been conducted the 20th of May 2022 in Rørvig . From 2015 to 2018 I worked as a journal distributor at Rørvig. I remembered to have had many good conversations with the residents in front of the gardens of the residents' personal homes, while I was distributing newspapers. By calling my former work asking for distributing journals, I thought this was the opportunity to get in dialog with the permanent residents, when they are at home in safe and secure settings, where people don't mind opening up talking about personal issues and concerns. This would be an opportunity to get closer to what people think and believe. Two questions were prepared for the survey. One question has been asked regarding how they experience the car congestion during summertime. This question was asked to understand if it is something that they want to be changed or not. The purpose of the question was also to test out, if the Facebook post its and comments where people complain about the traffic issues is a general perception among the permanent residents in Rørvig. This question would identify how the permanent residents would engage in a network that supports sustainability. As with summerhouse owner in Rørvig the permanent resident were presented the same solution of introducing the restrictions of car and introduction of shuttle busses in peak season to understand how they believe it will affect their everyday live. 10 interviews have been conducted with permanent residents in Rørvig

By conducting surveys with the leisure-time residents and permanent residents it would allow to identify how they relate to the matter of car congestion and how they can co-operate in finding the best solutions possible.

6 Site analysis

As mentioned Odsherred is a municipality where people travel to enjoy nature, landscape and the seaside.

However, it has not always been like that.

The glaciers during the ice age have left Odsherred with a beautiful morainic landscape with many hills such as the arches of Vejrhøj, Hønsinge and Højby. The melting water has created Høve Stræde and other deep cuts in the edge moraines. Odsherred was nearly an island. In the hills, there were old villages from where the farmers cultivated their farms for generations. The flat areas of Odsherred today consist of depositions from the sea with access to beautiful beaches for bathing. This is where the summerhouse areas are located today (Plum, 1999). If you want to dig a hole to plant a tree in the garden of the summerhouses sometimes you discover old mussels in the sandy earth layers that once have been covered by the sea. Because the clay of the soils of the flat areas is very sandy they are unsuitable for farming. Cornbearing trees that grow well in such earth layers were planted to protect the sand from blowing away from the coast in 1867. For a long time, these areas were left untouched until industrialization began (Olsen, 1966).

With the industrialization and the growth of the cities, there was a concern of how to profit from “leisure time”. It was a term that had not been used as frequently before. People wanted to get out and enjoy nature and go bathing in the sea. It was at this moment that summerhouses were built in the plantation along the coasts of Odsherred. Today these beaches have become very popular beaches.

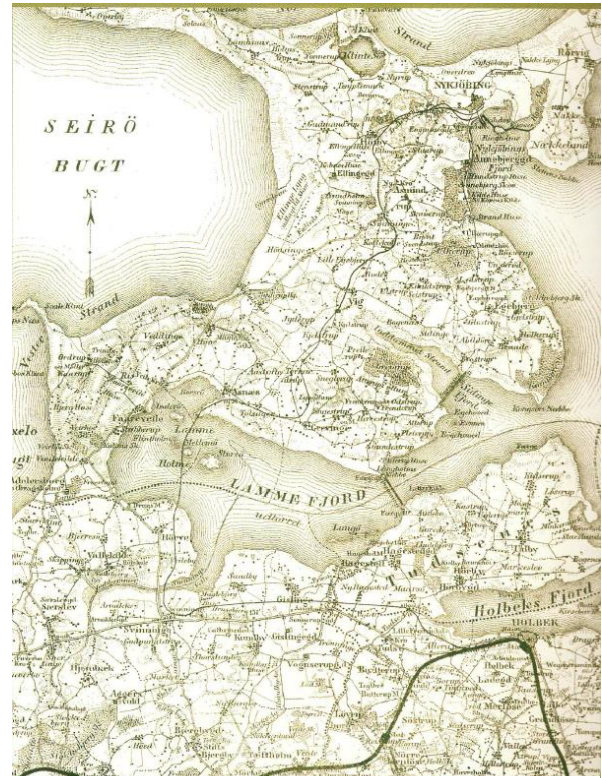


Figure 15: Map of Odsherred before the containment of the water of the Lammefjord where Odsherred looks like an island (Plum, 1999)



Figure 16: The plantation of Odsherred before the construction of summerhouses (Olsen, 1966)



Figure 17: The beginning of the construction of summerhouses in the plantation of Odsherred (Olsen, 1966)

The beaches along the coast in Rørvig are the most popular and this is due to the sand having fine corns, it is bright and it is therefore not too warm during summer. The sand does not consist of stones and mussels cutting your feet. The water is perfect because it feels clean and it is not too salty. The temperature of the water during hot summers is just the degrees that fit for cooling down. You don't need to walk long distances to reach a sea level to dive under the water. The sea level in the border of the beach is perfect for letting children play alone where parents can observe their children while lying on the beach. This makes the beaches at Rørvig very popular. The Sejerøbugt and the beaches at Klint are very beautiful, and you can swim there as well, but at the Sejerøbugt sometimes you need to walk very long distances before the water gets deep. This is why at some beaches bathing bridges has been built to reach the deep water easily. At beaches such as Klint and Ebbe Lyng the sand consists of big and sharp stones so it hurts when you walk with barefoot on the sand and it is not very comfortable to lie on the stones to sunbathe. This is why summerhouse owners from these summerhouse areas sometimes travel to Rørvig where the best beaches are located and this contributes to the car congestion in Rørvig when the leisure time residents choose to travel by car. Beaches with fine corns can also be found at Gudmindrup and Ellinge Lyng which generates car congestion at Lyngen.



Figure 18: Rørvig Beach



Figure 19: Ordrup Beach out to Sejerøbugt



Figure 20: Beach at Klint



Figure 21: Ebbelyng beach

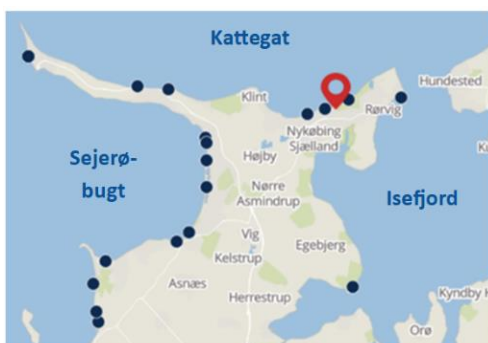


Figure 22: Card with spots illustrating beaches suggested by Visit Odsherred. The red spot is where one of the most popular beaches are located at Rørvig



Figure 23: Ellinge Lyng Beach

Looking into the more commercial conditions it can be found that most of the food stores in Odsherred are located in the villages. Therefore, when people are in their summerhouses they need to travel from the summerhouses areas to the villages when they have to buy food. There are also small local food stores at most of the summerhouse areas, but the local stores tend to raise the prices in high season and the price of the products are therefore more expensive. In Nykøbing Sj. there is a pedestrian zone with many small local shops that attract many tourists during summer, where Nykøbing Sj. can be seen as the capital of Odsherred. Vig also has a road with local stores where many of the activities at Vig is financed by the yearly festival that is hold during summer. Asnæs has been turned into the city of education for young people at Odsherred where a gymnasium and other educations are located, as well as a shopping center.

The local train passes through all the villages and combines the villages of Odsherred but it stops at Nykøbing Sjælland. A part from Odden most of the summerhouses are located approximately 5-8 km to the villages and the local train. Many studies state that one of the possible ways to reduce transport emissions from tourism is to encourage to use of alternative transport modes like public transport or other non-motorized modes. The distances shown on the map show that it is possible to bike from most of the summerhouse areas to the villages.

In Copenhagen, the distances of most bike trips are between 1-5 km but the introduction of electric bikes and the super-bike-lanes in the Region of the Capital has shown that bicyclists can bike longer distances (DTU, 2014). However, for visitors with a lot of packaging and for elderly people with health issues biking may not always be a solution. In this case, public transport can meet a larger group of commuters, but what to do when the service is not there? There are local busses driving to all of the summerhouse areas but unfortunately, the busses rarely fit the timetable of the local train and in the



Figure 24: Map showing where the food stores are located in Odsherred

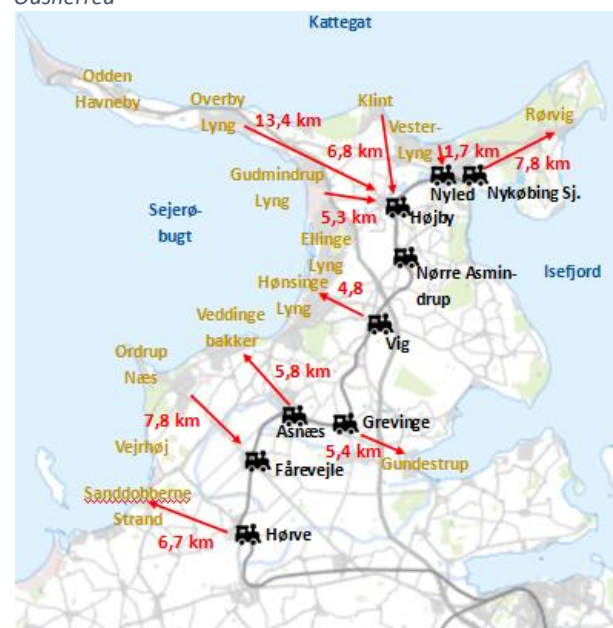
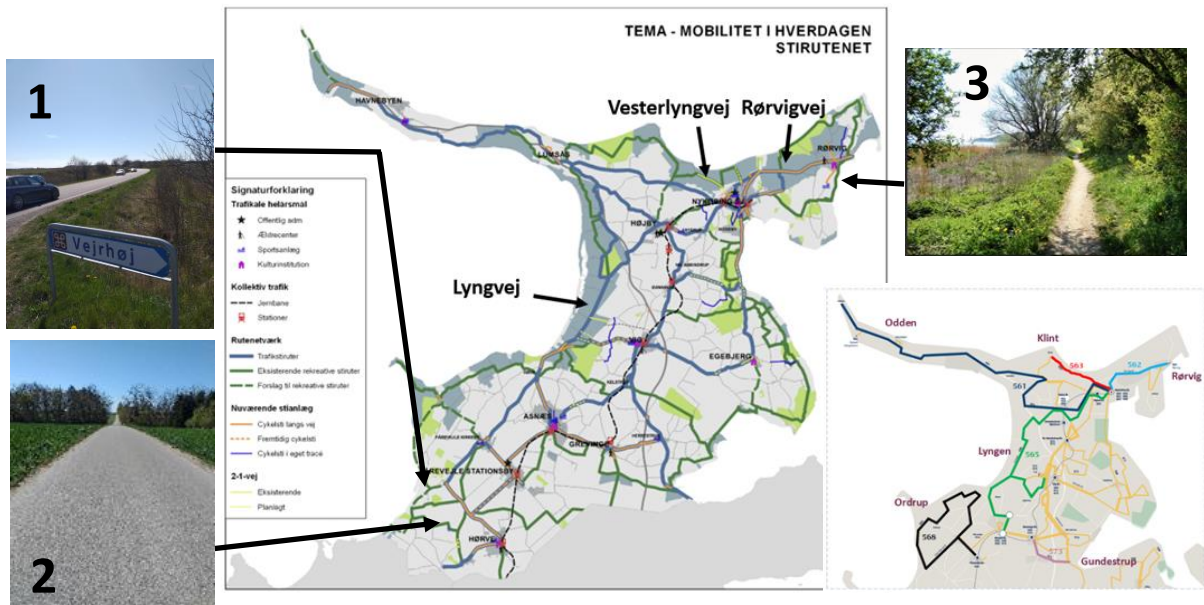


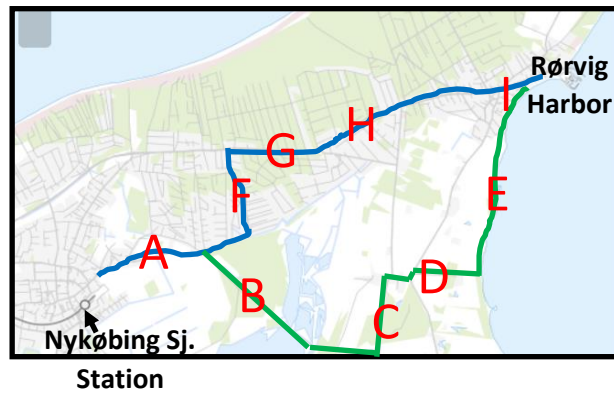
Figure 25: Map showing the location of summerhouse areas and their distances to the train stations in the villages



Bus Route Network

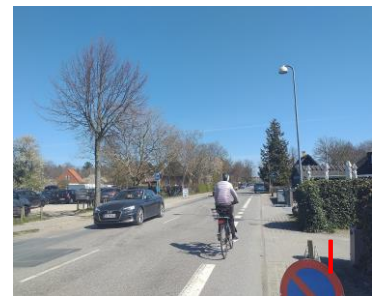
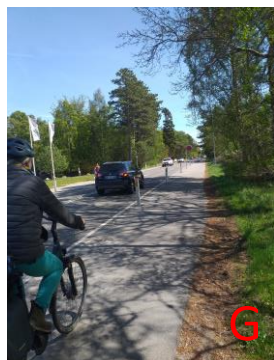


Route 1



**Bicycle routes
from
Nykøbing
Sjælland
to Rørvig Harbor**

Route 2 (Blue)



weekends some of the busses only drive twice a day (DOT, n.d.) On page 46, a map of the bus route network is shown at the top right corner. The page also shows a map from the traffic plan by the Municipality Odsherred from 2017 indicating the road network at Odsherred. According to the traffic plan, Rørvigvej and Lyngvej are some of the most congested roads during summer because these roads lead to the popular beaches and the summerhouse areas of the summerhouse owners. As the map indicates there are no bike lanes from the cities to the summerhouse areas except for the summerhouse owner traveling from Nykøbing to Rørvig and from Asnæs to Veddinge bakker. As mentioned, a bike inspection has been performed from all the stations to the summerhouse areas to get an idea of what the vulnerable road users experience when they travel from the villages to the summerhouse areas. Pictures of some of the routes can be seen in annex 20 and 21 illustrating the road conditions from Hørve station to the Sanddobberne and Vejrhøj and from Nykøbing Sj. to Klint. On the previous page two bike routes can be seen from Nykøbing station to the harbor of Rørvig. There's the possibility to take the beautiful recreative route where no cars are driving on most of the route. It passes through a bird sanctuary where a little stretch of the route happens on rural empty car roads and then a very beautiful narrow path along Isefjorden is found. There is also the opportunity to take a shorter route. There is bike lane most of the route except for the bit before reaching Rørvigvej and at the last part before reaching the harbor where coincidences with bikes and cars sometimes happens when many cars are parking on the bike lanes as shown at the pictures 1 and 2 in the introduction. The recreative takes approximately 45 minutes and the shorter route parallel to the cars at Rørvigvej takes 25 minutes. By car, it takes 10 minutes.

In this report, I do not dear to take a discussion whether the bike routes from the stations to the summerhouse areas are safe or not and whether there needs to be built bicycles. Even literature of bicycling in rural areas tend to disagree. Some literature state that there's a need to construct more bike lanes wherever you want more bicyclists to bike. Other literature states that biking in rural areas is not particular related to whether there are bike lanes or not. It is often related to whether people like to bicycle or not and they tend to bike even if there are no bike lanes (Mounce et al, 2020). Furthermore, as mentioned in section 4.1.1 this literature states that if more bike lanes were built in rural areas, it will properly attract more women as it is mostly the women that claims that bike lanes can be unsafe. What I can confirm from my bike inspection is that most of the routes do not have bike lanes. Bicyclists are biking on rural roads where the roads are empty with no cars as these roads are not main roads. Picture 2 on page 46 illustrates how these roads typically looks like. However, at some of roads that are main roads for the cars, bicyclist can become in doubt if it is even illegal to bike on the road as shown on picture 1 at page 46. The cars are driving with a speed of approximately 100 km/hour, but this is the road, which tourists camping at Sanddobberne Camping needs to take, when they want to bicycle to the beaches at Vejrhøj or to the Rema 1000 in Fårveje.

There has been claims on Facebook of the danger of bicycling at Vesterlyngvej. It is a part of the route towards Klint as shown in annex 20. The map in annex 20 illustrates the route to Klint clock wise of the bike route from Nykøbing to Klint. The danger has also been confirmed by one of the persons met during this semester claiming that he did not feel safe letting his daughter biking there. On the footpath it is not indicated whether a bike is allowed to bike on the footpath or not. Three of the respondents of the survey at Rørvig harbor said that they came from Klint. They would need to pass by this cross in order to continue to Rørvig.



Figure 26: Footpath to Vesterlyngvej with no indication for where the bicycles should

Unfortunately, it has not been possible to conduct an interview with the traffic planners of the municipality of Odsherred. It could have enlightened how they work with defining recreative roads. As a researcher you can wonder how the municipality work with identifying recreative road. The green lines at the traffic map on page 46 indicate recreative road. It is not very clear how the municipality distinguish between the conditions of the roads as picture 1, 2 and 3 on page 46 illustrate. There are significant differences on what the municipality defines as recreative routes. The bike inspection has shown that the line of the potential recreative road before it reaches Vejrhøj is where the cars drive with a speed of 100 km/hour as shown at picture 3. Other recreative routes

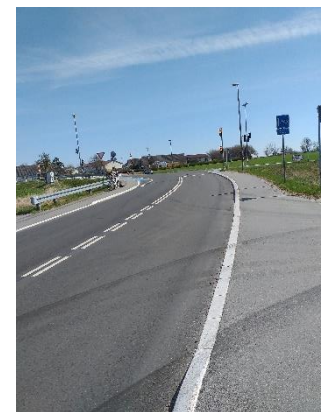


Figure 27: Vesterlyngvej leading up to the cross of the main road of Oddenvej with no indication where bicycles should bike

are very narrow small bike lanes with no presence of cars as shown at picture 3. Some recreative routes are rural paved roads for cars where there are no bike lanes as shown at picture 2. This map does therefore not clearly distinguish between routes that are nice enjoyable recreative route for bicyclist and where bicyclist has to drive together with cars. This is an interesting point reflecting upon the methods that municipality apply to map out what are recreative routes. Could it be that the recreative road without bikelanes should be seen from the recreative perspective of a car driver? A political from the Conservative Party, Ulla Margrethe Hansen, who is a bicyclists and a current user of the local train in Odsherred has said that the municipality has a great focus on the how car drivers experience the landscape of Odsherred. However, they have very little interest in how tourists and residents applying the public transport experience the physical room. Her statement can be confirmed by pictures taken of the local trains stations during the bike inspection.

The stations seem to be forgotten in the planning for tourism. Odsherred Municipality cooperate with Visit Odsherred and Geo park Odsherred to create attractive conditions for the visitors of Odsherred. It does not seem like the stations are a part of their plans of creating attractive conditions. As the pictures show of the conditions of the stations, bikes are often lying and floating on some of the stations. On Facebook there have been claims about criminality of the bikes and as a passengers said at the station of Højby, she would never leave her bike for a longer period at the stations. However, with enclosed secure parking she could consider it. If summerhouse owners are to be encourage to bike to and from the stations better conditions for bike parking should be facilitated and it would send a signal to the users that the municipality would like people to use to public transport instead. This confirms the second step of improving the condition making the sustainable transport mode more visual and attractive to use.



Figure 28: Bicycle parking at Højby Station



Figure 29: Bicycle parking at Figure Nyled Station

Figure 30: Open bus shelter with no protection



Figure 31: Bench at Højby busstop in open air that is wet and inconvenient to sit on



Figure 32: Bicycle parking at Nørre Asmindrup Station



Improving the conditions of the local train is very important in transport planning in Odsherred as the local train is the backbone of the public transport combining all the villages transport in Odsherred. Whenever you want to travel from one summerhouse area to an activity in another part of Odsherred, you need to travel to the villages, to take the local train to another village and then travel the rest of the distance to the activity that you want to go to.



Figure 33 : Pictures illustrating: the narrow entry of the local train

When improving the local train there's a need to look at the qualities of the design of local train. An issue today is the old train. It is not easy for elderly people and people with handicap to enter the trains. It is possible to bring bikes but it is not convenient as the entry is narrow and you need to lift the bikes over stairs. Furthermore it is not possible to buy tickets for the bike at some of the stations, only if you have a Rejsekort, which is a ticket card for the transport systems. Another issue is that the trains do not have tables. This means people cannot use the travel time working on a laptop or the young people studying at the gymnasium cannot do their homework properly by sitting with the material on the knees. At old time there was a direct train Nykøbing Sjælland to Copenhagen. Today you need to change train at Holbæk. For a long period when traveling for Copenhagen often the trains did not match the time table of the trains for Copenhagen which meant that people arriving at the station at Holbæk were observing the bottom of the train for Copenhagen exiting the station and Holbæk which was not waiting for them. It meant that passengers either had to take the slow train that stops at all the small villages towards Copenhagen or they need to wait 30- 60 minutes for the next train. The timetables was changed in august 2021. However it has made the connection with the bus routes in Odsherred even worse as the time table of the bus routes has not been adjusted.

There is potential good news of improving the design of the trains improving some of the qualities. As mentioned, a part of the national plans of electrifying the railway in Denmark, in 2026 there are plans of

substituting the local trains and regional trains running between Holbæk to Nykøbing and between Holbæk and Copenhagen Central station. There is going to be a direct battery train from Nykøbing Sjælland to Copenhagen where passengers don't have to switch trains at Holbæk. The train is going to charge energy on the line between Holbæk and Copenhagen and between Holbæk at Nykøbing it is going to run on battery. Siemens might be the tender of the new battery trains. Questions regarding the design of the new battery trains concerning the speed, the possibility of bringing bikes and cargo bikes and facilitating the possibility to work in the trains has been asked. The purpose of the letter to Siemens has been to get an understanding of the opportunities of the design of the future trains and how the design can support sustainable transport modes for summerhouse owners, for the elderly and people who wants to work in the train. I have received a very nice letter back from Siemens, which is possible to read in annex 11 explaining the possibilities. According to Siemens they can deliver whatever the transport operators would like to. The entry of the trains can be wide so there is space for baby carriages, bikes, cargo bikes and wheel chairs to access the trains easily. Siemens can deliver an office space in the train where people can work on their lab-tops and they can make space for cargo bikes in the train. However, a problem is found in the fact that the platform of the stations is lower than the requirements of the new trains, which can make it difficult to create entry-free levels. According to Niels Dam a consultant at DSB, DSB has worked on creating entry free level in the Capital Region. However, according to Katja Diana Loost, who is working at Lokaltog, it is not expected that any improvement of the platforms of the local train will happen in the near future.

Today the local train does not continue to Rørvig or Odden, which could have reduced the car traffic flow towards Jutland and to Rørvig as it would improve the quality of accessibility of the summerhouse owners. One of the permanent residents in Rørvig has suggested that the local train should continue to Rørvig so it was easy for the leisure-time citizens to take the train. A project of the train continuing to Rørvig was actually proposed in 1919. However noone knows why the plans was not realized but is was presumably because of lack of money suggested by Ole Plum the chief of the Odsherred Trafik Museum. Furthermore it was proposed in 1875 that the train should continue to Odden, but the plans died when the person of the plans died.



Figure 34: Old plans of the local train of Odsherred continuing to the harbor at Rørvig with stops at Spar/Rørvig Streetfood and Dybesøvej

The following section is going to dive more into how the theories and models are expressed in Odsherred. Building the physical rooms for our senses and the human dimension is very relevant at destinations in Odsherred as the economy of Odsherred is based on tourists that travel to Odsherred to sense the nature and the environment and who enjoy holiday and the cosy small villages. As explained in the introduction it is very inconvenient for the vulnerable road users that cars penetrate the narrow roads with fast speed. It is disturbing the surrounding areas where the summerhouses are located by providing road noise. The presence of cars shakes up the human senses and makes the stay of leisure time residents and permanent residents less pleasant. Cars take up car space for parking. As explained in the introduction when there are not enough parking places, cars tend to park illegally on bike lanes blocking the bike lanes (Pictures 1 and 2 in the introduction). When building parking for the cars green areas are removed. Large empty parking lots for the big supermarkets such as Aldi, Lidl, Netto, Coop 365, Brugsen in villages such as Nykøbing, Vig and Højby has created sleeping, boring and unattractive urban areas in winter times only to be filled up with lots of cars when the summerhouse owners are shopping. Unfortunately an example of a newly enlargement and reconstruction of the Spar in Rørvig this spring 2022 has shown how car usage damage the environment. Because of the very popular Street Food that has



Figure 35: Big open space illustrating the new parking lot of the reconstruction of Spar at Rørvig



Figure 36: Before the reconstruction of Spar at Rørvig showing trees and plant and a road that is more narrow.



Figure 37: After the reconstruction of Spar at Rørvig showing how trees and plants has been removed with a new internet mast and fence

appeared in 2019, people did not only park at the bike lanes as shown at picture 2 in the introduction. The cars also filled up the parking lots at Spar so there were no space for the customers of Spar. Therefore, Spar has decided to enlarge their parking space. Unfortunately, trees have been cut down on the corner of Østerlyngvej where a green area has disappeared allowing space for the new car parking. Furthermore, a very ugly mast has been placed to facilitate fast internet for the residents and summerhouse owners. Before the road was small with trees and bushes (picture 36), but now it has been opened and it has become an unpersonal open space unattractive for bicyclists. See picture (37) This has made the bike route from Rørvig towards Nykøbing Sj. less attractive and enjoyable. This confirms the literature of how the car usage of tourism damage the nature and environment (Chang et al., 2018). It also confirms Jahn Gehl's theory of how cars make the physical environment unpersonal and it confirms his theory of the importance of building for a human dimension, that makes the use of slow modes of transport and physical room more attractive and that pleases our senses.

There's a great debate recently going on about allowing a new project financed by Rema 1000 in Nr. Asmindrup. It is a good example of a project that is going to be built for cars, where the considerations regarding the human dimension creating an unattractive physical room for vulnerable road users are absent. Rema 1000 has offered the municipality of Odsherred to finance new housing for elderly and new families at Odsherred. Rema1000 is



Figure 38: A picture of a Rema 1000 in Jutland with a parking and round point for cars. (Picture from a representation of Lars Austrup, Akademisk Arkitektforening)

going to be located out to the main highway, where they are going to build a round point catching the consumers from the main road traveling from outer municipalities to Odsherred. Mostly the debate has concentrated around the risk of Rema1000 killing the economy of the local shops in the northern part of Odsherred as it will catch all the consumers of the summerhouse owners traveling to the north of Odsherred, but as the director of Akademisk Arkitektforening, Lars Austrup, points out, it is also extremely important to be aware of the architecture. The picture is from a presentation by Lars Austrup, showing a Rema1000 with a round point in Jutland. Tourists travel to Odsherred to enjoy the idyllic landscape. They do not travel to Odsherred to shop in Rema 1000 and to enjoy physical rooms as shown on the picture. As explained in the introduction politician has to ensure growth and welfare and therefore it is difficult to reject a project, with new housing for families paying tax in the municipality contributing to the economy. However the municipality is about to develop policy for architecture that protects cultural historical values as there has

been several example of constructions that favors the economy, but weakens the idyllic attractions of Odsherred, that is the core of attracting leisure-time citizens to Odsherred. This includes boring parking lots to facilitate space for the car congestion, which highlights the vicious circle, Gehl and Callon, where the attractiveness of driving a car becomes more convenient, while the vulnerable traffic are down prioritized. The following section is looking at Odsherred at a more broad perspective in relation to the rest of Denmark

Travel from residence to the summerhouse

In 2020 the Danish Statistics has investigated where summerhouse owners have their residency. A great number of the second homeowners in Odsherred lives in the Copenhagen area. In average people have 79 km from their residency to their summerhouse (Danmarks Statistik, 2020). According to google maps the travel time by car from Copenhagen to the summerhouses in Odsherred vary between 1 hour and 1 hour and half Copenhagen. The primary route 21, which is

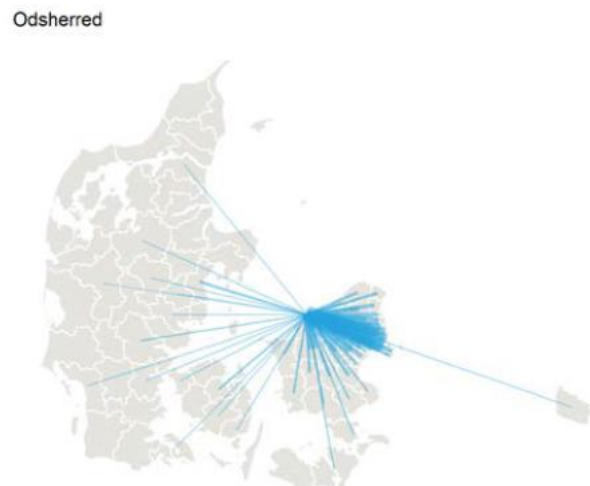


Figure 39: Map showing where the leisure-time residents of Odsherred has permanent residency (Danmarks statistic 2020)

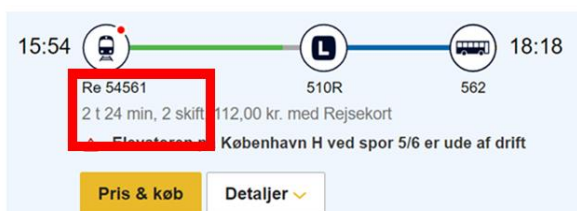


Figure 40: Travel with public transport to Odsherred with a change in Holbæk (Rejseplanen.dk)

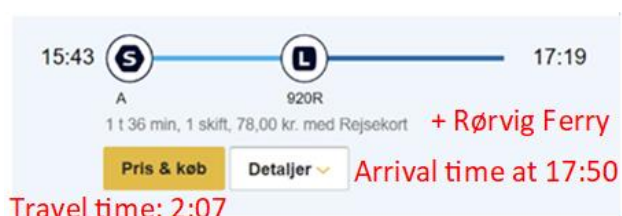


Figure 41: Travel by Public transport to Rørvig by Hillerød and to ferry from Hundested (Rejsplanen.dk)

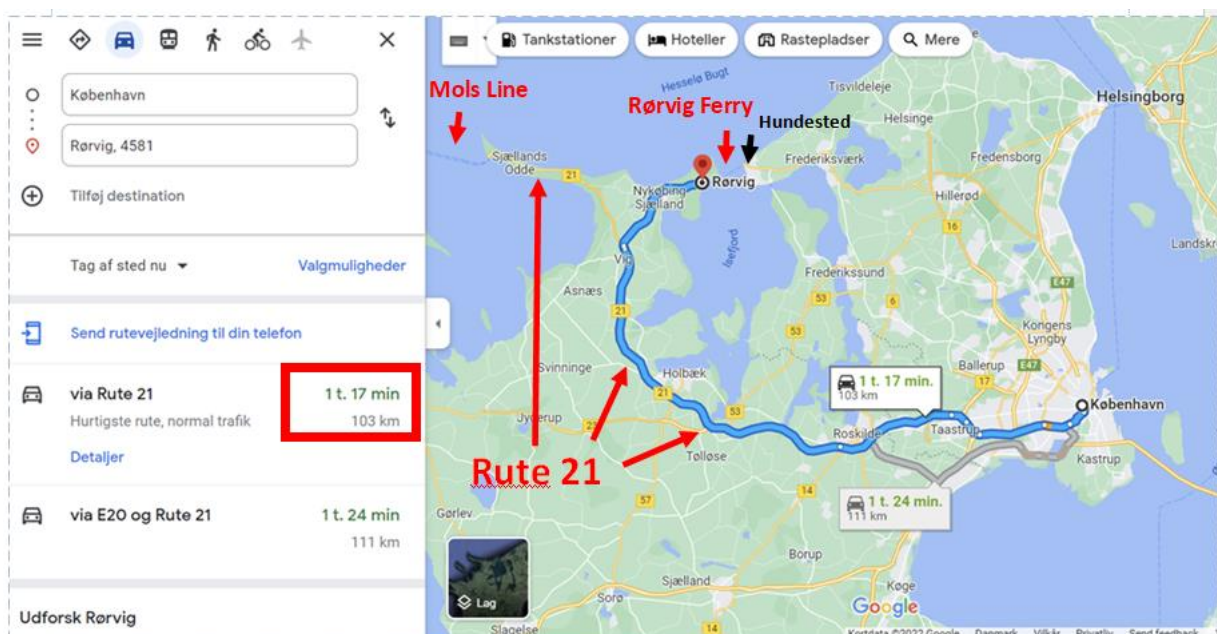


Figure 42: Travel by car from Copenhagen to Rørvig (Google Maps)

7. Stakeholder Analysis

The purpose of this section is to identify what has been found to be the structural barriers for sustainable transition and to identify opportunities for reducing car usage in high season in Odsherred.

Six main issues of structural barriers has been found. The greatest issue seems to be that all actors tend to deny their own responsibility of sustainable transition pointing at other stakeholders saying that it is their responsibility to improve the traffic conditions. Another great issue is the lack of money available to facilitate the service that is necessary, and the third issue is the period of time that contracts are signed with traffic operators, that makes it difficult to adjust timetable and changes to provide good public transport with good connections. The fourth issue is unreliable data. The fifth issue shows that there are conflicts of rules and criteria that goes against each other when prioritized. The sixth issue shows that the new generations in general sets much higher requirements for the services today.

Noone wants to take responsibility!

As Nina Bruun the climate coordinator in the municipality of Odsherred said “I’m just doing what is political decided”. It is the politician who decides where Odsherred should have bus routes and bike lanes. She points to the fact that soon they are going to develop new mobility plans and there’s a climate plan that is going to be made. She has received data from DTU which is primarily based on permanent residents. She is going to pick up on this report from DKDK20 based on data from DTU and transfer the message to the Climate Committee. According to the politician Kim Buurskov in the Climate Committee pointed Movia have traffic planners and they are paid by the municipality to create good reliable time tables for the municipalities. Movia says it is the municipality who decides what busses that they want to have on the roads. Sometimes there have been situations where school children had to wait 20 minutes up til an hour for their the correspondence at Nykøbing. When asked in a comment on Facebook why they do not open the empty station building so the school children could get heat, the politician Thomas Nicolaisen answered in a comment that the municipality only own 1 % of Lokaltog meaning that the municipally can not do much in this situation. When asking Lokaltog why they do not open up the stations they said it is too expensive because the passengers don’t want to pay what it costs, passing on the responsibility to the passengers of being stingy. When Passengerpulsen was asked if they are performing suveryys with car drivers to understand how car drivers can be removed to other sustainable transport mode they said that they only perform the surveys that they are payed for by the traffic planners and their focus is on the current users of the public transportsystem.

This shows how all the actors throws the task onto each other rejecting their own responsibility to take new steps and new actions that can do something about the problems.

Lack of money

According to Joe Jensen from Movia there is only a limit of money dedicated to the bus operations. So if you want more busses in the summerhouse areas you would need to shut down other bus routes. As the politician Kim Buurskov from the Climate Committee said the question is whether the municipality should pay for public transport for the summerhouse owners when they do not pay municipal tax. The municipality already has problems of delivering a sufficient service for home care for summerhouse owners as they do not pay municipal tax in the municipality. Is that fair? Then Kim Buurskov point to the fact that the land value tax of summerhouses is much less than the tax of all year-round houses. According to Kim Burskov the summerhouse owners is a very sensitive topic in political discussions. As explained in the introduction the economy of Odsherred is based on the second house owners. If you start raising the taxes you risk that they would stop coming to Odsherred and therefore the politicians do not dear to touch the topic.

As shown in the site analysis the stations does not seem very welcoming for attaching more passengers to use the public transport, as bicycle are floating representing mess and the benches in the open sheds a wet when is rainings so passengers can not sit in the sheds. When asked why Lokaltog do not open up the station buildings allowing heat and better conditions for the passengers, so they do not have to stand outside in the wind and rains during winter, Ole Pluum from Lokaltog said that just one single station could cost 2-3 million crowns a year just for the staff only. It was a political decision that the station buildings are sold to private actors. You cannot get someone to luck up the station building without having to receive a salary of 25.000 crowns a month. He pointed to another issue of criminality on the toilets where they recently had to pay 400.000 crowns to repair the toilets in Nykøbing Sj. When toilets were introduced on the trains decision were taken of locking down the toilets on most of the stations.

When asking why Region Sjælland are not doing like the Capital Region, who pays Lokaltog A/S for lust profit when allowing bike for free on the locals trains, Malte Emborg Vinding said that there are great interest in allowing bike for free. However Ole Plum were more realistic stating that Region Sjælland has a much larger network to finance than the Capital Region and Region Sjælland has greater expenses. He would not say the region have tried to save money and he point to the fact the Region Sjælland still needs to find money for repairing the East line. This might be the challenges for finding money to allow bicycles for free on the trains.

The above mentioned examples show how the traffic system is locked in an economic system that does not facilitate enough money for the services. This indicate how difficult it is to find the money to facilitate the service that can meet the requirements of the summerhouse owners in Odsherred.

Contracts as a barrier for good correspondences

As explained in the site analysis often the timetables of the busses does not fit with the timetable of the local train, and often there are situations where busses leaves just before another bus or the train arrives. Movia is testing a communication tool where the train driver can communicate with the busdrivers. According to Anette Enemark from Movia it is a problem that the busses are run on contracts for 6 years. When DSB change their timetable they need to change everything too. She said that last time DSB change the time table on the Line of Kalundborg they only warned Movia one month before they changed their timetables. Movia needs to warn their operators at least a half year in advance. If they don't do that, operators can say that they want to stop the contract or they can ask for more money. And she point to another issue that they do not get feedback so they don't know when people experience that the timetable do not match.

According to a retired traffic planner at the Traffic Museum of Odsherred everything worked much better at the time where DSB owned the trains and the busses. At that moment it was much easier to create schedules that fits because it was run by the same company. He also pointed out that the busses should be running in a star structure to and from the local train station instead of running in parallel with local train. Ole Plum supported his statements saying that Movia is good compåagny but they are not very efficient when it comes to coordinating with the local trains. They have proposed a new system where the busses are not run by Movia.

Conflicting rules and criteria

The interviews has shown how rules and criteria go in conflicts with other rules and criteria where it is important to raise a discussion of what should be prioritized.

Rørvig Street Food has asked the municipality to lower the speed of the cars driving on Rørvigvej and they would like a new bus stop. They have also asked for a cross walk for the pedestrian crossing the Rørvigvej between the car parking of Spar and Rørvig Street Food. Because the road is a transit road to the Rørvig Ferry to Hundested, the municipality has said that lowering the speed and introducing pedestrian crossing goes against road traffic regulations. This shows how the rules of the road regulations are prioritized more than the security of the vulnerable road traffic users. As Rørvig Street food said it is a question of when an accident is going to happen.

Another example is the survey conducted by Joe Jensen from Movia at Nykøbing Sj. Station, that have shown that the passengers are very satisfied with the accesses and entry conditions at Nykøbing Sjælland Station. When you arrive with the train it is very easy to see where the busses are, and for the bus passengeres it is very visible where the is. From the bike parking there are only 10-20 meters to the train and to the busses. Evenfurther the respondents say that the accesses of bicyclists and pedestrians to the stations are very good. However there have been complaint from the bus drivers who do not find the entries and

outrides for the busses secure. Today the busses park beside each other where the busses have to back out when they have to get out the bus parking lot. There is going to be a renewal of the area around the station, where the municipality is going to restructure the way busses enter, park and exit the station. According to Titi an architect in the municipality of Odsherred the busses are going to park in a row after each other instead of beside each other as it is today, so the passengers would have to walk longer distances to find the bus. The busses are also going to be placed behind the train station buildings so the busses will not be visible for the passengers arriving from the train anymore. This is a deterioration of the accesses and overview of the entries for the passengers and it is an example of how the traffic security of the bus drivers is going to be prioritized more than the access for the passengers that make the public transport easy and comfortable for the users

A new generation that sets more requirement for the service

In the survey of the summerhouse owners there was a onetime visitor stating that if there were bicycles available at the rented summerhouse, they have rented they would use it instead of their car. For his reason VisitOdsherred has been asked why they do not rent bicycle for the visitors that rents summerhouses from VisitOdsherred. A person sitting at the back of the reception in the office of Visit Odsherred could answer on this question. He said that they rented bikes 20 years ago, but now they recommend people to rent bikes from the local bike stores instead. This is because “a bike is not just a bike anymore”. People set a lot more requirements to the amount of bicycle gears, the height of the bikes and how they look. Often the bicycle are placed outside in the summerhouses and they stand there during winter and get rusty. Visit Odsherred had 30 bikes to rent out from their own office but then the high of the seat of the bike was too high. They have experienced people arriving where the bikes have lost air in the wheels and then the visitors did not use the bikes. At the end VisitOdsherred have decided that they cannot manage the requirements and they do not to rent out bikes any longer. They believe that the local bike shops more easily can meet the requirements of the visitors.

The fact that the people set more requirements to the services has also been confirmed by one of the respondents in the survey and by Ole Pluum. A girl said when she was asked if she would use renting bikes at the stations, that she could not use any bicycles. They need to be comfortable. According to Ole plum the problem with the public transport is that I have to be there when people need it, and he said that at old time when the Line of the Odsherred rail started operating there was only three departures in each direction. One in the morning, one during midday and one in the evening and people were happy. They coordinated their day according to the schedule of the train. Today people coordinate their day with taking into account the schedule of the public transport.

Partial conclusion

As the stakeholder analysis shows people set a lot more requirements to the services, and at the same time there is a great issue of finding the money that is needed to deliver the service that can substitute car driving. Everyone says that it is not their responsibility to investigate how to meet the problem.

It seems that there needs to be a forum where it is possible to discuss what we want in Odsherred? Should we accept rules that allow cars to drive as fast as they do? As there are not enough car parkings should we accept that nature disappears to build more parking lots or should we accept that car drivers can park wherever they want? Do we want to prioritize the vulnerable passengers and are summerhouse owners ready to pay for the service? Are the car drivers of the summerhouse owners willing to pay more tax to create the systems that can substitute the cars? How should planners of the public transport be activated to visualize possible solutions, as it seems that politicians cannot act without knowing, how to act?

8. Survey with the temporary residents

In this section the results of the survey with summerhouse owners are presented. The contains 20 respondents: 10 at Lyngen and 10 at Rørvig. Many similarities in the survey with the summerhouse owners and permanent residents can be found in the tourist literature by Dickinson, Curtale and Hall which will be unfold continuously.

Most respondents own their summerhouse but there were some of them just visiting family, who own a summerhouse. Some visitors have known the area since their childhood, others have recently bought a summerhouse 2 or 4 years ago and did not know the area so well yet. However, most of the respondents have known the area for many years. Only few of the respondents were single time visitors as one of the respondents were renting a summerhouse and a group of young people had travelled from Jutland from Ringkøbing as a tradition, that they do once a year, where they borrow the summerhouse of one of their parents.

Activities during the stay

Common for those who own a summerhouse is that most of them travel to Odsherred every weekend or every second weekend and in holidays, and most of them live in the Region of the Capital or at Roskilde. This indicates that they visit Odsherred quite often. Common for all the respondents is that they all come to Odsherred to enjoy nature and to relax. They like to walk trips in the nature, in the forests and along the beaches. Some like to do work in the garden and to read and others like to play social games. Some like to visit flea markets and local farm shops and others like to bike in the area. When trying to identify the

distances that people are traveling a single man said that he comes to Odsherred especially for the activity of bathing in the sea where he walks to the beach in Sejerøbugten. He only drives distances between 0-8 km. However, a single woman who has recently bought a summerhouse and who has recently efforted a car said that she was still quite unknown to the area and therefore she was driving quite a lot to see and discover the area. It could be distances between 10- 30 km. One couple said that they like to go to Odden because there is a good fish shop. They also go to Fårevejle because there's a local butcher. Another couple enjoy playing golf in Højby. Some of the respondents in Rørvig harbour said their summerhouse were located at Klint. Common for most of them, they said that they try as much as possible to support the local shops and buy from the locals. But this may not be surprising as the survey was conducted in front of the local Brugsen.

Arrival at the summerhouse

When asked how their arrival at their summerhouse looks like common for all of them is that they start by unpacking their car, then they put on fire or heat at their summerhouse. How they ensure food differs a lot among all the respondents. Some of them has emptied their refrigerator at home which they bring to the summerhouse. Others have bought food at a shop in their home municipality before arriving at Odsherred and then they buy food again in the local stores while they are at their stay. Some buy food at their own municipality and the next day they buy food at Vig and at Lyngen. Others buy food at Vig before they arrive in their summerhouse at 16-17 o'clock in the afternoon.

The activities that they perform gives an impression about the distances that they are travelling by looking at Google Maps: From Lyngen to Vig food shops there are 4 km. From Lyngen to Odden there are 20 km. From Lyngen to Fårevejle there are 8, 5 km and from Lyngen to Højby there are 10 km. From Klint to Rørvig harbour there are 13, 5 km.



Figure 44: Map showing where some of the activities are located, that the summerhouse owners go to

Attitude versus behavior

Fellow for all of the respondents is that they had all travelled to Odsherred by car and they use their car when they purchase. When asked about how they experience the car congestion all respondents did not see car congestion as a problem. This confirms the literature by Dickinson who has found that the tourists does usually not see their own car driving as a problem (Dickinson and Robinson, 2008). Research has seen that typically tourist use public transport in urban cities, but in rural areas they do not want to use bus

routes (Cohen & Higham, 2012). As (Prillwitz and Barr 2011 as cited in Le-Klaehn & Hall, 2015) states tourists tend to care more about the environment at home than while they travel. Other literature has found that people tend to care more about the environment at home than when they are on vacation. This became visible in this survey as several of the respondents said that they were biking or using the public transport at their home municipality but not when they are in Odsherred. Dickinson points to other literature by Macnaghten 1995 stating that attitudes become formed in language and that people are very contradictory and ambiguous in their attitudes. As Dickinson states people typically have dilemmas over social issues and practices rather than settled attitudes. When the summerhouse owners were asked about how important they think it is to protect nature and the environment all respondents think that this is very important. This confirms the literature which has shown that there's a great gap between the behavior and the attitudes of people (Cohen & Higham, 2012) People think sustainability is important but they do not behave accordingly by adopting sustainable habits.

What could convince the car drivers to switch more sustainable transport modes?

Dickinson found two profound social representations: "The car cannot be restricted!" and "If public transport were improved people would use it more!" (Dickinson & Robinson, 2007). This was also very clear in this survey among the summerhouse owners where people claimed that more busses should be operating out to the summerhouse areas and they claimed that the public transport were too slow and this is why they used their car. When asked what could be done to convince the summerhouse owners to switch transport modes common for all of them is that they think it should be easier to arrive to the summerhouse areas. General for most of the respondents is that they think that the car is convenient. As a woman said, who had just efforted a car: "At the moment you effort a car it is difficult not to use it!" Several respondents claimed that there are no busses during the weekend or only two departures during a day. This confirms site analysis illustrating the lack of bus routes during weekends in the summerhouse areas. One respondent said that she would like more busses from Vig and from Højby and they should run at least every 1-1,1/2 hour. In general the respondents claimed that there should be more departures, more busses available, the travel time should be reduced, the price should be reduced and the public transport should be reliable so you don't miss the train at Holbæk. Some respondents pointed out the issue of lack of communication on the stations. It is sometimes difficult to know at what track the train is arriving when you are not used to take the train and therefore the car seems much more convenient. These statements confirm the qualities highlighted by the literature in pointing out price, travel time, frequency, reliability and communication as the most important criteria for the attraction of public transport users.

A girl in her 20's standing together with her father claimed that she had just recently travelled with her bike in the train. There were not enough space for the bicycles in the train and it was complicated to park the bike

when passengers need to get on and off the train at different stations. The accessibility of bikes in the train can be seen as a quality of the public transport service as it relates to Gehl's and Calon's theory stating that the service should be made comfortable and easy to use if it should encourage people to use it. The ticket price of the train was not a problem for the girl as "father was paying!" However they said that they were very sad that the bus routes number 666 and 555 were not running from Høje Taastrup to Odsherred anymore. The young girl had a brother travelling from Jutland that usually took the train to Høje Taastrup and from Høje Taastrup he took the bus driving just nearby their summer house in Odsherred. Since the busses are not operating anymore, they are now driving by car to Slagelse to pick up the brother at Slagelse station. This confirms the vicious circle describing how the reduction of the public transport encourage more people to use the car.

Attitudes towards bike and renting bikes

The respondents were asked what they think about possible solutions, such as the municipality offering e-bikes to the summerhouse owners for leaving their car at home. Most of the respondents said that they did not think that the municipality should spend money on delivering e-bikes for residents. It is better that the money is spent differently. However one of the respondent acknowledge that it is a good idea if this is necessary to reach the climate goals. When asked about the solution of renting bikes a respondent said that they had visitors who did not have cars and for them renting bikes at the stations would be a good solution.

It is interesting in the survey that no respondents of the summerhouse owners claimed that the bike lanes are unsafe. In contrary there was a woman telling that her sons sometimes biked the whole way from Roskilde to Lyngby and they think that the bike routes are safe during the whole way up through Odsherred. One respondent mention that there are holes in the road that are dangerous that should be repaired but that was the only issue mentioned in the survey. This clearly goes against all the Facebook comments claiming that the roads are unsafe in Odsherred especially at Lyngvejen where the survey was conducted.

Attitudes towards improvements of the services at the coming battery train

Literature has stated that working with slow transportation where people enjoy their travel time while travelling could attract more consumers to the public transport (Noor et al., 2014). For instance, introducing a restaurant in the new battery train with opening hours every Friday evening, at the moment where people travel to their summerhouse could allow the summerhouse owners to enjoy the travel time. By eating dinner at the train they would not have to think about making dinner, when they arrive at their summerhouse. When the respondents were asked about such a solution and if the improvement of the services of the train could

make them take the train, it was clear among all the respondents that the improvement of the services in the trains was not important for them as they just want to get quickly from A to B. Furthermore, no respondents could see the Cargo bike as a substitution to the car if it became possible to bring the Cargo bikes along on the train. However, it is a risk to ask such questions in a survey, because the answers can be unreliable. As Jens Toedahl Jensen from Movia has said: “People often don’t know what they want before they have it!” and he gives as an example that no one knew that they could need a mobile phone, before it was on the market. Joe Jensen had asked passengers at Nykøbing Sjælland whether they would be interested in renting bikes and he said that he had received unreliable results.

Attitudes toward Parking fees

As mentioned in the section 4.1.1 parking fees are qualities that can be adjusted in transport planning to detach car drivers from driving, as it is shown that car traffic is reduced in tourist context when the price of parking fees are increases (Curtale, 2021). According to Dickinson, most visitors are not aware of the actual cost that would come from parking charges. In the survey most summerhouse owners did not think that the introduction of parking fees would reduce their car usage. They would just accept it as they are used to it at their home municipality. As mentioned in the introduction many of the new commers of the summerhouse owners are people with high income, and they might not be as affected by tariffs as people with a low income. The effect of parking fees is therefore doubtful. Studies states that it is often difficult to introduce parking fees in rural areas as it is difficult keep up with the control (Lohmann & Duval, 2014). Studies has found that if tourist have previous experiences of not being able to find a parking place they may be prone to chose an alternative the next time (Dickinson and Robinson, 2008). This was confirmed by a summerhouse owner stating that it should not be made easier to park a car presuming that if people can not find a parking in the harbor of Rørvig they might take the bike. However this is doubtful aswell as the introduction shows that people just park randomly and illegally on bike lanes, grass lawns and at other bothersome places in Rørvig instead.

Identification of personas and it’s impact of changing people’s transport behaviors

As mentioned Jensen (1999) divided car drivers and public transport and bike users into personas which I have listed in annex with numbers in front of each persona. In the survey some of these personas based on Jensen’s persona can be identified and new personas can be defined as well. It was clear to see that some of the personas have a certain impact on how easy it would be to convince people not to use their car.

For instance, the young couple with a child at the harbor of Rørvig could not imagine how they could ever live without a car, if Rørvig were transformed into a car freezone with shuttle busses. They have so much packaging each time they have to bring their baby carriage a long on their trips. Their summerhouse is located nearby Rørvig Church which means that it is possible to walk or bicycle from their summerhouse to the harbor of Rørvig. The women said that she was not moving a lot since she was pregnant with another child. However when they were asked about the scenario of the possibility of bringing Christiania bike onto the coming battery train from Copenhagen to Odsherred, they said that this could be a solution. Unfortunately when reflecting a bit more they had difficulties imagining how to bring a baby carriage in a cargobike, and then they rejected the idea of a cargo bike claiming that with children it is just much easier with a car.

Another persona that would be difficult to convince is the elderly retired man going fishing everyday at the harbor of Rørvig living at Klint. At first he claimed that he did not use the public transport because of laziness eventhough it would be possible to bring his fishing package a long in the public transport, but then he said that he has four registered authorized cars at home and he loves cars and they are polluting cars! He said straight out that a person like him, he believed would be difficult to convince to abandon his loving cars. He also pointed to the fact that he believed that making Rørvig car free would harm the economy and close down Rørvig. According to the persona of (Jensen 1999) he would belong to the first category of car drivers and the most difficult to convince to switch to other transport modes .

A third example that would be difficult to convince is the single man that has a hybrid car. He comes to Odsherred because he loves to go bathing. He walks to the beach, but it was clear that he could not see any reason for reducing his car driving as he already had an “ecofriendly” car.

An example of persona that would be easier to convince to use alternative transport modes is the elderly couple who states that they would use the public transport when they get older. They already use the public transport at their home municipality. They think it is a good thing that the municipality has put a limit preventing summerhouse owners to build houses bigger than 200 m². They believe that the municipality should transform Odsherred into a mecca for bicyclists and they should profit from the event of Tour de France to raise people’s awareness of bicycling as a means of transport. At Høve Stræde they think that the municipality should enlarge the road for bicycles because there are many motionists biking on this road.

Another example is the mother with two adult daughters with a summerhouse in Klint traveling to the Rørvig Harbor. They said that they would adopt to the conditions, if Rørvig was made car free and they would probably bike more.

9. Survey with the permanent residents

A survey has been conducted with the permanent residents in Rørvig as well to understand their perception of the development of the car usage. People were asked how they experience the car congestion during summertime, and they were asked how it would influence them if solutions such as making the Rørvig car free zone with shuttle busses would affect them. They were asked about this solution as tourist literature has found that tourists favors this solution (Curtale, 2021)

It seems possible to categorize the permanent residents into two categories: There are the residents that are very annoyed by the car congestion who thinks that it generates great problems. They are annoyed by people parking “everywhere”, driving at high speed, creating insecure and bothersome situations. They would like people to stop driving in their cars. This confirms the literature mentioned in the introduction stating that residents tends to develop frustrations and dissatisfaction towards the visitors if the problems are not managed (Dickinson and Ribbindon, 2008 ; Chang et al., 2018). The other category of permanent residents thinks that the presence of all the cars creates a cosy atmosphere. It represents life, happiness and activity. They think that restriction of cars would damage Rørvig. If Rørvig was made car free with shuttle busses they are afraid summerhouse owner would stop coming to the area and it would damage the atmosphere and the economy. This confirms the liberal policy that favor roads traffic believing that roads for cars is important for the economy and that people should have the free right to travel with a transport mode as they want to, other wise it will harm the tourism and economy (Venstre, 2022).

It is found in the survey among permanent residents but also among a few summerhouse owners that has known the area for many years, that they are very annoyed by the new development of with all the activity that has appeared during the last decades, claiming that Rørvig is turning into a “Tivoli” (Tivoli is an activity park at Copenhagen). They claimed that once people traveled to Rørvig to find piece, tranquility and silence and at old times if people wanted to have fun and activity they could travel to places in the Nothern part of Zealand such as Tisvildeleje. This highlight the issues mentioned in the introduction that we are dealing with different generations who set different requirements for the developments: the old generation would like the area to be calm and nature to be protected while the new generation likes fun and activity. This has also been confirmed by the founder of Rørvig Street Food telling that at old from the location of Rørvig Street food along the Rørvigvej to the harbour of Rørvig, this was an area that consisted of the plantation and nature that was support be protected with no activities. Rørvig Street food started up by just one single camper selling thai food at winter time during corona times in 2019. Then another camber appeared selling Indian food, then another camber seeling burger and fast food pubbed up and this developed into the street food which is there today, which has become a great succes for the leisure time visitor. However it generates great conflicts with

the old generation of keeping the area calm and it creates traffic problems with the vulnerable traffic users at Rørvigvej.

The Fisher Club at Rørvig has great problems when people want to get out sailing and fishing, because cars are blocking for their vessels in Rørvig harbor. Permanent residents at Nørrevangsvej, which is a parallel road to Rørvigvej, are very annoyed by the “big”, “fat” cars parking along Nørrevangsvej claiming that the cars block for the firetruck to access in case there is a fire. Because of the enlargement of district heating during the winter 2022, the road has temporarily been blocked, so cars could only drive in one direction. The road construction from the district heating had lowered the speed of the cars significantly and less people were applying the road. This had encouraged several permanent residents living at Nørrevangsvej to create a traffic working group in co creation with the municipality of how to lower the speed at the road. Because the group was missing a mediator nothing has happened so far.



Figure 45: Nørrevangsvej, parallel road to Rørvigvej, where cars are parked blocking for the firetruck and other big vehicles to pass

When Dickinson investigated whether people would want car driving to be restricted in the countryside, she has found that people were in favor of restricting cars in the countryside but at the same time they did not know if cars should be restricted. Dickinson says that this is a great dilemma of conflicts over the loss of silence, tranquility and ruralness and at the same time wanting to keep their personal right for driving. This survey has truly shown the same dilemma, among the permanent residents in Rørvig who were annoyed by the car congestion but at the same time they could not see how they could drive for their own work or doctoral visit near the Capital Region, if cars were restricted. Most permanent residents claim that they need a car when they live at Rørvig. Some of the residents drive by Holbæk for their work in Copenhagen other people take the ferry to Hundested and drive by car to Hillerød. Some permanent residents are retired people with health issues that need to travel to doctor clinics at places such as Roskilde or Slagelse. Most of the permanent residents could not imagine how a car free zone could look like at Rørvig, even though a lot of them were very annoyed by the car congestion. Most permanent residents do not see their own car driving as

they talk about their own needs as “natural” and “necessary”, while claiming and wondering why the leisure-timer residents do not walk or bicycle as many of the summerhouse owners lives within small distances from the events. This illustrates a kind of egoist point of view where people are pointing at other people to stop certain kind of behavior but they do not even question their own behavior and how to change it.

It was found that residents that exercise a lot do not use the car as much and some of them share cars with other people. Residents that perform other sports than bicycling do not see why they should start bicycling. However, in order to conclude that this is a general tendency, a greater amount of respondents is needed.

As stated by the tourist literature by (Poltimäe et al., 2022) it is very important that the different public transport schedules interconnect. The issue of the timetables of the busses not fitting to the timetables of the train and other bus correspondances as mention in the site analysis should not be ignored in Odsherred. As one of the permanent residents expressed: “never again I am going to take the bus as I had to wait nearly an hour at Nykøbing for the next bus”. This show how the quality of waiting time detaches comuters from the public transport if it is not adjusted and it confirms the statements by Ole plums that pessengers should not experience that the coreespondances does not fit one single time, then they will find alternative solutions. The letter written by the visepresident Thomas Nicolaisen to Movia asking Movia to adjust the timetables so the children don’t have to wait in cold weather was confirmed by a residents, who is a school teacher at the Rørvig Free school claiming that often the children from Egebjerg has to wait for a long time at Nykøbing station because the bus for Rørvig leaves just before the arrival of the bus from Egebjerg. The reliability is a very important quality of the public transport that needs to be adjusted if ever the car congestion should be reduced .

People with sustainable transport habits in Odsherred

During this semester I have met five special personas in the public bus and in front of supermarkets in Odsherred. They were not a part of my survey, but I have chosen to include them in my project as they are front models of how sustainable transition could happen. If everyone had the same attitudes as they have, we would already live in a world with sustainable mobility.

On page 69 citations can be read from these minority personas



"I am so happy to have acquired this Cargo bike. I cycle with my dogs to the forest. I cycle from Nykøbing to the veterinary clinic in Vig, where I buy food for the dogs. I'm sad that I did not get rid of my car much earlier because I save a lot of money by not having a car (...) It would be great if you could bring the cargo bike in the new battery trains to Copenhagen. Then I can take my dogs to Tivoli!"
(Old man in his 70-80s)



"It's brilliant, this electric bike! You can get around all over Odsherred on it!"
(Middle-aged woman)



"Why should I have a car? It is not too heavy to drive with a trailer if you have an electric bike attached to the trailer"
(Old woman in her 70's-80's)



I walk from Stårup to Højby Station. Walking that distance does not matter at all for me. I take the train to Svinninge, where my work is."
(Young woman in her 20-30s)



"I've lived all my life at Odden. I have always taken a bus to Odden. It has never been a problem for me not to have a car"
(Old woman who has adult children)

Figure 46: Citations from people living at Odsherred who have adapted sustainable transport habits

Partial conclusion

As the survey has shown there is a great lack of awareness among the most of the summerhouse owners of the consequences that their car driving has as on the environment and on the perception of permanent residents. All summerhouse owners in the survey did not see car congestion as a problem. This indicates that the municipality has a great work to do in working with the first step of the pyramid of mobility which concerns raising the awareness among the residents about mobility and mobility solutions. This is the most important step if car drivers should even question their own habits. . The survey has shown that there are residents that are very annoyed by the car congestion and some of them are even ready to work on identifying solution to the problems . However they are not willing to quite their own car driving which support the social representation that cars cannot be restricted. However this social representation might not be true as there are people in Odsherred that has adapted a sustainable green mobility profile and they have shown that it is possible to live without cars. An interesting point is that the survey have shown the differences between the new generation and the old generation and where the new generation seems to have adopted a less sustainable perspective on the development than the old generation, as the old generation wants to sustain the nature and calm while the new generation don't mind that nature is disappearing in favor of allowing space for parking lot for the new activities. Further more we are dealing with a population that have contradicting views as they would like car congestion to be reduced but they don't see how they could reduce their own driving. The social representations: "The car cannot be restricted!" and "If public transport were improved people would use it more!" could be found both among the summerhouse owners and the permanent residents. The survey has confirmed the findings in the site analysis that the timetable of the

busroutes and train does not correspond indicating the that social representation stationg that the public transport is insuffient is true. As the survey has shown reliability and waiting time are important qualities that needs to be adjhusted by the transport operators in order to attach more consumers to the public transport. This means that the municipality should work on the third step of the mobility pyramid which concerns the improvement of combination travel. Further more they need to work on the fourth step which is about introducing new infrastructure such as new buslines to the summerhouse areas in the weekends

10. Discussion of Results Literature and Theories

This section is discussing the findings of the report and how a sustainable designer can meet these challenges in order to reach sustainable transition.

How to solve the problems of car congestion in rural destinations with the presence of summerhouse owners in the high season has received less attention in transport planning and among transport researchers, even though the consequences of car usage at tourist destinations have been known for many years and approved by tourist studies. This study has therefore been an attempt to develop more knowledge about summerhouse owner's and permanent resident's perceptions towards transport planning in Odsherred and to understand how the decision-makers are dealing with the transport issues of the varying user demand.

The study has shown that we are dealing with a new generation with other requirements and perceptions towards the development of the local areas of Odsherred. The car congestion has never been as intensive in high season as today and local frustrations and anger towards tourism increase among the permanent residents and the old generation of summerhouse owners. The site analysis has illustrated that all summerhouse areas and all activities in Odsherred are located within distances to the villages that are possible to bike, except the activities and summerhouses located at Odden. The local train combines all the villages which means that Odsherred has an infrastructure that makes it possible to live without a car. This means that the site analysis kills the myth of the social representation that states that "car cannot be restricted". Odsherred is a rural area, where it "IS" possible to live without a car and this has also been confirmed in the project by a minority of the population that are happy, that they have chosen the decision to get rid of their car and who have adapted cargo bikes, electric bikes, bike trailer, walking and the local train as their transport modes in Odsherred. However, the social representation stating that "the public transport needs to be improved" can be regarded as a true statement, as the site analysis and the surveys have found, that it is a great issue that there are only a few bus departures to and from the summerhouse areas to and from the villages. Furthermore, the "waiting time" between the correspondences of the busses and train departures is very long which makes the public transport very inconvenient. This confirms Callon's theory of "the economy of goods" that the qualities, which relate to "frequency" and "waiting time" of the public transport, need to be adjusted to attract more summerhouse owners and permanent residents to use it. The site analysis and conversations with permanent and leisure time citizens also confirm Gehl's theory, where Gehl's theory states that unfortunately the physical rooms are built for car drivers. Green attractive areas with trees are removed in favor of building car parking at Rørvig Street Food at the parking in front of Spar and it is much easier to take the car as the travel time with the public transport and the bike is too long. There are beautiful recreative bike lanes that meet Gehl's criteria of building for human dimensions, but they are detours, and they are not fast. They do not meet the demand of the speed of the society, where people don't

want to spend a long time on travel. This was found in tourist literature that tourists are often in time shortage compared to the permanent residents. At some stations, bicycles are floating with no appropriate bike parking, and conversations with people at the stations have shown that people do not feel comfortable leaving their bikes at the stations for a longer period as there have been cases of criminality, where bicycles have been damaged. This supports Callon's and Jan Gehl's theory that the qualities that relate to the security and the visual look of bike parkings should be improved at the stations. The bike parkings should be made more attractive to use and it supports the second step of the mobility pyramid that relates to making the bike facilities more visible.

The site analysis and survey have shown the theory by Jan Gehl and the theory by Callon cannot stand alone. It has been necessary to support the theories by a sociological theory such as Moscovici's social representation theory. Car restrictions such as transforming parking lots into recreative grass lanes with playgrounds for children and parents in the harbor of Rørvig meet the theory of constructing the built environments so it favors the human dimensions. According to the theory of Jan Gehl, the removal of parking lots reduces the attractiveness of using the car. As mentioned in section 4.4.1 according to the tourist literature by Dickinson when it is difficult to find parking lots at tourist destinations, her studies have shown that people would be prone to choose another transport mode the next time. However, this has not shown to be the case in Rørvig as the car congestion has not been reduced in Rørvig. Removing parking lots in favor of grass lanes in the harbor of Rørvig has just shown to worsen the existing car parking problems and it has created new problems, where people are parking illegally on bike lanes along the road of Rørvigvej, and along Nørrevangsvej blocking for the fire truck to arrive. Furthermore, cars are blocking for the vessels of fishermen going sailing in the harbor of Rørvig. This shows that the theory of Jan Gehl cannot stand alone as building the room for human dimensions in the harbor of Rørvig has not reduced the car usage. However, the car restrictions during the period of the district heating work during wintertime have shown that fewer cars were driving on Nørrevangsvej. It shows that restrictions work as it reduces the car usage, but it is unknown whether the car congestion has just been removed to other local roads instead.

The theory of the economy of goods by Callon where the qualities are adjusted of the public transport to increase attractiveness cannot stand alone either. For instance, a new article written by Movia published on the 8th of June 2022 explains that Movia launched a project of allowing bikes on all the buses of Movia. This is an improvement of the quality of "accessibility" for bicyclists. From July 2022 passengers can bring the bike along in the busses for free for the rest of the test period. This is a quality that relates to the quality of "price" that makes the use of public transport more attractive. However, in the month of June Movia registered that even though allowing bikes on all busses is favored by many stakeholders, it did not lead to a remarkable increase of the number of passengers using the public transport. This confirms the statements in the interviews with Ole Plum and Annette Enemark stating that there have been many examples where

projects have failed because of a lack of users. Too often it is seen that innovative projects are abandoned after a short time when the granted aid for the project runs out. The projects are most often judged on their economic viability and on how much it has been used but it is rarely estimated whether it has moved car users (Dickinson, 2006).

This shows that there's a need for Movia and the transport planners to put an effort in interrupting the car driver's transport habits informing the car drivers about the importance, relevance and benefits of choosing alternatives transport modes. The project by Movia of renting bikes and allowing bikes for free on the busses risk to be other innovative projects that are going to fail if they do not make an effort in mobilizing people to support the projects. This is especially important as the survey has shown that the summerhouse owners do not seem to have any intention of changing their car driving habits under the current conditions and as the stakeholder analysis has shown that no stakeholders are currently working on changing the habits of the car drivers.

The survey has shown the summerhouse owners travel quite often to Odsherred as most of them visit Odsherred every weekend or every second weekend. The summerhouse owners do not see car congestion as a problem however they think it is important to protect nature and this confirms literature that shows how people do not behave according to their attitudes (Cohen & Higham, 2012). Right now, the summerhouse owners do not see alternatives as a solution and they do not see any reason why they should stop driving in their cars. As (Alvesson, 2002) states it is not unless people recognize that it has consequences for them that they will engage in change. This means that the municipality has a great working with the first step of the mobility pyramid of raising the awareness of the issues that the traffic congestion brings if they are to encourage people to change their habits. Political processes are about the creation of alternative systems of meanings that makes sense for people. If people find sense and meaning in the systems, they will recontinue using it and they would even suggest other people to use it.

This shows why it is important to include "The embodied performance" of the model of Bo Jensen of how people relate to matter and how cultures are formed and changed. There's a need to relate back to the theory by Moscovici, which was the theory applied in the project to understand the embodied performance of the model by BO Jensen. People have adopted the norm of driving a car and they don't feel any shame about it as none of the summerhouse owners see car congestion as a problem. Furthermore, the way that people park illegally shows that the act of "parking illegally" is a norm that is acceptable and adaptable among a majority of the car drivers of the summerhouse owners and they do not see the consequences of this act. By turning the act of driving a car into a crucial act, this could make people requalify the qualities of the car and they would start questioning if there is another norm that is more adaptable, that they should conform to instead.

The project has shown that there's a lack of awareness of the need for sustainable mobility. The lack of awareness has not only been found among the leisure time and permanent residents but also among the

transport operator, planners, researchers, politicians and companies that all reject their responsibility to take action for change. As mentioned in the introduction, there is a need to be a commitment among the stakeholders and the second house owners in order to switch car drivers to other more sustainable transport modes (Le-Klaehn & Hall, 2015). Without this commitment, the traffic problems are not going to be solved. As the first step of the mobility pyramid consists of raising the awareness of the commuters for adapting other sustainable transport mode, and as this project has shown that there's a great lack of awareness among both the permanent and leisure time residents but also among the planners, operators, politicians and researchers it seems that in order to achieve commitment, there is a great work to do of increasing the awareness of the need for change.

This is where Moscovici's work with social representation plays an important role. As it has been seen that most stakeholders and residents conform to the social representation stating that "cars cannot be restricted", there's a need to work with this social representation in order to increase awareness that this social representation is simply not true.

How to increase this awareness, theory of mobilization by (Rao et al. 2009) and (Callon, 1986) can be applied. The traffic planners should try to build a social network that supports sustainable mobility. Many of the green mobility projects have failed because the traffic planners of the innovative transport project have failed to engage and mobilize users to support the projects (Callon, 1986). They fail because the traffic managers have overlooked the social and cultural mobilization needed to excite users (Rao et al., 2009). Radical changes happen when a situation is turned into a "hot cause". The activity of choosing a sustainable transport mode should be turned into a "hot cause" (Rao et al., 2009). This is very important if for instance, Movia should succeed with their project of renting bikes at the stations. If it is not turned into a "hot cause" it can be presumed that most car drivers would not even discover that there are renting bikes available at the stations. Rao's theory of mobilization can be supported by the literature (Doganova & Karnøe, 2012). Managerial work is not only about creating a new design and showing a new business case. It is also about demonstrating the new and different costs and performance qualities. The relevance is not pre-given for the user. Oftentimes innovators put a lot of effort in setting up a stable supply chain and production, but they underestimate the effort and investments that are necessary to put in the external surroundings of the firm. Transport planning is also managerial work; therefore transport operators and planners need to think like entrepreneurs. The job of the entrepreneur is to bring the reality that will happen from applying the new business case into the existing reality of the environment by creating the conditions, that consumers will pay for (Doganova & Karnøe, 2012). This is done by the use of *interessement* devices.

Callon developed the term “interessement devices” as a tool that can trigger the interest of actors and enroll them in a program. Some people may not be willing to take part, so this is where they are met with interessement devices, that seek to translate and change their interest into becoming supporters of the program that we are trying to promote (Callon, 1986). Callon defines interessement devices as non-human elements which are circulated by key actors in order to inspire other actors to support the change. If successful the interessement devices can be used to enroll new actors into a network (Callon, 1986). Interessement devices can help the actors that the mobility group wants to engage in their network to identify themselves and to identify their roles and how they should relate and enroll them into our network (Clausen & Hansen, 2017).

But who are the actors that should develop these interessement devices, as the interviews with the stakeholders have shown that all stakeholders currently don't find it important to trigger the interest of car users to use other transport modes? There is also a need to be someone who triggers the interest of the stakeholders as well to engage them in a program of change. These actors can be found among the frustrated and angry residents and stakeholders in Rørvig. These people are already aware of the consequences. They are concerned and affected by the consequences of the car congestion and therefore they may be more willing to take part in an action program. This indicates as BO Jensen model that change can happen from the bottom.

How to mobilize and create this network that supports sustainable mobility Callon's actor-network theory of the four moments of translation can be applied. The four moments of translation consist of problematization, Interessement, Enrolment and Mobilization (Callon, 1986). It is about creating an action program that people take part in. According to Latour and Callon an Action-program has a lot of action points where people take action by engaging in the program (Callon 1986) and when they act, they become actors (Latour, 1987) Traffic planners need to construct new actors in order to build their network as a key outcome of the change process, and they have to do that by translating the interest of the commuters that they want to engage in their network (Clausen & Hansen, 2017). The first moment of translation, the problematization phase, is where the innovator will impose their definition of the problem and convince others to subscribe into their view. In the second moment of translation, the interessement, phase, the creation of the network of alliances will take place where the actors put their interests in contrast and align them with the interests of the innovator. In the third moment of translation, the enrolment phase, links between the various interests are strengthened. The last moment of translation, Mobilization, is about the monitoring of interests so the network remains stable (Callon 1986).

11. The setup of the design intervention

In order to raise the awareness of the importance of adapting sustainable mobility to achieve change, the design intervention will consist of a mobilization. The more agency a sustainable designer can build, the more she/he is able to act as change agent in the enactment of change.

As mentioned the survey has shown that some people at Nørrevangsvej at Rørvig have already tried to create a transport group that wants to cooperate with the municipality in how to solve the parking problems and the speed problems at Nørrevangsvej. The only thing they were missing to be established was a mentor and they have said that they are interested in starting up the group again if someone would take the role of a mentor. These people would be obvious to contact to see if the group could be established again. For this group to gain impact it needs to create agency by engaging other actors in their group. This relates to the Social Impact Theory which states that the more actors who deliver the same message the more impact the message has. It also relates to Latour's and Callon's Actor-Network Theory which states that it is all about the construction of new string networks that interest, engage, enroll and mobilize people in strong networks.

As the mobility group at Nørrevangsvej and the Fisher Club in the harbor of Rørvig share the same concerns about cars parking "everywhere" and the Fisher Club has interest in solving the car parking problems for allowing the fishermen to get out on the sea with their vessels, it would make sense that the fisher club engaged in the mobility group. As mentioned Rørvig Street Food has also tried to get in contact with the municipality regarding the parking problems at Rørvigvej at the Street Food and Spar. Rørvig street food has a great interest that people would arrive by bike or by bus instead of by car to avoid all the complaints that they have had from local residents that were bothered by the noise and traffic problems generated by the Street Food. Therefore, Rørvig Street Food shares the same concerns as the mobility group and Fisher Club. By asking Rørvig Street Food to become a member of the mobility group the impact of the group can become even stronger. As mentioned in the introduction there has been many posts in the Facebook group called "Rørvig og Omegn" debating the traffic problems by annoyed and frustrated residents. The mobility group could post an invitation in this Facebook group inviting all the people who are concerned about the car congestion during high season to become a part of the mobility group. This is also an opportunity to invite for the first gathering of the stakeholders of the new mobility group where the members can discuss the purpose of the new mobility group. The mobility group could discuss how the mobility group should create a forum where people can express their concerns and where there is space for brainstorming on solutions. As mentioned the Traffic Museum of Odsherred at Hørve had members that are former traffic planners. These traffic planners are still working voluntarily for improving the transport systems trying to impact national politics even though they are retired. An invitation for the association of the traffic museum of Odsherred could be sent inviting them to become a part of the new mobility group. By engaging these former traffic

planners in the mobility group, this would strengthen the mobility group with expert knowledge, as these elderly people have a long career life behind them with great experiences in how to improve the transport systems. As one of the retired traffic planners mentioned there is a need to develop direct bus routes to and from the local train matching with the timetable of the local train instead of parallel bus tours driving detours on irrelevant roads. This has also been confirmed by the respondents of the summerhouse owners stating that there are no bus route in their area or it takes too long time. The new mobility group could be a forum where new solutions could be investigated such as the opportunity for introducing bus routes between the local train and the summerhouse area.

There may also be an opportunity to engage the Campings in Odsherred such as Rørvig Camping and Sanddøberne Camping. Sanddøberne Camping were very concerned about the fact that the cars drive with a very fast on the Kalundborgvej road 225 and it feels very insecure for bicyclist to bike when they need to travel to Rema 1000 at Fårevejle or to the beautiful beaches at Vejrhøj. Sanddøberne Camping pointed to the issue of power relations claiming that they are just a little actor with a very little voice in Odsherred compared to other touristic actors such as Dragsholm Slot. Therefore, the municipality will not listen to them when they communicate with the municipality about the security problems for bicyclists. By engaging Sanddøberne Camping in the mobility group, they would obtain a bigger voice.

Rørvig Camping was interested in adopting a system for renting bikes and they have tried to get in contact with one of the local bicycle repairers without success. By engaging in the mobility group they could be a part of the group looking at how such a system for renting bikes could be integrated by getting in contact with Movia who is also working with the idea. In this regard, Movia could be a part of the mobility group as a forum, where interests can be discussed, where Movia should be listening to the concerns and investigating potential solutions as they are the operators of the services. It should not be ignored that many summerhouse owners do not have public transport in the areas where they live. During weekends children are not going to school and many people are not working during weekends. Therefore, the argument by Anette Enemark from Movia, that the bus route network cannot fit with the local trains, because it also needs to fit with the timetables of the schools does not hold in the weekends and holiday periods. By facilitating a dialog between the summerhouse owners and Movia this could identify where there is a transport demand.

By interesting engaging enrolling and mobilizing actors in this new mobility group it seems possible to create a grass root movement. It is a part of BO Jensen's model, where change can start with bottom-up initiatives. The grassroot movement could consist of a whole new NGO consisting of the different actors that share the same concerns of the car congestion in high season. The purpose and the work of the new NGO should consist of turning the act of applying sustainable mobility modes into a "hot cause" as stated by (Rao et al., 2009). It should work on creating awareness of the consequences of the car congestion turning the act of driving a car into a "crucial act" as stated by Moscovici. By turning the act of driving a car into a crucial

act, people will start questioning their behavior and stop conforming to it. According to the Green Student Moment people are more easily engaged by emphasizing worse-case scenarios, as this will make people understand why things matters and people are then more likely to engage in the action program (Alverson, 2002). The NGO should therefore work on creating awareness by emphasizing many situations that have shown what happens when the physical rooms are not designed for human dimensions and the vulnerable passengers, and what happens when people park their cars as they do. The site analysis and survey have already shown several examples of the consequences, which could be turned into interessement devices that are messages that should circulate in the society to increase the awareness of the consequences. For instance, the interessement device could be narratives and pictures about the issue of the fishermen that cannot get out with their vessels, cyclists that are forced out on the congested roads and the valuable nature that is disappearing in favor of building ugly car parking lots. By engaging the frustrated citizens there will probably be more stories to tell of the negative consequences.

The new NGO could also invite people that have adopted sustainable transport behaviors like the persons shown in survey and get inspired by their positive narratives. The persons that have already adapted sustainable mobility habits could tell about their own story and how it is possible to live such a life. As some of them have been car drivers before they could explain about their experience of becoming car-less and how it has made their lives better. This relates to Moscovici's theory stating when one act is turned into a crucial act and becomes maladaptive, people look for something else that is adaptive that they can confirm to instead. By developing and amplifying the narratives of the persons that have adapted sustainable transport habits visualizing how it could fit into the routines of the permanent residents and summerhouse owners this could make it easier for the summerhouse owners and permanent residents to imagine how such alternative sustainable behavior could be adapted in their everyday life. All the persons with sustainable habits expressed that they felt a certain form of freedom by the choice of sustainable modes. The quality of freedom is also a quality of the car drivers. How to obtain the same freedom by applying other sustainable modes should be visualized for the car drivers in order to trigger their interest to change habits. The maps of the summerhouse areas indicating the distances to the village, local train and food shops could also be applied to illustrate that the distances are not as long as they think. These maps could also be shown to the burgomaster and the chief executive officer of the municipality as they said that they did not have an overview of where the summerhouse areas are located and where the bus lines should be running.

Narratives can be applied as interessement devices. Narratives are useful to convince decision-makers as narratives are strong tools in visualizing how to perform change. Narratives can be descriptions of the past but also descriptions of the future. Narratives describe for you how you should see the world and how a difference can be made. As a girl said who has studied international studies of societies at the University of Roskilde, all international studies around the world show that politicians just do what the population seems

to want. This confirms the vicious circle and Jan Gehl's study of the wrong way in which cities have been designed following the misunderstood concept "Form follow functions". The mobilization of the population and stakeholders at Rørvig and Odsherred would increase the power of the frustrated stakeholders and it would send a signal to the decision-makers that the negative consequences of the development of car driving cannot continuously be ignored emphasizing worse case scenarios. It will increase the awareness of the need for change, and it would put light on the topic of mobility turning the topic into a hot cause. If decision-makers should ever see why more public transport should be implemented in the summerhouse areas or if the policymakers should ever see how a car-free zone in Rørvig is possible, it is important to develop narratives that can illustrate how such a solution is ever possible to be implemented. This project has not been able to identify how such solutions can be implemented as half of the residents in Rørvig believe it would harm the economy of tourism if cars were restricted. This relates to a liberal mindset. As mentioned Odsherred has recently elected politicians from the liberal parties. Liberal political parties have often viewed new roads as important for the development of economic growth, whereas the left-oriented labor parties see the reduction of car dependance and the use of other forms of transport modes as vital for reducing the environmental impact (Dickinson, 2006). When reading the transport politics at the webpage of the Danish Liberal Party it states that the Danish people should have the liberty and the free right to decide how they want to transport themselves in Denmark. They should have the free choice of transport modes during their whole life. It is this mindset the NGO is working against highlighting worse case scenarios if people were allowed to have the free choice of using a car. This just highlights need for the NGO to be a forum where people can discuss the desires for the development of Odsherred and what happens if everything continues as status co. With the mobilization of a grass root movement with many actors, they gain more agency and thereby more power in the fight of politics and in achieving change.

12. Conclusion

As the survey and interviews have shown there's a lack of awareness of the traffic consequences of the car congestion in high season among both the summerhouse owners, the traffic operators, politicians and in general in transport research. This study consists of an approach where many actors have been contacted and many issues have been highlighted that stem from the car congestion and the down prioritization of public transport and bike facilities. Different theories have been applied as they deliver different perspectives of how the car congestion has increased and can be reduced.

A broad approach has been necessary in this study to get a general overview of how a strong mobilization can take place, that engages and includes many actors with all the concerns that they may have regarding the car congestion problems. Inspired by Callon's four moments of translation and (Rao et al. 2009)'s theory of mobilization about how to construct strong networks by interesting engaging enrolling and mobilizing actors the study shows that there's an opportunity to create a whole new NGO. According to the Green Student Moment and (Alverson et al., 2002) people are engaged by emphasizing worse-case scenarios. The NGO should therefore work on creating awareness by emphasizing many situations, that have shown what happens when the physical rooms are not designed for human dimensions and the vulnerable passengers. These examples should be used as interessement devices that should circulate in the society to raise the awareness of the people to engage residents, transport planners, researchers and politicians in a network that supports change. Some example has already been shown by the site analysis of this project explaining how nature disappears and bicycle experience insecure conditions and train station seems abandoned. The act of driving a car should be turned into a crucial act so people will stop conforming to it. By creating awareness and turning the act of driving in a car into a crucial act raising awareness of how it harms the development the local environment diminishing the values and attractiveness of Odsherred, it can facilitate a path for change. Delivering a forum where stakeholders and actors can discuss what they want from the development of Odsherred is necessary in order to find the right solutions, and this is what the new NGO, which consists of the mobility group and people that want to engage in the group, is going to deliver.

13. Perspectivation

The city council of the municipality of Odsherred has recently decided that Odsherred needs a policy for architecture in Odsherred. I have been asked by the project manager of Odsherred municipality, Ella Cadee, if I would like to join the group developing the architect policy in Odsherred. This is the first step of the municipality acknowledging that there is a need to protect nature and cultural values that make Odsherred an attractive place to come as a leisure time citizen but also a permanent resident to live. In this regard the architect policy could have a great impact on protecting values and nature. After the summer vacation 2022 I have the intention of joining this group. As mentioned in foreword I have during my childhood come to Rørvig every summer as a leisure time citizen. I therefore belong to the category of the old generation of frustrated leisure time citizens. I would not be afraid of taking the role as a mentor for the mobility group and setting up the new NGO. I have already tried it before where I together with a group of young people in Copenhagen have established the Green Student Moment as a part of mobilizing the Green Climate Moment in Denmark. I know what is required in order to mobilize stakeholders and how to motivate people to take part of a network. It is uncertain if the municipalities would ever have started developing climate plans in Denmark, if the Green Student Movement had not been mobilizing Green Organisations in Denmark fighting for the Government of Denmark to adapt the Climate Law of Denmark in 2019. Nothing happens if the awareness of the need for change is not emphasized, which confirms (Rao et al, 2009)´s theory of turning a topic into a “hot cause”. This is what is needed in Odsherred, if change should ever happen.

As we are dealing with a municipality with lack of money that hinders the possibility to construct better bike lanes and pay for the operation of better bus lines, it is possible that the work of increasing of awareness should not stay on a local level. It is possible that it is necessary to raise the issue of car congestion of leisure time residents to a national level, visualizing the necessity of including data of leisure time citizens in transport data delivered by institutions such as DTU and the Region of Zealand. It is unknown how many people in Denmark, who´s has never been car drivers before, who effort a car as soon as they buy a summerhouse. As Marie Vang Nielsen working for Movia said, she has bought a car when she efforted a summerhouse near Nykøbing Sj. She was not a car driver before. As the statistics of Denmark have shown many residents in the region of Copenhagen have a summerhouse in Odsherred. If the city of Copenhagen and the Government of Denmark has any visions of reducing car congestion and the CO2-emissions from the transport sector, the experts cannot continuously ignore the amount leisure time residents in Denmark travelling by car every weekend to their summerhouse, when delivering transport data and reports for the authorities. As this study has shown there are no actors and stakeholders in Odsherred, that have the intentions of performing change, if mobilization is not enacted, this is the reason for developing a NGO that can conduct the work of enacting relevant stakeholders, facilitating sustainable mobility during high season in Odsherred.

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Annexe

Annex 1 - Inspiration from other literature for the questionnaire of the surveys with summerhouse owners

Spørg om:

Kortlæg Norm, infrastructure og ressource

Trait attitudes values and desires

Holdning til trængsel hvordan opfatter de den nuværende situation

hvor ofte de er her?

hvad er deres opfattelse af alternativerne?

hvilke ideer flukturerer i samfundet?

Trip chaining, model choice, Formål ved rejse, afstand, attraktion besøgt,

Kortlæg fastboendes frustrationer mod turister

Er folk opmærksomme på hvilke restriktioner trængslen kan lede til?

Fortælle om hvad de fornemmer omkring Odsherreds udvikling

Hvis alle andre ankommer i bil gør du også.

Hvad er din holdning til den kollektive trafik (spørg for at undersøge hvordan holdninger cirkulere i samfundet)

Hvor ved du dette fra (hvor kommer folks holdninger fra)

Hvis du ikke valgte bilen hvad ville du så skulle vælge? (kortlægning af infrastruktur og ressource) Spørger om hvilke alternative muligheder de har)

Cost har betydning

Hvilke folk tage bike hvis der blev indført parkeringsbetaling?

Er de sammen med andre der også cykler (undersøge om de har et andet netværk hvis bryder norm)

Hvis du sjældent lader bilen stå kan du indikere hvorfor?

Fastboende har mere tid end turister, gælder det også i rørvig?

Spørgeskema for sommerhusejere:

Hvor vigtigt er det for dig at trængslen bliver nedsat? Fra 1-5

Hvor vigtigt er det for dig at luftkvaliteten er ren i dit område? 1-5

Hvor meget betyder andre miljøforhold for dig, såsom mikroplast i naturen, dyreliv og drikkevandet blev skånet ved mindre trængsel luftkvaliteten er ren i dit område? 1-5

Hvilken kommune kommer du fra?

Hvad er din relation til området? Ejer du? Lejer du? Er du ven? Er du familie til nogen i området?

Hvor ofte er du i sommerhus?

Hvor mange er I i jeres sommerhus?

Hvilket transportmiddel bruger du til at komme herop?

Bilbrugere:

Hvorfor vælger I bilen?

Hvor lang tid tager jeres transporttur? Hvornår kører I fra jeres kommune?

Vil du prøve at beskrive hvordan jeres ankomst til Odsherred og til sommerhuset foregår?

Til hvilke formål bruger I bilen, når I er i sommerhus?

Bruger I andre transportmidler heroppe? Hvornår?

Hvor ofte har I større læs med, som ikke bare kan klares med en rygsæk og nogle ting i hænderne?

Hvad skulle der til for at du ville tage toget i stedet for bilen?

Hvis man skabte aktiviteter på togene, f.eks. en restaurant "train food" eller fitnessrum, ville det få dig til at tage tog i stedet for bil?

Hvordan ville I komme fra stationen til jeres sommerhus?

Hvis der var lejecykler vil I så benytte jer af dette tilbud?

I Fredensborg kommune vil man give elcykler til folk, der lader deres bil stå hjemme, hvad synes du om den ide?

Hvad skal til for at du vil ændre mobilitetsvaner?

Hvis der blev indført bilfri søndag, hvordan ville det påvirke jer?

Hvis det var muligt at medbringe Christiniacykler i togene, er det noget du kunne forestille jer at I ville benytte jer af?

Nogle forslår at man skulle stille bilen i Nykøbing sj indsætte hyppige afgange med busser og gøre rørvig bilfri om sommeren, hvad synes du om den ide?

Kortlægning af persona

Hvilken type bil har du?

Hvor langt går den på literen?

Hvad betyder bilens design for dig?

Hvordan bruger du bilen i hverdagen?

Tog-brugere

Hvilke forbindelser bruger du til at komme herop?

Hvilke forbedringer kunne du tænke dig til de nye batteritog?

Kunne du tænke dig at der var en kupe hvor man kan sidde ved borde med labtops?

Tager du cyklen til toget?

Er der forbedringer af cykelforholdene på stationerne du kunne tænke dig?

Er der forbedringer af cykelforholdene i togene du kunne tænke dig?

Cyklister

Hvor ofte sker det at du har mere med end du kan have på cyklen?

Kunne du tænke dig at der er cykelkuper på togene ligesom i S-togene

Hvad ville de betyde for dig hvis der blev gjort mulighed for at medbringe Christiniacykler

[Annex 3 - Questions for the permanent residents in Rørvig](#)

Hvordan oplever du trængslen om sommeren?

Er det noget du mener man skal ændre?

Hvordan vil det påvirke dig hvis man gjorde Rørvig bilfri med shuttle busser som nogle turiststudie har vist sig at være en løsning?

Annex 4 – Results of questionnaire summerhouse owners at Lyngen

hvem	ældre dame	ældre par	mand			kvinde skolelære	ung pige og far			to drenge og en pige
alder	60-70 år	60+	60 år	50 år		43 år	20 og 55	ældre dame	60 årig kvinde	omkring 20
hvor mange fast /sommer		alene eller med børnebørn	alene	2 personer		2 personer og en hund	familie	har mand		kørt med forældre
hvor sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	sommerhus	feriekoloni
kommune	Lyngen	Asnæs avedlukked	Høve bakke		Hønsinge Lyng	lige købt i sommer		Lyngen		
relation	Færøerne	København	Roskilde	København	Rødovre	København	Herlev	Smørum Egedal	Roskilde	Ringkøbing
	forældre		ejer	2 mennesker	besøger datter og svigersøn		ejer	ejer	forældre købte sommerhus	
kendt til område	over 50 år		40-45 år	kendt område i mange år men kun boet 5 år	kend område i 30-40 år	ikke så kendt 4 år	far har været der hele sit liv	har ejet i 12-14 mnd kendt til område i mange år	forældre købte sommerhus i 1968	
hyppighed			hver 14. dag		besøger Odsherred så tit som muligt 6 gange om påret ca. 45 minutter fra rødovre	hver 2. weekend + ferier		hver weekend	hver weekend	en gang om året
tid fra hjem til sommerhus			45 minutter							
transportmiddel hertil	lejet bil fra Kbh	bil	bil	bil	bil	bil	bil tilfældigt at vi så dem i bil da de cykler til det meste	bil	bil	bil
aktiviteter	slapper af går med børnebørn til bøfhus	går turer i naturen, læser, cykler tager til Odden god fiskehandler	bader i naturen bader i sejerøbugt, ren afslapning	havearbejde løber cykler gårur i naturen ser på ting	går med hunde	slapper af, går på loppemarkeder have ser på naturen	besøger stranden gårdsbutikker, spiller brætspil	spiller golf i Højby, hyggetur i skov	cykler bader, går ture ordner grund	
transportmiddel til aktivitet	går til lejeplads	kører til odden	går til vandet	køre i bil til alt			går og cykler til de fleste ting			
anskomst			pakker ud, varmer op har købt ind hjemmefra både lørdag og søndag kører i de små butikker i Brugsen		pakker ud når de ankommer, de har købt ind hjemmefra tager mad med hjemme	handler først i Vig ankommer ca. kl. 16-17		kom torsdag. Har handlet ind hjemme fra. Næste dag handler de i Vig og på	handler på vejen - pakker ud -tænder op- handler igen	
hvor lang tid	10 minutter at gå til bøfhus		11/2 til Brugsen 1-3 gange om dagen					1-4 km til indkøb		
transportmidler heroppe	bruger bil til Holbæk Nykøbing og vig				Vig Asnæs og til vandet					
hvor lange distancer			ture på max 0-8 km køre, max til Asnæs			10-30 km distancer køre r hun går til stand 1,5 km		10 km til højby golf		

						der skal være bedre forbindelser til små områder. Flere busser fra vig og højby. Der sk være 1 time- 1 1/2 mellem afgange, når man førsat er blevet glad for sin bil er det svært at slippe den, ville ikke tage det direkte tog hvis det kommer heller ikke hvis man kan bringe Christiniacykler på toget		hun synes ikke at skiltningen er god. Hun har prøvet at misse tog i Holbæk. Den kollektive trafik er meget bedre planlagt i KBH		
hvad skal til for at tage toget	stykket fra tog ud til sommerhus skal være bedre	togtid er for lang, vil måske tage tog når de bliver for gamle til at køre bil	bekvemmeligt at tage bilen, han har i forvejen en miljøvenlig bil	flere afgange flere busser tiden og prisen skal ned	det skal være nemmere at komme hertil		det skal være nemmere at tage toget betalt ruinere dem ikke. det er far der betaler!			
fredensborg lejecykler	folk må selv betale for deres elcykler	Det skal en kommune ikke betale for	kommune skal ikke bruge penge på elcykler			god ide at bgive elcykler	ved ikke om det er en god ide men måske nødvendigt for at nå klimamål		ikke interesseret i elcykler. Viil godt kunne forstå det ind mod København	
smere service på tog		vil ikke få dem til at tage tog	vil ikke gøre nogen forskel		vil ikke få dem til at tage tog, skal bare fra A til B				vil ike tage toget trods forbedret service	
parkeringsbetaling i området		det er ok			ingen holdning, ville ikke vælge bilen fra			ok	ok	ville overveje alternativ
bilfri dage		ville bare indrette sig efter det	ok	ok	ok	ikke godt fredag efter arbejde men ok om søndagen		ok		
indkøb	køber lokalt ind	køber lokalt hos slagter og fiskehandlere i bBrugsen	støtter lokalt		støtter lokalt		støtter lokalt	støtter lokalt	støtter lokalt	
miljø	5	5	4 1/2	kan ikke svare		4	5	5	4	03-jan
trængsel	2 og 3	1 og 2	1	1 og 2		1 og 2	ved ike om det er noget der er vigtigt at nedsætte	4 og 5	1 og 2	
hvad påvirkes af trængsel	mere trafik end tidligere, bor længere væk fra vej, folk kører hurtigere end tidligere	synes faktisk det hyggeligt med mange mennsekser	har ikke noget i mod trængslen livet er for kort til sure mennesker, driller dem	flere mennesker god forretning større omsætning		mærker ikke trængslen gør ikke noget selv for at nedsætte den				
forandring i område		kommune mere tourist venlig, nogle lidt for kommercielt, glad for at der er sat stopper for at bygge huse på over 200 km^2			svært at svare på		dett er blevet et mere rekreativts sommerhusområde, beplantningen er blevet flottere		der er kommet flere huse flere mennsker	
type bil	toyota Suv har elbil hjemme	Mercedes	hybridbil	Vwpolo	Citroen	volkevogn vWstuerer				opel diesel
liter				20-25 liter	15 km/l	19 km /l				
design			betyder ikke noget skal være kobfortabel			betyder noget				
transport i hjemmekommune	hjemme har elbil	tager den offentlige transport i hjem kommune		tager toget i hverdagen konen tager bil		cykler i kbh og bruger offentligt men kører til arbejde			cykler for at motionere men ikke til andre formål	
ting på rygsæk?		ofte læs der ikke kan bæres på cykel								

						der skal være bedre forbindelser til små områder. Flere busser fra vig og højby. Der sk være 1 time- 1 1/2 mellem afgange, når man førsat er blevet glad for sin bil er det svært at slippe den, ville ikke tage det direkte tog hvis det kommer heller ikke hvis man kan bringe Christiniacykler på toget		hun synes ikke at skiltningen er god. Hun har prøvet at misse tog i Holbæk. Den kollektive trafik er meget bedre planlagt i KBH		
hvad skal til for at tage toget	stykket fra tog ud til sommerhus skal være bedre	togtid er for lang, vil måske tage tog når de bliver for gamle til at køre bil	bekvemmeligt at tage bilen, han har i forvejen en miljøvenlig bil	flere afgange flere busser tiden og prisen skal ned	det skal være nemmere at komme hertil		det skal være nemmere at tage toget betaing ruinere dem ikke. det er far der betaler!			
fredensbor borg lejecykler	folk må selv betale for deres elcykler	Det skal en kommune ikke betale for	kommune skal ikke bruge penge på elcykler			god ide at bgive elcykler	ved ikke om det er en god ide men måske nødvendigt for at nå klimamål	ikke interesseret i elcykler. Viil godt kunne forstå det ind mod København		
smere service på tog		vil ikke få dem til at tage tog	vil ikke gøre nogen forskel		vil ikke få dem til at tage tog, skal bare fra A til B			vil ike tage toget trods forbedret service		
parkeringsbetaling i området		det er ok			ingen holdning, ville ikke vælge bilen fra			ok	ok	ville overveje alternativ
bilfri dage		ville bare indrette sig efter det	ok	ok	ok	ikke godt fredag efter arbejde men ok om søndagen		ok		
indkøb	køber lokalt ind	køber lokalt hos slagter og fiskehandlere i bBrugsen	støtter lokalt		støtter lokalt		støtter lokalt	støtter lokalt	støtter lokalt	
andet	har børn de cykler helt fra Kbh og Roskilde op til Lyngen. Der er trygge cykelstier hele vejen	køre udenfor myldretid da de er pensionister					sidts pige tog cykel i tog var der pladsmangel og der var besvær med at folk skulle ind og ud på samme tid. Ærgerlig over at 555 og 666 er nedlagt. Tidligere tog broren til Højetåstrup for at tage busserne, men nu henter de ham i bil i Slagelse	kunne gfoodt se sig selv med en elcykel		christianiecykler ville ikke være mulighed
holdning til ændringer		Tour de france skal gøre burde lave et mekka for cyklister her i området, der skal mere plads tril cykelstier, Tour de france skal gøre mere for at få flere til at cykle, nævnte Høve stræde hvor folk kører i klasser på bilvejene, der burde man gøre plads til		bedre cykelstier på de store veje		bedre muligheder for at lejecykler på stationerne ville være godt så det er nemmere for folk at komme fra statiinen til sommerhus, Vigtigt at vide om der er plads til sin cykel i toget hvis man tager den med		bedre veje uden huller, det er farligt for cyklister		

Annex 5 - Interview guide with Movia (Anette Enemark and Jens Toedal Jessen)

What is the responsibility of Movia?

Can you work season based?

Why is the bus 555 og 666 not running anymore?

Plustur how do you work? How do you get more people with the plustur than just one person?

As I understand this just one driver driving one other person, so can plustur be seen as a reduction in the pollution?

How do you perform surveys? Do you also ask car drivers? Why? why not?

Do Movia want more users in the public transport?

Would you do more to promote and improve the public transport if you would like more users?

What do you prioritize the most? that the correspondence fit together or punctuality?

If more busses were operating in peak season, how is the political process? Is it the municipality that should ask for it?

How do you think the Danish system work? market vs state

How is the cooperation between Movia and the municipalities?

Would it be better if it was more market-oriented instead of getting subsidies from the state?

If it was not a requirement to have a license, don't you think there would be more operators on the road?

Who's the responsible of implementing the bike facilities?

Annex 6: Partial transcription of interview with Movia

J: Jens toedal Jensen (Movia) A: Anette enemark (Movia) N: Nina roitmnn (student) D: Daniel Coelho (student)

J: I have been living here for 3 years. Before that I worked in a municipality and I worked with bicycling in Copenhagen in Roskilde where I worked before, but now I'm in a bus company.

A: My name is anette. I'm in head of mobility, sorry I don't know anything about busses what so ever. I've been working in movia, I don't know, 7 years I think, but I know a lot about mobility and bikes and combination.

T: and you are writing each thesis, or?

D: sorry, yes, I'm Daniel, I'm in sustainable cities in AAU. And I'm writing about bike commuting in Greater Copenhagen, all the situation of people coming here everyday, if we have transport it may be easier to transport. Obviously we have S-train and all that.

N: And I'm also from Aalborg University, but I'm on another line, so we could not write together, otherwise we would probably have done it, so I have chosen another topic, there's a lot of Copenhageners travelling every week to Odsherred, and you can really feel the difference, when the Copenhagen people are there and when they are not there, because yeah now we just had holiday and there were a lot of cars, but yesterday there was not a car at all on the road. So they are the ones who are polluting and how can we change their behavior.

A: so this is this some of the summercottage issue

N: so I have actually been out talking to some of the summerhouse owners and they are claiming that there are no busses out in my area

A: that's probably true

N: oh there are two busses during a day, that's also why I want to ask you, can't we work season-based? Why do they have to run regularly every day at the same time. What about in the summer when there are a lot of people, there you could actually have a bus every 10 minutes going to Rørvig havn

A: so the question is how do we remake route 333 and 666 the two buslines that went from, that whole area and ended in Høje Taastrup.

N: yeah I actually meet some who said that they took 555 and 666, but now since it not there of cause they use the car and they even go get someone in Slagelse by car now. Before he went to Høje Taastrup and took the bus, because it's not there any more now and even drive the whole way to Slagelse to get him

T: so we work a lot on the combination with bike and bus either by biking towards the busstop and then take the bus and the rest of the journey and in some cases have can the bus be transferred, or how can it have bicycles in it. At the moment you are allowed to bring two bicycles with two units, actually, so that's an issue we are working on at the moment.

D: you are focusing on busses out of Copenhagen?

A: no, all busses except here in the city-center

D: ok

N: the first time I brought a bike with me. It was from Nykøbing to Rørvig and I thought it was just the busdriver who was nice because he let me take the bike. I didn't know that we were actually allowed to bring it and maybe, I have the feeling that many people don't know, that we are actually allowed to bring bicycles on the bus

T: yeah because we keep it a bit on a low profile, so we don't get the busses full of bikes, then we have the problem with scrollers and wheel chairs and everything else

D: yeah because then the bikes and scrollers are not that....

T: it's two units and it the first ones on board of the bus that gets to stay,

D: then obviously a biker even if he has a bike if he sees someone. Ok he has my space then ...

T: true

A: we have just changed the rules about allowing bicycles on busses, so this is work in progress, it has a lot of focus, political focus, which consist of our owners a section of our owners which is 45 municipalities. So

there's a lot of focus on this first last mile bring you combination , so previously the rules were much more restricted on which busses you were allowed to bring your bike on , now for the simplicity of all busses you are allowed to bring up to two units at it is a fair get to say that this will develop further

D: I think you said that there were some restriction on the lines so probably so f.eks I see ythat but only in rush our?

A: yeah

And 5C is actually only one of the few busses where there's room enough to bring busses

Teah because they are extra long. The figuration of the bus also allows this

T: its very specificfyed and detailed on the homepage which buslines and when and how to DOT

You need to have a ticket to bring the bicycles which is equivalent to a child fare.

T have you tried to buy a ticket on the bus?

N: no of cause I could look it up at DOT

A: you can do it on your travel card: It's more tricky on the bus because you have to ask the driver to change

T: yres he has to prepare the but is is a lot of working around the menu for paying their ticket for busdriver so in many cases in many cases they ok just get in

D: yaeah as I already told Nina, there was one situation and I though about getting in a train bus . It was when I should have a shot of the vaccine. It was when I was going flat tired and I had 3 km more and there where more 6 to returnal . I thought if I should ask a bus driver burtt I didn't know at all

A: that something we have to work on. We have done just for your information we have done a few test on how to make room for more bicycles because it is a common political topic and this is extremely difficult. You know from abroad you can put your bike in the front of the bus on a hanger . this is not allowed in Denmark. This is the trafikstyrelse. There is the possibility to put it on the back on a hanger. In order to do that the driver has to get out of the bus to check which takes time which is not compatible with the time table. Then we have tested a trailer, we did that six month and we had very few. So it is sought of catch 22 but at the same time we have vocalized group wanting this opportunity and it makes sense from a logical and mobility point of few just like the two cases that you are working on

N: I have a question. Do Movia actually want more users that we already have of public transport users

A;: within the buses?

N: yes, don't think about bikes, do they want more users?

A: oh yes

T : of cause

N. but why don't you do something about the problems then? Like for inddistance Rørvig Friskole often experience that the children that come from Egebjerg. They have to change in Nykøbing and then apparently you think punctually ty is better than making sure4 that busses connect. So this bus to Rørvig drives two minutes before the other busses arrives. And why is punctually better that ensuring connections

A: Making a time table for a bus is well out of my competence, but it is extremely difficult. I just had a tresh course in this and it's actually in Odsherred, because I have the same issue, i'm working with the highschool in Asnæs, they have the problems.

N: In Asnæs? In Odsherred?

A: Usually in a busline there are three main characteristics, you have a station and we have a station this is a typical of a bus route that it will service the station and community and then we have a school up here and we have a school here and these kind here have to get in at 8 and here at 8:10 so in order to have a bus connect to the station when the train is running the time table of the train and it should meet this starting time to the specific school, so it is a very typical question. So we often get the feeling that we get into the station and the bus leaves the second you have gone to the station and there's an hour to wait. We are working on that. We tested for the past year a system at selected stations where we actually have a communication tool between the driver of the train and the bus because sometimes the bus can wait up to let's say 10 minutes. It doesn't really effect the rest of the timetable. It will still make it in time to the other station, where it has to return and pick up people coming here. But it can't wait indefinite because it will effect the whole system, so we have tested our communication tool between the busdriver the train given these leadways of how long can you wait. In the ultimate situation we hope that we can get this to work

N: but now you have quite a lot of time in Holbæk because the train needs to catch the other train from Kallundborg to Copenhagen, so of course we who are going to Copenhagen we would not like to wait too long in Asnæs, but now they have changed the timetable, so now you actually have 10 minutes at Holbæk before the trains go.

And this is something that we wish we would have known earlier. Doing a timetable for a bus- because of the contract, we don't run busses. these are all contracts that are out which means that we have made a contract for 6+6+6 years with a private company running the bus. If we have to change the contract, we need to give them at least half a notice, so if we change the timetable, we need to give them at least half a year notice. Otherwise they can come back and say we gonna terminate the contract or they can say we want more money, so what happens in this case exactly is dsb changed their timetable and they gave us one month notice when they changed the timetable. When they changed the timetable we have to adjust everything also the local train which is run by us

N: and all the busses that connect to the train.

A: yes and all the busses that connect to the train. It is just to say that I have a profound respect for my colleagues working with this because it is not easy

N: yeah

A: Maybe the rule of the problem is that we don't get this knowledge back. So if no one tells us that there is this disconnect of 3- or 2 minutes at a specific point how should we know?

We can see it in the time table but if it is the later the one way or the other it is very very difficult, so it is soothing that we are working on now with the new digital "passageranmelding" passenger reporting.

Maybe you have seen it at the back of the busses A1?

N: I have not seen it but I called Movia kundeservice and they said if you can tell us exactly the time where it went because I have tried to run out of a bus and push on the doors of the train and the train goes

A: yeah this is just extremely complexed. In the best of our world we would have this connectivity the leeways in some cases you can wait up to ten minutes if the train is later than 10 minutes, then you would have to live

So in the best of all worlds we would have this communication. Of course we would also have to have these communications where the buslines meet. We are not there yet. I'm sorry to say we are not there yet. We are working on it.

N: yeah, because I had a proposal, but you are going to say that it is not possible. It's because Nykøbing station, why could you not make this like a spot all buses meet at the same time. Of course they need to reach the ferries and everything, then people would not have to wait if they could just go from one bus to another if you work with Nykøbing or Herrestrup station

T: we had it in Odense and they abandoned it because it is really really vulnerable. There only need one busroute to be a bit delayed before the whole system collapse. So if you have two or three buses that are a bit out of time then you will not get that connectivity and you cannot get all those different lines so now they change the system in Odense. Perhaps in this smaller area

A: it is definitely a focus point although we don't hear it enough this is a typical comment

N: what about in peak-season, why couldn't you run it like you do in Copenhagen, because there are so many people that it is actually so crowded that you can run more frequency buses so, now you talked about you have these contract that the reason why you cannot run peak season buses?

A: No, we have actually in the other end Guldborgsund, that also a big ned til Gesser southern tip of Denmark. It is also a summerhouse area. They actually have summerbuses running so this is definitely a possibility to do that. It takes two things. It takes first that someone suggest it. And secondly that the politicians of the municipality are willing to pay for it because the system as it is that all municipalities pay for their buses in their own municipality, and there are few buslines that goes out of the municipality. They are paired and if they cross more than one municipality typically they are regional lines and they are paid by the regions. But this summerbus thing could be an option but it needs finance and it is not cheap.

We don't have a single busline at movie that is sufficient.

N: what do you then think of this plustur. I saw a webinar where I heard you were working with this plustur and I knew our new borgmester in Odsherred she likes the idea of this flextrafik

A: do you know the flextrafik and plustur

D: no

N: it's a bit like a taxi?

T: it's a combination of a taxi and public transport. In movie we have variations of public transport from train to bus and to flextrafik where you as a user of public transport call into an office and you can say then your bus comes to your place, so there's a minimum of two hours in advance that you have to order this tour so we can plan for so then actually the car itself is a taxi or a minibus from local taxi companies so we bit out a tender and we bit on it and they bit on that service so they drive that amount of hours or tours for us, and then we combine the taxi with the public transport with the bus or train. Some municipalities have it, because it's a good way to have public transport in f.eks. a rural area where a public bus system have very few users. It's cheaper to use this system.

D: and it doesn't require a minimum amount?

N: yeah I tried it in Jutland last summer. We were two people on this summercamp who had called, but we going to the same place, so it was a bit stupid that there were two cars coming for us. In the end we just went two persons in this one car, but the other car had come for no purpose you can say

A: that's not usually the case, because we have at the top floor here, there are about 50 people full time employed to avoid this kind of thing.

N: ok

T: I'm sure they didn't do it intentionally

N: How do you see plustur because I just see it whether people had their own private car or whether they when in a plustur, it would not make any difference because it is still one car

A: from an environmental point of view it would be an advantage in the sense that the first main part of the trip would be by public transport if that's a requirement I it is a plustur. But if it is a flextrafik trip it wouldn't make any difference from an environmental point of view. Except that we have the ambition by 2030 all our plusturvehicels should be electric.

N: I think it was flextrafik and not plustur. I actually didn't know there was this difference.

A: plustur is a rather new thing. Lot of other public transport authorities have other systems. They would have a half price for young people or a lot of different variations.

D: because I was thinking that a bus that went from place one to place two. Like f.eks. the bus usually passes here. And I was thinking this person lives here, this person needs so this person let's go around and go to the place. But is it almost as a taxi at some point?

A: it is a taxi, just at a lower cost

T: But flextrafik picks up other passengers

A: just to add to your thesis. We are working now with the municipality of Odsherred in a test actually at the station at Nykøbing where we will set up some bikesharing scheme exactly targeted at tourists. We also do some cargo bikes but it unfortunately won't be.....we hope it is going to get through this summer but I'm not sure we're going to be able to do it. So exactly for the summer tourists that has the summercottage, that hopefully arrive by train and then they can put all of their stuff in there. It's gonna be a test

N: I had several summerhouseowners saying that if there were more possibilities for renting bikes at the stations, so not just Nykøbing, but it should be at the stations of Lokalbanen, with possibility of renting a bike when you come at the station and you take the rest of the part to your summerhouse. It was at Lyngby. I was interviewing 10 people. There were 4 of them.

A: The cargo bike we are going to test possibly at Nykøbing and possibly at Vig in connection with the city renewal program. It is going to run for the next three years

N: What about Joe Jensen one of your colleagues. He was talking about the donkey republic, do you know anything about that?

A: We haven't talked with Donkey Republic. This is not the we are gonna go, because it's too expensive. So what we are gonna do at Nykøbing Sj. is we going to do the cargobikes. We are going to rent through the local bikes repair shops. We are going to do a tender just on it's way and then we are going to do some recycled bikes, so from the dumps we have a cooperation with the dumps. We are going to pick up the bikes there, they are going to be repaired by a local bike repair man, and then they will be put at the stations. So there will be regular bikes and then one of the bike shops also already have a service where electric bikes are available for rent. It's a small scale. We don't know how it is going to work and how it is going to work, but we are going to test it to see if there is a real need. If there is a real need I'm sure that there is an interest but it is always a question off... as with the busses, the busses run with huge subsidies. I guess it is 80 percent of the busses, the cost of the bus is subsidised. So in order to have a bicycle service available locally it will need subsidise. So this is what we as Movia are working on. We are not just a bus company. We are a mobility company, so we also have to be able to make tenders for bike sharing for car sharing, for ride-sharing. So all these things we are testing exactly have to see if we can make a better match between public transport and other modes. They are more attractive than using your own private car.

N: and also getting these feripartners and those into play because met some who were renting a housing summerhouse and they said that if I had the possibility to for renting bikes I would not take my car, they said, so

A: There is I think it's at Møn, No it's Lolland so it's the southern western part of Zealand. Sorry not at Lolland, it's at Vordingborg. They actually made an agreement with older donkey republic bikes so this is the tourist organization that puts up these bikes. And that is. I think it makes a lot of sense, because we want to promote Denmark as the green alternative. It taps in to so many issues in the tourist segment.

N: Do you know how this renting bike system functions from the stations are going to be? Because I sometimes arrive at the station and I don't have my bike but I have to walk these two km home, but if there was this possibility of taking this bike and just leave it and the closest busstop. If you could leave the bike there instead of me having to rent a bike and I have to deliver it back again, then...

A: This is actually a test we are going to do at Odsherred is to figure out how are we gonna set up a system that is attractive enough for people to use it but doesn't cost a gazillion of Danish kroner in order to pick up bikes so if you have any ideas please...

N: but we have all these busstops around could that be a station for the bikes ?

A: yeah, it could be a hub, it makes sense

D: yeah but that problem where you leave the bikes is complicated for someone it useful to leave there but no one will pick there in two month or something some has to move it or do something

A: we had a talk with one of the electric scooter companies. Their biggest cost is the reorganization of these scooters, so we need to figure out how to do that.

N: Yeah, but that's maybe because they have a system where they have to get back. If it was ok that it was left at this place and it stayed there until another person came and took it and used it it could maybe reduce some of the cost transporting the bikes round

A: but that's exactly what we are gonna test. We are gonna test the electric cargo . Bikes with a lock and then we are going to do some of the free flowing bikes without locks and see if they sta.

N: and how are you going to test it if you don't have the stations yet?

A: but this is because we don't know how it will work so we will start at Asnæs target the high school. It's pretty simple. It's from the station to the high school and back. That's basically it. We will do that but unlocked, freefloating bikes and see how it works. Then at Vig we are going to do some other test and this might be one of them. We need to have the municipality to have a dialog with the users to find the system that will work for them because we don't have the answers, but we think the idea of making busstops hubs is a very good idea

D: so all the time that you want to implement just to go more to the actors and all the time that you want to do something in any commune you have to talk with the municipality. You don't have the....

A:authority

D: yeah

N: How do you think the Danish system work market oriented versus state. Så if it was only run by the market and you didn't need a licence. Don't you think there would be many more operators on market if you don't need a licence to drive, you can just drive when you see there's a demand.

A: are you thinking about busses

N: busses taxis what ever. Where you see a demand there would be an operator.

T: if we had a very free market you would also have to pay for drive in a city on a road because that's what you use. If we had a very market we would not have a public transport like ours. You would have more like these African bus routes where they sought of cherry pick . They drive from this area to this area because there's a lot of busses going there so they drive in mini vans. And then you pay like sought of a common taxi. Si that's a very free market no legislation at all, but we are not there. (laughing) in Denmark, so public transport is very much a public good and we seek municipalities at a political level that wants us to be able to live in rural areas where the ability to come forth and back is crucial to live in these areas , so it is subsidies in various and the ordinary bus routes in some of these places is a the fixed trafik because that's the cheapest way.

N: but wouldn't you..... now that you get money for running empty busses . If you didn't get these money you could run these busses you would work more to actually try to get more to get car drivers to use the bus , wouldn't you

T: then we would cut it off. We would not have. If we were more market based we would not drive busses there. We would only take the routes with the biggest amount of passengers. So there would be f.eks the route 150S from Nørreport to the north at Helsingør motorvejen it almost makes a revenue from ticket so it can pay itself. It's around 90 %. That's the best bus we have so we would take that busroute and some others and then we would cut other busses. So you would not have a busservice in Odsherred

A: Having said that you have a point. We have right now a technology where we drive from A with a fixed route depending on f.eks schools whatever, it is decided by the local politicians to have these routes to be but not in details, we do that work for them but we propose something and they pay for it

N: yeah but when I go home today there's not a bus. Why should it run during the day and not run when I arrive with my train and this incentive to investigate when are the people coming from Copenhagen and when do they need a bus. It's like it is absent

A: I don't completely agree with you if we are talking Odsherred I would say 90 % of the busses running in Odsherred are school busses. So they run on school times. Starting and stopping times that's it. Then there are a few lines that runs because they connect workplaces with the stations. But this is thought of first last mile from the stations and it has to do with these prices running these busses.

N: but if you were not public finances if I were mayor and I saw the publicity where Odsherred commune has put up " come and live in Odsherred you only have one hour by drive by car to Copenhagen then I would as Mayor of Lokaltog I would shout out, you can not do a publicity where you encourage people to take the car. It's against competition

T: yeah but we are owned by the municipality.

A: They pay our wages

T: we do what they say

A: we need to dialogue with them. But I don't think we can stand up and shout at them. I don't think they would appreciate that. Why 0:47:23

Spørgsmål angående lejecykelprojektet

Hvordan arbejder Movia og kommunen for, at Movias testprojekt med lejecykler skal slå igennem og blive en succes?

Hvordan undgår man at lejecykelprojektet ikke bliver ligesom så mange andre projekter, der stopper ligeså snart, at puljen med penge til projektet ophører, og man har set, at der ikke er nok brugere af projektet?

Er man kommet videre med at udtænke, hvordan folk kan afsætte lejecyklerne?

Har man startet samarbejde med Rejsekort og Rejsplan A/S om at gøre lejecykelen til en del af det overordnede billetsystem?

Hvis ikke, er der erfaring fra andre steder i landet?

Hvilke undersøgelser har Movia af, hvad folk mener om lejecykler i Odsherred?

Hvilken fornemmelse har Movia af, hvor stor opbakning, der er til projektet?

Spørgsmål angående busserne i Odsherred

Hvordan arbejder Movia på at forbedre busruterne?

Hvad er årsagen til, at Odsherred kommune vælger at nedsætte frekvensen af antal busser i weekender og ferier, hvor befolkningstallet stiger i Odsherred pga. sommerhusgæster?

Hvordan arbejdes der for at få busruterne til at passe med lokaltoget?

Hvilke elementer i busrutesystemet er det, som gør, at bustiderne sjældent passer med lokaltoget?

Hvorfor oplever passagerer at det nedprioriteres, at busserne skal passe med lokaltogets tider?

Jeg mødte en pensioneret trafikplanlægger, der sagde, at man burde lade busser køre fra og til lokaltoget i lige linjer ud til sommerhusområderne ved kysterne i en stjerneformet struktur, i stedet for at de tager større omveje eller kører parallelt med lokaltoget.

Ex: hvis du vil fra Asnæs St. til sommerhusene i Veddinge Bakker, hvor der kun er 5,8 km på cykel, så skal du tage en bus, der tager 30 minutter, fordi den skal ned sydpå til Fårevejle for at køre langs Vindekilde Strandvej forbi Ordrup Strand før den kommer til Veddinge bakker. Derudover skal du først vente 20-30 minutter på stationen, hvis du ankommer med lokaltoget på Asnæs eller Fårevejle.

Hvad tænker du om en reformation af buslinjernes struktur, der er til gavn for sommerhusgæsterne?

Annex 8 - Transcription of the conversation with Ole Plum

(Retires consultant at Lokaltog and chief of the Odsherred Traffic Museum)

O: Ole Plum

N: Nina Roitmann

Lokal tog

Penge Priserne og lønninger er årsag til at man lukkede passagererne ude af stationsbygningerne

Passagerne vil ikke betale det det koster at have stationerne åbne

Flere vil ikke bruge det kollektive hvis priserne stiger

2-3 millioner kroner om året vil bare en enkel station som Hørve koste bare alene i personale. Så bliver banens udgifter større og så skal der laves et budget, hvor man siger at man skal prøve at holde balance i det med tilskud fra staten. Det har været med til at holde billetpriserne nede, at man har lukket stationerne.

Det koster at vedligeholde og ellers er der hærværk, sidste år brugte de 400.000

Operatørerne er ikke dygtige nok til at koordinere deres trafik. Du kan ikke lave halvtimedrift på en busrute helt ud på pløjemarken

Du får ikke nogen til at være på stationen og åbne og lukke den uden at de får 25.000 kr. om måneden minimum eller 30.

N. men det er jo kun at åbne og lukke og måske holde varme?

Vi havde en pensioneret i >Svinninge hvor hun pbnede og lukkede igen om aften. Det gjorde hun af egne fri vilje. Da hun døde, ville de gerne have at nogen gjorde det samme og gjorde rent, men man regnede ud at det det kostede en halv million om året. Hvem skulle betale dem?

Folk vil have penge for det de laver i dag. Det er kun sådan nogen der er åndsvage her på museet der arbejder uden betaling. Det er åproblemet

N: vægler region Sjælland ikke samme løsning som region hovedstaden med at tillade gratis cykler

O: Det er jo en påolitik region sjælland hare

Det er overordnet politikerne i region Sjælland sammen med mopvia, for det er jo movia der også ejer banerne. Det er igen hvad vil den enkelte region og hvad har de penge til. Region sjælland har det store net i form af lokal tog Tølløsebanen Østbanen og Lolland banen. RHan vil ikke sige at region sjælland har sparet, men de står over for væsentlige større udgifter end mang af de andre regioner. Østbanen mangler stsdigvæk 510 millioner til at lægge nye spor ellers må de lukke banen om et år. Tilsvarende sporarbejder laver de i Norge uden at lukke banen

Banedanmark der ejer statens strækning. DSB køre på dem. På Odsherredbanen er det Lokaltog der både ejer spotrene og ejer banen og kører togene. Når de skal lave noget så er de ikke interesseret i at genere trafikken mere end højst nødvendigt. Banedanmark glemmer slutkunde. Det er dig og mig. De tænker kun på at de skal tekste på politikerne så når de skal lave sporarbejde, så siger de til entreprenørerne at de skal

lave de så billigt som muligt. Så siger entreprenørerne at det kan de godt men det tager 5 måneder fordi vi arbejder ikke lørdag og søndag fordi så bliver det dyrere

Tilgængæld får DSB en udgift på togbussersom banedanmak er ligeglade med. Sådan en som Ole udregner hvad koster det at køre togbusser i alle de weekender i stedet for at betale arbejderne til at arbejde i weekenderne, hvis man havde gjort det at de havde arbejdet i weekender og man kunne have sparet ca. 50 millioner

N: på at passagererne blev i den kollektive transport også ik?

O: sikkert også det. Det ene med et andet. De har været i Folketinget foreløbig 3 gange lad os sige at det at de arbejder i weekenden ville koste 100000 men samme weekend kørte man busser hvor de kostede 130000. Så havde det været bedre at de arbejdede og togene havde kørt hurtigere igen. Det er hele tiden en balance akt og begge parter skal lave det for politikerne. De kigger ikke på slut kunden

Du får ikke folk der skal i sommerhus, de vil køre når de har fået læsset bilen og så vil de afsted. De vil ikke gå ind og stå og vente på en station. I gamle dage ikke mange år siden der kørt der ekstra tog til København og om lørdagen og søndag morgen kørt de ud fra købbenhavn. Der var ingen med.

N: bilfrie dage

O: Men der er fordi det er en periode. Hvis det var permanent Problemet med den kollektive trafik er at den skal være der når folk gerne vil bruge den. I gamle dage da banen åbnede, der var tog 3 gange om dagen i hver retning. Et om morgenen et om middagen og et om aftenen og et sidst på eftermiddagen-først på aftenen og det var folk tilfredse med fordi de tilrettelagde deres dag efter toget. I dag tilrettelægger man sin dag uden at tage hensyn til toget og så finder man bare en anden løsning. Movia og Lokaltog, de laver til december de laver et forsøg nede på Lollandsbanen som man har fundet penge til fredag aften og lørdag aften kører to ekstra tog ud på natten for at de unde kan komme hjem og more sig og hvis man har været i teateret så kan man komme til Nakskov. Men det er et forsøg man laver , men selve forsøget koster 300.000 om året og hvis nu der ikke kommer nogen rejsende så forsvinder det jo igen.

N: men hvad gør man for at gøre folk opmærksomme på det her for jeg hørte Movia også havde kørt et forsøg med cykler med på busser og så var der ikke nogen der ingen der benyttede sig af det selvom der var mange der havde efterspurgt det

O: I Frederiksværk der kørte man med bus og de var tomme og man annoncerede med heltidsaviser og ugeaviserne, man annoncerede på tv2. Der kom ingen. Og nu kan man bare se and man har annonceret med rejseforbindelse til skil nede i Høng næste uge. Hvor mange har reflektere på at få en billig rejse derned? De regner med at der kommer 50000. Der er kun 6 der har købt en billet og så har man lavet ekstra tog for at kunne betjene dem og de folk der skal køre togene og man har annonceret for det heltidavisen by og land og Movia og lokaltig køre ekstra oven i købet mellem Holbæk og Lyng ingen gang melle tølløse og hyng, mellem holbæk og hyng.. Så der 6 der har taget i mod tilbuddet.

"Folk de tænker kun på sig selv, Nina" og det er det du skal op i mod og det er det Felix også er oppe imod.

N: fortæller om resultater i spørgskemear om at folk ikke ser trængsel som et problem men siger at de går op i miljøet

O: De siger at det vigtig men de tager ikke hensynet selv, men netop når de siger 1 til trængsel, så er det jo netop det der er problemet at folk vil 100% disponere over deres egen tid.

Når de er færdige med morgen kaffen om morgenen og skal på 4n tourist udflugt i løbet af dagen så sætter de sig ud i bilen og så spekulere de ikke på trængslen. De spekulere over at de er utilfredse hvis de ikke når frem til målet til en rimelig tid men så er det for de har selv bestemt hvornår de vilkøre og hvornår de vil være fremme. Hvis de derimod var færdi med morgen kaffen klokken 7:15 og toget køre fra stationen 7:30 og de kunne tage bilen eller stycylen til stationen. Det vil de ikke. De er ikke herre over deres egen transport tid. Spørger "hvorsdan føler du det når din tid er tilrettelagt?". Så er det selvfølgelig klart at det er meget vigtigt at man kan regne med togene og regne med bussen. Det nytter ikke noget at sige at man kan køre til nykøbing på 45 minutter hvis det tager 43 minutter for de er næsten altid forsinket. Det er bedre at sige at det tager 45 minutter. Så kommer de frem rettidigt. Da der blev lavet dobbeltspor mellem Holbæk og Røskilde lovede man at man kunne spare 8 minutter mellem Holbæk og København og så lavede de en køreplan hvor de kørte 8 minutter hurtigere. Stort set alle tog var forsinket og folk brokkede sig for de kunne ikke hente børn til tiden. Næste år lavede man køreplanen om og førte den tilbage til de gamle minuttal. Det blev 2 minutter hurtigere, men togene blev rettidigt. Så kom folk. Det er vigtigt. Det vigtigste er at man kan stole på det. Så det ikke noget at det tager 2 minutter længere

Rebitalisering af jernbanen af danmark. Det er et oplæg nogle stykker har lavet til politikkerne til debat rund omkring, hvor man kommer til et forslag til en ændring af strukturen, så det ikke er Movia. Movia er et udmærket busselskab men de er ikke altid lige veltænkende omkring jernbanerne

N: hvad er årsag til at man ikke længere har direkte tog?

O: Der var ikke så mange rejsende der brugte det. Det var jo kun i myldretiden og det var kun i weekenderne og i ferietiden. En anden ting var at de nye signalsystemer hindrede at ældre tog ikke kan køre på de nye signal system. Det er jo det samme der gør sig gældende lige i øjeblikket men lokaltog får jo nogle nye tog om nogle år, men i øjeblikket kan de ikke køre til københavn de tog der køre heroppe. Det kan sagten køre på skinnerne men ikke efter signalerne fordi teknologien ikke passer til det nye signalsystem, men det arbejdes der på.

N: men det bliver løst med de nye batteritog

O: De nye batteritog vil få det nye signalsystem selvfølgelig. Så det

Du skal bruge pendlertjek

Annex 9 - Notes from interviews and conversation

Visit Odsherred

Mange har cykler med

Man tilbød cykler for 20 år siden. Der var typisk cykler i sommerhusene

Men i dag er cyklen en videnskab. En cykel er ikke bare en cykel

De begyndte at få spørgsmål til, hvor høje cyklerne er hvor mange gear der er på den, so they took a decision that they could not managed it

They experienced that when people came to a summerhouse and there were not air in the dæk og the bicycle

Eller også var det skæve hjul der blev klaget over

De cykler, typisk star de omme bag i et skur og der har de stået over vinteren så they have gotten rust. Those who has

Der er andre krav til cykler

De anbefaler andre udlejere hvor de så kan leje en cykel der passer præcis til hvad de vil have

Earlier they had 30 bikes that they rented from office Så har et sæde været monteret for højt.

Møde med borgmester kommunaldirektør og borgere

Det er noget der bliver arbejdet med hele tiden. Lige om lidt skal vi vedtage denne her klimaplan også, hvor vi binder os op på de her mål, så det kommer der jo til at være nogle initiativer i mod. Jeg tror ikke cykelparkering er en del af det men jeg er meget enig i at der er mange ting der kunne løse sig hvis vi ver bedre til at cykle blandt ndet også ude iu Rørvig som er fyldt med biler og egentlig skimer landskabet rigtig meget og gør det rigtig besværligt, hvor je undre mig lidt over at hvis man bor i sommerhus eller os der bor lokalt hvorfor er det at vi altid skal tage vres bil til alting, hvorfor er det at vi altid skal parkere oppe ved siden af når vi skal nogen steder så noget af det handler jo også om at få ændret noget kultur og det gør vi jo kun ved at vi taler med hinanden

Bourgomester: problemet er at vores kommune er så geografisk stort hvor man siger hvor er sommerhusområderne? Det jo ikke bdtre lige placeret et sted der jo virkelig et stort område også

person 3: så er vi også tilbage igen om at vejene er for farlige. Hvis du har en supercykelsti der går gennem markerne , hvor der ikkke er nogert trafik dem vil man da gerne bruge, men man vil ikke køre med livet som indsats på en landevej

1 person: I randers , der har vi et meget tæt bysamfund med 92000 mennesker og der er elcykler du kan låne nede på stationen og noget af det udlejningsfirmaer ne bruger størst tid på at sa,mle dem sammen igebn.- de har heldivis gps på dem så de kan finde dem , men de bliver smidt alle vejne

2: person. Det gjorde ,man også i København

Borgmester: jeg kunne godt tænke mig hvis vi fik lavet en større tradition, så når nu man så var i sommerhusene der ude at når man skulle nogen steder at man så cyklede. Også os der bor her. Ikke kun når man bor i sommerhus at man prøvede at få dem motiveret lidt mere daglig dagen at få dem brugt

Rørvig Camping

Mange har deres egen cykler med

Hun havde gode erfaringer fra Lolland og Dunkey Republic og den app de brugte

De havde talt med cykelbutikken i Nykøbing ved dyreklinikken, men han var ikke interesseret

Hun havde ikke meget til overs for VisitOdsherred da de slet ikke vidste at der var en campingplads i Rørvig

[Annex 10 - Interview guide with Passagerpulsen \(Anders Albrechtsen\)](#)

How often do you perform the surveys?

Do you also investigate the purposes of their trip. And the reasons for their choices?

Have you done passenger surveys regarding the experience of public transport in rural areas?

Have you done surveys regarding the experience of the security of cycling in rural areas?

Have you done passenger surveys regarding travel for weekend trips and for summerhouses ?

I have seen several complaints on Facebook from elderly people and handicapped complaining about having trouble with the entrance of the trains. Soon we are going to substitute the old local-trains by new battery-trains.

Have you done any surveys investigating the passengers wishes regarding the design and improvements of the new battery-trains?

For instances:

Is there a demand for the possibility of bringing cargo bikes onto the new battery-trains?

Creating the possibility of bringing cargo bikes onto the trains could it suit trips with cargo-bike trips combining public travel?

How much load can people bring on their bikes before they choose

What methods do you usually use when you perform surveys?

Annex 11 - Letter from Siemens

SV: New form submit for "GL-EN-Contact_general" requires your attention. // FLCS-01637797 [ref:_00D1I3ntGf._500672UvWb2:ref]

18. marts 2022 20.47 42 KB

Fra:

Hansen, Carsten Langhoff <carsten.l.hansen@siemens.com>

Til:

nina@roitmann.dk

Dear Ms. Roitmann

Thank you very much for your questions and I hope that I with this response is able to answer them all.

It's correct that we were on Tuesday the 15th of March was announced as the preferred bidder for a contract to supply 7 battery trains to Midtjyske Jernbaner.

These trains are intended to operate on 2 lines in the western of Jutland.

A bit earlier this year, on the 23rd of February, we were prequalified to bid on a contract to supply minimum 14 battery trains to Lokaltog. In total 3 different manufacturers is now able to bid for this contract.

But this is an ongoing process which will take the most of this year before a decision will be made public on who will be the supplier of those trains – We of course hope that it will be us.

I think the last contact is what is most interesting for you, so you will have to have a little bit more patience – Sorry

When the battery trains as expected will be going into passenger service at Lokaltog in around 2025/2026 it will be on one or more lines at Zeeland and/or Lolland (All in Region Zeeland) but not necessary on all of these 4 lines:

- Lollandbanen
- Østbanen incl. the line to Roskilde
- Tølløsebanen
- Odsherredbanen

If the trains in the future will run beyond these lines we can only hope for, maybe as far as Copenhagen. To provide better connections between different parts of the country and offering an journey that is faster and with fewer exchanges between different trains.

All in all providing a more attractive public transport.

Regarding the comfort of the journey I will due to the unclosed process not be able to say anything specific to the bid we are currently working on.

But usually it's the buyer of the trains that are requesting the level of comfort which we then try to fulfill.

Meaning that it's Lokaltog who are buying the trains, which again is mainly owned by Movia which again is

owned by the Region Zealand (and others). It's in the end the politicians that provide the funding to buy trains and therefore they can also require the level of comfort.

In general I can say that there are a high level of focus in Denmark that new passenger trains are fitted with:

Large flex areas providing room for bicycles and prams. Even more than what we have seen in the past. Wide entrance doors is also in focus as well as level-free entrance (for 550mm platforms which is the standard platform height in Denmark)

Unfortunately a lot of stations have platforms lower than 550mm as there in the past was different standards and for regional lines it was very common to have only 350mm platforms which until this is changed will require a ramp for wheelchairs and properly also for cargo bikes.

If the operator Lokaltog will allow cargo bikes in the future!!! I don't know, you will have to ask them.

Room for working with a laptop is also an option but depending on the operators requirements towards passenger comfort.

It's today almost standard to have outlets at all fixed seats (230V or USB) and also inductive charging in fixed tables is now being introduced as an option.

Fixed tables are possible in vis a vis seating (Passenger seats normally found in groups of 4 seats, where the passengers is facing each other intended for groups traveling together) and tip-up tables in airline seating (Seating in rows like in an airplane).

But again depending on the operators request!!

I hope that this answers your questions, if not please don't hesitate to contact us again.

With kind regards
Carsten Langhoff Hansen

Siemens Mobility A/S
SMO NEE RC-DK S
Borupvang 9
2750 Ballerup, Denmark
Phone: +45 23821238
<mailto:carsten.l.hansen@siemens.com>
www.siemens.com

Siemens Mobility A/S, Borupvang 9, 2750 Ballerup, Denmark. Tel: +45 4477 4477, CVR-no. 39 49 27 68

Important notice: This e-mail and any attachment thereof contain corporate proprietary information. If you have received it by mistake, please notify us immediately by reply e-mail and delete this e-mail and its attachments from your system. Thank you.

From: dynamics-marketing.mobility@siemens.com [dynamics-marketing.mobility@siemens.com]

Sent: 16.03.2022, 10:39

To: contact.mobility@siemens.com

Subject: New form submit for "GL-EN-Contact_general" requires your attention.

Dear colleague,

A new form submit for "GL-EN-Contact_general" has been received with the following details:

Form Template: GL-EN-Contact
Salutation: Prefer not to say
First Name: Nina
Last Name: Roitmann
Email: nina@roitmann.dk
Company Name: Aalborg University
Customer:
Country: Denmark
Language:
Industry: Others
Mobility:
Job Role: University Student

Write message: Dear Siemens I have read in the newspapers that you are going to deliver battery trains for the local railway systems in different parts of Denmark. I have questions regarding the design of the new battery trains from a user perspective. I'm studying Sustainable Design Engineering, and I am often traveling from Nykøbing Sjælland by train to Copenhagen, where one of the new battery trains is going to run. Many people living in Copenhagen have a summerhouse in Odsherred. Today it is not possible to bring cargo bikes onto the trains. This means that if you must carry stuff for your holiday the only option is to use a car. It generates a lot of car congestion in these sweet summerhouse areas during summertime. Is it going to be easy to bring cargo bikes onto the new battery trains? Today, you must sit with your computer on your upper legs, if you want to work in the local train because there are no tables. Are there going to be tables in the new battery trains, so it will be easier for the passengers to do their homework or to work during their traveling time? Kind Regards Nina Roitmann

DOI: No
Date and time(UTC): 03/16/2022 09:39 AM
Form URL: <https://www.mobility.siemens.com/global/en/general/contact.html>
Form Referrer: <https://www.mobility.siemens.com/global/en/portfolio/rail/services.html>

Siemens Mobility
Service Management Dynamics Marketing

Annex 12 - Letters from Lokaltog 1

SV: Andre henvendelser

23. marts 2022 09.06 36 KB

Fra:

Kunde <kunde@lokaltoget.dk>

Til:

nina@roitmann.dk

Cc:

Kunde

Hej Nina Roitmann

Tak for din mail.

Det er lidt forskelligt, hvor vi tager cyklerne med gratis. I Nordsjælland kan du tage din cykel med gratis. Det skyldes, at Region Hovedstaden betaler Lokaltog for at medtage cyklerne.

Det samme gør sig ikke gældende på banerne på Sjælland.

Med venlig hilsen

Kundecentret

Hanne

Lokaltog A/S

Jættevej 50 | DK-4100 Ringsted

Telefon +45 7020 0054 | kunde@lokaltoget.dk

www.lokaltoget.dk

Fra: noreply@lokaltoget.dk <noreply@lokaltoget.dk>

Sendt: 19. marts 2022 11:23

Til: Kunde <kunde@lokaltoget.dk>

Emne: Andre henvendelser

Navn: Nina Roitmann

Telefonnummer: 53967494

Email: nina@roitmann.dk

Besked til Lokaltog: Kære Lokaltog Hvad er grunden til, at det ikke er gjort gratis for passagerer, at medbringe cyklen på Odsherredbanen? Jeg har hørt, at på øvrige strækninger, hvor cyklen er gratis at medbringe, bliver de tabte indtægter dækket af, at man får flere passagerer i den kollektive transport. Kunne man ikke forestille sig, at især om sommeren, hvor bilismen eksploderer i Odsherred pga. af sommerhusgæster, ville det give mening at gøre cyklen gratis? Mvh Nina Roitmann Vedhæft evt. dokumenter: -

Annex 13 - Letter from Lokaltog 2

Anvendelse af stationsbygninger på Odsherredsbanen

10. marts 2022 07.36 13 KB

Fra:

Katja D. Joost <kajo@lokaltoget.dk>

Til:

nina@roitmann.dk

Cc:

Kunde

Hej Nina,

Tak for din henvendelse og forespørgsel vedr. stationsbygningerne på Odsherredsbanen.

På og langs Odsherredsbanen er der alene 3 stationsbygninger, og disse blev i tidernes morgen opført for både at rumme ventesal, billetsalg og ikke mindst administrationen af banen.

Bygningerne bliver i dag anvendt til andre formål, herunder andre erhverv, og der er på de fleste stationer i stedet opsat læskure til passagererne, ligesom billetsalg i dag stort set alene er overgået til "rejsekortet" der jo optages digitalt.

Vedligehold af bygningerne og de generelle forhold på stationerne påhviler Lokaltog A/S, og en sådan vedligehold og behovene for forbedringer på stationerne bliver vurderet ud fra behovene på stedet.

Jeg håber hermed at have besvaret din henvendelse.

Med venlig hilsen

Katja Diana Joost

Koncern Jurist

Tlf. direkte: +45 28355993 | Tlf.: +45 7020 0054

e-mail: kajo@lokaltoget.dk

Lokaltog A/S

Jættevej 50 | DK-4100 Ringsted

www.lokaltoget.dk | LinkedIn

Annex 14 - Interview guide Odsherred Municipality

Nina Bruus (climate and process coordinator) February

Klima- og proceskoordinator

Spørgsmål til Odsherred Kommune

Oftentimes we hear that the collective transport is not getting enough money to be able to provide a good service. But is that the reality in Odsherred?

How do you work with reducing congestion?

What is the municipality responsible for in the traffic plan?

I talked to one of the local train stations, who said that they don't expect any improvement at the stations in the next few years. Do you have the same message? And how can it be that you accept this?

How does the municipality contact the transport companies?

Who is responsible for pushing for development?

What do you know about the transport needs of the summer houses?

Annex 15 - Email from Nina Bruus Odsherred Municipality

Hej Nina

I have just tried to call you regarding the phone booking, you have made.
I got the message that your husband would forward my number to you.

Now I discovered that I also have your email address, so you will also get it from now on.
You are very welcome to try to catch me on 59 66 60 99.

Venlig hilsen

Nina Bruus Nielsen

Klima- og proceskoordinator
Center for Miljø og Teknik

ODSHERRED KOMMUNE | NYVEJ 22 | 4573 HØJBY
DIREKTE: +45 59 66 60 99 | +45 20 67 06 19
nibni@odsherred.dk | www.odsherred.dk

In Odsherred Municipality we have a 4-day working week. This means that you as a citizen or company will have access to many more meeting times on Monday to Thursday. [You can book time here.](#)

Annex 16 - Note from telephone meeting with Nina Bruus Odsherred Municipality

Samtale med Nina Bruus (February)

De sidder to i og arbejder med klima

She is going to have a meeting

She did not know much about how the structures of cooperation when to improving the public transport

Hun sidder og skal lave de kommende klimaplaner

Hun kunne ikke sige noget om hvilke til tag de kunne gøre. De er ikke kommet dertil endnu. Der skal til og i gang.

Hun skal til et møde om, hvordan de vil levere data på trafikområdet

Det er en mobilitetsplan, der skal laves.

Mobilitetsplanen godkendes i klimaudvalget. Når den er godkendt er der nogen der sidder i trafikteamet som skal være tovholder men det afhænger meget af, hvad der er af ressourcer

Hun tror på at det her med cykelstier vil hjælpe så forældre ikke hele tiden skal bede børn om at køre ind til siden

De har byfornyelser hvor busserne kommer til at køre ind på en anden måde på stationerne i Asnæs og nykøbing

Hun var enig i at det godt kan være svært at overskue hvem der skal tage handling

12 % af trafik-udledningen skal reduceres

De er blevet kontaktet af gate 21

De lader sig inspirere af andre kommuner, hvor har en reduktion på 12 % reduktion

Hun var enig i at det er ikke så effektivt at sige til kommunen, hvor der er problemer,

De har haft en del udskiftning

Hun foreslog at stille følgende spørgsmål til sommerhusejerne.

Hvor tit kører folk i sommerhus?

Selvom de ting var der, vil du så bruge det?

Hvad skal til for at ændre vaner?

Hvad skal til for at Odsherred bliver en cykelvenlig kommune?

Vil lejecykler være en ide?

Har man brug for lade standere til elcykler?

Samtale med Nina Bruus (April)

Har fået rapport med data

Stor andel starter fritids ture under 2 km

Det er politikere der beslutter hvilken busdrift vi skal have

She does know who provides the information for the politicians

Normal er det arbejde der er bestilt for politikere

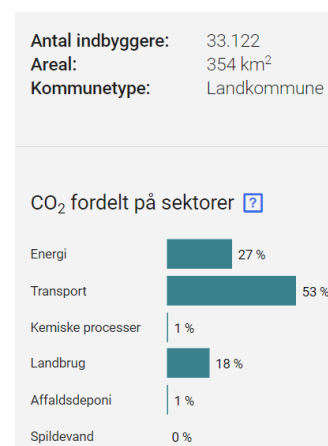
trafik@odsherred.dk

hun skal lave en opsamling en orientering Hun vil sammenligne med andre kommuner f.eks

Lolland hvor flere cykler

Annex 17 - Critical reflections on Concitos suggestion for how the municipality can reduce CO2 emissions from traffic?

Concito is helping the municipalities of Denmark with the introduction of climate plans. This section is going to look at the recommendations made by Concito and how their suggestions can help Odsherred solving the transport issues of the summerhouse owners in Odsherred. The climate plans will have a great impact on the traffic, since the climate plans is about setting goals and plans for how to reduce CO2 emissions from all sectors emitting CO2. When looking at the statistics made by the Energy Agency of Denmark of the CO2 emissions in the municipality of Odsherred, it is found that the greatest emissions come from transportation.



20 municipalities in Denmark started the work of introducing climate plans in 2019 and 15 municipalities has already made a plan (Realdania, 2019). 45 communes have started in 2020 and the remaining commune has started an appliance in august 2021. The process is provided by Concito, the counseling is financed by Realdania, the region of Denmark and KL and the plans are developed by the municipalities (Concito ,n.d.).

According to Nina Bruus that was contacted in the month of February 2022 the municipality has not yet started to work with the climate plans but they are going to create a climate plan. She said that in the month of April 2022 they would get data about the travel behavior in Odsherred that is going to be used to develop a new mobility plan in Odsherred.

The purpose of the climate plans is to meet the goals of the Paris Agreement using the C40 methods and there's a goal of reaching CO2 neutrality by 2050. The municipalities are creating part goals to be able to continuously measure how to meet the final goal (Realdania, 2019). Concito suggests that the commune has to look at the current situation today and thereby perform a forecasting. The purpose is to visualize what would happen if nothing is being done and to define what kind of action that should be implemented to achieve the goals. It requires a political engagement with a political approval that change has to happen. Meetings are held where different municipalities meet to learn from each other and to discuss what can be done. It is technical work and political work that involves other actors in the municipality where co-organisations and different actors attend.

According to Concito the commune can reduce a great amount of CO2 emissions, if the citizens convert their private fossil cars to electric cars. The commune cannot help with setting up electric power stations because that is a job of private companies, but they can point where to install electric power charges. According to my semester project on my 8. semester, which I wrote in co-operation with the car company, Daimler, the solution of converting fossil cars to electric cars will just create new environmental problems in foreign countries because of the issues of the management of electric batteries and non-renewal resources. If a municipality convert to electric cars they do not include scope 3 of the CO2 emissions and the CO2 emissions will just happen in foreign countries where the cars are produced and destroyed. Furthermore electric cars require energy, it would not solve the parking problems and car congestion and it would still damage the local environments in Odsherred. I therefore clearly disagree with Concito and I strongly discourage this solution.

The commune can also substitute busses by electric busses. Of course it will reduce the pollution of unhealthy particles, but this is the same issue was with electric cars, where the environmental problems of the electric batteries and non-renewal resources are moved to the foreign countries that construct the vehicles (Semesterproject, 2020). Busses on biofuels and hydrogen is not yet recommended

According to Concito the enlargement of the public transport does not always reduce emissions to a great extent. The public transport can obtain more passengers than single fossil cars, but most studies have shown that it is the passengers, that bicycle and walk that take the bus. It is not the car drivers and therefore the effect has shown to be limited. Less than 10% in the public transport are car drivers. New methods of attracting the car drivers should be introduced if this should have an effect. Concito therefore recommends restrictions of car use to encourage car users to use the public transport. If the public transport should compete with car traffic it is necessary to increase the speed of the public transport. It is necessary to create direct route because car drivers that has the possibility of driving directly to their destinations does not want drive detours on small rural roads. It is important that passengers can trust on the public transport and that it

is reliable with confort. This confirms the statements by the retired traffic planner of Odsherred Traffic museum stating that direct busses lines should be created to stations in Odsherred.

The feeder system has to be included, which means that combination travel such as walking, biking or driving to the public transport should be better coordinated. The ticket system can also be improved so it is more flexible and can fit to the need of the user. For instance because of corona more people may work at home and may not travel every day. During the lock down of corona a lot of people travelled to Odsherred. It was like there was a high season during winter time. Therefore this would be relevant for summerhouse owners that work on long distances. Corona has shown that it reduces transport so working from home is recommended to be continued. An economic strategy for the ,municipality is to encourage summerhpeople to stay longer in the second homes and to extend the peak season (Poltimäe, 2022).

Today it is only the busses that get subsidies while co-driving , sharing cars, bicycles and scooters is market based. Concito recommend that the subsidies could be prioritized differently assigning subsidies for other means of transport. According to Annette Enemark Movia has started a project of testing renting bikes that people can rent on the stations. There's a great potential in enlarging the system of rental bikes in Odsherred if it could facilitate connections from the stations to the summerhouse areas where there are no bus lines.

According to Concito Municipalities cannot reduce the emissions from motorways crossing municipalities, but they can try to improve the train service to minimize the traffic on the motorways or co-operate with Vejdirektoratet to reduced the allowed speed of cars. This point support the relevance for Odsherred to improve the train service and correspondences of the train if they should remove the cars from route 21. Odsherred municipality can not do much about the transit traffic towards Jutland but they can get in contact with the Molsline and Lokaltog to facilate more smoothly travel for passengers with the public transport.

So far the climate plans are only plans. When they are going to be implemented counterdictive goals about growth risk to go against the plans and therefore Concito suggest that coorordination with other plans and interests is important.

Annex 18 - Commuter personas, characteristics listed from Jensen 1999

The car drivers	
The passionate car driver	<p>Care for his/her car Love to drive Never uses public transport Has always driven a car Has no intention of stopping Listens to music /radio in the car Thinks of solutions to works tasks while driving Does not get stressed - not even in rush hour Does not experience car driving as waste of time The car is a symbol of freedom The car says something about your personality Believes the registration fee is too high Admits that cars pollute but not that it matter Most often a man Age 30 - 60 50 % chance of having children Usually live in one family homes Are employed</p>
The everyday car driver	<p>Commutes to and from work by car Think it is the easiest, quickest, and often cheapest Gives a sense of independence to everyday life Boring and hard to live without not a passionate driver driver of habit likely to have driven for many years If PT was more efficient and flexible it could be an alternative PT could never replace the sense of liberty Reluctant to do without car for leisure time Listens to music while driving Thinks of solutions to works tasks while driving Sympathetic to environmental problem foirm car pollution but don't wabt to relate it to their own driving Few wants to pay taxes Society has to solve the problem – would not give up their own car Age 30- 60 More than 50% chance have children Have finished an education</p>
The leisure time driver	<p>Uses the car in leisure time Use the car doing a big shopping Transport children to school and activities in car Visits friends and family by car Go on weekend trips and summer house by car Thinks that things are more easy done by using the car Thinks the transport by car is faster than bicycle Usually has a spouse that travel by car to work Car is used for transport - nothing more</p>

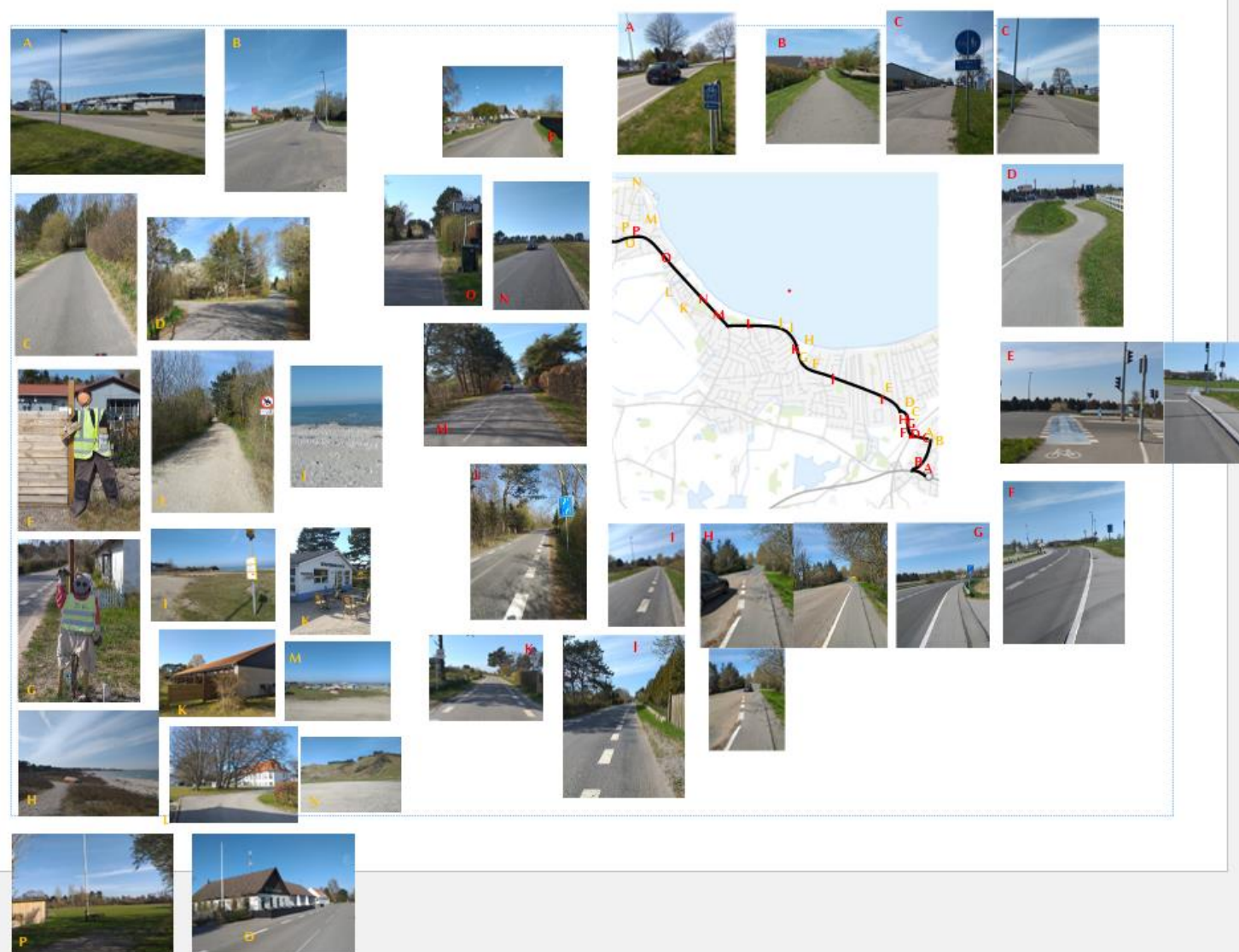
	<p>Maybe the car says something about personality but not necessarily</p> <p>If PT was improved and could meet their need they would consider it</p> <p>Would contribute money to a good cause</p> <p>Few more women than men</p> <p>All ages - surplus of age 50-70</p> <p>¾ live in one family homes</p> <p>Mostly a salary worker</p>
Cyclist / Public transport	
The cyclist /public transport user of heart	<p>Has voluntarily chosen to use the bike and PT</p> <p>Based on act of cycling</p> <p>Desire not to own a car</p> <p>Likes to cycle</p> <p>Sees positives side s PT</p> <p>Time in PT can be spent for reading or working</p> <p>Like to get “energized for work” by cycling</p> <p>Cycling is for fresh air and exercise</p> <p>Like to choose the scenic path that are removed from car traffic</p> <p>Thinks PT has become expensive</p> <p>Think it is a public responsibility to maintain good PT service</p> <p>Concerned about environment</p> <p>Aware of the car traffic problems</p> <p>Worry for future generations</p> <p>Aware of it has a price to protect the environment</p> <p>Are willing to pay the costs to protect environment</p> <p>Do not think that people always should have the free right to choose</p> <p>Thinks a good idea to double the price of gasoline</p> <p>45% are 20-29 years old</p> <p>15 % of this type in the population</p> <p>¼-1/3- have children</p> <p>60 % live in one family houses</p> <p>Many in this group are studying</p> <p>No one in this group is out of work</p> <p>1/4 salied workers</p>
The cyclist public transport user of convenience	<p>Usually urban dwellers</p> <p>Usually in cities</p> <p>Often a young person but also other age groups</p> <p>Bicycle suits his/her needs</p> <p>Often live work and study in cities</p> <p>Do not need a car</p> <p>Believes car difficult to get around in</p> <p>Believes car difficult to park</p> <p>Only travel on cycling distances in everyday life</p> <p>Use PT only for short travels- maybe to suburban areas</p> <p>No thoughts of purchasing a car in current situation but she/he will if the she /he moves out of cities or get a job far from where she/he lives</p> <p>young person rarely connect his/her own habits with the environmental concerns</p> <p>If asked she/he would do something for environment in the future</p>

The cyclist public transport user of necessity	Cyclist/ PT user of necessity cannot afford a car incapable of driving not allowed to have a driver-license single parent with a child young families outside work-force retired receives welfare payments the cyclist of necessity desire to have a car advantages of a car is greater than the disadvantages varies much whether “very green” or denies environmental problems

Annex 19 – table with elements to observe in a bicycle inspection

Punkter i en cykelstiinspektion:
Er der fremkommelighedsproblemer? (F.eks. belægning, cykelforhold)
Er lokaliteten farlig? (cyklisternes sikkerhed på vejen)
Er der problemer med beplantningen? (problemer med træer eller buske på cykelstien)
Er der mangelfuld skiltning? (Forklarende eller misvisende skilte)
Er der misvisende oplysninger? (F.eks. via vej optegnelser)
Er der dårlig vejbelægning på cykelstier og baner? (hvad består belægningen af?)
Er der dækplader ved vejarbejde på cykelstier? (jernplader eller gummilister)
Er der parkering af biler ved cykelstierne? (er der en sikkerhedszone mellem cykler og biler)
Kryds:
Er der tilbagetrukket stopstreg? (for bilister)
Er der et separat lyssignal for cyklister?
Er der før-grønt lyssignal for cyklister? (grønt lys for cyklister før biler)
Er der cykelbokse i området? (bilister kan have bedre overblik over cyklister)
Er der optegnet blåt cykelfelt? (som kan gøre cyklister mere synlige for bilister)
Strækninger:
Er der anlægning eller forberedelse af cykelstierne? (en formindskelse af vejbanen og forbedring af cykelstien)
Er der cykelbaner? (mindre end cykelstier)
Er belysning god i området? (hvor man tydeligt kan se forløbet af cykelstien)
Andet:
Findes der cykelparkering? (bedre forhold for cyklister)

Annex 20 – Bike inspection Nykøbing Sj. – Klint



Annex 21 - Bike inspektion – Hørve - Sanddobberne

