Understanding the Success Factors of Car Free Development

A Case Study of Stakeholder Interrelations and Management in Car Free
Development

by

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Abstract

The social, environmental, and economic impact of cars in urban areas are a rising concern of the public and policy makers since motorized vehicles have several negative impacts on individual health and climate change. Car free developments have induced positive changes in all three dimensions of sustainability. The development of car free cities, however, often encounters stakeholder adversity. To contribute to existing literature on barriers of car free development, this thesis will contribute to the understanding of the relevant stakeholder interrelations and particularly stakeholder management and what role they play in car free development.

A qualitative research study was conducted in the form of a single case study consisting of eight semi-structured interviews with six different stakeholder groups. The findings indicate that stakeholder management is critical in creating long term sustainable improvements, as changes in mobility policy such as car free development require a great deal of care when implemented. Moreover, the findings suggest that adequate stakeholder management is needed to overcome persisting stakeholder adversity and not further amplify social and economic issues. To what extent stakeholder management and interrelations contribute to a long-term sustainable development, is suggested for future research.

Keywords: Social Sustainability, Sustainable Urban Mobility, Car Free Development, Stakeholder Management

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1. Introduction

The concept of sustainability dates back to ancient times (Thiele, 2016), but with the ever-increasing threat of climate change, resource depletion, and biodiversity loss, the motivation to live sustainably is growing (McMichael, 1993). Significant changes in various fields have occurred over the last three decades, resulting in lifestyle changes and increased advocacy for sustainability from citizens, corporations, governments, political parties, and others (Thiele, 2016). As a result, sustainability has emerged as a critical issue for the public sector, that is confronted with environmental, social, and economic challenges (Niedderer, Ludden, Clune, Lockton, Mackrill, Morris, Cain, Gardiner, Evans, Gutteridge & Hekkert, 2016). A result of these concerns is a shifting focus towards progressive cities, which prioritize sustainability, equity, and innovation in their policies and practices (Clark & Christopherson, 2009). Most progressive cities are seeing car free developments, as they prioritize investments in green spaces, affordable housing, public transportation, and renewable energy (Johansson, Henriksson & Envall, 2019). This is mainly because the largest amount of CO_2 emission in the EU is caused by passenger vehicles, accounting for 61 percent of total CO_2 emissions from EU road transport (European Parliament, 2019). New developments and efforts to reduce car usage can be seen all over the world, with progressive cities serving as forerunners (Prasetyo, 2020). However, car ownership is continuing to rise as people are not able or resistant to switch to alternative modes of transport (Haustein, 2021). In response to this, cities have urged the concept of car free development to promote sustainable urban mobility within cities.

Car free development has the benefits of reducing air and noise pollution as well as increased greenspace due to the reduction in parking space and it leads to many health benefits such as higher levels of active and physical mobility (Nieuwenhuijsen, Bastiaanssen, Sersli, Waygood & Khreis, 2018). Most developments can be seen in the form of car free city centers that only permit certain transport and emergency vehicles road access (Patel, Gandhi & Bhatt, 2016). Despite this, there can be adversity of the public and businesses towards car free development, mostly due to concerns about retail sales and a resentment towards uncertainty and change, even though public and business acceptability is a requirement for car free development (Nieuwenhuijsen & Khreis, 2016). Moreover, Badiozamani (2003) argues that driving a car may appear to be a choice, while it can actually be a result of how a city was built. Because of the resilient character of the car market and

its continued economic gains, the likelihood of the market correcting itself is low because it would destroy the success of some of the current market winners (Foster & Kaplan, 2011). To restructure, several scholars have discovered the positive effects of stakeholder involvement because capturing knowledge and inputs of stakeholders is critical to meeting their needs (El-Gohary, Osman & El-Diraby, 2006; Mathur, Price & Austin, 2008). Lindenau and Böhler-Baedeker (2014) also emphasize the importance of stakeholder involvement in increasing sustainable urban mobility. This can encourage stakeholders to be involved in the development of innovative initiatives, implementing their needs, and experiences while increasing their level of ownership of the initiatives (Lindenau & Böhler-Baedeker, 2014).

1.1 Problem Statement

The rising interest in sustainability has drawn attention to car free city developments around the globe (England & Eriksson, 2020). However, most research concerns the meaning and different types of car free development while analyzing its potential (Melia, 2014). Although the benefits of car free development are generally accepted (Nieuwenhuijsen et al. 2018), there is little knowledge about how to manage it successfully. Based on the existing literature, it can be argued that this is a significant research gap in academic research that has remained unexplored within car free development. The question therefore arises of how car free development can be facilitated by creating public and business acceptability through stakeholder involvement.

One promising theory is Ed Freeman's stakeholder theory, which is a solid theory that uses a systematic approach to assessing stakeholders' diverse demands (Ackermann & Eden, 2011). Therefore, stakeholder theory could be a suitable tool to analyze the progress that a city, rather than an organization, goes through in a process of car free development, since its long-term implementation regards the complexity of stakeholder needs. However, because stakeholder theory centralizes one stakeholder in a hierarchical manner, it could be argued that it fails to understand the interrelationships between different stakeholders (Fassin, 2008). Since there is no clear hierarchy or centralized stakeholder in a city, the question arises in what way stakeholder theory can aid to understand the implementation of car free development. Besides, stakeholder theory lacks clarity in policy science and planning (Bryson, 2018). However, stakeholder theory has been used in similar attempts to understand stakeholder management from a public sector perspective, especially for risk control purposes and to empower external stakeholders, which is

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deemed to strengthen and improve public project outcomes (Waris, Khan, Abideen & Sorooshian, 2022).

Overall, stakeholder theory provides promising aspects that could facilitate the management of car free development, however, development of stakeholder theory is necessary to understand how it can precisely be applied in the implementation of car free development, as it is a new application of the theory. Therefore, stakeholder theory has the potential to evolve since car free development, which concerns inter-institutional relationships, is a new phenomenon in the field. Besides, it is relevant because no single stakeholder can account for all the aspects that are essential to a large-scale transition like car free development.

1.2 Purpose Statement and Research Question

The purpose of this thesis is to explore the role of different stakeholders in car free development through a single case study of a small city in the north of Spain, Pontevedra. The city has been actively implementing a car free approach since 1999 to counter the decreasing population by attracting citizens back into the city. The town implemented a comprehensive urban plan that prioritizes pedestrian and bicycle infrastructure, public transportation, and green spaces, with limited car access (Concello de Pontevedra, 2016). Different stakeholders were interviewed about their perceptions and experience of the car free development within the city. This method is thought to be especially interesting since it highlights the processes that cities that implement car free city development go through. This research aims to investigate stakeholder interrelations and management during the implementation of car free city development, using a case study approach. The purpose of this qualitative research is to create a new understanding of the success factors of implementation from a stakeholder perspective, while assessing whether a stakeholder perspective is a suitable tool in analyzing a city, which has no clear hierarchy of stakeholders. Furthermore, this research aims to give new insights about the perceived role of the public sector in accomplishing a car free city (center). The insights and gained understanding have the purpose of contributing to existing literature.

Based on the research motivation, this research intends to answer the following research question and sub-questions:

What role do stakeholder interrelations and management play in developing car free cities?

> *(i) How do different stakeholders experience car free development?*
> *(ii) How can the processes that cities, that implement car free city development, go through be understood?*
> *(iii) What are the shortcomings of applying a stakeholder perspective to understanding the success factors of car free development?*

1.3 Outline of the Thesis

The first chapter of this thesis is the introduction which introduced the background and problematization of this paper, following the purpose statement and the research question. The second chapter addresses the existing literature with a literature review concerning important definitions and central theories connected to the topics of urban mobility, car free development and stakeholder management and how these topics are interrelated. The third chapter describes the research methods used to conduct this research. The methodology chapter will cover the research design, data collection, data analysis, and the validity and reliability of this study. The fourth chapter lists the empirical findings by presenting the collected data. Additionally, a brief description of the setting of the research objects is provided to assist the reader to contextualize the findings. The fifth chapter discusses the empirical findings in relation to existing theories on the topic to add further insights into the topic and current theories. Following the analysis and discussion of the data, the final chapter concludes and summarizes the results of the research findings. Furthermore, this chapter provides theoretical and practical implications as well as addressing the limitations of this research and indications for future research on the topic of sustainable urban mobility and car free development.

2. Literature Review

The following literature review provides an overview of the existing research and theories which will provide the theoretical foundation for the research. First, the concept of urban mobility is introduced, leading to the changes towards sustainable urban mobility. Subsequently, a literature review on current car free development approaches, stakeholder implications, and challenges is presented. Thereafter, stakeholder theory is reviewed with a focus on sustainability and urban mobility. Lastly, a priori themes are identified and further elaborated.

2.1 Urban mobility

It is the overall conception that travel is an activity undertaken solely to get to a destination that provides a certain type of value (Malichová, Cornet & Hudák, 2022). Travel itself is seen as a cost, both from an economic and from a time perspective, which has to be minimized (Malichová, Cornet & Hudák, 2022). These principles have shaped the development of transport, making the speed of travel a key focus aspect. This increased speed of travel now outweighs the costs that travel imposes. Besides, urban expansion without innovative transport development has increased car dependence among people (Banister, 2008). According to Marshall (2001), the conventional approach towards transport relies on physical dimensions when it comes to planning and engineering, and besides the focus is placed on traffic, particularly on the car, whereas the street is seen as a road. Therefore, motorized transport is prioritized, which means that other modes of transport are formed around the needs of motorized transport. Since travel is seen as a cost, the aim is to speed up traffic, with the goal of minimizing travel time and people and traffic are seen as separate entities that should be segregated (Marshall, 2001).

The way that transport is organized right now is problematic in several ways, evidently, one being its environmental impact (Banister, 2005). From 1971 to 2001, the share of transport in global emissions grew from 19.3 percent to 28.9 percent, indicating the continuous increase of transport consumption (Banister, 2005). The last decades have seen many developments in the adoption of alternative energy sources, with the aim of reducing fossil fuel usage and dependence, however it is expected that alternative energy sources will not be able to cover the energy demands, at least not in the near future, and the production of some biofuels (soya and palm oil) has also been linked with rising emissions due to deforestation (Banister, 2005). The UN energy report describes how

biofuels are more efficient at reducing emissions when used for generating heat and power, rather than providing energy for transport (UN Energy, 2007). Furthermore, the generation of electricity and hydrogen through nuclear power results in high amounts of waste and the generation of hydrogen is costly and produces large numbers of greenhouse gasses if derived from coal-based electricity (Wright & Fulton, 2005). According to Banister (2005), although electric and hybrid vehicles are a good solution to reduce environmental impact in the short-term, the concept of personal vehicle usage would never become truly sustainable due to its massive energy consumption and resource usage. Also, apart from the environmental impact, there are complications in other relevant perspectives that cannot be targeted through alternative energy usage (Banister, 2005).

For example, transport has major health implications. First of all, traffic injuries are a prominent cause of death all over the world, for example accounting for approximately 34 percent of children's deaths in the EU (Zimmermann & Bauer, 2006). Cyclists and pedestrians are especially vulnerable in places where these modes of transport are not facilitated through sufficient infrastructures, causing the phenomenon that walking and cycling become safer when they are more common (Jacobsen, 2003). Problematically, a lack of safe active transport possibilities, in the form of walking or cycling, is an incentive for private vehicle usage (Jacobsen, 2003). In turn, a decrease in active transport reduces levels of physical activity, increasing the chances of heart diseases, diabetes, obesity, and certain forms of cancer (Bull, Armstrong, Dixon, Ham, Neiman, Pratt, Ezzati, Lopez, Rodgers & Murray, 2004). Besides, transport-induced air pollution is a cause of mortality, allergies, respiratory diseases, and impacts lung functioning (Krzyzanowski, Kuna-Dibbert & Schneider, 2005). These health implications are complicated further, as they are often connected in some way. For example, diabetes is suspected to increase an individual's vulnerability towards air pollution (O'Neill, Veves, Zanobetti, Sarnat, Gold, Economides, Horton & Schwartz, 2005), air pollution induces physical inactivity through a rise of cardiovascular disease, and the warming of the globe due to climate change is expected to intensify the health complications caused by air pollution (Patz & Kovats, 2002). Another form of pollution that poses a severe threat to human wellbeing is noise pollution. Although underestimated at times, noise pollution has severe health, social, and economic effects (Goines & Hagler, 2007). The presence of noise triggers a fight or flight response in humans, which results in the body being in a hyperactive state, which consumes energy and can lead to anxiety, sleep disturbances, impaired

task performance, hearing complications, and other mental health issues in the long run (Goines & Hagler, 2007). Therefore, an increase of global awareness and local control of noise pollution is important.

Besides, from a social perspective, conventional transport can go as far as being discriminatory and a barrier to inclusivity (Zola, 2005). This has its roots in the conception that travel or transport has to be fast. In a transport system where faster and larger vehicles are given priority, other traffic participants have to adjust their rhythm to this fast pace, for example in the form of public elevator closing doors, traffic lights, and pedestrian signals (Zola, 2005). Apart from inducing a constant hyperactive state for all people, this can be especially problematic for disabled or elderly people, who are not physically able to match the required fast pace, which can lead to feelings of exclusion, fear, and unsafety (Zola, 2005). Even though access to public spaces is not denied, these spaces are often designed in accordance with non-impaired people, making it impossible for impaired people to enter certain public spaces in a favorable way (Freund, 2001).

2.1.1 Sustainable urban mobility

In some ways, conventional transport perspectives are starting to change due to more travel time flexibility, mobile working, and travel being seen increasingly as leisure (Banister, 2008). Besides, the rising awareness about the negative social and environmental implications of conventional transport perspectives has given room for different paradigms to gain attention (Banister, 2008). Therefore, the concept of sustainable urban mobility has been urged by the European Commission and the Council of the European Union the last decade (Wefering, Rupprecht, Bührmann & Böhler-Baedeker, 2014). Wefering et al. (2014) describe that a sustainable urban mobility plan is designed in such a way that it adequately meets the mobility needs of people and businesses in and around a city, to ensure a better quality of life. To fulfill this goal, the transport system has to be accessible for everyone, safe, pollution should be reduced and the value of the urban environment should be increased (Wefering et al. 2014).

Contrasting to the conventional approach to transport, the sustainable urban mobility approach takes not the physical but the social dimensions as a starting point for transport planning and engineering (Marshall, 2001). The focus is placed not on traffic, but on people (whether in/on a vehicle or walking) and the street, instead of being seen as a road, is seen as a space (Marshall,

2001). Furthermore, priority is given to pedestrians and cyclists, and car users are placed at the bottom of the transport mode hierarchy (Marshall, 2001). Since travel is seen as a valued activity, rather than a cost, the aim is to slow movement down, while ensuring reasonable travel times and reliability, with the ultimate goal of integrating people and traffic, making travel a pleasant and sustainable experience embedded into daily life (Marshall, 2001). Apart from improving quality of life and creating health and environment benefits, sustainable urban mobility can boost local economies and optimize resource usage (Wefering et al., 2014). Taking a sustainable urban mobility approach means applying a long-term focus, to create the greatest value for the greatest number of people, without compromising on any needs (Wefering et al. 2014).

According to Banister (2008), there are several elements that can potentially aid a transition towards sustainable mobility. The first element to consider is to make use of technology, which can help to optimize transport systems and make them more fuel efficient. This element has the least implications for human behavior change, making it a suitable short-term focus point. Secondly, transport pricing should be re-evaluated. Current pricing may not reflect the true external costs of transport, meaning that the current pricing system is not able to be sustainable or effective in the long run. The last two elements could be seen as more complicated, as they require more large-scale changes. First, the usage of land is of great importance in creating sustainable mobility, implying different methods of urban planning, and regulating and changing current land plan designs. Lastly, it is essential to drive awareness leading to a change of human behavior. Prohibition of car use may result in big adversity since it could be seen as notions against freedom (Banister, 2008). Banister (2008) describes that public acceptability is a crucial element to drive sustainable mobility, and that this can be achieved for example through providing information and engaging the public.

Implementing successful changes concerning urban mobility depends on the adoption of the public. Although changes can be implemented stepwise to induce a soft transition, ultimately a large-scale change of society's attitude towards transport is still required (Gabrielli, Forbes, Jylhä, Wells, Sirén, Hemminki, Nurmi, Maimone, Masthoff & Jacucci, 2014). A way to do this is to apply persuasive sustainability systems, which has the goal of changing human behavior to increase sustainability, by raising awareness of the environmental impact of common activities (Brynjarsdóttir, Håkansson, Pierce, Baumer, DiSalvo & Sengers, 2012). Gabrielli et al. (2014)

describe that these systems can be successful, mainly when they deploy individual and social motivational strategies. However, these strategies result in slow change, since the individual motivation is highly dependent on social motivation (Gabrielli, 2014). This emphasizes the importance of influencing a society as a whole, rather than trying to influence individuals independently.

2.1.2 Social sustainability through urban mobility

As described before, when applying the sustainable urban mobility perspective, the focus shifts from motorized vehicles to people and their needs. Therefore, it is very important to understand that sustainable urban mobility plans are not only intended to reduce the environmental impact of transportation, but also to create value from a social perspective. However, as Arsenio, Martens, and Di Ciommo (2016) describe, environmental sustainability and social sustainability can sometimes be contradictory. For example, climate change goals may induce higher pricing, while equity and accessibility goals call for affordability. From a social perspective, urban sustainability "conceives the city as a backdrop for lasting and meaningful social relations that meet the social needs of present and future generations" (Yiftachel & Hedgecock, 1993, p. 140). To be able to be both sustainable from an environmental and social perspective, Grieco (2015) suggests that an overall re-evaluation of the organization of mobility and accessibility is necessary, focusing on efficiency. This is especially important due to rising global urbanization, causing social inequity and high levels of congestion (Grieco, 2015). Sustainable urban mobility has the potential to create environmentally and socially sustainable benefits, however, the design of appropriate initiatives relies on the incorporation and innovative rethinking of many different, potentially contrasting, contingencies. This study will be conducted with a strong focus on the social perspective of sustainability.

2.2 Car free development

Over the past few decades, a variety of scholars have become interested in car free development, however the term 'car free' has been used to describe a wide range of new development and housing types (Melia, 2014). It ranges from 'lifestyle politics', such as shifting car centered urban planning to car free housing alternatives where the term car free refers to housing with no parking, despite the traffic situation (Berglund-Snodgrass, 2022; Melia, 2008), to initiatives aiming at

achieving sustainable development goals and preserving or reestablishing a 'walking-city' and improving the citizens quality of life (Ortegon-Sanchez, Popan & Tyler, 2017). Foletta and Henderson (2016), broadly define the term car free development as blocks, neighborhoods or districts in which automobile traffic is heavily restricted. For the purposes of this thesis, car free development predominantly focused on the long-term development and quality of life improvement while preserving or reestablishing a 'walking city'. Thus, the overall meaning of car free development is to redefine urban mobility and shift the focus of car friendly cities towards a citizen focused perspective (Sperling & Gordon, 2009).

However, there are different approaches to car free development. Car free days are one approach where restrictions are only part-time. Car free days and events are frequently organized to reduce the impact of transportation-related air pollution, noise, physical inactivity, traffic congestion, and other negative externalities of private motor vehicle travel (Glazener, Wylie, van Waas, Kheis, 2022). These days can take the form of a city-wide or partial ban on cars on certain days, but the frequency and scale of these days are highly variable (Glazener et al. 2022). Another approach is permanent full-time restriction of vehicles in the city centers, which can mean a ban on cars in the entire city center or on specific streets (Nieuwenhuijsen & Khreis, 2016). There are also intensity scales, as most car free city centers allow emergency vehicles and transport vehicles to deliver goods on specific days. Nonetheless, each strategy aims to discourage citizens from owning a vehicle (Foletta & Henderson, 2016).

Crawford (2000), envisioned the future of mobility as car free cities. Crawford (2000) argues that car free development can bring many benefits and ultimately maximize the quality of life for individuals and communities as the development saves energy and preserves the environment. Furthermore, Nieuwenhuijsen and Khreis (2016) identify positive effects on air quality and noise pollution. A study discovered that nitrogen levels dropped by 40 percent the day that parts of Paris banned car use for a day (Willsher, 2015). Despite the many health benefits and environmental factors there are some complications in implementing car free development. One barrier is the complexity of each development since every city is structured differently and car free development is time consuming and costly as notable infrastructure changes are required. Glazener et al. (2022), emphasize the intensive planning that goes into incremental changes in such development. Furthermore, there is no clear approach of implementing such a development as there are highly

variable approaches. Additionally, further difficulties can arise as the cities need to overcome the car-dependency and further resistance to car free development (Ortegon-Sanchez, Popan & Tyler, 2017).

2.2.1 Stakeholder implications

As car free development gains popularity as a sustainable mobility strategy, several aspects of citizens' daily lives are impacted (Loo, 2018). Other social, economic, and environmental stakeholders are affected by the changes as well. The local community, which desires an inclusive and easily accessible city, is the primary social stakeholder. According to Hart and Parkhurst (2011), existing infrastructure and road networks limit the accessibility of non-car owners. Because social integration is so important in the local community, a solution to the problem could be car free zones that make the areas accessible to all (England & Eriksson, 2020). According to England and Eriksson (2020), car free development can facilitate interactions and integration, which creates a feeling of safety in the city. Furthermore, addressing and prioritizing human needs in the beginning of the process is important to plan the city from a citizens perspective considering aspects like sense of safety and participation in community (England & Eriksson, 2020). The shift to car free areas may significantly enhance the livability of neighborhoods, particularly in those that suffer disproportionately from pollution, social disadvantage, accidents, and public transportation underinvestment (Bullard, 2003). Since the social dimension is shifting more towards sustainable urban development, which requires the current generation to live within the confines of our environment without compromising the needs of future generations (WCED, 1987), the government needs to respond to the shift. The government is a secondary social stakeholder whose objective it is to create a desirable, lively, and safe city to live in and prevent people from leaving. Therefore, the actions, choices, and policies of the government have a significant impact on the actions of other stakeholders. Additionally, other stakeholders' interests also have an impact on the government's activities. In particular, in car free developments, the government must consider other stakeholders' needs to prevent stakeholder aversion and strengthen the comprehensive plans to make them more likely to be successfully implemented (Burby, 2003).

Government and the local community are economic stakeholders as well because they want living standards to rise. In car free development, the natural flow of people is considered in order to

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attract citizens to parts of the city (England & Eriksson, 2020). Infrastructure changes lead to a better use of public space and an improved traffic flow (Nieuwenhuijsen, Bastiaanssen, Sersli, Waygood & Khreis, 2019). Considering that, it is easier to center the natural flow around businesses which leads to securing more customers and attracting tourists into the city (Wright & Fulton, 2005). As a result, communities that have adopted car free areas have seen economic growth (Nieuwenhuijsen et al. 2019). Therefore, further economic stakeholders are businesses as they have an interest in maximizing their profits. Research has shown that visitors who walk to stores spend up to six times as much compared to those who arrive by automobile (Nieuwenhuijsen et al. 2019). Employees, suppliers, and customers are thus secondary economic stakeholders that benefit economically from car free zones. Moreover, pedestrianizing has shown to improve consumer and business perceptions and business diversity, creating new business opportunities and higher employment (Lawlor, 2013). Further secondary stakeholders are public places such as libraries, playgrounds, and banks where foot traffic can be increased through well planned use of public space (Lawlor, 2013).

The city and community are environmental stakeholders since they are directly impacted by air pollution, and environmental changes. Car free development can help to preserve a healthy environment and an ecological balance which has positive implications for the stakeholders. The mitigation of the effects of climate change through the decrease of greenhouse gasses is one of the most frequently stated catalysts of such transitions (Nieuwenhuijsen et al. 2019). But, lessening the usage of cars offers a variety of other advantages, namely the reduction of CO_2 emissions, traffic accidents, and resource use overall, all of which are beneficial for reducing ecological stress (Woodcock, Edwards, Tonne, Armstrong, Ashiru, Banister, Beevers, Chalabi, Chowdhury, Cohen, Franco, Haines, Hickman, Lindsay, Mittal, Mohan, Tiwari, Woodward & Roberts, 2009).

2.2.2 Stakeholder challenges

While car free development has shown many benefits, it is a complex process that involves several stakeholder challenges that need to be addressed. One of the main challenges of adopting car free development is the requirement for extensive infrastructural changes (Nieuwenhuijsen & Khreis, 2016). Infrastructure changes that are required in car free development might include the creation of additional bike lanes and pedestrian walkways, the extension of public transit systems, and the restructuring of existing roads and buildings (Nieuwenhuijsen & Khreis, 2016). With these

changes high political involvement is important, however the key challenge of realizing these infrastructure changes is the lack of political will (Wylie, 2019). In addition, stakeholders such as developers and business owners may resist changes that they perceive as being detrimental to their interests, such as the loss of parking spaces or decreased accessibility to their businesses (Glazener et al. 2022).

Another difficulty in establishing car free development is the requirement for citizens to adapt their lifestyles (Berglund-Snodgrass, 2022). Changes in mobility patterns, such as switching from owning cars to car sharing, public transportation, or bicycles, as well as changes in how people live and work in car free zones, can all contribute to this (Brown, 2017). These adjustments can be difficult to accomplish, especially if people are accustomed to relying on cars for everyday transit (Haustein, 2021). Changes in commuting patterns, shopping preferences, and leisure activities are examples of this. Furthermore, stakeholders such as homeowners and business owners may oppose changes that are lacking in flexibility, such as the loss of parking places or reduced accessibility to their homes or enterprises (Prillwitz & Barr, 2011).

Consequently, a lot of difficulties appear to be triggered by the barrier of public acceptance. As previously seen, the extent to which stakeholders, including residents, business owners, and political leaders, are willing to support and participate in the implementation of car free development is a challenge. Public acceptability is influenced by a variety of factors, including perceptions of safety, convenience, and quality of life (Crawford, 2000; England & Eriksson, 2020). Additional barriers of public acceptability are the (perceived) dependence on cars as schools, jobs, grocery stores, and other facilities might be located in a place with poor to no accessibility other than by car (Nieuwenhuijsen et al. 2018). However, scholars believe that public acceptability is a key factor in the success of car free development projects (Banister, 2008; Marcheschi, Vogel, Larsson, Perander & Koglin, 2022; Verplanken & Wood, 2006).

Generally, the implementation of car free development presents several interconnected stakeholder challenges, including infrastructure changes that lead to changes in lifestyle which cause public resistance and a lack of political willingness to implement extensive infrastructure changes. Despite the complexity of these issues, they can be managed by collaborating, communicating, and engaging stakeholders effectively.

2.3 Stakeholder Theory

In a world that is evolving rapidly through technological development and continuously shifting societal attitudes, doing business has gotten more complex over the decades (Freeman, 2010). The environment that a corporation is in impacts its internal and external affairs. According to Freeman (2010), using a stakeholder approach is a suitable way of understanding the environment, by making efforts to deeply understand the needs of all involved stakeholders. Freeman (2010, p. 46) defines a stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives". Consequently, whereas traditionally decision-making in a corporation was referred to as strategic planning, over the years the shift has been made to refer to it as strategic management, since "planning for stakeholder concerns is simply not enough" (Freeman, 2010, p. 44). Applying stakeholder theory is valuable in strategic management because it can provide the company some sort of direction, through the analysis of stakeholder and corporation values and social issues. An important level of stakeholder management is the transactional level, which concerns how a corporation interacts with its stakeholders, and what resources are allocated to these interactions. Stakeholder theory does not imply that all stakeholders are to be treated equally, rather, it encourages efforts for determining suitable prioritization in specific situations (Phillips, 2003). This does not mean that managing stakeholder relationships has to be a trade-off. Actually, the goal is to find mutual interests and create the largest possible value for all stakeholders involved (Freeman, 2010). Michell, Agle, and Wood (1997) describe the concept of stakeholder salience, which is used to understand the complexity of stakeholder relationships. Not only is it difficult to determine which (groups of) people can be called a stakeholder, it is also complex to understand the role that power, legitimacy, and urgency play in the relationships (Michell, Agle & Wood, 1997).

2.3.1 Integrating sustainability in stakeholder management

Rather than focusing on short-term profit maximization, stakeholder theory encourages to evaluate long-term relationships with different stakeholders, to create value over a sustained period of time through an increased sense of direction. Society is an important stakeholder of every organization since it affects and is affected by their actions. Creating value for society is therefore aligned with stakeholder theory (Freeman, 2010). Because of this, one can see many similarities between stakeholder theory and sustainability management. This also makes stakeholder theory relevant to

be applied in the management of sustainable development. The underlying philosophy of both perspectives is that businesses should not see business and ethics as conflicting, which would result in compromising and philanthropy, but rather see ethics and (societal) values as a starting point and instrument to create value, thereupon reaching business goals over a sustained period of time. The thing that distinguishes the perspectives is that stakeholder theory is open about the outcome of stakeholder management and what kind of value it will contribute, and that sustainability management emphasizes that the desired outcomes of thorough stakeholder management is to contribute to sustainable development (Hörisch, Freeman & Schaltegger, 2014).

Actively integrating sustainability as a stakeholder can be done either by considering nature as a stakeholder, or by understanding that sustainability is a societal need, whereas society is a stakeholder. Furthermore, it is rooted in both stakeholder theory and sustainability management that contributing to sustainable development creates economic value through sustainability-based value creation (Hörisch, Freeman & Schaltegger, 2014). To highlight this even more, Chandler (2019) describes how business is shaped around societal needs. Economic value therefore signals that the business successfully responds to some kind of societal need. Therefore, considering societal needs is a valuable starting point in order to create economic value. However, not all societal needs right now are sustainable due to a lack of awareness, which then again calls for deploying methods like persuasive sustainability systems to create individual and societal shifts so that their perceived needs are in line with what is actually needed to have a fulfilling life for a sustained number of generations (Brynjarsdóttir et al. 2012; Yiftachel & Hedgecock, 1993).

2.3.2 Stakeholder theory and urban management

The topic of stakeholder theory has started to receive some attention in urban management literature. As argued by Fainstein (2000), the perspective can help to improve relationships among urban stakeholders and the public sector is expected to make better decisions if they take urban stakeholder needs into account. Furthermore, Ibrahim, El-Zaart, and Adams (2017) have proposed a model of stakeholder engagement in smart sustainable cities. Although the concept of smart sustainable cities spans several relevant city dimensions, mobility is a key aspect of it. The researchers emphasize the importance of stakeholder engagement since stakeholders should be perceived as the end users of the city systems and services. Their proposed model entails eight

stages of identifying, prioritizing, sharing information with, mapping, creating partnerships with, managing, involving, and monitoring stakeholders (Ibrahim, El-Zaart & Adams, 2017).

In general, however, there is still little literature on stakeholder theory in cities and urban management (Beck & Storopoli, 2021). In their literature analysis, Beck and Storopoli (2021) found that value creation for urban stakeholders is an important aspect of urban management that is suggested to be explored further in the form of city case studies. Besides, the concept of legitimacy as described by Michell, Agle, and Wood (1997) becomes increasingly important as urban management has to respond to societal pressures like social inclusion and environmental protection (Beck & Storopoli, 2021). Beck and Storopoli (2021) conclude that there are implications that stakeholder engagement can be valuable in urban management, as a means to achieve sustainable urban development. They suggest that by understanding and meeting the needs of stakeholders can help to create a better quality of life for citizens, better industry and business environments, and better tourist experiences.

The conventional approach to urban management included the conception that the public sector has the power and authority to lead the development (Davey, 1996). This approach implies that the public sector is able to carefully plan and control urban development, subsequently leading also to the term urban planning. However, over time the inefficiency of this approach came to surface due to its inability to grasp the complexity of the interrelatedness of different actions and consequences (Devas & Rakodi, 1993). Besides, dissatisfaction arose around the questions of whether this approach and the existing political system were able to deal with conflicting needs of social groups in an adequate manner (Stoker, 1998). Eventually, this led to the realization that governance involves a variety of stakeholders, interdependent resources, and actions, shared goals, and blurred boundaries between the formal and informal sectors of the state and civil society, as well as a greater need for coordination, negotiation, and consensus building (United Nations Centre for Human Settlements, 2001).

2.3.3 Stakeholder theory and car free development

As described before, car free development promises to be an effective initiative to promote sustainable urban mobility (Sperling & Gordon, 2009). Sustainable urban mobility can be a way of creating long-term sustainable value for society, as it re-imagines a crucial element of urban

organization (Banister, 2008; Yiftachel & Hedgecock, 1993; Brynjarsdóttir et al. 2012; Chandler, 2019). As was described previously, measures concerning sustainable urban mobility and specifically car free development have implications on different stakeholders (England & Eriksson, 2020; Wright & Fulton, 2005; Nieuwenhuijsen et al. 2019). Therefore, it is important to understand in what way these challenges can be overcome. The complexity of urban settings, caused by the presence of many different interrelated stakeholders and perspectives (United Nations Centre for Human Settlements, 2001), creates a need for understanding how to approach this adequately. Urban management can benefit greatly from stakeholder engagement, since this can facilitate the value creation process and increase the degree to which decisions are made effectively in the purpose of serving a common goal (Freeman, 2010; Beck & Storopoli, 2021; United Nations Centre for Human Settlements, 2001). Stakeholder theory might be a useful tool to implement in the context of sustainable urban development, for example through the form of car free development. However, there is a need for further research about the usefulness of the application of this tool and understanding its practical implications. In particular, there is a need to understand in what way theory can be applied in urban settings that involve complex stakeholder interrelationships. Therefore, this research aims to discover in what way a stakeholder approach could help to understand the processes that cities that implement car free development go through. The goal is to deeply understand the interrelationships between relevant stakeholders, and how these interactions affect the process and success of the measures.

2.4 A Priori Themes

As will be elaborated on in the next chapter, this research will be conducted through thematic analysis. More specifically, template analysis will be applied. As King and Brooks (2017) describe, template analysis is a mostly inductive method, where the findings from the data collection are leading. However, template analysis has a small deductive element, which is in the form of a priori themes, which are theoretical concepts that have a high chance of being encountered in the research. A priori themes are used to take in account the previous research that has been conducted about the relevant theoretical concepts and to not discard this work but rather build upon it. This prior understanding and framing can help in providing a deepened data collection process (King & Brooks, 2017). However, the researchers prioritize objectivity and having an inductive

approach, to avoid a biased data collection. Therefore, the a priori themes are only seen as a starting point and tool to deeply understand the data collection process.

The concepts from the literature review that were regarded as most important are chosen as a priori themes and can be found in table 1. As Banister (2008) describes, 'public acceptability' is a necessity for car free development, because successful implementation relies partly on 'citizen lifestyle changes' (Berglund-Snodgrass, 2022). Challenges for car free development could be a 'resistance to car free development' as described by Ortegon-Sanchez, Popan, and Tyler (2017), which could be counteracted by 'car ownership discouragement' (Foletta & Henderson, 2016) and actions driven by 'political will' (Wylie, 2019). Car free development is expected to be a positive development due to an 'increased feeling of safety' (England & Eriksson, 2020) and 'economic growth' (Nieuwenhuijsen et al. 2019), which is also linked with an 'increase in business opportunities' (Lawlor, 2013). Lastly, prior research has hinted the importance of 'stakeholder engagement' (Ibrahim, El-Zaart & Adams, 2017) in urban mobility, which therefore could be valuable in the implementation of car free development.

Table 1

A Priori Themes

A priori theme	Source	Definition
Public acceptability	Banister, 2008	The degree to which the public accepts changes and changes behavior accordingly
Car ownership discouragement	Foletta & Henderson, 2016	Strategies aimed at minimizing the incentive for car ownership
Resistance to car free development	Ortegon-Sanchez, Popan & Tyler, 2017	Adversity to changing behavior in accordance with car free development

Increased feeling of safety	England & Eriksson, 2020	An increased feeling of safety in a city due to increased social integration and interaction attributed to car free development
Economic growth	Nieuwenhuijsen et al. 2019	Economic growth that is witnessed in car free communities due to increased accessibility
Increase in business opportunities	Lawlor, 2013	New business opportunities and higher employment rates attributed to car free development
Political will	Wylie, 2019	Political will being a key criterion for car free development
Citizen lifestyle changes	Berglund-Snodgrass, 2022	The requirement of lifestyle changes that the citizens have to adopt in order to achieve successful car free development
Stakeholder engagement	Ibrahim, El-Zaart & Adams, 2017	The process of partnering with, involving, and informing stakeholders

3. Methodology

The following section outlines the methodology chosen to investigate the research problem. This section will describe the specific processes and strategies used in the study to identify, collect, and analyze the necessary data. First, the overall research approach and research design are explained. Second, the case study sampling, including the selection of cases and interviews, is outlined and justified. Following that, the data collection process is presented, followed by a discussion about how the data was analyzed. Next, the legitimacy and reliability of the proposed methods are discussed. Lastly, recommended measures are discussed in terms of ethical considerations.

3.1 Research Approach and Design

To understand the role that stakeholder interrelations and management play in developing car free cities, a qualitative research method was chosen because the research seeks to gain an in-depth understanding of a social phenomenon within its natural setting (Eisenhardt & Graebner, 2007). Additionally, a qualitative study emphasizes people's experience and perception of certain events and processes including their assumptions, prejudgments, and presuppositions (Miles & Huberman, 1994). Another reason a qualitative approach is appropriate is that it examines the issue through the perspectives of the interviewees and offers a fresh viewpoint since stakeholder involved in the process may see and perceive the phenomenon differently than outsiders might expect (Bell, Bryman & Harley, 2019). For the purpose of this paper a combined technique of inductive and deductive thematic analysis has been chosen. The research is using a predominantly inductive approach to capture the experience and perception of the individual (Gioia, Corley & Hamilton, 2013). However, to understand the relevant concepts before starting the data collection process a deductive approach is taken, therefore an understanding of the interviewees responses is expected (King & Brooks, 2017).

Different qualitative research designs were considered for this study such as a survey research design. However, it was deemed to be unsuitable as it is aimed to quickly gain general details about a large group or multiple groups and does not gain an in-depth understanding into the specific topic (DeCarlo, 2018). The chosen research design is in the form of a case study since theory building from case studies is valuable due to its strong connection with empirical evidence (Eisenhardt, 1989) and in-depth analysis of a case which increases the aspect of richness (Creswell & Creswell,

2018 p.51; Larsson, 1993). For this study, both a single case and a multiple case study approach were taken into consideration. A multiple case study is mainly used to gain understanding of the differences and similarities between cases (Baxter & Jack, 2008; Stake, 1995). While a single case study is used when researchers want to research one thing (Yin, 2003). A comparative case study would have been a suitable approach with two or more units of analysis; however, according to Gustafsson (2017), the more case studies a scientific article has, the less observation time the writer has studied the case studies. Consequently, the advantages of a single case study over a multiple case study are that the researcher can challenge established theoretical connections and explore fresh ones, leading to a more thorough analysis (Gustafsson, 2017). Therefore, this research will be conducted in the form of a single case study because a single case study is a method that is focused on the in depth understanding of an extreme phenomenon in a certain setting (Eisenhardt, 1989; Yin, 2003).

3.2 Case Selection

The case selection for this research was based on how well it is aligned with the research objective to gain an initial understanding of the roles that stakeholder interrelations and management play in developing car free cities. Due to the case exploratory nature the first criterion was that the case has unique characteristics (Lazar, Feng & Hochheiser, 2017), such as a city that has sustained successful car free development over an extended period of time. This is mainly to be able analyze the effects of becoming car free and gain an in-depth understanding of what led and contributed to its success. The second criterion focused on being representative in the appropriate aspects of car free development such as a clear concept and expanding car free zones to preserve the integrity of the variables (Lazar, Feng & Hochheiser, 2017).

3.3 Sample Description

To identify the case study participants, the target population was derived from the unit of analysis, the city of Pontevedra, which is the level at which the results are relevant (Creswell & Creswell, 2018). Therefore, the case study participants are stakeholders that were or are involved or affected by car free development. The inclusion criteria in this case are individuals that have experienced the car free development in Pontevedra firsthand as well as have knowledge of changes and processes that the car free development entailed. The sample includes eight interviews. The small

sample size is due to the qualitative nature of this research to support the in-depth case-oriented analysis (Crouch & McKenzi, 2006). Moreover, the chosen sampling type is purposive sampling. This sampling method entails choosing those subjects who are suitable to give the most detailed and valuable information (Creswell & Creswell, 2018). Hence, the appropriate sample should consist of various stakeholders with relevant background to gain different perspectives into the processes and perceptions of car free development in Pontevedra. After selecting the right sample the interviewees will be reached directly through the researchers via email. Participant 7 participated in the research through a written record, as this participant was unable to conduct an interview.

Table 2

Sample description

Participants	Stakeholder type	Description
Participant 1	Student	Citizen of Pontevedra, student
Participant 2	Student	Citizen of Pontevedra, student
Participant 3	Director of SME organization	Owner of 2 local businesses in Pontevedra and director of local SME organization
Participant 4	Government spokesperson	Second-highest person in the city council of Pontevedra
Participant 5	Journalist	Citizen of Pontevedra, local journalist
Participant 6	Consultant and previous city councilor	Expert in urban mobility with knowledge about the case of Pontevedra
Participant 7	Tourist organization	Tourist organization of Pontevedra
Participant 8	Placemaker	Expert and visitor of Placemaking week in Pontevedra

3.4 Data Collection

To develop an in-depth understanding of the perception of the experience of the interviewees with car free development and its processes, a total of eight interviews with six different stakeholder groups were conducted. During the 30-60 minutes interview, both researchers were present, allowing both researchers to focus on asking the interviewee questions. An interview guide with open-ended questions was used because it is an effective way to encourage interviewers to express their experience and perception (Creswell & Creswell, 2018). In addition to open-ended questions, probes were used to gather additional information from respondents using research stimuli (Bell, Bryman & Harley, 2019). However, utilizing probes can also result in inaccuracies, since interviewees might be influenced to reply in a specific way (Bell, Bryman & Harley, 2019). Thus the interview questions were formulated to prevent specific types of responses.

Besides, data was collected through observational research. Observational research entails looking at relevant aspects and taking in account sensory experiences to enlarge understanding of a phenomenon (Adler & Adler, 1994). The city Pontevedra was visited by the supervisors and data was collected through experiencing the city. This entailed exploring how citizens behaved, what role traffic played in the city and what kind of atmosphere there was in the city.

3.4.1 Type of Interviews

The data was collected in the form of semi-structured interviews because it allowed for structure and guidance of the exploration, while leaving freedom for probing and deepened understanding (Gill, Stewart, Treasure & Chadwick, 2008). Furthermore, semi-structured interviews allow for detailed information from the retrospective viewpoint of the interviewees (Bell, Bryman & Harley, 2019; Gioia, Corley & Hamilton, 2013). Besides, semi-structured interviews allow for flexibility and reacting to significant insights (Gioia, Corley & Hamilton, 2013). Overall, semi structured interviews were considered appropriate since the research is aiming to gain an in-depth understanding therefore guidance and flexibility are crucial to understand the interviewees retrospective perspective, other qualitative data collection methods would lack the ability to thoroughly examine the topic and staying flexible while staying within the scope of the research.

3.4.2 Structure of the Interview Protocol and Type of Questions

The interview started with two questions concerning the profession and the connection to Pontevedra to understand the stakeholder relationship towards Pontevedra. The following three questions concern the stakeholder experience of the car free development in Pontevedra. In the next three questions the focus is shifting towards gaining an understanding of what processes the cities go through while still touching upon the stakeholder's own experience in regard to social, economic, and environmental changes. The last three questions were aimed to dig deeper into the stakeholder processes and involvement in steering the car free development and gaining an understanding of the stakeholder roles.

The interview questions included in the interview protocol were all open-ended, requiring a detailed response (Creswell & Creswell, 2018). The follow-up questions varied from interview to interview, as they were intended to investigate deeper into the topics stated by the interviewee. These follow-up questions were occasionally used as confirmation to ensure that the interviewers fully understood the interviewee.

3.5 Data Analysis

The collected data has been analyzed through template analysis as described by King and Brooks (2017). This type of thematic analysis is ideal for studying real-world situations and adheres to the philosophical stance of interpretivism (King & Brooks, 2017). Interpretivism corresponds with both qualitative research and template analysis, as it emphasizes the importance of inductive research on the basis that life and experiences of life are not objective. Since the purpose of this research is to comprehend the issues surrounding the research topic rather than to validate preconceived notions, the template analysis was primarily inductive (King & Brooks, 2017). The following steps were performed as suggested by King and Brooks (2017): familiarizing with the data, preliminary coding, clustering, producing an initial template, developing the template and the final interpretation.

After familiarizing with the initial data, preliminary coding was performed. After clustering the initial codes, an initial template was created, which can be found in figure 1. This template shows the preliminary understanding of the results and how these could be structured in a template. The template depicts a hierarchy of coding, which is used to highlight the importance of the codes and

how they are grouped (King & Brooks, 2017). The codes were phrased using descriptive coding, meaning that codes are phrased to explain a quote or set of quotes (Saldana, 2016). The coding was mainly emergent, meaning that the codes were inductively created based on the findings (Saldana, 2016). However, some codes matched the a priori themes mentioned in chapter 2, as shown in Figure 1 below.

Figure 1

Initial Template

```
1    City development
     1.1   Social
           1.1.1      Safety
                      1.1.1.1    Children playing on the streets
                      1.1.1.2    No more mortal car accidents
                      1.1.1.3    Decreased criminal rate
           1.1.2      Pleasant atmosphere
                      1.1.2.1    Decrease in noise pollution
                      1.1.2.2    Lively city
           1.1.3      Shrinking population
           1.1.4      Social Gap
     1.2   Environmental
           1.2.1      Lower pollution
                      1.2.1.1    Walking as preferred mode of transport
           1.2.2      Driving around the center
                      1.2.2.1    No significant decrease in car ownership
           1.2.3      Pollution of ENCE factory
     1.3   Economic
           1.3.1      Local stores disappearing
           1.3.2      Increasing hospitality business
                      1.3.2.1    Street used as an extension
           1.3.3      Job opportunities
                      1.3.3.1    Many public jobs
                      1.3.3.2    Low job diversity
                                 1.3.3.2.1    Necessitating people to commute outside the city
                                 1.3.3.2.2    Betting on a creative economy
2    Stakeholder perception
     2.1   Public sector
           2.1.1      Publicity
                      2.1.1.1    Awards
                      2.1.1.2    Placemaking Week Europe
           2.1.2      Political Power
     2.2   Public transport
           2.2.1      Incompetent system
     2.3   Public space
           2.3.1      Increase in activities
     2.4   Local community
           2.4.1      Division of citizen opinions
                      2.4.1.1    City center citizens
                                 2.4.1.1.1    Privileged position
                                 2.4.1.1.2    Locations in city are easily accessible
                                 2.4.1.1.3    Pride to live in the city
                      2.4.1.2    Suburban citizens
                                 2.4.1.2.1    Decreased accessibility of city center
                                 2.4.1.2.2    Difficult to rent
     2.5   Local business
           2.5.1      Hospitality industry
           2.5.2      Increased attractiveness of shopping area
                      2.5.2.1    Ban of malls
                      2.5.2.2    Higher rents
                                 2.5.2.2.1    Shift from local stores to global brands
     2.6   Tourism
           2.6.1      Attractive city for tourists
3    Stakeholder relationships
     3.1   Stakeholder meetings
           3.1.1      Initial adversity
     3.2   Newsletter
4    Factors necessary for successful car free development
     4.1   Political determination
           4.1.1      Clear political vision
           4.1.2      Patience
           4.1.3      Clear communication/ Citizen assemblies
     4.2   Freedom of movement
           4.2.1      Purpose traffic
     4.3   Stakeholder engagement
           4.3.1      Empathy
     4.4   Public transport
           4.4.1      Decreasing need for car ownership
     4.5   Experiencing
           4.5.1      Time
```

After the collection of all data was performed, the new findings were used to expand the initial template into the final template. The shift from the initial template to the final template clearly shows how the understanding of the concepts developed during the data analysis process (King & Brooks, 2017). New emergent codes were added to the template, and focused coding was performed on the initial interviews. The restructuring of the data also entailed moving or regrouping earlier codes. This led to the final template as depicted in figure 2.

Figure 2

Final Template

```
1    City development
     1.1  Social
          1.1.1      Safety
                     1.1.1.1     Children playing on the streets
                     1.1.1.2     No more mortal car accidents
                     1.1.1.3     Decreased criminal rate
          1.1.2      Pleasant atmosphere
                     1.1.2.1     Decrease in noise pollution
                     1.1.2.2     Lively city
                     1.1.2.3     Variety of facilities
          1.1.3      Public space
                     1.1.3.1     Right of space
                     1.1.3.2     Increase in activities
                                 1.1.3.2.1      Centralization of activities
          1.1.4      Shrinking population
          1.1.5      Social Gap
     1.2  Environmental
          1.2.1      Lower pollution
                     1.2.1.1     Walking as preferred mode of transport
          1.2.2      Driving around the center
                     1.2.2.1     No significant decrease in car ownership
          1.2.3      Pollution of ENCE factory
     1.3  Economic
          1.3.1      Local stores disappearing
          1.3.2      Increasing hospitality business
                     1.3.2.1     Street used as an extension
          1.3.3      Job opportunities
                     1.3.3.1     Many public jobs
                     1.3.3.2     Low job diversity
                                 1.3.3.2.1      Necessitating people to commute outside the city
                                 1.3.3.2.2      Betting on a creative economy
          1.3.4      Tourism
                     1.3.4.1     Attractive city for tourists
2    Stakeholder perception
     2.1  Public sector
          2.1.1      Publicity
                     2.1.1.1     Awards
                     2.1.1.2     Placemaking Week Europe
          2.1.2      Political Power
     2.2  Public transport
          2.2.1      Incompetent system
     2.3  Local community
          2.3.1      Division of citizen opinions
                     2.3.1.1     City center citizens
                                 2.3.1.1.1      Privileged position
                                 2.3.1.1.2      Locations in city are easily accessible
                                 2.3.1.1.3      Pride to live in the city
                     2.3.1.2     Suburban citizens
                                 2.3.1.2.1      Decreased accessibility of city center
     2.4  Local business
          2.4.1      Hospitality industry
          2.4.2      Increased attractiveness of shopping area
                     2.4.2.1     Ban of malls
                     2.4.2.2     Higher rents
                                 2.4.2.2.1      Shift from local stores to global brands
3    Stakeholder relationships
     3.1  Stakeholder meetings
          3.1.1      Initial adversity
     3.2  Newsletter
4    Factors necessary for successful car free development
     4.1  Political determination
          4.1.1      Clear political vision
          4.1.2      Patience
          4.1.3      Clear communication/ Citizen assemblies
          4.1.4      Continues development
     4.2  Freedom of movement
          4.2.1      Purpose traffic
     4.3  Stakeholder engagement
          4.3.1      Empathy
     4.4  An integrated system
          4.4.1      Decreasing need for car ownership
          4.4.2      Public transport
          4.4.3      Cycling infrastructure
          4.4.4      Parking
     4.5  Experiencing
          4.5.1      Time
```

3.6 Quality Measures

The quality of the research is a central aspect that is important to keep in mind (King & Brooks, 2017). Therefore it has been assessed continuously throughout the research. According to Shenton (2004), the following four criteria can help to increase trustworthiness and quality of qualitative research. As a result, the entire process has taken these factors into consideration. Since this research has been conducted by two researchers, efforts have been made to engage in both critical self-assessment and assessment of each other.

3.6.1 Credibility

Credibility, in the first place, refers to the extent to which the research is measuring what it is designed to measure, that is, whether the findings accurately reflect the real world and that the phenomena are recorded accordingly (Shenton, 2004). As Shenton (2004) recommended, certain steps were performed in this research to ensure credibility. For instance, an extensive preliminary literature review has been included to advance the understanding of the phenomena and its setting. This also acts as a quality control check later. A sign of credibility is when some results are consistent with earlier studies (Shenton, 2004). An example of this can be seen in the slight overlap between a priori themes and the findings of this research.

3.6.2 Transferability

Second, transferability has to do with how broadly applicable and transferable the results of qualitative research are to various populations and situations (Shenton, 2004). This can be challenging in qualitative research, especially given that this research was performed in the form of a single-case study. However, settings are taken into account and incorporated into the interpretation of data to raise the level of transferability, which may offer an explanation for the variation seen in the findings, following the diverse experiences of different types of stakeholders (Shenton, 2004).

3.6.3 Dependability

Third, dependability refers to the extent to which similar findings would be documented if the research were to be repeated (Shenton, 2004). As described before, this research follows the philosophy of interpretivism, highlighting the relevance of interpretation (King & Brooks, 2017).

This is somewhat difficult when it comes to dependability. Nonetheless, efforts are made to create a detailed description of the method of data collection and data analysis, as can be found in this chapter. An extensive description of the research process facilitates the understanding of how the researchers have interpreted the results and therefore can help future researchers to take all these elements into consideration (Shenton, 2004).

3.6.4 Confirmability

The last quality criteria factor is confirmability, which relates to the degree to which the results are not misguided by assumptions, bias and researcher prejudgment, and the objectivity that the researcher has applied to interpreting the results (Shenton, 2004). The detailed recording of the research process serves as a quality check for both the researcher involved in this research and future researchers, to trace the line of thought that went into the drawing of conclusions from collected data. Besides, during the data collection, the researchers have placed the experiences of the interviewees as the center of attention and have not engaged in leading questions or steering of the interview.

3.7 Ethical Considerations

This research was conducted in line with ethical principles concerning data collection, data analysis, data sharing and storing. All participants were informed about the purpose of the research. Furthermore, all participants received an information letter provided with instructions about the purpose of the study and were asked to actively participate in the research. The information letter informed the participant that participation is voluntary and that data is handled securely. At the beginning of the interview participants are reminded that the interviews are recorded and that the data is kept for data analysis purposes only. Furthermore, the participants are reminded that the recording might be made available to the direct supervisor. Additionally, the terms and purpose of the research are repeated to the participant at the start of the interview, and they are also asked once more if the interviewer has permission to record the conversation on audio. Furthermore, the privacy of participants that requested to be anonymized was respected and were given an alias to protect the identity. The interviewers ensured that there was no data sharing or potential for data leakage in the process of recording, analyzing, and storing, in order to make sure that the treatment of the data was ethical.

4.   Empirical Findings

The following chapter will elaborate on the empirical finding. Firstly, a brief case description is included to offer the background information required to contextualize the chosen case. Secondly, the data will be arranged in a template, as demonstrated in the Methodology chapter. The template consists of four themes, each of which are further broken down into underlying sub-themes and interpretive codes.

4.1 Case Description

Pontevedra is a small city in the north-west region of Galicia, Spain. The city pioneered into a car free future, since 1999. Ever since, Pontevedra is used as a model of urban mobility for many other cities around the globe. Before the car free development, the town's population was declining, which was the driving force for actively pursuing a car free policy. The Mayor, Miguel Anxo Fernandez Lores, implemented a comprehensive urban plan that prioritizes pedestrian public spaces since the first month of his election in 1999.

In addition, when visiting the city of Pontevedra one can see a lot of cafes and bars with outdoor terraces in the old town. The whole city center feels very quiet, there are noticeably fewer cars. One can see children playing freely on the streets or playing soccer at a square. Furthermore, many Camino hikers are passing through the city who blend with the locals in the pedestrian areas of the city. Once going outside the car restricted areas it seems like ordinary traffic with cars driving freely around the outskirts.

Even after more than 20 years since the initial changes were made, the project is ever evolving and growing. However it has already proven to be successful, with a significant reduction in air and noise pollution, an increase in public spaces and green areas, and a boost to the local economy. Furthermore, the city has gained publicity, and its accomplishments have been recognized through a variety of awards.

4.2 City development

4.2.1 Social

Pontevedra has seen great social development over the past two decades. The city has gotten awards for their social environment and their continued investment in development. Pontevedra offers more than 1000 activities a year in the city's public space. Examples of activities of this kind are a day dedicated towards book readings and events that are aimed at children. The city has become livelier because of the people-filled café and bars at any time of the day. Furthermore, the participants mention that conversation can be held away from 'annoying' car noise.

The city is very livable for families with young children or older people. It could however be observed that museums, concerts, bars and something like a bowling alley or pool club are lacking to offer an adequate social life for younger adults, who mention to often go to the nearby town Santiago de Compostela because of its larger range of social opportunities. This matter could perhaps be understood by the observation of participant 5 of the shifting emphasis of the government from nighttime to daytime activities. This explains why families and elderly are attracted to the city, while students may not be as satisfied. However, because of the university in Pontevedra, there are still students in the city who could contribute to the city having a more progressive environment, which can for instance be witnessed through the commencement of feminist and pride parades.

4.2.1.1 Safety

Before the car free development in Pontevedra, there were higher crime rates and more traffic accidents. Because of the changes, criminals are not able to drive a getaway vehicle in the center which could have contributed to a lower crime rate, and besides there have been no deathly traffic accidents for 11 years. Instead, streets that used to be filled with cars are now occupied by children playing without traffic danger. This also strengthens the case that Pontevedra is especially attractive for families, making it the youngest city of Galicia, as well as the city with the most pets. Besides, the calmer character of the city center makes it a pleasant environment for older and impaired people. Overall, many citizens feel safer and more comfortable.

However, there are also negative views about the matter of safety in Pontevedra. As touched upon by participant 1, she does not feel very safe at night because some areas are not busy (partly due to the lack of cars) and because there is little light in the streets. Even in the suburban areas where there are more cars, she mentions the narrow streets with no adequate lights. Lastly, she spoke about the lack of police officers on the streets. However, in general it is perceived that car free development has positively impacted safety in Pontevedra.

4.2.1.2 Pleasant atmosphere

The citizens seem to be very content with the quiet atmosphere that the absence of cars in the center creates. Since the car free development has allowed for a bubbly, hospitality-oriented center, the city is not quiet. However, the sounds that can be heard at the busier spots are of people talking and laughing, rather than loud vehicle engines and honking. Participant 7 mentioned how comfortable it is to walk quietly through the 'beautiful' streets. Pontevedra, and especially the city center, is a neighborhood community, which adds to a pleasant atmosphere and a lot of interaction on the streets. Besides, it is typical for life in Spain to mostly take place outside. Car free development has certainly facilitated this type of life in Pontevedra.

4.2.1.3 Public space

Since the first steps were taken toward a car free city, the concept of public space has been reconsidered to gain a better use of the public space in the city center. As explained by the city council, the right of public space is a central concept to the transformation of the city. The main idea was to create more space for people with the goal of inclusivity in mind. The space is firstly for pedestrians, bikes are second, then public transport, and lastly cars. The space is now used to facilitate events and activities rather than for car parking.

Before the car free development, people living outside the city would park their automobile in the city in the morning and leave it parked for the entire working day. This was not only a very inefficient use of space, but also non-desirable for businesses as they require a flow and mobility of people (and therefore of cars).

Although it is called 'public space', not everyone belonging to the public feels like their opinions are not considered when it comes to determining the use of public space. A participant mentions an example of a street next to a school that was pedestrianized for safety and noise reasons, but

that that space is now occupied with a skate park, which causes noise and distraction for the school as well. This caused misunderstanding and frustration for citizens.

4.2.1.4 Shrinking population

The region of Pontevedra, Galicia, has experienced a steady decrease in population. Although the city Pontevedra is also influenced by this wave, the decrease occurs at a slower pace. Therefore, it could be argued that car free development makes a city more attractive to live in.

4.2.1.5 Social gap

It can be witnessed that there is a social gap in the city of Pontevedra. Citizens in the city center are more privileged than the citizens outside the car restricted zones. City center citizens are allowed to drive in the center and use a personal parking garage. Participant 3 added that it is difficult to rent a place partly because of the touristic use of flats but also due to the high rents, which is expected to be caused by car free development. The increase of rents is a global problem. Nonetheless, it seems that the car free development is contributing to a social class divide that is created by the access privileges and affordability barrier. This social inequality is strengthened because city center citizens get to experience a pleasant atmosphere and other benefits, while suburban citizens experience accessibility inconveniences caused by car free development. Also, even though elderly and impaired people living in the center can enjoy the benefits, the city center becomes less accessible for elderly and impaired people who live outside of the center. Besides, one can observe a centralization of activities. Everything that is planned by the government is to draw people into the city center, which may not be easily accessible for everyone as mentioned. This further exacerbates the social division and inequality.

Although the city council markets their mobility plans as being focused on promoting inclusivity, by describing the concept of the right of space for pedestrians and the benefits for impaired people, they may not accurately see (or consciously ignore) the negative impacts that car free development can have on inclusivity.

The social gap within the city results in frustration for citizens who are not living in the city center, which will be further elaborated on in the sub-theme division of citizen opinions.

4.2.2 Environmental

4.2.2.1 Lower pollution

Interventions aimed at reducing motorized traffic in Pontevedra have had significant effects on lowering air pollution, reducing it by 67 percent as proudly claimed by the city council. Adding to that, Pontevedra meets the air quality parameters all 365 days of the year, mostly attributable to the reduction in smoke caused by vehicles. Pontevedra has an extensive network of footpaths in and surrounding the city to promote the preferred mode of transport; walking. The environmental benefits that come along with the car free development are cheered on by many citizens, which facilitates citizen acceptability of the measures. Participant 3 explains that it is important to not have any public parking in the city center, since this would still incentivize many cars driving around in order to find a spot. Instead, the city now has big parking lots outside the center and people can walk into the city.

4.2.2.2 Driving around the center

Although cars are restricted in the city center, there are still high levels of car ownership and dependency. Therefore, it can be questioned whether the 'car free' component of car free development is indeed accomplished. Without a sufficient public transport system (which will be elaborated on later), people are forced to drive around the city center for commuting or other purposes, resulting in longer trips and traffic jams on the roads around the center. This reduces the positive environmental impact of car free development, however there are no numbers of the size of this problem in Pontevedra. Therefore, it cannot be determined what kind of threat this poses.

4.2.2.3 Pollution of ENCE factory

While talking about the environmental factors, participant 2 brought up the ENCE factory. She referred to the ongoing debate of closing the factory due to the air and water pollution. However, she added that ENCE is providing many jobs and therefore is contributing to the economic well-being of the city. Nonetheless, the presence of this factory results in citizen frustration as they do not understand how Pontevedra is promoting itself as an environmentally friendly city if they allow a factory that produces an unpleasant smell and pollutes the river and the beach. Therefore, the existence of the factory is important to mention as it could help to understand stakeholder

perspectives. However, other participants did not raise this topic and it is not clear to what extent the government of Pontevedra holds power over the continuation or discontinuation of this factory.

4.2.3 Economic

Spain and particularly the region of Galicia went through several economic crises, however Pontevedra seems to have more resistance to them than other cities in the region, which could be caused by car free development.

4.2.3.1 Local stores disappearing

The decrease in local stores has been a noticeable difference in Pontevedra and has been mentioned by several participants. Some business owners think that the car free development has benefited their business as people can go shopping at the same time that they go for a walk. Besides, it is easier to stop in any shop. Despite that, many local stores seem to be disappearing. Participant 2 remembered that when she was younger there were many stores in the city. She explained that since the covid crisis many local businesses closed. It is unclear to what degree the disappearance of local businesses can be attributed to car free development or the pandemic.

Nonetheless, car free development is perceived to have a major impact on the local business perspective. For example, participant 3 explained that it is important for businesses that people come and go, that they move around. He declared that economically speaking, there is not necessarily a need for mobility of the cars, but it's about the mobility of the people in the cars. As a consequence of the restriction of cars, the popular spaces where many people 'come and go' are experiencing higher rents. He further explained that this is why the main street is now filled with global brands like Zara and H&M because they can afford the high rental prices, while small businesses cannot.

4.2.3.2 Increasing hospitality businesses

As mentioned before, the hospitality industry grew in Pontevedra because of the car free development. Many streets that were occupied by parked cars can now be used as an extension of hospitality businesses, in the form of terraces that enlarge the seating areas. This allows them to accommodate more customers, which makes the industry more attractive. Besides, Pontevedra is an attractive city for tourists, who are mostly interested in visiting bars, restaurants, and hotels. In

turn, more tourists could incentivize the growth of the hospitality sector, which means that they reinforce each other.

4.2.3.3 Job opportunities

While talking about the economic situation in Pontevedra many participants expressed their concerns about the lack of job opportunities. Many young adults are moving away from Pontevedra when they finish their education because of this. Participants 4 and 5 mention that there is no industrial power in the city. Most job opportunities are in the public sector and at cafes, bars, restaurants, and shops, hence there is a low job diversity. Besides, positions in the public sector are mostly filled by people that live outside the city of Pontevedra. Therefore, citizens of Pontevedra have difficulties finding jobs other than in the hospitality industry and need to work outside of the city. Consequently, this forces them to commute (by car).

The local government is aware of this issue and explains that they are betting on a creative economy since Pontevedra has a university specializing in art and creativity. They see this as a way to attract people into the city by creating job opportunities. Regardless of the efforts, there are difficulties in establishing a creative economy especially because the autonomous government is responsible for such actions and not the local government.

4.2.3.4 *Tourism*

Many participants discussed the impact that tourism has on the city, which is a significant economic factor in Pontevedra. The city is drawing in more tourists since the car free development started. This could be caused by the improvement of the city atmosphere and the publicity that the city has gotten because of its car free development. The fact that Pontevedra is located on the trail of the Camino de Santiago also contributes to a steady stream of tourists. Even though an increase in tourism has economic benefits, some citizens see disadvantages as the city center has been transformed into a tourist destination. Some citizens are frustrated because they believe that the mayor only cares about winning awards and attracting tourists, rather than prioritizing citizen needs.

Besides, the increase of tourism has caused many apartments in the city center to be converted into Airbnb's since they are more profitable for property owners. This development adds to the city

center's housing problems as it exacerbates the issues of the lack of affordable housing in the center.

4.3   Stakeholder perceptions

4.3.1 Public sector

4.3.1.1 Publicity

Pontevedra has won many prestigious awards and gained popularity for their car free development. Additionally, a substantial number of newspaper articles, praising the city's attempts to ban cars, have been published in renowned global newspapers. This increased the self-esteem of the city. While in the past some people were ashamed of living in Pontevedra because the city was not remarkable and had a high crime rate, the city now has many citizens that are proud of living there.

Pontevedra also hosted the Placemaking Week Europe in 2022. This week was even mostly financed by the council of Pontevedra. During the week, people from different countries exchanged their experiences on placemaking, of which mobility is an important aspect. Some of the workshops were designed around questions and challenges that were encountered by the city council of Pontevedra. This shows the progressive character of the city. Furthermore, participant 6 highlights that Pontevedra was a pleasant environment for this week, as the distances between the workshop locations were walkable and the size of the city facilitated continuous spontaneous encounters with other participants.

4.3.1.2 Political power

Like participant 3 described, historically Pontevedra was ruled by right-power parties. When the Galician Nationalist Bloc (BNG), a left-wing party, came to power in 1999, a lot changed in Pontevedra. The mayor Miguel Anxo Fernández Lores represented this party and supposedly was the one who had the revolutionary vision concerning the car free city center of Pontevedra. Some participants agree that the mayor did not clearly express his vision of Pontevedra becoming car free when he was running for election, and question if he would have been elected if he would have done this.

On the other hand, the city council describes that they have been transparent about this vision and that that is actually the reason that they were elected, and that they therefore wanted to implement

the changes quickly after winning the election. This is also what has been emphasized by the mayor during his opening speech of the Placemaking Week.

It seems like the public sector attempts to sketch a rosy picture of the implementation of the car free city center. However, many citizens have perceived that this felt like a 'dictatorial' decision that received much adversity and caused many problems. However, over the years and through experiencing a car free city center, many citizens have come to enjoy it. However, participant 3 reminds the researchers of the possibility of another political party taking over and changing the policy completely, which could again result in much adversity and problems since many people have adapted to the changes. This will be elaborated on later.

4.3.2 Public transport

The findings have shown that Pontevedra and the whole region of Galicia have a serious problem when it comes to public transport, causing a lot of frustration among citizens and counteracting the goals of car free development strategies. This makes it difficult to access the city center from the suburban and regional areas, especially without a car. This applies for both the citizens who are not privileged enough to live in the city center and for visitors. Many citizens believe that the public transport system of Pontevedra requires restructuring, but the council does not seem to respond to these needs.

Participant 2 describes that the public transport connections in Galicia are inconvenient, especially as a student. She describes that the overall quality of the public transport system is poor, because the trains and buses are not punctual and overcrowded. An example of the inefficiency is the bus from Pontevedra to Vigo that is always full during rush hour as many citizens of Pontevedra work in Vigo.

Since many participants commented on the lack of a sufficient public transport system, this could be a barrier to achieving widespread citizen acceptance of car free development in Pontevedra. The city council aims to reduce car usage solely by restricting cars in the city center. They however seem to miss out on the impact that investments in a public transport system can have to achieve their desired results.

4.3.2.1 Lack of cycling infrastructure

One can observe a lack of cycling infrastructure in the city overall as well as the non-existing bike-sharing systems. Participant 6 expresses his disappointment by not being able to find any bike rental stores in the city center. A proper cycling infrastructure could facilitate car free development in Pontevedra, especially when it is used for suburban to center connections, giving the suburban citizens a suitable and safe alternative of reaching the center other than by car.

4.3.3 Local community

4.3.3.1 Division of citizen opinions

As described, citizens living in the city center are generally pleased with the car free development of Pontevedra. However, one can observe social inequality in the city. Citizens who live in the suburban areas of Pontevedra experience frustration due to several reasons as described above. First of all, they do not get the advantages to drive around in the city center like the city center citizens do. Second, they experience a reduced accessibility to the city center without sufficient alternative transportation modes. Third, people that have to drive around the city center are making their roads in the suburban areas more constipated. Fourth, job diversity has decreased due to the increasing domination of the hospitality industry in the center. Fifth, the rise in tourism and increase in rents enforces the commercial use of residences, making the city center less affordable to live in. Lastly, there is the overarching frustration that they feel like the public sector does not take their needs into consideration and there is incomprehension about their chosen actions. It is alarming that a big part of the population of the city is dealing with factors like these, as they can cause deep frustration, as already expressed by many participants. Therefore, it is seriously questioned to what extent the city council of Pontevedra will be able to keep going in the same direction without changing important aspects of their strategy.

4.3.4 Local business

There was a very clear initial adversity towards car free development among the local businesses. Many of them protested against the initial changes, as they argued that their business would not survive. Their protests were well-grounded, as many business owners indeed had to give up their business at some point in the transition, because they did not fit the economic environment of Pontevedra anymore.

The different use of public space as created by having a car free city center facilitates the hospitality industry. This is because they can make use of the street in the form of an extension of their business, as described before. For local businesses that are not in the hospitality industry this can be a disadvantage since the terraces could block the view of their stores. Besides, there is a general rising interest in hospitality businesses in the city due to an increase in tourism. Because of this, it is difficult to open another business that is not in the hospitality industry.

Evidently, restaurants, bars, lodging establishments, and other hospitality businesses are satisfied given that they realize that if clients are comfortable in the city, they will stay for a longer time and thus spend more money.

4.3.4.2 Increased attractiveness of shopping area

The old city center of Pontevedra can be seen as an 'outside mall'. The council has established a ban on shopping centers in near proximity of the city Pontevedra, to attract customers to the city center and therefore preserve the existing business in the city center. Even though the measure of banning malls in the area was intended as a measure to protect small local businesses, they are experiencing difficulties competing with global brands and a different business environment. The changes in shopping preferences and mobility patterns were concerning for local business owners and therefore led to the initial adversity, which eventually showed to not be misplaced, as many local business owners were in fact forced to abandon their businesses. The city council describes that it is beneficial to have global brands in the center as they attract more customers. However, this contradicts their earlier intention of wanting to protect local businesses.

4.4   Stakeholder relationships

The spokesperson of the city council emphasizes the importance of engaging the stakeholders of Pontevedra. The way that they have engaged them is through citizen assemblies. These assemblies were used to explain the changes related to car free development and the motivation behind it. Besides, they informed the public about decisions through flyers and the local newspaper.

There were many problems when the city council started implementing the changes. These problems were likely to be caused by fear, which was centered around several topics. First of all,

there was the economic perspective that made local businesses fear the changes, as there was uncertainty on what would happen to their success. Besides, people were reluctant to give up their own car and afraid that they would have to compromise on their freedom and their way of living. Also, there were many changes in a short period of time. Participant 6 called this quite a 'rough' and abrupt transition.

Although several participants have confirmed that the city council of Pontevedra has engaged in these actions like citizen assemblies and the diffusion of newspapers, one can still observe a dissatisfaction among citizens. Even though the citizens are somewhat engaged in the process, there seems to be a feeling that their expressed opinions will not impact the choices made by the government. Actually, the city council confirms this by saying that they have not changed their plans based on citizen feedback, as they wanted to stick to their political vision. Besides, some citizens have expressed their incomprehension of certain decisions, which raises the question of the extent to which the actions of the city council have reached their desired results.

In Pontevedra, many conflicting needs can be detected among different stakeholders. As described, although city center citizens are satisfied with the car free center, suburban citizens are experiencing some levels of discomfort and frustration attributed to the changes. Also, even though business owners in the hospitality industry may be pleased with the development, business owners of local stores are disappointed. It is remarkable that there are clear 'winners' and 'losers' to the car free development, even though it should be something that promotes integration and inclusivity in the city. Without that, car free development might not be able to achieve the desired creation of value.

There is an interrelation of stakeholders in Pontevedra, for example the local community is a stakeholder of local businesses and public transport, and vice versa. However, there is a centralized stakeholder in Pontevedra when it comes to car free development, being the city council. Whereas it was expected that the case of Pontevedra would show a strong interrelated cooperation of several stakeholders, the findings have indicated that the main driver for car free development in this case is the political determination of the public sector, as will be elaborated on in the next section. This shifts the perspective as it makes it possible to identify who is responsible for the changes and, consequently, who needs to make sure that all stakeholder needs are met.

However, the observation of the current stakeholder relationships and satisfaction of stakeholder needs in Pontevedra has shown that there is ambiguity on whether the public acceptability is reached in a broad way and whether the needs of all stakeholders are taken into account and satisfied to a reasonable degree. Therefore, it can be questioned how strong the policy that is implemented in Pontevedra is right now.

4.5 Factors necessary for successful car free development

4.5.1 Political determination

Several participants commented on how prominent the political determination has been for car free development in the case of Pontevedra. After the current political party got to power in 1999, many changes were made in a short period of time. The initial reaction from the public was not necessarily positive. The city council describes how important it has been that there was a clear political vision and clear communication with the citizens. Besides, there was a necessity for patience to overcome the initial adversity.

There could be issues arising if another political party takes over the power and allows cars again. Since the business environment has altered to fit the car free city center, this could be problematic from an economic perspective. Besides, this could also destroy the sustainable impact of the measure, as it would not have a long-term impact anymore. Political determination, or a political vision, can only be implemented through political power. Therefore, political determination, if not supported by stakeholders after overcoming the initial adversity, may not be enough to achieve the desired goals. Otherwise, Pontevedra's sustainable policy may be hanging by a thread and may not be able to deliver value over a sustained period of time.

Even though the city council describes that the car free zone has been expanded continuously and efforts are now being made to expand to rural areas, it can be observed that the city, apart from the city center, is just like a regular city. It is difficult to witness any sustainable mobility development in the areas outside the city center. Adding to that, other European cities, who may have initiated progress in their sustainable mobility policy later than Pontevedra, are now being more advanced because they are engaging in continuous development. It seems like the council of Pontevedra has stood still in some way after their revolutionary actions 20 years ago. The political determination in Pontevedra has been emphasized continuously but seems to be lacking on this aspect. This is

surprising, as a sustainable mobility policy should be developed continuously, as this can increase its impact.

4.5.2 Freedom of movement

As a motorcycle drives by, participant 3 comments on how important it is that it is still allowed to use vehicles in the city center if it is necessary. The goal of the city council has always been to create purpose traffic, which is limited to short trips of a maximum of 20 minutes. The purpose traffic takes its form in delivery vehicles and personal vehicles of city center citizens. In this way, people are not limited severely in their daily lives, but can still make use of vehicles consciously and with purpose. Although these rules are beneficial since they minimize the impact of car restriction on freedom of movement, they could also be perceived as unfair when it comes to the division of city center and suburban citizens, who do not get granted the same degree of freedom.

4.5.3 Stakeholder engagement

Several participants have described how important it is to have empathy in the transition to a car free city. The city council emphasizes their level of patience and focus on the citizen's needs through their citizen assemblies and newspaper announcements. However, the sensed dissatisfaction of several stakeholders in Pontevedra, and their mentions of confusion and feelings of neglect from the city council aim towards an absence of empathy and sufficient stakeholder engagement.

4.5.4 An integrated system

Many participants brought up that a sufficient public transport system is a necessity to achieve car free development successfully. Participant 5 believes as well that there needs to be more opportunity to take the bus to go into the city center because in his opinion it is missing completely. Participant 6 agrees and calls it a key aspect of car free development. The current public transportation system does not successfully cover the transportation needs of the citizens. The city council responds to this by saying that efforts are in fact being made to add more stops, but that they also do not want to have inefficient bus lines going into the rural areas with little occupancy, since they see this as a waste of resources. Besides, the parking conditions in Pontevedra cause

frustration for some. The car free development forces people to rent a private parking garage or pay for parking their car, simultaneously making it difficult for visitors to reach the city.

Pontevedra being a relatively flat-surfaced city could facilitate sustainable modes of transportation like walking and cycling. Besides, the classical layout of a Spanish town with a historical center, with many narrow streets and squares, could contribute to creating a car free city center successfully. The mobility policy of Pontevedra follows a hierarchy of transportation modes, prioritizing walking, cycling, public transport, and personal vehicles subsequently when it comes to a right of space. There is incomprehension about why the city council chooses to prioritize pedestrians over cyclists instead of seeing them as equally important. A focus on cycling could help the city improve their sustainable mobility policy. For example, a bike-sharing system could be considered, and the cycling infrastructure should be improved, especially to incentivize citizens in the suburban areas to reach the city center by bicycle instead of by car.

Contrasting to the idea that modes of transportation have to be hierarchized, participant 6 believes that these should be considered as a family. He adds that cars are also still an important element of this strategy that have to be integrated in a sustainable way, for example by creating innovative ways for car parking. He finishes his argument by asking: "Why not combine the big parking lot with a bike-sharing system?" (Participant 6, personal communication).

What seems to be missing in Pontevedra is an integrated system, with sufficient public transport, cycling infrastructure and integrated parking systems. Without this, citizens are still too dependent on their car. Investing in a proper cycling infrastructure could also increase the accessibility of the center to citizens living in the suburban areas, thereby decreasing the social disadvantages in Pontevedra. Apart from citizens, the findings indicated that Pontevedra is more difficult to reach for visitors. Therefore, an integrated system, where parking, public transport, cycling and walking can be combined efficiently may discourage car use for visitors simultaneously.

4.5.5 Experiencing

The participants described how their attitude towards the car free city center changed as they got to feel the development. As described by the city council, citizens started to even request their streets becoming car free after they had experienced this improved definition of public space. Participant 3 also confirmed that with time and through living the changes, people started

appreciating the car free development. Especially since people in Spain enjoy being outside, citizens started seeing the benefits. However, as described before in the perceptions of the local community, mostly those privileged enough to be able to live in the historical city center are in the position to experience the benefits of the car free development.

5. Discussion

In the following chapter, the theoretical contribution of the findings and its connections to prior research are discussed. The discussion is structured into four sections which focus on the overarching themes presented in the template that was derived from the data collection process.

5.1 City development

5.1.1 Social

An increased feeling of safety due to car free development could be attributed to more interaction and integration on the streets, as suggested by England & Eriksson (2020). Prior research has shown that traffic injuries are a prominent cause of (children's) death all over the world (Zimmermann & Bauer, 2006). The findings confirm that car free development is a suitable way of increasing safety and reducing accidents in a city.

Noise pollution poses severe health, social and economic effects and is generally underestimated as indicated by Goines and Hagler (2007). With the reduction of traffic, noise pollution can be reduced. The findings confirm that citizens enjoy a pleasant and quiet atmosphere in a car free city (center). Furthermore, it is found that this makes a city more attractive than comparable cities, which can protect the population size.

Prior research shows that in car free development, the natural flow of people is considered in order to attract citizens to parts of the city (England & Eriksson, 2020). The increased efficiency of public space use, which can be attributed to car free development, aids in facilitating social interaction. The findings did not indicate if foot traffic increased in public spaces such as libraries, playgrounds, and banks, which was indicated as a consequence of well-planned use of public space by Lawlor (2013).

The slowing down of traffic as a result of car free development helps to make it easier for disabled or elderly people to move around in the center, since they are not required to participate in the fast pace of traffic that is created by vehicles. This helps in decreasing feelings of exclusion, fear, and unsafety (Freund, 2001).

However, apart from the overall observed benefits regarding social life, the findings suggest that car free development can create a social gap between citizens. Since prior research indicated that car free areas enhance the livability of neighborhoods, particularly in those that suffer disproportionately from pollution, social disadvantage, accidents, and public transportation underinvestment (Bullard, 2003), progress on the elements of inclusiveness and equality is expected. Inclusivity and equality could be promoted through mobility, as mobility is seen as a human right in the European Pillar of Social Rights (European Economic and Social Committee, 2022). The European Economic and Social Committee (2022) furthermore states that it is important that transport links exist between urban and suburban areas for social equality. Besides, Schwanen, Lucas, Akyelken, Solsona, Carrasco and Neutens (2015) describe the role of transport disadvantage in social exclusion. They describe the complexity of understanding causality between these two aspects since the processes around them are intertwined and contextual. These sources emphasize how critical urban mobility is in achieving social equality. Without it, a city is not accessible to everyone anymore, and social inequality in affordability and accessibility will arise. The findings on this aspect are very important, as car free development is regarded as a positive influence on the social environment of a society, while the potential risks of it are not regarded sufficiently.

5.1.2 Environmental

The participants of this research referred to environmental changes as car free development promotes lower pollution and increases air quality. This has been supported by prior research identifying positive effects on air quality, noise pollution and quality of life (Crawford, 2000; Nieuwenhuijsen & Khreis, 2016; Willsher, 2015). However, it was brought to the attention of the researchers that the prohibition of driving through the city center can result in longer trips around the center. This detouring phenomenon could cancel out some benefits of having a car free city center. This is described earlier by Nieuwenhuijsen and Khreis (2016), who suggested that further research should be conducted on this.

Besides, findings suggested that car ownership is not automatically discouraged by car free development if citizens are still dependent on their car to commute. Foletta and Henderson (2016) describe car free development as a strategy aimed to minimize the incentives for car ownership. However, the findings imply that car free development can be interpreted differently, as

prohibition of cars in a city center can also be referred to as car free development, even though it may not minimize car ownership. It also appears that people are accustomed to relying on cars for everyday transit which explains the adversity to change in commuting patterns. This confirms the findings of Haustein (2021) that adjustments in daily habits can be difficult to accomplish.

5.1.3 Economic

The findings have indicated that car free development could induce more resistance to economic crises, confirming prior research findings of Nieuwenhuijsen et al. (2019) that communities adopting car free areas have seen economic growth, as was chosen as an a priori theme. Prior research indicates that to successfully implement car free development, the natural flow of people is considered in order to attract citizens to certain parts of the city (England & Eriksson, 2020). It is convenient to center this natural flow around businesses which leads to securing more customers and attracting tourists into the city (Wright & Fulton, 2005). The findings indicated that car free development can facilitate a flow of people around business, making a city more attractive economically.

Car free development could induce a rise in hospitality businesses and global brands, and a decrease in local businesses, leading to little diversity in employment. Prior studies have demonstrated that car free zones increase business diversity, open up new business possibilities, and boost employment (Lawlor, 2013), as highlighted in the a priori themes. The findings, however, revealed that business diversity can decline as a result of the hospitality sector's high desirability in a car free city and larger brands' tendency to outbid smaller companies. Besides, it was mentioned that a car free center and the rise of hospitality establishments attracts more tourists.

Consequently, this can cause the rise of Airbnb's in the city center. As Gotham (2005) describes, this can be understood as a wave of tourism gentrification, meaning that the city (center) becomes less accessible for middle-class people as their residences are displaced by commercial apartments, which changes the dynamics and character of the city. Especially historic city centers are prone to gentrification, since Airbnb is free to grow to cover the tourist accommodation needs, whereas regular hotel and hospitality establishments are constrained by limited space and strict zoning rules (Zervas, Proserpio & Byers, 2017). Although tourism can boost the local economy, gentrification may have severe social consequences, like community conflicts, loss of affordable housing due to

increasing property prices and population loss (Atkinson, 2010). This is in line with the further findings of social risks that can be attributed to car free development. Besides, social inequality in affordability and accessibility can negatively affect economic growth simultaneously (OECD, 2014).

5.2 Stakeholder perceptions

5.2.1 Public sector

The public sector in cities implementing car free development can be praised and awarded for their actions. This gained publicity can help to overcome stakeholders' initial adversity and contribute to being a proud citizen, thereby promoting acceptability of the measures. As highlighted by Ortegon-Sanchez, Popan and Tyler (2017), adversity to changing behavior needs to be overcome as resistance to car free development is expected.

It was established in the a priori themes that public acceptability of car free development is required (Banister, 2008). Although the findings are generally in line with this, as touched upon later, they can nuance Banister's statement by saying that public acceptability may not be required initially, as political determination has been found to be the key driver for car free development. This implies that initial citizen resistance does not have to be a barrier to car free development, since political power can be exerted to implement the measures either with or without initial citizen acceptability. This confirms prior research of Wylie (2019), describing that political will is a key criterion for car free development, as was also used as an a priori theme. This will also be elaborated on later.

5.2.2 Public transport

The findings have confirmed that citizens perceive a sufficient public transport system to be a key factor for car free development. In fact, Johansson, Henriksson and Envall (2019) had commented on car free development in progressive cities being the result of prioritizing investments in public transportation among others. In this reasoning, an investment in a sufficient public transport system could consequently boost car free development, as people are more attracted to using this system. This will be elaborated in the sub-theme of factors necessary for successful car free development.

5.2.3 Local community

Prior research has shown that as car free development progresses, several aspects of citizens' daily lives are impacted (Loo, 2018). Furthermore, Berglund-Snodgrass (2022) explained that a barrier in establishing car free development is the requirement for citizens to adapt their lifestyles. The findings indicated that many citizens are able to change their modes of transportation accordingly with mobility policy changes. England and Eriksson (2020) believe that social integration is important in the local community and that car free zones make the areas accessible to all. However, the findings suggest that citizens could experience a segregation attributed to car free development, caused by decreased accessibility and inclusivity. As a result, the findings appear to contradict previous research suggesting that car free development may assist in social integration. Although this research does not suggest that car free development causes social inequality, it contributes to the understanding of the field by shedding light on the importance of social dimensions in the implementation of car free development, and the social risks that could be associated with it.

5.2.4 Local business

Prior research has indicated that business owners may resist car free policy changes that they perceive as being detrimental to their interests, such as the loss of parking spaces or decreased accessibility to their businesses (Glazener et al. 2022), which is in line with the findings. Besides, it can be contributed to this that for some types of businesses, a car free policy can in fact be detrimental. This helps to understand that although all stakeholders may experience unjustified fear and uncertainty, for some stakeholders these fears are justified. The interpretation that car free development changes the economic environment of a city could imply that it cannot be a win-win situation for all stakeholders that are affected by the development.

Brown (2017) stated that changes in mobility patterns are a requirement for car free development and can contribute to public acceptability. Haustein (2021) established that shopping preferences are affected by the development as well. The findings confirmed that shopping behavior can be affected by car free development and suggest that this can make a city more attractive for hospitality businesses and bigger brands.

5.3 Stakeholder relationships

As described by Yiftachel and Hedgecock (1993), sustainability in an urban context has the goal of facilitating strong social relations that meet the social needs now and in the future. When it comes to changing the urban context, a shift of society's attitude towards transport is required (Gabrielli et al. 2014). However, this may be challenging. In the case of car free development, Ortegon-Sanchez, Popan and Tyler (2017) emphasize the problems that can arise as a city has to battle the car-dependency and other resistance expressed by the citizens, as was established in the a priori theme 'resistance to car free development'. The findings have confirmed that resistance of several stakeholders to car free policies can be expected. This adversity could be caused by fear and uncertainty about what would happen to their daily lives and businesses.

However, earlier research has identified the importance of public acceptability in the success of sustainable mobility projects (Banister, 2008; Marcheschi et al. 2022; Verplanken & Wood, 2006). Public acceptability depends on several factors (Nieuwenhuijsen et al. 2018). Banister (2008) adds that it could be accomplished by educating and involving the public. The findings add that without a sufficient education and involvement, citizens could express frustration towards car free development and the initiator of this.

Besides, it is important to understand that different stakeholders can have different (conflicting) needs when it comes to mobility measures. Phillips, (2003) emphasizes the importance of appropriate stakeholder prioritization depending on the situation and Freeman (2010) adds that rather than seeing this as a trade-off, the goal should be to create the most value for all stakeholders concerned. Furthermore, Burby (2003) explains how important it is for the government to avoid stakeholder aversion to strengthen their plans and increase the chances of successful implementation. Although car free development as a result of political determination can be successful in the short run, this does not mean that this will be successful over a sustained period of time. Freeman (2010) and Wefering et al. (2014) emphasize the importance of creating value with a long-term focus to be truly sustainable, by engaging and involving stakeholders. Although there is little literature proving that stakeholder engagement can help in creating a sustainable urban policy (Beck & Storopoli, 2021), there are clues that it can be helpful to improve industry, business and tourist experiences as well as the quality of life for inhabitants (Beck & Storopoli, 2021; Ibrahim, El-Zaart & Adams, 2017). The findings present clues that a lack of stakeholder

engagement in car free development could result in stakeholder aversion and decrease the total amount of value created.

5.4 Factors necessary for successful car free development

The findings have indicated five factors that are necessary for successful car free development. These factors are derived both from prior research and from empirical data. Table 3, as depicted at the end of this section, presents an overview of these factors.

5.4.1 Political determination

The findings have indicated that political determination can be a driving factor for car free development. This is in line with the research of Wylie (2019) that indicated the importance of political will in implementing measures of this kind. Wylie (2019) further explains that political involvement is necessary as changes in mobility often require extensive infrastructural changes.

Political determination certainly is a good starting point for achieving these changes. With a conventional approach as described by Davey (1996), it could be concluded that the public sector is consequently able to implement a sustainable mobility policy through their power and authority. However, as was understood over time, governance of a policy involves a number of stakeholders and interdependent resources, signaling a greater need for coordination, negotiation, and consensus building (United Nations Centre for Human Settlements, 2001). One could therefore argue that political will, or political determination, by itself is not enough. Especially when taking into account that political power can swiftly be lost in elections as was brought to the attention of the researchers, which could result in the installment of a different party and divergent policy. Logically speaking, in a democratic system, political intent is aligned with the majority of the stakeholders' needs. This again emphasizes the importance of making sure that stakeholders' needs are met and balanced.

As Wefering et al. (2014) describe, a long-term focus is needed when it comes to designing a sustainable urban mobility policy. The findings hint that a sustainable urban mobility policy should involve continuous development to achieve a long-term focus.

5.4.2 Freedom of movement

As was already highlighted by Banister (2008), the prohibition of car use could cause adversity due to it being perceived as a notion against freedom and choice. It is difficult to distinguish the vague barriers of car restriction and freedom reduction. It becomes even more problematic when a distinction is made between citizens based on where they live, especially as their place of residence presumably depends on their level of income. Many cities in Europe are implementing car-restriction policies relying on making car use more costly, for example by increasing parking tariffs in the center (Buehler, Pucher, Gerike & Götschi, 2016). Adding that to an inconsistent degree of freedom based on place of residence could result in a larger citizen division and dissatisfaction, as found in this research.

5.4.3 Stakeholder engagement

Ibrahim, El-Zaart and Adams (2017) suggested that stakeholder engagement could be valuable in sustainable urban projects, as was included in the a priori themes. Since the findings of this research have highlighted stakeholder frustrations and divisions attributable to car free development, it is suggested that stakeholder engagement could facilitate a smoother and more successful transition. Besides, the findings emphasize the importance of empathy in a transition that impacts daily life. Additional research by Strong, Ringer and Taylor (2001) was investigated to understand the role of empathy in stakeholder management satisfaction. They conclude that it is wise to be clear, honest and "empathetically evaluate alternatives and actions from the viewpoint of each stakeholder group" (Strong, Ringer & Taylor, 2001, p. 228). The findings indicated that a lack of empathy can result in feelings of neglect and frustration. This confirms the need for empathy as a factor for successfully implementing car free development.

5.4.4 An integrated system

The findings indicate that an important aspect of car free development is the prioritization of people, rather than vehicles. This is in line with the explanation of sustainable urban mobility given by Marshall (2001), although he describes that priority is given to both pedestrians and cyclists. The findings suggest that one should encourage both walking and cycling as sustainable transport modes, as they can both contribute to successful car free development. Furthermore, it is suggested that encouraging solely walking can create accessibility issues which can be resolved by

encouraging cycling as a preferred mode of transport. Other studies also mention pedestrians and cyclists without distinguishing a hierarchy between them (Jacobsen, 2003; Nieuwenhuijsen & Khreis, 2016). Marshall (2001) further adds that the objective of sustainable mobility is to integrate people and traffic. Jacobsen (2003) also describes that chosen modes of transport depend on the context and possibilities, which confirms that different modes of transport cannot be separated. Although infrastructural changes like additional bicycle lanes, public transport systems and pedestrian walkways can be costly (Nieuwenhuijsen & Khreis, 2016), a lack of them is an incentive for using private vehicles (Jacobsen, 2003).

The findings show that an integrated system with sufficient public transport, cycling infrastructure and integrated parking systems can aid car free development. Without this, citizens are still too dependent on their car, which means that the goal of car free development, to discourage car ownership (Foletta & Henderson, 2016) cannot be achieved. As described by Nieuwenhuijsen and Khreis et al. (2019), infrastructure changes can lead to a better use of public space and improved traffic flow. Since it was argued before that the use of public space is an important factor in inclusivity and the social context of a city, having an integrated system with proper infrastructures can have a positive impact on the city. First of all from an environmental perspective by decreasing car dependency, and second of all from a social perspective by increasing accessibility and a better use of public space, which simultaneously might induce economic benefits.

To add to this, additional research conducted by O'Fallon, Sullivan and Hensher (2004) was considered. They describe that measures in a sustainable mobility policy are both focused on encouraging sustainable modes of transport by making them more attractive and on discouraging unsustainable modes of transport (private vehicle usage) by making them more unattractive. Although they found the latter to have a greater influence in terms of behavioral change, they argue that only working on discouraging car usage without offering convenient alternatives may not have the desired result.

5.4.5 Experiencing

The findings of this study have indicated that living and experiencing the changes implemented to promote sustainable mobility through car free development can facilitate citizen acceptability. As citizen acceptability is a main element in long term success it is important to understand it from a

psychological perspective. The phenomenon of experiencing changes which contribute to acceptance could be explained by the concept of cognitive dissonance. Cognitive dissonance is an unpleasant feeling that arises when an individual's attitude toward something does not correspond with their behavior (Jhangiani & Tarry, 2022). If behavior is forced to be changed, the individual could change their attitude to resolve their experienced cognitive dissonance. This could be an explanation for why citizens could change their attitude towards car free development, once their behavior related to transport was unwillingly changed. This supports the earlier finding that political determination is a good starting place for car free development and suggests that experiencing it has the potential to reduce initial adversity.

Table 3

Five Factors Necessary for Car Free Development

Factors necessary for car free development	Definition
Political determination	A clear vision that is supported by political power
Freedom of movement	The liberty to engage in purpose traffic
Stakeholder engagement	The process of partnering with, involving, informing, and *empathizing* with stakeholders
An integrated system	A system where different modes of transport are combined efficiently to cover the transportation needs of citizens
Experiencing	The increasing acceptance associated with living the implemented changes

6.   Conclusion

The purpose of this thesis is to understand what role stakeholder interrelations and management play in car free development. The research was based on this main research question and three sub-questions. In this section, the sub-questions are answered, leading to the conclusion of the main research question.

The first sub-question is: "how do different stakeholders experience car free development?". The discussed findings indicated that the way stakeholders experience car free development depends on contextual and situational factors. Overall, the public sector praises car free development as it can reward the city with positive publicity, boost the economy, attract citizens, lower pollution, increase safety and improve citizen health. The citizens that are in the advantageous situation of living in the city center, where the car free development is implemented, can enjoy the health and safety benefits. However, citizens who are not in this situation can feel frustrated, as the car free development causes disadvantages and inconveniences for them. This creates a social division between citizens. For local businesses in the hospitality industry, car free development is appreciated as it increases the number of customers and allows for extension of the business on the street. However, for other local businesses that rely on car traffic and are impacted by the other changes attributed to car free development, the changes are negatively regarded resulting in dissatisfaction with the policy.

The second sub-question is: "how can the processes that cities, that implement car free city development, go through be understood?". The answer is that a city implementing car free city development goes through a process existing of changes from a social, environmental, and economic perspective. Although car free development can boost the social character of the city by creating a lively atmosphere, a car free city center can result in a social gap between citizens, by reducing the accessibility and inclusivity of the citizen population. Environmentally, the city progresses as car free city development lowers the overall pollution. These benefits could be enlarged through implementing successful strategies aimed at reducing car-dependency in the entire city and avoiding the incentivization of driving around the car free city center. A city implementing car free city development can go through a process shifting to a different economic environment, as this development can affect the types of industry that are attracted to the city.

Besides, an increase in tourism due to more publicity and more hospitality businesses can lead to a change in the city through gentrification.

The third sub-question is: "what are the shortcomings of applying a stakeholder perspective to understanding the success factors of car free development?". This question can be answered by concluding that a stakeholder perspective facilitates the understanding of the development that cities go through in a holistic way. However, the successful implementation of car free development relies on many different factors other than stakeholder management, the most important being political determination, which can generate rapid development. Therefore, the application of a stakeholder perspective alone is not sufficient in understanding the success factors of car free development and has to be extended with different perspectives.

The sub-questions have provided a base for answering the main research question: "what role do stakeholder interrelations and management play in developing car free cities?". It is concluded that stakeholder interrelations and management are crucial elements that need to be considered in the development of car free cities, as they are perceived to be essential for delivering the greatest possible, long-term, and sustained value. It was concluded that political determination, rather than stakeholder management, is likely to be the driving force for car free development. Initial stakeholder fear and uncertainty can fade away once the stakeholders experience the changes. However, a lack of long-term stakeholder alignment with the policy can result in deep-rooted stakeholder adversity. It is perceived as important to reduce and avoid stakeholder adversity through adequate stakeholder management in the case of car free development, as this is expected to increase the chances of sustainable success. Besides, this thesis suggests that having an integrated urban mobility model can help to overcome stakeholder adversity, as the sole restriction of cars in a city center is not incentivizing enough to reduce car dependency if no sufficient alternatives are offered to the public. Concluding, changes in mobility policy such as car free development require a great deal of care when implemented, to ensure that they reach the desired goals of environmental, social, and economic sustainability, rather than exacerbating issues in these perspectives. This care can be fulfilled through active stakeholder management and engagement.

6.1 Theoretical Implications

The findings of this study sheds light on the understanding of car free development in a theoretical setting. Sustainable urban mobility literature is a new field of research that is still in need of more attention. The topic of car free development, a component of sustainable urban mobility, is therefore also still in need of more research. Prior research pointed out the economic, social, and environmental benefits related to car free development. However, the understanding of successful implementation of car free development is lacking theoretical foundation. The field suggests the importance of gaining public acceptability, car ownership discouragement, political will and changing citizen lifestyles, but fails to grasp how these concepts can be reinforced. Some research in the sustainable urban mobility field suggests stakeholder engagement as a promising tool to be used by the public sector. The findings of this research have contributed to the growing interest towards stakeholder management in urban mobility literature, by suggesting its promising connections in overcoming stakeholder adversity and reaching public acceptance in car free development specifically.

Although prior research adequately established the connection between urban mobility and social equality, it has not grasped the negative social implications that sustainable urban mobility initiatives could have. This study highlights the possible formation or exacerbation of social inequalities through car free development, thereby raising further awareness about the relation of the concept to urban mobility.

To conclude, the most important theoretical contribution of this study is the establishment of five factors that are deemed necessary for successful car free development, being political determination, freedom of movement, stakeholder engagement, an integrated system and experiencing. Some of these factors were suggested in similar studies, although they lacked the specificity of the application to car free development and the more thorough understanding of the underlying causal relationships.

6.2 Practical Implications

The findings of this study provide important insights for governments and communities that consider transitioning to a sustainable car free city. The necessary factors for car free development

are valuable insights for cities that begin with a car free development in practice to counter barriers like stakeholder adversity and the creation of social gaps. Furthermore, this study identifies the importance of adequate stakeholder management and what roles stakeholder interrelations play in the development, which can be relevant for urban planning and car free development.

6.3 Limitations and Future Research

It is important to highlight the limitations in regard to the implication and understanding of this study and findings to enhance transparency. As a qualitative research approach was selected, there are constraints on the ability to statistically test any correlation between the themes like car free development, political determination, social gap, stakeholder interrelations and stakeholder management. Instead, this research approach aims to explore the perceived experience of different stakeholders in this particular case and contribute to previous findings. Therefore, it leaves the opportunity for future research to conduct a quantitative study to statistically test the relationship and association between these themes.

Secondly, a single case study approach was used to explore the stakeholder interrelations and management. Therefore, a second limitation is in regard to the generalizability of this research. The case study was based on Pontevedra, a Galician Spanish city, hence the findings may be particular to similar cities in Europe, the Galician region or solely to this case. Thus, the concept of car free cities can be further investigated to explore the applicability of this study to other cities with car free areas.

Another limitation derives from the limited sample size. The majority of stakeholder groups were only represented by one individual due to the limited number of interviews. As a result, the conclusions in a given instance only reflect one individual subjective perception and may not be representative of the stakeholder groups' general opinion. The small number of interviewees is attributable to the challenges in gaining access to English speaking individuals in Pontevedra as well as time constraints. To assure more representative results for each example, future research could therefore perform a more comprehensive study with many individuals of each stakeholder group.

Lastly, semi-structured interviews were conducted. The benefit of this structure is that each interviewee will be asked the key questions while leaving room for more in-depth inquiries into

significant emergent topics. The data collection, however, was guided by the predetermined structure. Even though probing was used, it was not possible to completely explore all facets of the topic. Unstructured interviews could have been used to get highly rich data, but this would have led to less cohesive data with weaker comparisons between findings.

The findings of this study have raised important questions surrounding car free development, stakeholder management and social inequality. Future research is encouraged to be conducted to build onto the relation of these topics, as this can facilitate the transition towards sustainable development from a social, economic, and environmental perspective.

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Appendices

Appendix A: Interview protocol

The Role of Stakeholder Interrelations and Management in the Development of Car Free Cities

Time of interview:

Date:

Interviewer(s):

Interviewee:

Position of interviewee:

Introductory statement:

We thank you very much for your time and cooperation in this research. We would like to ask you for your prior consent to record this interview. We would also like to remind you that you have the right to not answer a question and can withdraw from the interview at any time.

Interview questions:

1) What is your profession?

2) Could you describe your connection to Pontevedra?

3) How do you feel the city Pontevedra has changed over the last 2 decades?

4) How do you experience car free development in Pontevedra?

   a) How did you experience initial car free development?

   b) How has your initial opinion about this changed since then?

      i) Could you explain to us if there was a specific event changing your opinion about it?

5) How do you think that car free development has changed Pontevedra?

   a) Do you feel that car free development in Pontevedra is a successful change?

        i)   Why do you think it was successful/unsuccessful?

6) How do you think car free development influences the city from a social perspective?

    a) How have you experienced changes in inclusivity in the city through car free development?

    b) Why do you think car free development influences the social environment in a city?

7) How do you think car free development influences the city from an economic perspective?

    a) Why do you think car free development influences the economic environment in a city?

8) How do you think car free development influences the city from an environmental perspective?

9) What do you think is necessary for successful car free development?

    a) Which of these do you think is the most important and why?

10) According to you, which stakeholders have played a vital role in the car free development of Pontevedra?

    a) Why would you say that these stakeholders were so important in the changes?

    b) In what way have these stakeholders changed your perception of car free development?

    c) Were there specific actions that you remember to have impacted the way you feel about car free development?

        i)   How did this impact you?

11) Do you perceive the relationships between city stakeholders to have changed over the last decades?

    a) In what way do you think that stakeholder relationships can facilitate car free development?

Closing statement:

Thank you for your cooperation and participation in this interview. The results will be used carefully and only for this research.

Appendix B: Transition from initial template to final template

1   City development
    1.1   Social
          1.1.1   Safety
                1.1.1.1   Children playing on the streets
                1.1.1.2   No more mortal car accidents
                1.1.1.3   Decreased criminal rate
          1.1.2   Pleasant atmosphere
                1.1.2.1   Decrease in noise pollution
                1.1.2.2   Lively city
                1.1.2.3   Variety of facilities
          1.1.3   Public space
                1.1.3.1   Right of space
                1.1.3.2   Increase in activities
                      1.1.3.2.1   Centralization of activities
          1.1.4   Shrinking population
          1.1.5   Social Gap
    1.2   Environmental
          1.2.1   Lower pollution
                 1.2.1.1   Walking as preferred mode of transport
          1.2.2   Driving around the center
                 1.2.2.1   No significant decrease in car ownership
          1.2.3   Pollution of ENCE factory
    1.3   Economic
          1.3.1   Local stores disappearing
          1.3.2   Increasing hospitality business
                 1.3.2.1   Street used as an extension
          1.3.3   Job opportunities
                 1.3.3.1   Many public jobs
                 1.3.3.2   Low job diversity
                     1.3.3.2.1   Necessitating people to commute outside the city
                     1.3.3.2.2   Betting on a creative economy
          1.3.4   Tourism
                 1.3.4.1   Attractive city for tourists
2   Stakeholder perception
    2.1   Public sector
          2.1.1   Publicity
                 2.1.1.1   Awards
                 2.1.1.2   Placemaking Week Europe
          2.1.2   Political Power
    2.2   Public transport
          2.2.1   Incompetent system
    2.3   Local community
          2.3.1   Division of citizen opinions
                 2.3.1.1   City center citizens
                     2.3.1.1.1   Privileged position
                     2.3.1.1.2   Locations in city are easily accessible
                     2.3.1.1.3   Pride to live in the city
                 2.3.1.2   Suburban citizens
                     2.3.1.2.1   Decreased accessibility of city center
    2.4   Local business
          2.4.1   Hospitality industry
          2.4.2   Increased attractiveness of shopping area
                 2.4.2.1   Ban of malls
                 2.4.2.2   Higher rents
                     2.4.2.2.1   Shift from local stores to global brands
3   Stakeholder relationships
    3.1   Stakeholder meetings
          3.1.1   Initial adversity
    3.2   Newsletter
4   Factors necessary for successful car free development
    4.1   Political determination
          4.1.1   Clear political vision
          4.1.2   Patience
          4.1.3   Clear communication/ Citizen assemblies
          4.1.4   Continues development
    4.2   Freedom of movement
          4.2.1   Purpose traffic
    4.3   Stakeholder engagement
          4.3.1   Empathy
    4.4   An integrated system
          4.4.1   Decreasing need for car ownership
          4.4.2   Public transport
          4.4.3   Cycling infrastructure
          4.4.4   Parking
    4.5   Experiencing
          4.5.1   Time