PLANNING STRATEGIES FOR FUTURE SUSTAINABLE CITIES INFLUENCED BY STORYLINES

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Emma Vibe Jürgens

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Malene Freudendal-Pedersen

Student:
Emma Vibe Jürgens 20174685

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I. Abstract

Transport and private vehicles have always been a huge part of the cities we live in, but we are becoming more aware of the consequences it has on our planet, cities, and us humans. 193 countries have decided to stand together to improve the climate and protect our planet by following the Sustainable Development Goals. In the transport sector, this means transitioning the transport to sustainable mobility, where the people are the main factor in mobility. This includes working in synergies across sectors and overall, as a part of urban planning. Copenhagen is a city which for many years has been working with sustainable transport and have created an expressive cycling culture in the city. Barcelona is implementing a complete change of the city in form of their Superblock model, a city renewal model which focus on the people, children, green hubs, and delimiting the car from the cityscape.

This master's thesis will investigate Copenhagen and Barcelona planning strategies by looking at storylines and structural stories, which leads to this research question:

What does the analytical perspective of storylines indicate about the planning pathways for Copenhagen and Barcelona in relations to planning for more sustainable cities?

Through literature review, planning documents from each city is selected and from them, three storylines are defined. The thesis will use three different theories as tools in the analysis to answer the research question. The first theory will frame how the planning strategies are working towards sustainable cities and this is the *Same, Faster, Harder, and Smarter Pathways*. The other two theories are *storylines with discourses* and *structural stories*. They will both be used to understand the planning strategies and find indications in relation to the planning pathways.

This thesis will first analyse the planning documents for each of the cities for the three defined storylines and how they are expressed in the planning documents. Then the storylines will be analysed for structural stories and how they together with the storylines indicate where the cities planning strategies are placed in the four planning pathways.

There are different indications for the two cities and their planning strategies places them very differently on the planning pathways.
Copenhagen is still following the sustainable transport initiatives they have for a few years, but with a little more innovation. This places the city on the Same or Faster Pathway.
Barcelona has planned the Superblock model, which is very innovative and are changing the cityscape completely, which places the city on the Smarter Pathway.

II. Preface

This master's thesis completes my two years master's degree in *Sustainable Cities* at Aalborg University Copenhagen, department of Planning.

My interest in sustainable mobilities and urban planning started a little over 5 years ago, when I stumbled upon the bachelor 'Urban-, energy-, and sustainable planning' at an open house event. I found sustainability interesting already long before university, but mostly regarding climate proofing cities and recycling waste.

The bachelor introduced me to mobilities, practices, and structural stories, which all caught my interest. I continued my studies with Sustainable Cities, where I could dig deeper into mobilities, structural stories, practices, and urban planning. At some point I read about the Superblocks of Barcelona, and it made me want to know more.

This led me to investigate how I could make a master's thesis out of it, and I ended up combining mobilities and urban planning with structural stories and the pathways of achieving sustainable cities.

Please enjoy!

III. Acknowledgements

First, I want to thank the amazing Malene Freudendal-Pedersen for being a bit of an idol in the mobility world for me through my education, introducing a new perspective of practices, and for taken the task of being my supervisor for this thesis. Thank you for your guidance, optimism, and for keep believing in me.

Next, I would like to thank my parents for giving me a space to work, helping in any way possible, and supporting me when I went into a down spiral. Furthermore, my brother for proof-reading everything and making sure my thesis is looking great.

Additionally, my study buddy Marie for helping professionally as a sparring partner and a great friend through this thesis.

Lastly, I want to thank Mikkel for getting me through not only this thesis, but all five years of my education. Thank you for letting me feel everything at once but at the same time be paralyzing numb, and for getting me through the depressing and angsty times.

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1. Introduction

The initial interest for this thesis is inspired by the concept of Superblocks in Barcelona. Changing the mobility in the city, focussing on the people rather than infrastructure and automobile planning. This led to this thought.

What will happen if we start planning our cities for the people living in them instead of for the vehicles need to shred through the city?

For this thesis to look further into this kind of thinking, it is important to understand a few things about urban planning and transport planning. This introduction will investigate what transport and mobility planning is, what responsibilities the countries and cities have sustainably, the car's role and what a city for the people are. Furthermore, this introduction will investigate some planning examples from Copenhagen and the Superblock model from Barcelona.

1.1 Transport planning vs Mobility planning

Cities has for many years been designed according to the private vehicle and on the dependency there has been on the private vehicle (Doheim, Farag, and Kamel 2020). This is seen in the traditional transport planning, which mainly focuses on development of the infrastructure based on congestion, road conditions, or traffic accident (Nielsen, Lohmann, and Andersen 2019).

The big sinner of the transport sector and private vehicles are the carbon emissions. Road transport are the second-largest source of CO_2 emissions in the European Union (European Environment Agency 2020) and the transport sector is emitting around a quarter of energy-related global greenhouse gas (GHG) (United Nations 2021).

This has led to sustainable transport, but the Sustainable Development Goals and Planetary Boundaries as well. Sustainable transport is defined as "the provision of services and infrastructure for the mobility of people and goods" (United Nations 2021), and are about minimizing carbon and other emission and environmental impacts (United Nations 2021).

Denmark has been working with sustainable transport for a long time and been quite progressive in this field early on. Copenhagen has been tracking cycling trips at least since 2007, and have investigated the different benefits of cycling (Hovedstaden 2014).

Sustainable transport is becoming an important priority in many countries. In 2015, the Sustainable Development Goals (SDG's) came together as a shared plan which 193 countries agreed on to end extreme poverty, reduce equality, and protect the planet. The Sustainable Development Goals are the most inclusive and comprehensive plan in UN history, containing 17 goals, where some of them affect the way of planning for transport and mobility in the participating countries. The goals are set to

be achieved by 2030, but it isn't an easy path ahead (Department of Economic and Social Affairs n.d.).

The 17 goals have different purposes, but they can cover multiple topics, and multiple goals can be part of achieving one of the main topics. They are connected and work across sectors and field of priorities for the planet and its people. There are multiple goals which serves to improve sustainability on the transport and mobility sectors. Some of these are Industry, Innovation, and Infrastructure (9), Sustainable Cities and Communities (11) and Life on Land (15). They are focusing sustainable and resilient infrastructure, technology and innovation development, safe sustainable transportation, sustainable urbanization, secure green and public spaces, and biodiversity (Department of Economic and Social Affairs n.d.).

Beside the SDG's there is the Planetary Boundaries. The Planetary Boundaries is first identified in 2009 and are nine processes which regulate stability and resilience of the Earth system. The Planetary Boundaries (PB's) are set to showcase the effects on Earth if humanity continues to develop and thrive for many years. If these boundaries are crossed, it increases the risk of generating large-scale abrupt or irreversible environmental changes (Stockholm Resilience Centre n.d.).

The next step from sustainable transport is mobility planning. Mobility is more than transporting people or goods from A to B, it is about the journey going from A to B (Urry 2007). Mobility planning focus on the people and quality of life. In figure 1 the differences between traditional planning and sustainable mobility planning are shown (Rupprecht Consult et al. 2019).

Traditional Transport Planning		Sustainable Urban Mobility Planning
Focus on traffic	→	Focus on **people**
Primary objectives: Traffic flow capacity and speed	→	Primary objectives: **Accessibility** and **quality of life**, including social equity, health and environmental quality, and economic viability
Mode-focussed	→	**Integrated development of all transport modes** and shift towards sustainable mobility
Infrastructure as the main topic	→	**Combination** of infrastructure, market, regulation, information and promotion
Sectoral planning document	→	Planning document **consistent with related policy areas**
Short and medium-term delivery plan	→	Short and medium-term delivery plan embedded in a **long-term vision and strategy**
Covering an administrative area	→	Covering a **functional urban area** based on travel-to-work flows
Domain of traffic engineers	→	**Interdisciplinary** planning teams
Planning by experts	→	Planning with the **involvement of stakeholders and citizens** using a transparent and participatory approach
Limited impact assessment	→	Systematic **evaluation** of impacts to facilitate **learning** and improvement

Figure 1: Table over Traditional Transport Planning and Sustainable Urban Mobility Planning (Rupprecht Consult et al. 2019)

Traditional transport planning focus on traffic, infrastructure, traffic flows, and short and medium-term delivery plan. Whereas the sustainable urban mobility plan focuses on the people, quality of life, sustainable mobility, and long-term vision and strategy (Rupprecht Consult et al. 2019). Traditional transport planning seems often to forget the "why" and "for whom" (Freudendal-Pedersen 2022).

Mobilities goes hand in hand with everyday life. Everyday life is filled with unconscious decision making, which makes the daily activities and practices simple and efficient. For the day to go smoothly, there is no room to reflect on the next action, it will be an unconscious decision already made as the easiest option. Currently it is expected by modern institutions for individuals to take responsibility for changing their everyday practices, to correspond with the climate changes (Freudendal-Pedersen 2022).

To change the everyday mobility practices toward more sustainable mobility, means changing the elements of the everyday life. This can be the physical mobilities such as cars, trains, and cycles, but just as well policy and planning. Everyday life is influenced by conceptions of time, freedom, and community, and by changing these everyday mobilities can be change and hereby the mobility habits of the individual (Freudendal-Pedersen 2022).

1.1.1 The human city

Everyday life and mobility have more focus on the people and their journey or experience with transporting. In urban planning the people can be placed in focus as well.

The human city is a city which focuses on the people, their needs and the space to live their lives.

"A city come into being for the sake of life but exists for the sake of living well."

The city evolves around its residents and the city's heart exists where its people choose to settle.

The residents of the city should not shape or adjust to the city (Kotkin 2016).

The human focus on the needs of future generations, leads to focusing on the areas where families are likely to be raised. According to Joel Kotkin, the city must be more than what today's planners and urban theorists tries to make them, which is dense and crowded places.

1.2 Mobility projects in Copenhagen

The sustainable transportation forms are growing and are changing the game for urban planning. There has been a lot of changes in Copenhagen over the last few years, with more projects to change the infrastructure into something more sustainable. Copenhagen does not have one big project for the city, but rather multiple individual initiatives concentrated on a street or a district of the city.

Nørrebrogade is the most central street of Nørrebro district of Copenhagen and is connected with a lot of side streets filled with culture, shopping, cafés, and other activity. In 2008 a trial for traffic on Nørrebrogade was started to create more space for cyclist and busses. The cyclist is given some of the car's space and have two bike lanes rather than one. Two years prior, in 2006, a "green wave" was established for the cyclist in order to improve accessibility (Freudendal-Pedersen and Nielsen 2012). A "green wave" is the timing of the green light of the traffic lights on a longer distance which is matched with a certain speed of the cyclist, so they do not have to stop for red (MONOLINE n.d.). The strategy in 2008 was to make physical changes, such as expanding the space for cyclist, limiting the access for cars, strengthening the urban space, and improving the access for public transport. The traffic consequences of the private vehicles is barely mentioned and 'soft traffic' is prioritised, which at the time was new for Copenhagen and Denmark (Freudendal-Pedersen and Nielsen 2012).

Since then, a section of Nørrebrogade has been completely shut down for cars and only busses, bicycles, and emergency vehicles are allowed through. This has reduced the car traffic by about 60% from 2008 to 2012. Furthermore, the speed limit has been changed from 50 km/t to 40 km/t, which has reduced the numbers of traffic accidents. Additionally, a few more initiatives has been taken, such as wider pavements, more benches, and improvement to cyclist conditions (Københavns Kommune 2013).

Another project in Copenhagen is Stefansgade, which connects to Nørrebrogade and is filled with restaurant, cafés, and city life. Stefansgade in Copenhagen N is becoming a "green traffic street". It will be the first in Denmark closed for fueled by gasoline or diesel. Stefansgade will be used to test the effects of a green traffic street and to gain experience about green traffic streets. The idea is to have fewer cars driving through to escape rush hour at Jagtvej, a huge and congested road connecting street to inner city with the highway, and therefore create more space for pedestrians and cyclist on the street. It will furthermore provide more security for families with children playing at the playground at Stefansgade.

It has only recently been decided to turn Stefansgade into a green traffic street, the details on this initiative will be decided later on through dialogue with local committees and other local stakeholders (Københavns Kommune 2022).

Even though these initiatives are great for the green mobility, Superblocks takes it a step further. Superblocks are not only prioritising sustainable transport, but it creates urban spaces for the citizens to enjoy themselves and their social relations as well.

1.3 The concept of Superblocks in Barcelona

Barcelona is a city much like any other city, where the planning early on has been with the cars in mind. The many roads between the buildings create a grid-like view, when looking at Barcelona from above, which doesn't leave much space preserved open and green to the public. The city is filled with concrete streets, cars, and traffic, which create air and noise pollution and it has become a large health burden(Mueller et al. 2019).

Barcelona has chosen to put an end to it and make a great change for its citizens by making a radical change in their way of planning the city. They have chosen not to only plan better in the future, but instead make huge changes in the current infrastructure. Therefore, Barcelona introduces their superblock model.

The Barcelona superblock model is a model which aims to reclaim some of the concrete space for people to use providing urban green spaces, social areas, promoting sustainable mobility and active lifestyles, reduce motorized transport, and diminish the effects of climate change. The Urban Ecology Agency, a public consortium integrated into the Barcelona City Council, has developed a total of 503 superblocks, which will be stretching all over the city of Barcelona. The superblocks will use the already existing grids to divide into blocks, transforming the city into cells of sustainability and health, connecting the neighbourhoods with green areas and high potential for social capital(Mueller et al. 2019).

The Superblock model works towards achieving the target from the SDGs, which define sustainable city and community development in SDG 11 as a pressing issue and leverage point to overcome global challenges related to poverty, inequality, climate, environmental degradation, prosperity, peace, and justice by 2030(Department of Economic and Social Affairs n.d.).

Since Barcelona is divided in a grid-like structure for the most part, it is quite simple to divide it into superblocks. The standard superblock is comprised of nine building squares and will cover approximately 400m x 400m but will deviate in the part of the city where form and space doesn't fit perfectly. Traffic will be diverted to go around the Superblock with a speed limit of maximum 50km/h with segregated cycling and pedestrian infrastructures, and segregated bus lane for rapid transit. The roads inside the Superblock will primarily be for active transport such as walking and biking, where residential traffic will be secondarily with a speed limit of maximum 20km/h. Bus stops will be placed every 400m at the main intersections of the Superblock (Mueller et al. 2019).

The limitation on speed limits within the Superblock and the new bus infrastructure will change the general traffic flow. It is expected for private motorized traffic to decrease considerably when all 503 Superblocks are implemented, which will make the traffic flow less congested as well.
The Superblock model foresees the development of public open and green space throughout the city, consisting of plazas, parks, green corridors, green patches, and general greening in and outside the Superblock (Mueller et al. 2019).

1.4 Problem Formulation

Denmark and Spain have committed to transforming traditional transport into sustainable mobility and improving the sustainability in the cities. Copenhagen has been working towards more sustainable transport for many years and is especially known for being a huge biking city. The whole structure of the city is already very focused on sustainable transport and is taking many initiatives to become more sustainable in the mobility sector.
Barcelona hasn't been as focused on sustainable transport in the city and the Superblock model is the first big action towards sustainable mobility, but it is a big project working towards a big change over all of Barcelona.

As a person from Copenhagen, who is somewhat 'used' to the biking culture and the sustainable transport initiatives in the city, the Superblock model is very different and seems very radical. It has caught my attention and inspired this thesis. It made me question how we work in Copenhagen towards sustainable mobility, if our initiatives are not progressive enough, and if they are too small to

actual make a difference. Furthermore, I am curious about if the Superblock model actually are working towards sustainable mobility and what their perspective of changing the mobility in the city.

I want to investigate the differences in the urban and mobility planning of Copenhagen and Barcelona and investigate if the planning can reach the sustainable achievement we seek.
There are a lot of factors which influence the planning choices and options for the cities, and it would be too big of a project to include everything. Therefore, I have decided to investigate planning documents from both Copenhagen and Barcelona, identify a few storylines, which I can compare the two cities with. From this I want to evaluate how effective the cities' planning strategies are through using the Same, Faster, Harder, and Smarter Pathways theory.

This helped me formulate my research question into this:

What does the analytical perspective of storylines indicate about the planning pathways for Copenhagen and Barcelona in relations to planning for more sustainable cities?

2. Research Design

The thesis has used the research design as seen in figure 2, where the methodology and conceptual framework will be tools for the analyses. The analyses are divided into three, but this will be explained further in the analyses model in chapter 4.4 Analytic model.
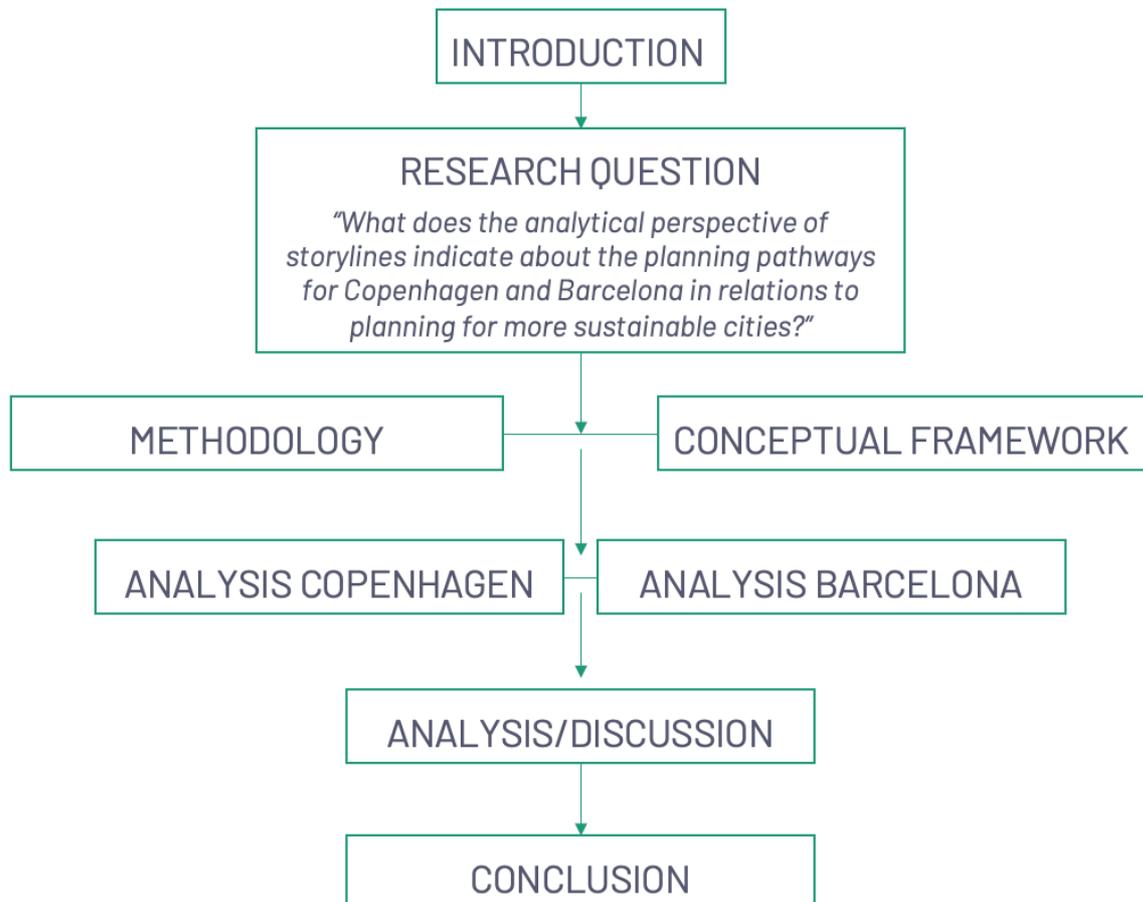

Figure 2: Research Design - own creation

3. Methodology

This chapter will present the methods used to acquire the necessary information to research the different approaches of urban planning in Copenhagen and Barcelona. Furthermore, the methods will be explained based on their relevance to this thesis and how they will be used particularly for this thesis compared to the general use of the methods. Collection of information will be by literature review. The thesis uses two critical examples to dig deeper into the theories framing this thesis.

3.1 Literature review

Literature review is a critical evaluation of the existing research on the topic which is important to know for the research in this thesis. It is partly to provide a background and justification for the investigation, here investigating the planning strategies in Copenhagen and Barcelona. It is also Implemented to validate what literature can be used for this thesis. There are two types of literature review, the narrative review and the systematic review, where the narrative review is relevant for this thesis (Bryman et al. 2021).

A narrative review is used for research projects, where the aim is to gather an overview of the research topic by conducting comprehensive assessment and critical interpretation of the relevant literature. This happens by examining and outlining the theory and research relating to the field of interest and using this to frame the research question (Bryman et al. 2021).
The relevant literature to frame a research question for this thesis is around the topic of transport and mobility, and especially about Copenhagen and Barcelona. The literature is for example articles, research reports, books, and webpages.

In the analysis, multiple documents about planning in Copenhagen and the Superblock model of Barcelona is used to identify the storylines, which is then used together with the theory to answer the research question.

The documents chosen from Copenhagen are all the newest planning document and have been chosen because they give an indication of the focuses and priorities in the planning of Copenhagen Municipality. It shows the overall priorities for Copenhagen without being specific about planning projects.
The three documents are:
- The Municipality Plan 2019 (Københavns Kommune 2019)
- The Climate Plan 2025 (Teknik- og Miljøforvaltningen and Københavns Kommune 2012)
- The Mobility Report 2021 (Teknik- og Miljøforvaltningen and Københavns Kommune 2021)

The documents chosen for Barcelona is partly project reports of the Superblock model and partly webpages of the Superblock model. It is more difficult to select documents from Barcelona since most of them are in Spanish. But the two documents found and used are in English and describe the Superblocks model well and showcase the new priorities of the city. The webpages are simply supporting the points from the project reports.

The documents are:

- Government measure Barcelona Superblock for urban renewal in Barcelona and its neighbourhoods (Ajuntament de Barcelona 2021)
- Let's fill streets with life (Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016)
- Barcelona Superblock: New stage (Ajuntament de Barcelona n.d.)
- Gaining a million square metres from cars with the Barcelona Superblock plan (Ajuntament de Barcelona n.d.)
- Initial approval for the 2024 Urban Mobility Plan (Ajuntament de Barcelona n.d.)

3.2 Critical examples

For this master's thesis, Copenhagen and Barcelona is used as two examples on the cities approach on planning strategies. They have been chosen based on how they previously and are currently planning for mobility and sustainable urban spaces. The two cities are used as examples but are similar to cases in a case study.

The two examples are each an object of interest in the sense of their planning strategies being in interest and these planning strategies will be researched through the planning documents mentioned earlier (chapter 3.1 Literature review) from each city. The length and timeframe for this thesis are not long enough to provide an in-depth examination, which is one of the reasons why the cities aren't used as cases but rather examples. A case study requires much more time to research the case thoroughly, to the extent of the researcher becoming an expert on the case (Bryman et al. 2021). The two examples will be analysed for the unique features which comes to show in their planning documents and planning strategies. For Copenhagen it will be the general philosophy of the municipality's planning and for Barcelona it will be investigating the unique features of the Superblock model, since Copenhagen does not have an exact plan or strategy for the whole city such as Barcelona has with the Superblock model (Bryman et al. 2021).

Furthermore the two examples will be investigated as critical examples, because they are used to better understand the main theory in the sense of urban and mobility planning (Bryman et al. 2021).

3.2.1 Copenhagen

Copenhagen is the capital of Denmark, a small country of Scandinavia. The city is growing with 644.424 people of 1st of January 2022, an increase of 37% since 1995 and it expected to keep increasing. Everyday a lot of people are commuting in and out of the municipality, in 2020 about 46% are commuting into the municipality from other cities and 38% of commuters are commuting out of Copenhagen municipality. Of all Copenhagen's working residents in 2020, 55% work within the municipality. Both data are from 2020 because of the corona pandemic, which has influenced the travel patterns (Den tværgående Analyseenhed 2022).

Figure 3 shows how the trips of Copenhagen are divided on transportation forms from 2012-2021, whereas figure 4 show the percentage of trips by foot, bike, and public transport, where the goal is 75% by 2025. 79% of the cyclist in Copenhagen feel safe when biking (Den tværgående Analyseenhed 2022).
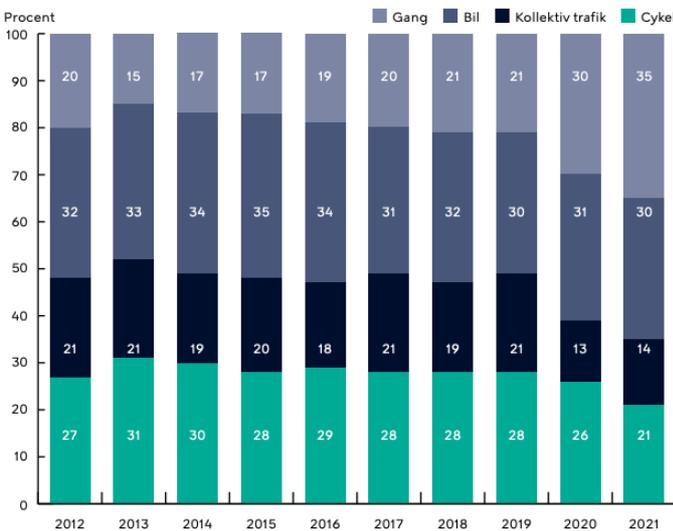

*Figure 3: Percentage of the division of transport (Den tværgående Analyseenhed 2022)*
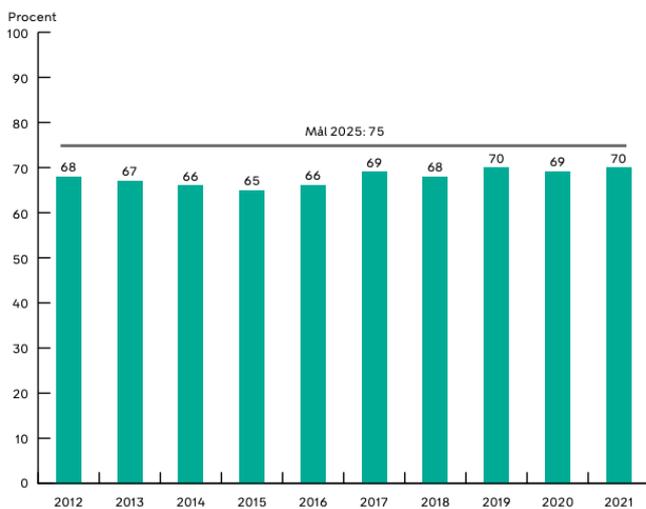
Figure 4; Percentage of trips by foot, bike, and public transport (Den tværgående Analyseenhed 2022)

Copenhagen is close to their goal of 75% of trips traveled by foot, bike, and public transport, but figure 4 shows that even in 2012 there was 68% people traveling like this, which indicates Copenhagen have had a focus on public and green transport for a while. According to the data in figure 3, there aren't any big changes in how the trips are divided, if 2020 and 2021 are excluded since they have been influenced by the pandemic (Den tværgående Analyseenhed 2022).
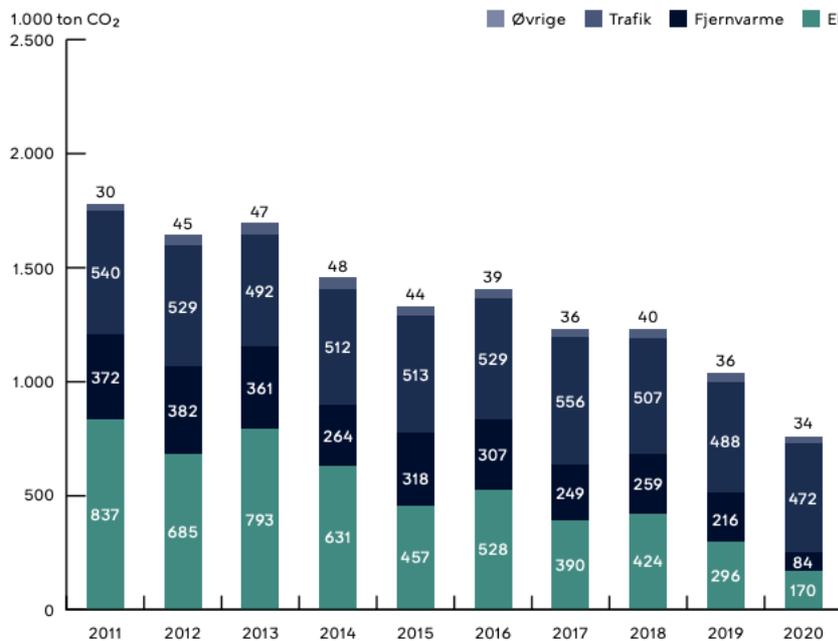
Figure 5: Yearly CO$_2$ emission of electricity, district heating, traffic, and others (Den tværgående Analyseenhed 2022)

Figure 5 shows the yearly CO$_2$ emission of electricity (green), district heating (very dark blue), traffic (middle blue), and others (light blue/grey). In 2020 the car is the biggest sinner on CO$_2$ emissions by far (Den tværgående Analyseenhed 2022).

3.2.2 Barcelona

Barcelona is second largest city in Spain, only surpassed by the capital Madrid, with about 1.620.809 people. Every year the city is visited by many people from around the world and in 2016 over 9 million people visited the city. Barcelona have about 257.605 in-commuters and 226.111 out-commuters daily for work, study or personal reasons (Urban Resilience Hub n.d.).

In a year 133.94 journeys per inhabitant are taken with public transport and 48,72% of the journeys are by metro and 38,3% by bus. The data is from 2020, reflecting the impact of the corona pandemic (City Transit Data n.d. (b)).

There are 594 cars per 1000 inhabitants in the city and 4.912 shared mobility vehicles per million inhabitants (City Transit Data n.d. (a)).

3.3 Theory of science

The research question is fundamentally what drives the choice of methodology and methods, but to find the appropriate methods and methodologies it is important to know how the research question originate and how is it refined. In research, the terms important to understand are ontology, epistemology, methodology, and methods (Berryman 2019).

Ontology is the philosophical study of being and describes what can be known, what one believes can exist, and what is considered fundamental or basis, where epistemology describes the ways of knowing, how to know the knowledge one has and who can be a knower. Together they provide an insight into the researchers believes about the nature of truth, the world, and way of being in that world.
It is the ontology which controls the direction of the research question, depending on what the researcher believes is possible and understanding of what is real. Ontology works together with epistemology in terms of the theoretical perspective, which helps the researcher shape the research question (Berryman 2019).

There are two types of researchers: The positivist researcher and the interpretivism researcher. The positivist researcher believes the truth is discoverable and therefore shape a research question which can be quantified. Positivists look at bias, objectivity, validity, and generalizability. The interpretivist researcher will instead look at qualitative question, where the goal is to understand the how and the why to the research question, through social constructions. The interpretivists investigate confirmability, dependability, credibility, and transferability. The positivist look at the numbers, where the interpretivist look at the reason (Berryman 2019).

This thesis is taken an interpretivist research approach, investigating the participants, using qualitative methodologies by interpretating documents for the reason why the two critical examples have chosen the strategies they have. The critical examples are analysed for storylines, which will be analysed for structural stories to interpretate how it indicates how the planning strategies fit in the theory of pathways.

Ontology, epistemology, and theoretical perspective influence the methodology used to answer the research question. Positivists use quantitative data, something which can test a theory, hypothesis, or explanation through mostly numeric data and statistical analysis. In general, the quantitative researcher seeks to be objective in their research.
Interpretivists then uses qualitative methodologies as fit to their ontology and epistemology. The qualitative researcher investigates their research question by understanding the participants

through data made of words and phrases, data which can be interpreted, and a general theoretical and philosophical approach. Positivists seeks subject, while interpretivists seek participants (Berryman 2019).

4. Conceptual Framework

The two critical examples will be analysed and discussed based on the conceptual framework of three theories: the Same, Faster, Harder, Smarter Pathways, Storylines, and Structural Stories. The Same, Faster, Harder, Smart Pathways will form the general framework, serving as a guide to understand the efforts of mobility and urban planning in the two cities.

The selected literature of the two critical examples will be analysed for storylines, which will give an understanding of their planning priorities and approach to these storylines. Structural Stories will help understand the perspective of previous, current, and future planning.

Both will be used to analyse how the two critical examples fit in the Same, Faster, Harder, and Smarter Pathways.

4.1 Same, Faster, Harder, and Smarter Pathways

The Same, Faster, Harder, and Smarter (SFHS) Pathways is a theory of how to achieve the Sustainable Development Goals within Planetary Boundaries where transformation is feasible. It contains four different scenarios: Same, Faster, Harder, and Smarter, which all have the same point of departure but different approaches on how much to improve to achieve the Sustainable Development Goals.

The theory is based on the report "Transformation is feasible" to the Club of Rome from Stockholm Resilience Centre and BI Norwegian Business School authored by Jorgen Randers, Johan Rockström, Per Espen Stoknes, Ulrich Golüke, David Collste and Sarah Cornell (Randers et al. 2018). The report is investigating different approaches to reach the Sustainable Development Goals (SDG's) within Planetary Boundaries (PB's) by the set wanted deadline of 2030 and further 2050. The SDG's have a great vision for the future of the world, working towards a more sustainable world within climate, social, and economic sustainability. Unfortunately, the SDGs does not quite describe how to implement these goals. Therefore, the report to the Club of Rome will investigate four different pathways of implementing the SDGs in the PBs. According to this report, only one pathway meets most of the SDG's by 2030 and it is built of transformational change starting immediately, resting on at least five actions (Randers et al. 2018):

- Accelerated renewable energy growth
- Accelerated productivity in food chains
- New development models in the poorer countries
- Active inequality reduction
- Investments in education for all, gender equality and family planning (Randers et al. 2018)

The pathways are divided in four different scenarios: Same, Faster, Harder, and Smarter. There is no probability assigned to the scenarios in the report, therefore they are not predictions. All four are based on the same historic facts but shaped by different policy and investment choices (Randers et al. 2018).

In the "Transformation is feasible" report a modelling framework, called Earth3, is used to calculate the effects on the 17 Sustainable Development Goals (SDG's), and assess the status of global environmental pressures on the nine Planetary Boundaries (PB's). Furthermore, there is a "SDG success score" which goes from 0-17 and a PB safety margin which values from 0-9. A 17 on the SDG success score and a 9 on the PB safety margin are the absolute preferable result. This model cannot give a complete picture or stimulate what is going to happen with each scenario because several variables are not included. It is merely a model to illustrate the effects of the four different pathways (Randers et al. 2018).

The Earth3 model, SDG success score and PB safety margin is used in the four scenarios to investigate how the world can respond to the grand challenge in each of the four. The results show only one scenario which rises to the challenge (Randers et al. 2018). Figure 6 shows the main characteristics of each scenario.
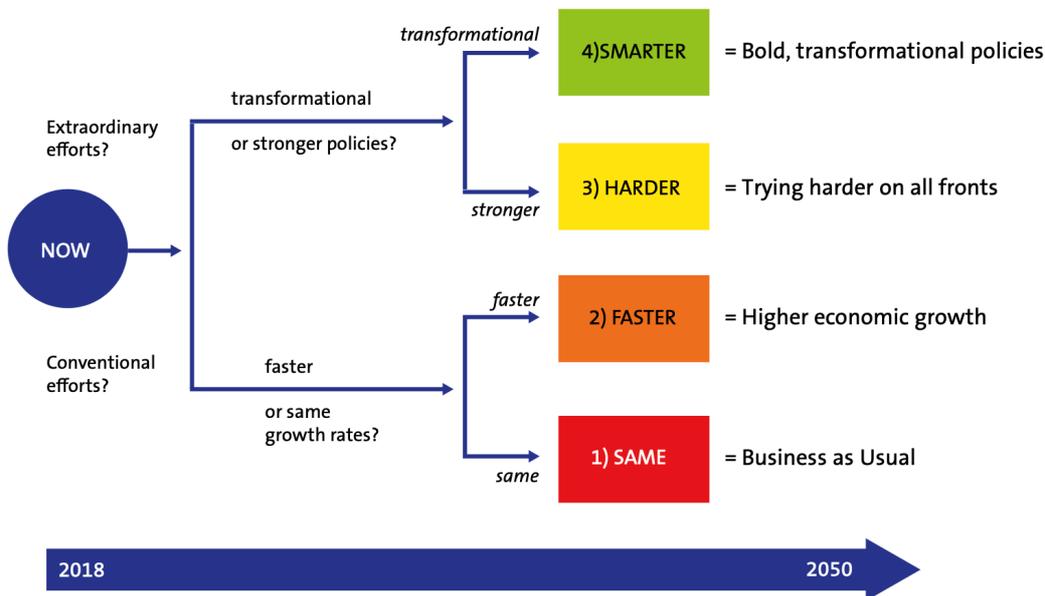
*Figure 6: The main characteristics of each scenario (Randers et al. 2018)*

4.1.1 Scenario 1: Same

The first scenario is *Same* which, simply put, is as implied. On this pathway, the future is explored if today's policies and actions follow the same pace all the way to 2050. It doesn't mean there won't be any action or that society should leave everything as it is. This pathway continues with the efforts

made now and through the conventional ways done over the last decade. Data over the last decade shows change of socio-economics to be slow at most rates, and the *Same* pace of progress proves to be insufficient to deliver huge progress by 2050 regarding the SDG's (Randers et al. 2018). There are some good things about the *Same* pathway, because the efforts the world put into ending poverty and hunger now will put an end to poverty and hunger, but at the consequence of planetary boundaries being pushed to their red zones by the increased resource use. But at its best, it's taking two steps forward and one step back. It is a very slow progress that won't deliver much in the end. The change forward will be similar to the changes happened in 1980-2015 (Randers et al. 2018).

4.1.2 Scenario 2: Faster

The second scenario is *Faster*, where the main point is a faster economic growth. The idea being that higher incomes can give extra funds to achieve the SDGs for all people. This includes funds for more education, clean water, food, and more jobs. It is the government and industry who needs to succeed with the faster economic growth. This can be done by increasing trade and go further with innovations and investments. In the *Faster* scenario the world sees growth in renewable energy, and there is a demand of electricity and renewables get cheaper. But there isn't much effort in electrification of industry, heating, transport, therefore the use of fossil fuels keeps increasing. Changing public transport from diesel to electrical one bus route at a time will make the process slow and not efficient in the end. Same as offering parking for electrical vehicles with a charging station, but no other effort to replace the fossil vehicles completely with electrical vehicles.

This pathway only delivers a bit better than the *Same* pathway on the Sustainable Development Goals, but the Planetary Boundaries will take even more damage in this scenario. It will do well at first, but the speeding up the average growth rates will increase social inequalities as well (Randers et al. 2018).

4.1.3 Scenario 3: Harder

Scenario 3 is the next step, where the government and industry try even *Harder*. For this scenario the focus is to work harder on sustainability on all fronts. The government allocate even more funds than at scenario 2 and are pushing harder for projects regarding the Sustainable Development Goals (SDGs). There will be an understanding of the need for a new model for economic growth, which must shift to a green and sustainable growth model. More initiatives should be taken to try harder and find more innovative solutions, where the effort will be carried out in a greater project or investment, such as sustainable renewal of a whole city district or electrifying all public transport (Randers et al. 2018).

This pathway does increase the achievements of SDGs, but it still has a critical effect on the Planetary Boundaries (PB's) even though not as negative as with the *Same* and *Faster* Pathways. The SDGs are lifted separately, which can cause trade-offs, where goals get pitted against the other. This could be that money is cut off for sustainable agriculture to support education instead. More goals will be reached, and the Earth's resources will be better managed, but the world's societies will still push many of the PBs out to the red high-risk zones (Randers et al. 2018).

4.1.4 Scenario 4: Smarter

Last is scenario 4, which takes a whole different approach than the first three scenarios. The *Smarter* pathway investigates what happens if the governments and industry choose transformational actions.

The approach to investigate this scenario is different from the first three scenarios, because the scenario is a challenge-and-response scenario. This means the purpose is to describe the extent of what is needed to "hit target" rather than only focusing on the understanding of solutions already known as in *Same*, *Faster*, and *Harder* scenarios. It is almost as backcasting the scenario, by first looking at the wanted result, and then taken one step back at the time, to understand what needs to be done to achieve the wanted result. This can be seeing a future with no C02 emission from the transport sector as the target and then plan backwards.

With the *Smarter* scenario the report explores five different extraordinary actions, what could happen with each of those five actions if acted on by decision- and policymakers in all regions. For this pathway it is assumed the world and its leaders stand together to realise the massive scale of the challenge and do the necessary changes. For this to be possible, the countries and their leaders need to implement five actions, which can turn things around (Randers et al. 2018).

The five actions are as follows:
1. Rapid renewable energy growth – sufficient to halve carbon emissions every decade from 2020
2. Accelerated productivity in food chains – improving productivity by +1%/year
3. New development models in the poorer countries – following models such as China, Scandinavia, Ethiopia, or Costa Rica
4. Active inequality reduction – ensuring that the richest 10% take no more than 40% income
5. Investment in education for all, gender equality, health, family planning – stabilising the world's population (Randers et al. 2018)

These five transformations make the *Smarter* scenario far more radical than the other three scenarios, and for some it might be too radical. But when running this scenario through the scenario model, it indicates great results of these actions creating synergies capable of attaining nearly all SDGs while staying within nearly all PBs (Randers et al. 2018).

4.1.5 Sustainable Development Goals within Planetary Boundaries

When looking at the numbers for the four pathways, it shows that even though *Same*, *Faster*, and *Harder* do make some improvement on the world's SDGs, the consequences on the stability and risk level of Earth's life supporting systems comes at too high of a cost. It is not possible to achieve the sustainable development goals within planetary boundaries from the *Same*, *Faster*, or *Harder* pathways (Randers et al. 2018).

Based on the analysis from the "Transformation is feasible" report, the only scenario which can keep developing the economy while staying within the PBs are the *Smarter* scenario. The type of transformative development by the five actions could be able to secure a safe operating space, making it possible for the world's societies to continue to flourish in 2050 and forward with safer life supporting systems on Earth (Randers et al. 2018). Figure 7 illustrates how the scenarios perform on both SDG success and planetary boundary states. Scenario 1 – *Same* is red, Scenario 2 – *Faster* is orange, Scenario 3 – *Harder* is yellow, and Scenario 4 – *Smarter* is green.
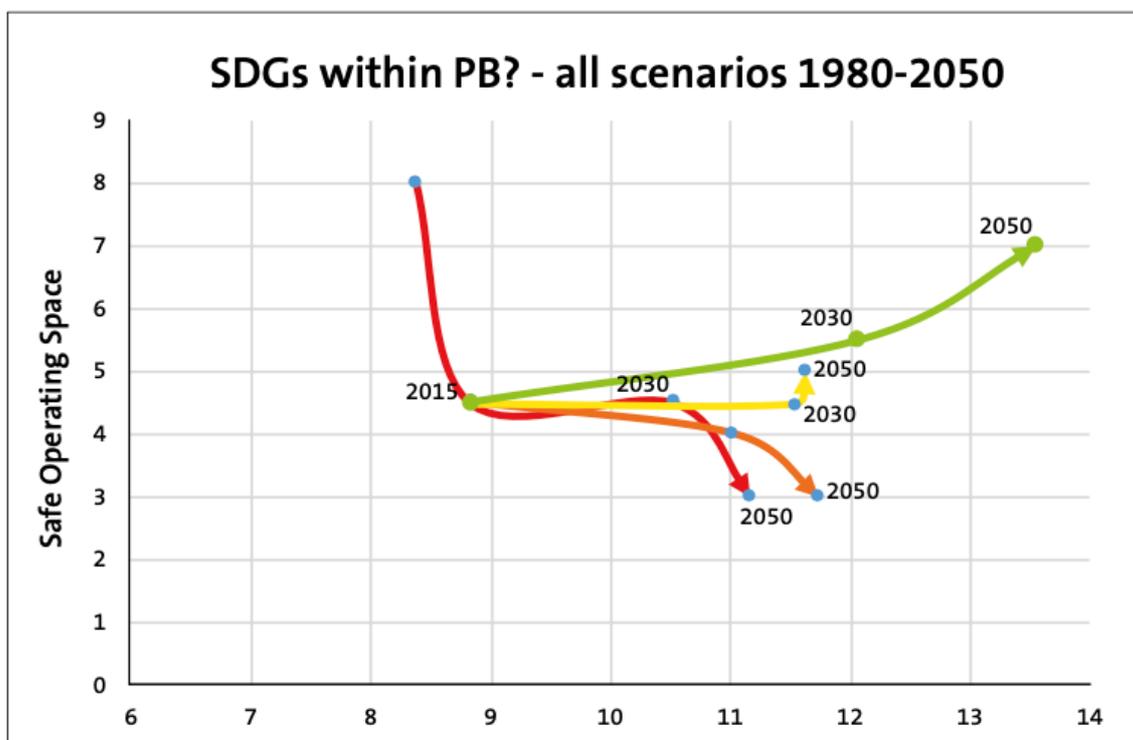

Figure 7: Illustration of the four pathways placement on achieving SDGs within planetary boundaries. SDG success rate on axel x and planetary boundaries margin on axel y (Randers et al. 2018)

It is clear scenario 4 Is achieving the best result for SDGs within PBs, where scenario 3 is the only other scenario to improve a little bit on the PB scale.

4.1.6 Pathways in urban planning

A lot of urban planning can affect the SDGs, which is why the pathways are important to consider here as well as any form for planning. Urban planning can include social sustainability, economic sustainability, and environmental sustainability. Just as in any other situation that include the SDGs, the *Smarter* pathway gives the best results, therefore it must be the same principle with urban and mobility planning. Furthermore, the transformation thinking needs to be implemented when planning for our urban spaces and in collaboration with mobility planning. The SDGs should be thought of in an overall solution, because in the end it is all intertwined.

4.2 Storylines

Maarten Hajer describes storylines as part of discourse analysis in his book about Authoritative Governance (Hajer 2010). The analysis in this thesis is not discourse analysis, but the understanding of storylines is from Hajer's book. This chapter will very shortly introduce discourse analysis and then only focus on storylines and the way they will be used in this thesis.

Hajer argues politics are stages and explains it can be argued the 'real' politics takes place behind what first meets the eye. Therefore, detailed analytical techniques has been developed to study predictions of behaviour, strategic choice, real interest, and hidden power structures. It is to analyse the meaning behind the words of the government and the role certain political language can obtain. In a discourse analysis one finds and illuminates the pattern, its mechanisms, and its political effects (Hajer 2010).

Hajer defines discourse as:

"Discourse: an ensemble of notions, ideas, concepts, and categorizations through which meaning is allocated to social and physical phenomena, and which is produced and reproduced in an identifiable set of practices." (Hajer 2010)

The interesting part of discourse for this thesis is the 'notions', things retold through stories, metaphors, or catchphrases, which includes the storylines (Hajer 2010).

Of the mechanisms mentioned earlier there are two central linguistic mechanisms: storyline and metaphor. This thesis will only look at the storylines. Storylines are a summary of narratives which links events to one or more discourses and are often used to 'guide' a policy process. It can help actors to develop the story over a period of time and build it up.

For this thesis three storylines are categorized and used to investigate some of the priorities in the planning of the two critical examples, Copenhagen and Barcelona. The three storylines are found through reading and working with the planning literature chosen to represent planning in each of the cities. These themes are the most present and are clearly priorities and focuses through the documents, and therefore interesting to investigate further.

The three storylines include the narratives each city has about the certain storyline, and illustrates how they prioritise it, and gives an idea of their perspective on the area.

The three storylines are:

- The Car's Role
- Space for Children
- The Human City

The three areas of planning are very clear in the documents investigated for the thesis and leads to analysing what the two cities are trying to say in their planning documents. Furthermore, to search for more than meets the eye in the narrative through strategic choices and real interest (Hajer 2010).

4.3 Structural Stories

The structural stories are used as a tool to understand the narrative in the storylines from the two critical examples. The structural stories will provide an understanding of the reasons behind the planning choices and help identify where the storylines are placed in the matter of the four pathways.

4.3.1 Understanding structural stories

Structural stories are stories about how some things are in the everyday life which becomes a universal truth, almost like stereotypical understanding of for example public transport. This could be that public transport is always delayed. The structural stories can also explain actions and choices made through individuals daily routine, and it becomes an unconscious part of the choices made to fit best into people and their family's life. The stories become part of regimes of beliefs and behaviour for people and can serve as arguments for choice of action (Freudendal-Pedersen 2016).

The structural stories can become a tool to explain certain structures in society or can even be the reasons behind some structures. As this structural story becomes a part of a bigger story about cars dominating the city space, affecting children cycling: *"The structural story on how dangerous it is for kids to cycle in Copenhagen traffic is part of institutionalizing the car's dominance in the city space"* (Freudendal-Pedersen 2015). Tendencies can create narratives. Narratives such as the car is the best mode of transport, it gives freedom and public transport is slow and unreliable. These

narratives have a dominant role in planning and politics, which then create reasons for keeping the car dominant in the cityscape of Copenhagen (Freudendal-Pedersen 2015).

4.3.2 Structural stories and storylines

Storylines are a summary of narratives and structural stories are narratives, which becomes a part of the storyline and a tool to understand the discourse of the storyline.

The structural story can be seen as a micro-discourse because it can illustrate hegemonies in every-day practices if they are reified and institutionalized. The structural stories can illuminate the practice and the way the stories are told can maintain specific practices. Which can cause practices to be something out of the individual control and become something imposed upon the individual. Then for example, the car being the only opportunity becomes an objective fact, with no control over changing it. With this the structural story show how everyday practices create reified and institutionalized discourses (Freudendal-Pedersen 2022).

The structural story on an everyday scale becomes a tool to understand a policy and planning scale, and then it can be possible to try to understand how the dominant unsustainable mobilities systems can be changed (Freudendal-Pedersen 2022).

The structural stories help understand the storylines, what tendencies there are and how practices be locked into almost becoming unchangeable. Furthermore, it indicates how even on a policy and planning stage, people get affected by the everyday life and its structural stories.

4.3.3 Choice of structural stories

This thesis will analyse the storylines for previous defined structural stories by Malene Freudendal-Pedersen, since the purpose of the thesis isn't to define the structural stories found in planning of the two cities. Both the structural stories and their counter stories will be used to analyse the story-lines.

The pre-defined structural stories are:
- "One gets more freedom when one has a car" (Freudendal-Pedersen 2016)
- "Society is arranged around automobility and one can therefore not live without a car" (Freudendal-Pedersen 2016).
- "One cannot let kids cycle to school, it is too dangerous, it is safer to drive them" (Freudendal-Pedersen 2022).
- "It is not possible to connect everyday life if one doesn't have a car" (Freudendal-Pedersen 2015)
- "When one has children, one needs a car" (Freudendal-Pedersen 2016).

The stories are chosen from the knowledge about typical structural stories in Denmark, which is therefore known already to be present in the documents about the Copenhagen case. It will be interesting to compare if the same stories are present in Barcelona or if their counter stories are present instead.

4.4 Analytic model

To answer the research question, the planning strategies in Copenhagen and Barcelona will be analysed. First, two vertical analyses will each analyse the chosen planning documents for each city for perspectives of the three defined storylines, the Car's Role, Space for Children, and the Human City. Secondly, one horizontal analysis will compare the storylines for Copenhagen and Barcelona, and analyse the structural stories within the storyline, and analyse how that indicates how the planning strategies fit into the four pathways.

Figure 8 shows the SFHS Pathways framing the analyses, whereas the two vertical analyses are parallel to each other, divided in Copenhagen and Barcelona. They will each be analysed for the three storylines, finding examples and indication of how the two cities planning perspectives are of the storylines. The vertical analysis is followed up by one horizontal analyse, which will be in three parts, one part for each storyline. Within each storyline, the actual storyline will be compared for the two cities, then the structural stories in the storyline will be analysed. Lastly, it will be analysed what the storyline and structural stories indicate about the planning strategies and how each city fit into the four pathways.
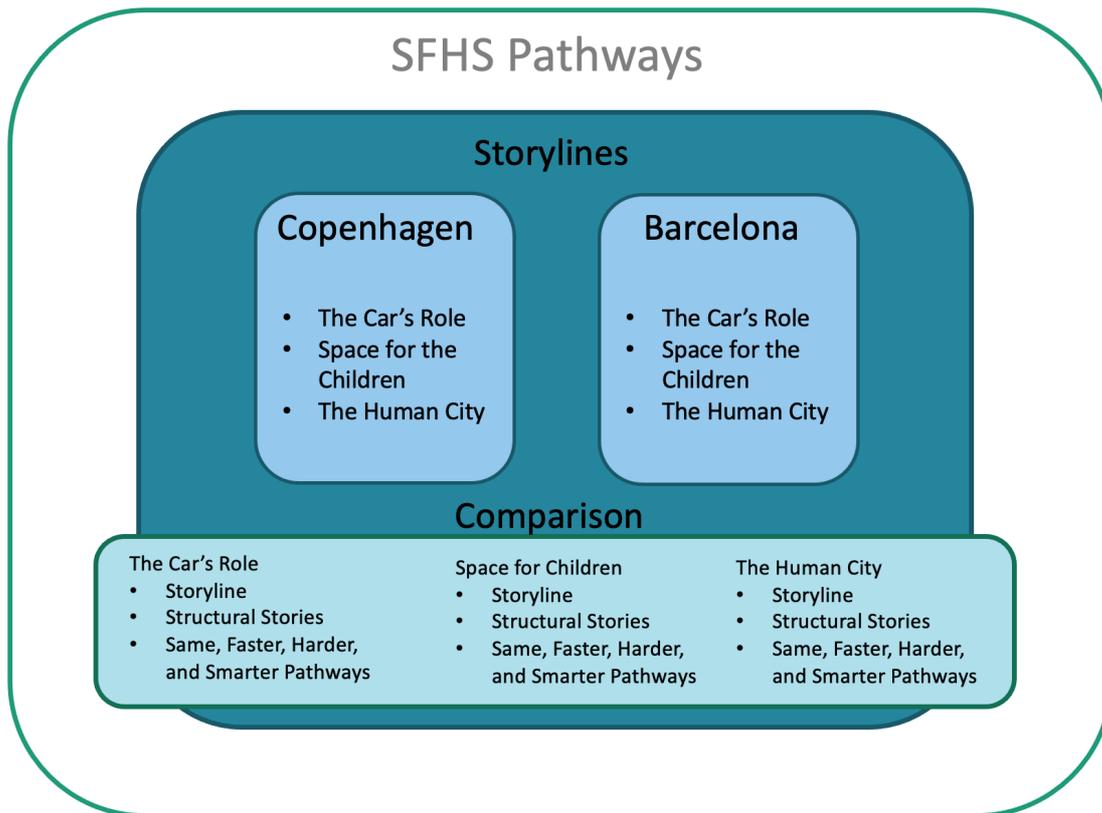
Figure 8: Structure of the analysis, divided into three analyses – own creation.

For the two vertical analyses, multiple documents and webpages are used for each of the analysis. The Copenhagen analysis will pull examples of the storylines from:

- *"Københavns Kommuneplan 2019: Verdensby med ansvar"* (Municipality plan 2019)(Københavns Kommune 2019)
- *"Klimaplanen – KBH 2025"* (The Climate Plan 2025)(Teknik- og Miljøforvaltningen and Københavns Kommune 2012)
- *"Mobilitetsredegørelsen 2021"* (Mobility report 2021)(Teknik- og Miljøforvaltningen and Københavns Kommune 2021)
- The Barcelona analysis will pull examples from
- *"Let's fill streets with life"* (Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016)
- *"Government measure Barcelona Superblock for urban renewal in Barcelona and its neighbour-hoods."* (Ajuntament de Barcelona 2021)
- Webpages all by the Ajuntament de Barcelona (Ajuntament de Barcelona n.d.; n.d.; n.d.).

5. The Stories in our Planning

The literature selected to represent the planning strategies for Copenhagen and Barcelona show an indication of three storylines, which are defined in chapter 4.2 Storylines. Here the documents will be analysed to identify how the storylines are a part of the planning strategies for each of the cities.

5.1 Storylines in Copenhagen planning

The planning documents about Copenhagen show a city wanting to be sustainable, green, inclusive, and a role model for other countries. There are quite a lot of focus on the car, electrical vehicles, and the cycling culture of Copenhagen. The three storylines will be identified separately in this chapter.

5.1.1 The Car's role

The first storyline is the role of the car in mobility planning of Copenhagen. As any other big city, cars have long dominated urban landscape, and a lot of the infrastructure is centred around the car.

All through the Copenhagen Municipality plan, traffic and private vehicles take up most of the focus. Copenhagen is growing and there are more people living in the city (Københavns Kommune 2019). This puts pressure on the infrastructure and the space in traffic. The municipality wants to give more room to bikes, public transport, and green breathing spaces, but by compromising as little as possible when it comes to the private vehicles. *"The busses are limited though more and more by the additional traffic and to secure the busses can come by faster, we establish bus lanes and other bus priority. It can have the consequence that, In some areas, we have to find a compromise with wishes of local greening and parking." (Københavns Kommune 2019 - page 28).* Here the municipality are expressing how implementing public transportation can have a consequence of having to compromise on what the Copenhageners wishes to be the landscape of their city, this being local greening and parking.

Even though the Copenhagen Municipality expresses some hesitation towards transitioning space from the private vehicles to more sustainable purposes, they are aware the transition must happen. *"That there must be worked on freeing road space from private motoring to new uses such as recreative purpose, public transport, and climate adaption."* (Københavns Kommune 2019 - page 54). The municipality highlights recreative purposes, public transport, and climate adaption as a priority for the mobility planning. The car's role become less important, as the space needed for these initiatives will be former road space being re-used. It is unclear how much road space is being freed, but the options present in these documents aren't to free all the road space.

In Copenhagen's storyline of the car, they argue the car has positive effects such as accessibility, and they underline that it should still be possible to use the car when needed. *"Residents, clients, local business owners etc. should still be able to use cars for relevant areas and distances."* (Københavns Kommune 2019 - page 72). The relevant areas and distances are unspecified and what the purposes of the use of the car should be is unspecified as well. But it is clear, that the car to Copenhagen Municipality in some situations Is necessary and can't be replaced by other means of transport. Copenhagen goes on mentioning, *"But also in the future there will be a need for cars and heavy vehicles."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2012 - page 43). This again supports the municipality's view on the motorized vehicles, and they don't see them disappear in Copenhagen's landscape in the near future.

Copenhagen Municipality mentions multiple times the concept of building close to a station as an approach to limit the car's role in the everyday practices. This is changing the car's role into a different storyline by changing the city's design rather than changing the actual function of the car. *"Locating business and housing close to the station is consistently important to secure a good and healthy city, where it is possible to live without using a car daily. ... It is a desire that there to a greater extent be built close to the station."* (Københavns Kommune 2019 - page 24).
This is similar to the concept of a 15-minute city, where the city becomes more compact near the stations, with everything gathered in one place (hairdresser, groceries, work, sport facilities etc.). The residents can access all the individual's essentials at the distance of maximum 15 minutes by foot or bike. This is to avoid the need for a car in the everyday practices because everything is so close, it is faster and easier to walk or take the bike. (Moreno et al. 2021). This concept of building station-near does not relate to most of Copenhagen, since most Copenhagen Is already build and the municipality does not mention implementing this in already existing districts.

Copenhagen municipality does not express an ambition of making the storyline of the car's role in the big city decrease rapidly. Rather than eliminating cars in general, the municipality is looking into electrifying all motorized vehicles. Copenhagen Municipality Is dividing the car's role into two different storylines, where on one side the motorized vehicles are bad for the environment, and on the other side is the alternative of the electrical vehicles, which they mention a lot in these documents. Their plan for the first storyline is to ban all diesel vehicles within the city,

"Therefore, we desire an environmental zone in Copenhagen, which put demands on emissions from private cars, cargo cars, and trucks, and before the end of 2030 we wish to introduce an area of the city, where only vehicles, that doesn't emit pollutants or CO_2, can drive." (Københavns Kommune 2019 - page 28).

Furthermore, Copenhagen Municipality desires an environmental zone on the motorized vehicles because the air pollution in Copenhagen is too high according to WHO's guidelines and it compromises the health of the residents in Copenhagen (Københavns Kommune 2019 - page 22).

The municipality Is highly set on electrical vehicles (EV's) as they mention EV's many times through the planning documents. Copenhagen wants to replace the motorized vehicles with EV's for the most part. They want to transform some parking spaces into EV only parking spaces. Only the EV's and hybrid cars are allowed to park in EV parking spaces, and it is free for EV's to park on most public parking spaces in Copenhagen (Københavns Kommune n.d.). *"And possibly another 500-1000 electrical car spaces (parking spaces), if the need arises."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2012 - page 42). For the Copenhagen Municipality the car is very important and necessary, but not at the cost of the environment and air pollution. They show this by going further to please the residents and encourage them to choose an EV rather than fossil fuel vehicles.

Even though Copenhagen Municipality Isn't being aggressive about removing cars from the city scape, they are promoting wider bike lanes, more biking in general, walks in the city, and public transport. Furthermore, they are opening op for the option of making part of Copenhagen free of cars,: *"... more of the coming city development areas and Nordhavn can be free of cars or partly free of cars."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 16). Nordhavn is a district of Copenhagen by the water, where most of the area have been built recently and been developed into a more sustainable area, with public transport options in busses, metro, and S-train. Deciding to make Nordhavn free of cars would make it into an area like a 15-minute city, as the municipality have shown interest in multiple times through the documents. Copenhagen mentions districts of the city, which can be free of cars, but doesn't not plan for the whole city to make this transition.

In the mobility report from 2021 it shows, *"About every fourth owner of a cargo bike or a bike trailer indicated it replaces a car in the household."* (*Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 55*). This is not mentioned in any of the other documents, but it could change the role of the car, if one looked further into how the cargo bike can replace the car and the influence the residents of Copenhagen.

Copenhagen's storyline of the car's role shows a shift from being the highest priority for transport, where public transportation, biking, and walking is being prioritised equally with the private vehicles. Copenhagen Municipality does not want to remove the private vehicles from the city's landscape, but rather descale it and convert it into electrical vehicles. The private vehicle is indispensable according to Copenhagen Municipality.

5.1.2 Space for the children

The second storyline Is the space children need. This can be for them to travel safely by themselves or with adults, a space for them to play, or a nice environment at their school or leisure facilities. In the three documents about Copenhagen the children are only mentioned once and it is barely about their space in the mobility planning.

The only time families or children are mentioned in relation to biking or walking Is in the mobility report for 2021, where the matter of concern is the children's safety when traveling to school or leisure facilities.

"The project aims to target the administration's continued efforts to improve children's possibilities to bike and walk in Copenhagen through site-specific mapping of the safety by schools and major leisure facilities. The overall results from the safety mapping shows, there Is a big difference on how parents and students experience the safety on the way to school and leisure facilities."

(Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 33).

It does indicate children can travel themselves under certain circumstances, one being the safety of the children as the most important factor. It creates a focus on how the municipality can create an environment suitable for children traveling to school and leisure facilities, without parents driving them around. But other than this one point in all three planning documents, there aren't any mentions of the children space. Which could indicate Copenhagen Municipality does not consider it or might not think of it is a priority.

5.1.3 The Human City

The third storyline is planning a city for humans, which prioritises its residents rather than private vehicles. Copenhagen is developing green transport, more space in the traffic, more green urban areas in the city, and planning more for its residents and the guest of the city. But private vehicles are still very much a part of the cityscape, and the human city is less in focus in Copenhagen.

The first thing mentioned in the municipality plan is Copenhagen and the Copenhageners want a city with space for everyone, no matter the background. There needs to be more biking, green urban areas, space in the traffic, and a better public transport network. *"You can't say Copenhagen without saying bikes. But the Copenhageners demands even better biking conditions and moreover demands better conditions in the public traffic."*(Københavns Kommune 2019 - page 5). The Copenhageners wishes and needs are being heard, and the municipality is working towards meeting those demands. The new metro 'Cityringen' and two other yet-to-come metro lines are going to expand the public transport network (Transport- og Boligministeriet, n.d.). Furthermore, it is decided in the

Municipality plan 2019 that pedestrians are to be equals to all other means of transport. *"With Munici-pality plan 2019 it is decided, the pedestrians traffic as a transport form must be prioritised and evalu-ated on an equal footing with bikes, cars, and busses."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 33).

As for the biking culture in Copenhagen, the municipality will expand the network of Super Cycle Highways and furthermore, work with the other neighbour municipalities on having Super Cycle Highways to connect the municipalities. Super Cycle Highways are a connected network of bike lanes, where high quality bike lanes and great conditions for cyclists Is prioritised to make the daily travels better (Supercykelstier n.d.). In the Copenhagen Biking Strategy 2011-2025 there is a vision of it must be safe to bike from A to B in Copenhagen, and the bike must be the fastest means of trans-portation from A to B in Copenhagen (Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 52, 53).

Copenhagen wants to stand in front for sustainable urban solutions, with a social responsibility to its residents and guests. Giving them space and the right circumstances for high quality of life.
With this Copenhagen wants to further protect its history, historic buildings, and other signs of the previous urban life in Copenhagen. Furthermore, there is a vision of mobility and infrastructure to contribute to the social inclusion in Copenhagen(Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 24).

Copenhagen wants to take care of its people, to make sure they are safe and have the best condi-tions for walking in the city. This is done by making space for the pedestrians on wider pavements, more senior friendly curbs, crosswalks, and in general improve the accessibility by foot in the city. *"It is important that the development of the urban space is secured with the best possible conditions for seniors and walking-impaired – for example by establishing wide pavements, more senior friendly curbs, traffic lights, crosswalk etc."* (Københavns Kommune 2019 - page 20).

A part of the human city storyline for Copenhagen is improving the air pollution, adhering to the WHO guidelines. To do so, the municipality will work on plans to secure more green urban areas for the Copenhageners. *"In continuation hereof, we are developing an area plan for green areas, that for all city districts secures new and attractive green areas in pace with us becoming more Copenha-geners."* (Københavns Kommune 2019 - page 23).

Copenhagen Municipality do have the Copenhageners at focus, but these planning documents doesn't express a human city. They are giving more space to pedestrians and cyclist, but the

municipality does not consider urban green space and social places or activities for its citizens. Even in their storyline about the human city, it is clear traffic and transport are the main focus even if it is sustainable mobility.

5.1.4 Summary

In Copenhagen the storyline of the Car's Role is the one that takes the most focus. There Is not much indication of the municipality wanting to limit the car's role much in the city, but rather make private vehicle traffic more sustainable by replacing it with electrical vehicles. But even with the big focus on the car, Copenhagen is still very focused on its great cycling culture. The planning documents does not indicate much focus on the remaining two storylines, the Children's Space and the Human City, but does mention green spaces and importance of the Copenhageners.

5.2 Storylines in Barcelona planning

Barcelona is changing its whole infrastructure by implementing their Superblocks model, where the urban planning focuses on the residents of Barcelona rather than prioritising the motorized vehicles. The citizens of Barcelona are reclaiming their streets.

5.2.1 The Car's role

The streets of Barcelona have been dominated by the motorized vehicles, but this is something they urge to change with the Superblock model.

Barcelona's view on the private vehicle and how the city is designed around it is quite negative. They do not like how the private vehicles are dominating the streets and how much space the motorized vehicles take up of the city.

> *"... the development of the industrial city was based on urban and intercity mobility in private vehicles and this was linked to a bias towards this mode of transport in the design and occupation of public spaces. ... pedestrians and city residents were displaced to the pavements, while private vehicles occupied the centre and also eventually invaded marginal spaces and even squares and gardens, making the city congested and reducing the useful space for city residents to a minimal expression."*(Ajuntament de Barcelona 2021 - page 12).

It is mentioned multiple times, Barcelona thinks the motorized vehicles are bad for its city, especially because the roads, parking, and the vehicles themselves take up so much space in the city. Space which the residents could use for themselves, to move around and enjoy their own city.

"For years, motor vehicle traffic has been the main source of pollution in the city, particularly contaminants such as nitrogen oxides and particulates, as well as being the main source of noise."
(Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016 - page 25). According to Barcelona the car has been taking over the city, pushing the residents and people into the wall, with no space to enjoy their lives. This view on the car's capture of the city is seen through many documents about the Superblock model and Barcelona is fed up with it. They want to make a big change in the role the car has to the residents and the city. Barcelona wants to limit and deprioritise cars.

The private vehicles will mostly be replaced by public transport, bikes, and pavements for the pedestrians to enjoy. There are different plans for different parts of the city. In one area they,

"will promote active mobility, widen pavements for pedestrians, include a bicycle lane and a bus lane in the mountainward direction and a bus-bicycle lane in the seaward direction. One traffic lane for private vehicles will be maintained in the seaward direction, while in the mountainward direction, the lane will be for local residents and services only." (Ajuntament de Barcelona 2021 - page 27).

They are really downsizing the roads for private vehicles, making more roads for only one direction driving, and instead using the space for public transportation. The car isn't completely removed, because the new storyline still acknowledges the car is useful in some situations. But in the new Superblocks model there isn't much space for the car, and it is definitely only for necessary driving.

The city of Barcelona is ready for a change and has a grand vision on the transition to sustainable mobility.

"The transformation of public spaces being undertaken clearly prioritise active mobility and connections with public transport, with the aim of promoting this sustainable mobility still further. Work is also being carried out to achieve a city where people can cycle everywhere, thanks to the construction of new bicycle lanes and traffic-calming measures on 75% of the city's streets."
(Ajuntament de Barcelona 2021 - page 64).

The bike will overtake the infrastructures with new bicycle lanes which can take the people of Barcelona to work. Public transport will be promoted and be connected to the active mobility, creating a network of sustainable mobility, where the private vehicle disappears from the cityscape.

The car has dominated the cityscape of Barcelona, but this role is about to change. Barcelona is invested in a completely different storyline about the car's role, where it will take a minor role as a transport form. Instead, public transportation and active mobilities will take over and be the main means of transport form for the citizens.

5.2.2 Space for the children

The second storyline is the space for the children and Barcelona is very aware of the space the children need in the cityscape. With the Superblock model they focus on the space around schools, the possibilities for playing, and how the traffic flows around the areas where children are.

Barcelona is reclaiming the space in their cities for their residents, and this includes the children of the city. They are very aware of what the children could need other than what all the citizens might need. The Superblocks are considering the children by rethinking the outdoor play and activities for the children in the open areas.

"In this task of rethinking opportunities for outdoor play, the Plan provides new useful categories for going beyond playgrounds and play areas and including play in the city's planning and analysis, based on the concepts of recreational space, ecosystems, and infrastructures. It also considers school playgrounds and school surroundings as part of the city's recreational infrastructure."

(Ajuntament de Barcelona 2021 - page 37).

Barcelona keeps the focus on the children space, when planning the individual districts of the city as well. It is important for them to give the children the space to play and at the same time strengthen the ecosystems. In the individual plans for the different districts, a plan for children's playgrounds and play areas Is included and prioritized.

Barcelona wants to have a city full of life, and the children should be able to move around freely and safe.

"The idea is to introduce traffic-calming measures in the urban areas around a total of 200 schools and kindergartens, with actions that lead to a reduction in accidents, create more people-friendly meeting places and more greenery, improving the environmental quality of the areas around schools. In short, the aim is to make school and their surroundings safer places that are full of life."

(Ajuntament de Barcelona 2021 - page 39).

The focus here is the safety of the children, in terms of reducing accidents by changing the traffic flows around them, but the social aspects of the children as well. Barcelona wants to create a safe space for the children to come together and be social, enjoy the greenery, and be able to play around outside with their friends. These areas are going to be placed near 200 schools and kindergartens in Barcelona, so it is near the places the children already are.

"The street-calming measures in areas around schools mean fewer traffic lanes and more space for children and their families to get together before and after school, favouring well-being for a particularly vulnerable group." (Ajuntament de Barcelona n.d.).

Barcelona is really emphasizing on the street-calming measures and traffic-calming measures, which are meant to make the areas around the schools and playgrounds safer for the children.

In Barcelona's storyline, the space for children is really in focus and is valued highly in the mobility planning and the planning of the Superblocks. The children of the city are an important part of the community and that makes them a priority in the planning. They are given a space to play in a safe environment.

5.2.3 The Human City

The third storyline Is the story of prioritising the humans in the city. It is about how the city takes care of its people and give them the opportunity to live their life to the fullest. Something that is very important to Barcelona and the key to the Superblocks.

All through the documents and the webpages from Barcelona about their Superblock model are the storyline of the human city. The most important outcome for Barcelona of the Superblock model, is reclaiming the city for its people. Change the infrastructure to prioritize the public transport and active mobilities, but the public and green spaces as well. The people should be able to enjoy their city on their own two legs, rather than inside a car. It is clear in the documents how important it is for Barcelona, as they keep repeating themselves about their vision of the third storyline. The next four sections will analyse different aspects of the human city, with multiple quotes in each section which are quite similar. It is to emphasize how important the storyline of the human city is for Barcelona, even though the actual plans don't show much specific other than limiting the private vehicles.

Firstly, how Barcelona is describing the transition of the city from being car dominating to human dominating as giving the people and city life itself.
"... Barcelona into a more habitable place, where everyone can live their lives to the full while preserving the city's character and identity." (Ajuntament de Barcelona 2021 - page 4). And again in the other document, *"We need to fill the city's street with life again."* (Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016 - page 2).

In general, the Superblocks model is described as giving priority to the citizens, creating a network of green hubs, and overall building a better city. It is the main points from the webpages of Superblocks as well as the documents.

"The Superblocks model is a way of organising the city based on revering the distribution of public space among vehicles and people, giving priority to the citizen, to improve environmental conditions and people's quality of life."(Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016 - page 15).

In addition,

"… Superblocks are now taking a leap in scale and pace, with the creation of a network of green hubs and squares where pedestrians have priority."(Ajuntament de Barcelona n.d.).

Furthermore,

"Together, we can build a better city. … A city with cleaner air, green spaces and calmed traffic."(Ajuntament de Barcelona n.d.).

The Superblocks model is rethinking the image and the function of the city. It is reforming the flows in the city creating a neighbourhood that can make a positive contribution to sustainability.

"Rethinking cities and reconnecting them with natural flows and cycles, forming part of the natural network and living systems, making a positive contribution to local and global sustainability."(Ajuntament de Barcelona 2021 - page 6).

Again the same approach of rethinking the whole infrastructure of Barcelona.

"Regenerating the city therefore means rethinking it and regenerating it at all levels, scales and functions, from the global and metropolitan levels, to the neighbourhood, street, household and city resident level."(Ajuntament de Barcelona 2021 - page 8).

Lastly, there's the focus of the public areas transitioning to green hubs and active areas, where people can meet, play, be in contact and enjoy the nature.

"The strategy aims to turn it into a green street where vegetation, leisure areas and urban furniture invite people to use it, instead of perceiving it as a barrier that divides neighbourhoods."(Ajuntament de Barcelona 2021 - page 23).

Here they focus on people using the public areas.

"By reconfiguring the global functions of public areas, more space is created for relaxation, play, meeting people and contact with nature, as well as fostering local economic activities, reducing the space dedicated to motorised vehicles and the negative effects that they cause."(Ajuntament de Barcelona 2021 - page 21).

Barcelona is again emphasizing the street-calming measures, which the prioritizes the active mobilities.

"The urban transformation and its street-calming measures give priority to journeys made on foot or by bike."(Ajuntament de Barcelona n.d.).

5.2.4 Summary

From the three storylines it is clear Barcelona wants to change the role of the car, minimizing its use in the city, accessibility, and space. The city feels the residents are down prioritised and the city is suffering from the current occupation of the private vehicles. Instead, it is at their highest priority to give more space to the children and for the residents in the city to really enjoy life. It needs to be safe around school for families to enjoy quality time and green hubs all over the city for all residents and visitors of the city to relax.

6. Comparison between Copenhagen and Barcelona

This chapter will go into analysing and discussing the differences and similarities between planning in Copenhagen and Barcelona. It will be delving deeper into the structural stories within the storyline, how they are present in current planning and what the storylines and structural stories are indicating about the cities' planning strategies.

6.1 The Car's Role

The car has had a huge role in urban planning for many years and this is true for the two critical examples as well. Now both Copenhagen and Barcelona are ready to do something to change the role of the car into a minor part. Even though they both are ready to change the car's role, their storylines are a bit different from each other.

6.1.1 Storylines

Copenhagen's storyline of the car's role is shifting from the car being the absolute form for transport to being down prioritised for active mobility and public transport. Copenhagen Municipality still wants to keep the private vehicle in the cityscape and equally to the other transport forms (by foot, bike, and public transport), but the electrical vehicles must replace the diesel vehicle and most of all motorized vehicles.

Barcelona's storyline is a bit different, because they are not fond of the car and want to minimize the cars in the city. They acknowledge there's still many situations where the car and private vehicles are quite useful and therefore, not possible to completely remove from the city. But they are not interested in electrifying all motorized vehicle as Copenhagen, they rather want to delimit the necessary uses of the private vehicles and remove unnecessary uses.

In the documents analysed in the previous chapter (5. The stories in our planning) it is very clear how different the two cities perspective of the car is. Copenhagen Municipality still believe the need for the car is big and finds it useful and necessary. In addition, they mention the benefits of the car such as accessibility and the use of heavy vehicles (Teknik- og Miljøforvaltningen and Københavns Kommune 2021; 2012). But as they acknowledge the downside of the private vehicles in terms of how much pollution they produce, they are pushing forward electrical vehicles (EV's) as an environment friendly alternative.

"Therefore, we desire an environmental zone in Copenhagen, which put demands on emissions from private cars, cargo cars, and trucks, and before the end of 2030 we wish to introduce an area of the city, where only vehicles, that doesn't emit pollutants or CO_2, can drive." (Københavns Kommune 2019 - page 28).

Even as the municipality is pushing forward the EV's, they are still reluctant to restrict the motorized vehicles emitting pollutants, as they wish to remove these from only an area of the city and not in the city entirely.

Barcelona is much more reluctant to even have the car in their city anymore, and the Superblocks model is a clear indicator of that. The documents of the Superblock model indicate that the private vehicles are restricting the residents of Barcelona to live their best lives and enjoy their beautiful city.

> *"... the development of the industrial city was based on urban and intercity mobility in private vehicles and this was linked to a bias towards this mode of transport in the design and occupation of public spaces. ... pedestrians and city residents were displaced to the pavements, while private vehicles occupied the centre and also eventually invaded marginal spaces and even squares and gardens, making the city congested and reducing the useful space for city residents to a minimal expression."* (Ajuntament de Barcelona 2021 - page 12).

Throughout any of the Superblock documents, Barcelona does not mention the private vehicles being replaced by electrical vehicles in any way. They aren't limiting the Superblock model to certain areas of the city either, they are planning to implement it over the whole city, and have customised the plan in certain districts because they are considering the specific elements of that specific district (Ajuntament de Barcelona 2021).

The two cities both have the Sustainable Development Goals as common goals for their city and they are both pushing forward sustainable and active mobilities, but their storylines are still different from each other.

6.1.2 Structural Stories

Malene Freudendal-Pedersen defines structural stories in multiple of her works, some of which is in some degree present in the different planning documents. Some of the most dominant structural stories over the past decade are such as *"one gets more freedom when one has a car"* (Freudendal-Pedersen 2016), *"it is not possible to connect everyday life if one doesn't have a car"* (Freudendal-Pedersen 2015), and *"when one has children, one needs a car"* (Freudendal-Pedersen 2016).

These structural stories are not as dominant in the planning documents for the two critical examples as they might have been in the past, but in the documents about Copenhagen planning they do come to light in some form.

In the storyline it is clear Copenhagen Municipality still values the private vehicles to an extend where they make the car seem indispensable in people's everyday life. This is shown by pushing the electrical vehicles as a solution and the replacement of diesel vehicles instead of replacing it with active and public transport mainly.

Besides, the municipality makes it a point to highlight that the car and heavy vehicles will be needed in the future for errands and to travel certain distances. *"But also in the future there will be a need for cars and heavy vehicles."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2012 - page 43). They are referring to residents, clients, and local business owners, in the municipality plan, but that is almost everyone anyway. *"Residents, clients, local business owners etc. should still be able to use cars for relevant areas and distances."* (Københavns Kommune 2019 - page 72).

In Barcelona it is rather the counter stories of the car dominant structural stories that come to light in the Superblocks documents.

They do acknowledge that motorized vehicles are necessary and useful in some situations, and therefore aren't completely removing them from the city. But they do not believe the car provides people freedom. On the contrary Barcelona describes the car as if it is stealing way the resident's freedom. Their freedom to move around freely in the city and enjoy it.

> *"The transformation of public spaces being undertaken clearly prioritise active mobility and con-*
> *nections with public transport, with the aim of promoting this sustainable mobility still further.*
> *Work is also being carried out to achieve a city where people can cycle everywhere, thanks to the*
> *construction of new bicycle lanes and traffic-calming measures on 75% of the city's streets."*
> (Ajuntament de Barcelona 2021 - page 64).

Here the bicycles are the new cars, transporting people everywhere.

Even though some of these structural stories are over 10 years old (Freudendal-Pedersen 2016) they are still present in the Copenhagen planning, whereas in Barcelona they are breaking free from the old views on how people gets around which shows in their planning.

6.1.3 Same, Faster, Harder, and Smarter Pathways

Barcelona is really taking responsibility to change the transport into active and green mobility by making great changes to the infrastructure. Whereas Copenhagen Municipality is somewhat moving the responsibility to the residents, asking them to be open to change their habits (Københavns Kommune 2019). But as structural stories are narratives which unconsciously effect the choices individuals make in their everyday lifes (Freudendal-Pedersen 2015), it is not something people can simply choose to change. To some degree the unconscious choices needs to be forced into

becoming conscious choice, which will happen when the environment and conditions of the choices change. This can change the residents' habits (Spurling et al. 2013).

Copenhagen's storyline of the car's role hasn't changed much over the last decade, and it indicates the municipality is staying on the Faster Pathway. Copenhagen is taking actions towards more sustainable transport, but mostly with the same efforts made now and the last couple of years though through a bit more innovative ways and with bigger investment in the area (Randers et al. 2018). There are indications of Copenhagen moving towards the Harder Pathway. The municipality is pushing forward, replacing private vehicles with electrical vehicles and is taking measures to remove more diesel vehicles from the cityscape. The Faster Pathway sees growth in renewable energy, but doesn't invest much in electrification of for example transport, whereas the Harder Pathway are working Harder on sustainability on all fronts (Randers et al. 2018). The electrification of transport, more focus on public transport, cyclist, and pedestrians are all indicators of working harder towards sustainability.

Barcelona and their Superblocks are on the Harder Pathway, maybe even Smarter Pathway. With the Superblock model they are making radical changes all at once, trying to make big changes across districts, sustainability, and mobilities. This by almost eliminating the private and motorized vehicles from the city and taking the streets back to the residents. The government are working much harder than previously on sustainability on all fronts (Randers et al. 2018). The indications of the Superblock model being on the Smarter Pathway are the progressive action of limiting the private vehicles space, by removing parking and only dedicating one road for private vehicles. Barcelona focuses on the result they wanted, the active mobility and space for the people, and then backcasting to find the solutions needed to achieve the result (Randers et al. 2018).

6.2 Space for Children
It is difficult to compare the two cities' planning strategies on this point, because it is clear what separates them. Copenhagen does not mention the space for children in their planning strategies, but Barcelona highlights their future plans for the city's children. It also makes it quite easy to see the difference of the two critical examples.

6.2.1 Storylines
In Copenhagen's planning of the municipality, there aren't much mentioned about the space for children. In fact, the only time children are mentioned is in relation to the safety on their route to school.

"The project aims to target the administration's continued efforts to improve children's possibilities to bike and walk in Copenhagen through site-specific mapping of the safety by schools and major leisure facilities. The overall results from the safety mapping shows, there ls a big difference on how parents and students experience the safety on the way to school and leisure facilities."

(Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 33).

The focus is the safety of children, which is achieved by looking at the children's routes to school and where there might be safety concerns. The idea is to improve the possibilities to bike and walk, but it is not mentioned what makes the specific sites unsafe, or what role the car has in this.

For Barcelona the focus is the safety of children as well, but this point of departure is completely different. Barcelona is investigating the space the children need and the space around the places the children come such as school and leisure facilities. Even more so, they are investigating the car's role in the unsafe environment and by instinct are prioritising traffic-calming measures.

"The idea is to introduce traffic-calming measure in the urban areas around a total of 200 schools and kindergartens, with actions that lead to a reduction in accidents, create more people-friendly meeting places and more greenery, improving the environmental quality of the areas around schools. In short, the aim is to make school and their surroundings safer places that are full of life."

(Ajuntament de Barcelona 2021 - page 39).

Not only is the goal to introduce traffic-calming measures, but further create a space for the families to enjoy their city in a safe environment.

The children safe and play-friendly areas are mentioned many times throughout the planning of Superblocks and are very clearly important for Barcelona.

6.2.2 Structural Stories

Neither of the two cities show much of any structural stories and yet one of the sorts comes to mind, *"One cannot let kids cycle to school, it is too dangerous, it is safer to drive them"* (Freudendal-Pedersen 2022).

For both cities, the safety of the children is the central point in planning for children. In Copenhagen they are safety mapping and mentions the different perspectives of safety from the children and the parents. In Malene Freudendal-Pedersen's article about structural stories on cycling, it is mentioned the parents feels it is safer for the children if they are driven to school (Freudendal-Pedersen 2015). This seems to prove the structural story exist in Copenhagen still.

For Barcelona they are approaching a different story. They prioritise the safety for children as well, but by creating a safe space for the children. *"The street-calming measures in areas around schools mean fewer traffic lanes and more space for children and their families to get together before and after school, favouring well-being for a particularly vulnerable group."* (Ajuntament de Barcelona n.d.). They are limiting the traffic, so it is safe for children to bike to school and to play-dates, rather than keeping the car as the safe option. The Superblock model becomes a counter story to the structural story from Copenhagen.

6.2.3 Same, Faster, Harder, and Smarter Pathways

Copenhagen's storyline of the children's space isn't in focus in the planning documents analysed for the thesis and therefore it is hard to make an evaluation of the pathway Copenhagen are on. Because the lack of focus on this storyline in the documents on this point it is assumed Copenhagen are on the Same Pathway. The planning documents does not indicate any changes in policies or action in this storyline nor any new way of approaching families and children's space in transport or urban planning (Randers et al. 2018).

Barcelona's storyline of the children's space is one of the main focusses in their Superblock planning documents. They are completely changing the areas around the schools to fit in the children's lives, rather than the children must try to fit in the city's infrastructure. They are showing the Superblock model is working forward on the Smarter Pathway. The indications for their ideas on the children's space being on the Smarter Pathway are the progressive action of introducing traffic-calming measures around 200 schools, and implementing areas for the children and families to socialise, have quality-time together, and enjoy the fresh air (Randers et al. 2018).
Barcelona is really taking responsibility to change the children's environment into active and green surroundings by making great changes to the infrastructure.

6.3 The Human City

The concept of a human city is very new and is almost the opposite of everything transport planning brings to urban planning. Beforehand the cities infrastructure was fitted to cars and motorized vehicles, but the human city wants an infrastructure designed for the residents and people of the cities. The Superblock model is taking in the human city concept very well, but it is not a perspective Copenhagen have started to work with much. This makes it a bit difficult again to compare the two cities one on one, because they currently go to this perspective in two different ways. But it is important to keep in mind, the Climate Plan document from Copenhagen Municipality is from 2012, and it is being reviewed with an update in mind.

6.3.1 Storylines

This is not a storyline which Copenhagen gives the expression of as a priority of their planning. They mention very little related to the human city and when it is mentioned, it is in the sense of green breathing spaces and transport by foot or bike. *"First and foremost, Copenhagen must, according to the Copenhagen people, be a city with space for everyone. This means housing for all incomes, green breathing spaces, public functions, and space in the traffic."* (Københavns Kommune 2019 - page 5). Pedestrian traffic is were the people are in centrum, since walking only require ones own legs, not a bike or car etc. In that way planning for the pedestrian is planning for a more human friendly city, but it is not enough to call it planning for the human city. There is more to it than traffic lights and pavements. The residents and guests of the city needs to be the first priority and what is mainly planned for. *"With Municipality plan 2019 it is decided, the pedestrians traffic as a transport form must be prioritised and evaluated on an equal footing with bikes, cars, and busses."* (Teknik- og Miljøforvaltningen and Københavns Kommune 2021 - page 33). This is partially the action needed to move toward a more human focused city.

The storyline of the human city has much more to it than green breathing spaces and pedestrian's traffic. The human city is a greener city, but more importantly about the residents, families, and how people are living their life. It's about giving the best living conditions for humans and make their everyday life better and easier. This is the goal of the Superblock model, it is what Barcelona wants, and this is the perspective of the human city Copenhagen does not have as their point of departure.

The storyline of the human city in the Barcelona is very simple, but important for them. This shows as the repeadily emphazises the importants of reclaiming the city from the private vehicles, prioritizing citizen and inable them to live their life to the fullest. *"The Superblocks model is a way of organising the city based on revering the distribution of public space among vehicles and people, giving priority to the citizen, to improve environmental conditions and people's quality of life."* (Commission for Ecology Urban Planning and Mobility and Ajuntament de Barcelona 2016 - page 15). Barcelona is planning from the perspective of the human city as the main base, and everything else is planned around this concept.

6.3.2 Structural Stories

There aren't any structural stories fitted for the human city storyline, but instead the human city can work as a counter story to a few structural stories. Some of the typical structural stories about the car is, "One gets more freedom when one has a car" (Freudendal-Pedersen 2016), as mentioned the storyline of the Car's Role, and another "Society is arranged around automobility and one can therefore not live without a car" (Freudendal-Pedersen 2016).

The concept of the human city is the direct opposite of these structural stories, as it does not believe the car gives freedom nor does Barcelona. On the contrary the documents of the Superblock model describe the infrastructure of the car as invading, congesting and polluting the city, and denying the residents their right to live their life to the fullest (Ajuntament de Barcelona 2021).

It does agree with society being arranged around automobility, but this is exactly what the human city is meant to change. Which is the exact purpose of the Superblock model.

"By reconfiguring the global functions of public areas, more space is created for relaxation, play, meeting people and contact with nature, as well as fostering local economic activities, reducing the space dedicated to motorised vehicles and the negative effects that they cause."(Ajuntament de Barcelona 2021 - page 21).

They are changing their city, making sure society are arranged around humans and not automobility.

Copenhagen does not have a focus on the human city through their planning documents, but it does not mean they don't care about their residents. Throughout the documents, the Copenhageners are mentioned multiple times and especially their love for biking (Københavns Kommune 2019). In the plans of prioritising cyclist and pedestrian's more in the municipality, they are pushing forward the wishes of the Copenhageners (Københavns Kommune 2019; Teknik- og Miljøforvaltningen and Københavns Kommune 2012).

In an article about cyclist by Malene Freudendal-Pedersen, there's a quote from someone she has interviewed, "The best thing about cycling is the feeling of sliding through the city. Cycling gives me the feeling that I am a part of the city's organism."(Freudendal-Pedersen 2015). It isn't a structural story, but it emphasises the perspective from Copenhagen Municipality to prioritise cycling in the best interest of the residents.

6.3.3 Same, Faster, Harder, and Smarter Pathways

The Copenhagen Municipality's main actions towards the human city, are their plan on prioritising cyclist and pedestrians even more than before. Copenhagen has been known as a big cyclist city for many years, because it has been important for a long time for the Copenhageners. In the sense of the cycling culture in Copenhagen, they are moving on the Faster or Harder Pathway, even though the actions are not much more progressive than Copenhagen some years ago and can therefore be argued to be on the Same Pathway (Randers et al. 2018). But compared to many other cities, such as Barcelona, Copenhagen has invested in the cycling culture much earlier and many big cities are still not near Copenhagen's cycling infrastructure. Furthermore, the Municipality keeps prioritising the cycling infrastructure, works hard on the sustainability, and investigates new innovations and investments, which indicates the Faster and Harder Pathways (Randers et al. 2018).

But in the planning documents analysed in this thesis, Copenhagen Municipality isn't focusing or prioritising the actual human city and must therefore be placed as on the Same Pathway despite their other efforts.

The storyline for Barcelona is quite different because they are really invested in the human city concept and it is the most emergence priority of the Superblocks model, looking at the planning documents. It is the overall theme throughout their planning and the actions on the Superblocks model are all to achieve the human city. The documents do not disclose many actions which is directly linked to the human city or explain actions which only effects the human city, but this is because of the actions on private vehicles and children are indirectly about the human city. Still the concept is extremely highlighted in the Superblock model, and this is what places this storyline on the Smarter Pathway. It is innovating, completely changes the infrastructure, and it take up an extreme opposite view from the traditional transport planning of cities. The human city is the result Barcelona want to achieve (Randers et al. 2018).

6.4 Copenhagen vs Barcelona

The planning in Copenhagen and Barcelona is very different from each other, so is the planning history. Copenhagen has been working with sustainable transport for many years and have prioritised cycling especially, whereas Barcelona have not made the same priorities beforehand. However, they are trying their best to change into healthy sustainable mobility and the Superblock model is a very strong start.

Copenhagen has a much bigger focus on cars and including them in their planning than Barcelona, but the lack of planning for cars in Barcelona's Superblock model is speaking louder than anything. It shows how progressive they want to be, and they might have found the way to follow the Smarter Pathway regarding the vehicles in our cities.

Copenhagen has a very big cycling culture and do prioritise the cyclist a lot, but the car is still highly prioritised as well, and replacing vehicles from fossil fuels to electrical is not the absolute solution. Even if it does decrease the amount of CO_2 emissions. The municipality has focused on sustainable transport, mostly the bikes, for many years but it is time to stop making the same improvements and take it a step further.

For Copenhagen to follow the Smarter Pathway, there needs to be changes in the private vehicle sector, parking, and public transport. Cars in general need to be allowed less in the capital, giving less space, and much more restrictions. This will create opportunities for people to travel into the city with public transport and there will be more space for public transport inside the city as well.

Which could improve the public transport service, which then can be followed by positive narratives about the public transport.

Barcelona has a great plan for the cars, and it is removing them from the cityscape as much as possible.

It is difficult to make an assessment of the space for children in Copenhagen when it is barely mentioned in the planning document, therefore it is assumed, the municipality does not focus more specifically on children but on same foot as all residents. Which is why Copenhagen are placed on the Same Pathway.

Barcelona is completely different, because it is very clear children is highly prioritised in their Superblock model. They have made special plans around 200 schools for the children and their families to have quality time together. They are not only making it safe for the children to come to school but are dedicating green spaces for them in the city, creating a whole atmosphere for the children's safety, health, social environment, and activities. This sort of prioritising the children in the planning is important because the children are our future and the city's future. They are the few next generations who will shape the world and their environment and surroundings now can affect them and their narratives. This indicates that Barcelona and the Superblocks are on the Smarter Pathway.

For the human city, Copenhagen again does not mention it a lot in the planning documents. But the municipality are mentioning the Copenhageners multiple times, keeping their wishes and needs in mind. Furthermore, even though it is not mentioned a lot, they have plan for making green spaces, calling them breathing areas. This indicates spaces for their residents to breathe and enjoy their surroundings. Besides, the high priority in cycling is prioritising the citizens and their health, which Copenhagen have been focusing on by making it one of the biggest cycling cities in the world.

The whole Superblock model is changing Barcelona into a human city, and their main focus throughout all of their planning documents are to reclaim the city from the private vehicles and turn it into a human city. They want their residents to live their life to the fullest and enjoy themselves in the city's streets. Their way of achieving the human city is describes in the two other storylines, the Car's Role and Space for the Children. Because it is the way they prioritise and plan for those two storylines that are going to make it the human city.

Overall, Copenhagen has been doing extremely well for many years regarding sustainable transport, but it is time to upgrade the effort and innovation a bit. Copenhagen has been in the mindset for sustainable transport for so long and therefore have automatically created a box for the sustainable mindset, that the planners need to find a way out of, to start thinking out of the box again.

Barcelona have not thought in the sustainable mindset for long, which means they have been starting on a completely clear drawing board, and it has allowed them to go all in with the Superblock model.

According to the four pathways theory, the Smarter Pathway is the only way to achieve the Sustainable Development Goals within the Planetary Boundaries. That is one of the reasons the Superblock model is so interesting, because it is going in the right direction of the Smarter Pathway.

7. Conclusion

The old traditional transport planning is slowly making its way out of society and is being replaced by sustainable mobility. The understanding of and focus on how people transport themselves is changing. With increased requirements and expectations of sustainability and care for the earth to society, it is time to think differently and make significant changes.

The two critical examples, Copenhagen and Barcelona, have a common goal together with a lot of other cities and countries which is the Sustainable Development Goals and have committed to improve within the Planetary Boundaries margin. According to the report "Transformation is feasible" there are four pathways to go on from here: Same, Faster, Harder, and Smarter Pathways. Furthermore, the report argues that the Smarter Pathway and the most radical approach is the only way to achieve the Sustainable Development Goals within the Planetary Boundaries.

Analysing the planning documents of Copenhagen and Barcelona there are three storylines which stands out: The Car's Role, Space for Children, and The Human City. The perspective of these storylines is different for the two cities, how they view the current situation, how they prioritise it, and the actions they are planning on taken for each of the storylines.
Copenhagen is very focused on the car's role in the city and wants vehicles to be electrical, but there is hardly any focus on the children space and very little on the human city. Even when the focus is on human city, it is simplified and mainly on cycling experiences and conditions.
Barcelona focuses on the car as well, but rather as something hindering the citizens life quality than a necessity. Different from Copenhagen, they put the children space and the human city at highest priority and most of the planning evolves around these two storylines.

The structural stories identified by Malene Freudendal-Pedersen are car-based and mostly present in the planning documents of Copenhagen in both the storyline of the car's role and the children's space. Whereas the Superblock model in Barcelona have counter stories and argues the opposite of the structural stories seen in Copenhagen. The storyline of the Human City itself works as a counter story to all structural stories of cars, changing the perspective of the car.

Copenhagen is most focused on the car's role, whereas Barcelona prioritises the space for children and the human city and are delimiting the car's role as much as possible. Copenhagen have been very forward and out-of-the-box-thinking regarding sustainable transport for many years and much earlier than Barcelona. But as of the current knowledge and actions which can be taken regarding sustainability in urban planning, Copenhagen is moving forward on the Same or Faster Pathway. The

solutions aren't as progressive as they should be and aren't following the Smarter Pathway, which means the planning won't reach the Sustainable Development Goals.

Barcelona on the other hand is much more progressive with their Superblock model, as they are trying to make great changes all at once in their urban planning. The Superblock model does fit the criteria for taken the Smarter Pathway and are changing their perspective of what their city needs to do and be for their citizens. Their planning prioritises the people and not the vehicles.

If we want changes for our planet, our selves, towards a greener, more sustainable, healthier, and better, the planning needs to be progressive, innovative, radical, and somewhat extreme. The Smarter Pathway and the Superblocks model are heading in the right direction toward more sustainable cities.

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8.1 Figures