

**Cycling by Design and by Demand: The Interplay of Formal Planning and Grassroots
Efforts in Copenhagen's Cycling Landscape**

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Abstract

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Copenhagen is widely celebrated as one of the world's most bicycle-friendly cities, known for its formal cycling network, ambitious mode share goals, and a coordinated, top-down approach to planning. However, this narrative can obscure the city's strong culture of community-led action. From street-level adaptations and advocacy to the autonomous, car-free community of Christiania, grassroots efforts have significantly shaped Copenhagen's cycling landscape. This research examines the interaction between formal planning and grassroots initiatives in shaping the city's cycling culture. The central research question is: *How do grassroots movements and formal planning interact in Copenhagen's cycling success, and why does this interplay matter for urban mobility planning?* To investigate, the study draws on historical context, planning literature, and documents, as well as unstructured interviews and experiential site observations informed by Situationist International principles. Findings reveal a co-created urban mobility system where formal and informal forces converge, offering insights for planners and advocates seeking more participatory approaches to cycling planning.

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Chapter 1: Introduction

1.1 Background and Context

Copenhagen is recognized as one of the world's leading cycling cities, a status that has evolved over decades of deliberate policy choices and cultural development. In the 1970s, in response to the global oil crisis and growing concerns about urban traffic congestion, policymakers began to prioritize non-motorized transportation (Emmanuel, 2018). Subsequent investments in cycling infrastructure, alongside strong public activism, led to the emergence of cycling as the premier transportation mode. Policies have also consistently supported cycling through integrated planning, safety campaigns, and ongoing engagement, embedding cycling into the city's identity (Gössling, 2013). With its exceptionally high cycling mode share and extensive bike infrastructure, Copenhagen serves as a model for urban planners seeking to promote cycling, whether that be for health, environmental, or quality of life considerations.

The city boasts an impressive network of both visually and physically separated cycling lanes, as well as innovative structures and striking, architectural bike bridges, all of which often exemplify best practices in bicycle infrastructure design globally. The prioritization of cycling infrastructure in Copenhagen is undeniable, helping to propel cycling as one of the most convenient and quickest ways to get around the city, which contrasts with the automobile-centric designs that many North American cities follow (Blanke, 2018). These physical elements, supported by strong political will and a history of coordinated investment, offer a powerful model for planners seeking to replicate Copenhagen's success.

While there is much to be learned from Copenhagen's approach, simply transplanting this meticulous, infrastructure-heavy model to a vastly different cultural and physical context may not yield the same results, and becoming more "Copenhagen-esque" may seem like a distant

dream for many planners and designers. Beyond the physical and spatial differences exhibited by many cities and Copenhagen, whether that be topography, climate, spatial area, street width, and many more considerations, the narrative that Copenhagen's success is primarily due to strong governmental coordination and high investment overlooks other critical components, such as cultural norms, civic engagement, and grassroots participation (Pucher & Buehler, 2008). It also risks positioning Copenhagen as a static model to be copied rather than a dynamic system shaped by continual dialogue between planners and the public, whether that process is formal or not. The city's planning success is not solely a product of the expert design Denmark is famed for.

1.2 Research Problem

Understanding how Copenhagen fosters its cycling culture requires moving beyond infrastructure and examining the social and participatory dimensions that enable its success. This study aims to evaluate the often-overlooked role of grassroots initiatives and informal civic action in shaping Copenhagen's cycling environment. These elements may be less visible in traditional planning discourse but remain crucial to the story of one of the world's leading cycling cities. The accessibility of cycling in Copenhagen is evident in its diverse riders, which span age groups, socioeconomic backgrounds, and personal motivations, highlighting a cultural buy-in that extends beyond infrastructure. While it is not a question that good infrastructure can increase the accessibility of cycling and propel it as a modal preference, infrastructure alone cannot sustain a cycling culture; active participation and societal acceptance are also crucial (Aldred & Jungnickel, 2014). The city's success in promoting cycling is partly due to an organic, bottom-up approach in which communities and individuals play an active role in fostering a cycling-friendly environment. However, this approach plays a notably lesser role in the discourse on Copenhagen's leadership in cycling. While the impressive feats of architectural and

engineering creativity through innovative cycle infrastructure may be more inspiring and broadly appealing to focus on in planning discourse, the process of mobility planning itself and the role of Copenhageners in shaping their city is underemphasized. The interplay between grassroots actors and institutional planners is central to this phenomenon.

This dynamic inherently raises broader questions about the role of citizens in mobility planning and how community engagement influences transportation policies and infrastructure development. Unlike many North American cities, where community engagement tends to follow more procedural models, Copenhagen exhibits a more fluid and adaptive approach (Jensen, 2013). While formal processes exist, many interventions arise from grassroots experimentation, tactical urbanism, or community activism. These decentralized efforts contribute meaningfully to the mobility landscape, challenging the idea that significant planning shifts must originate from top-down processes alone and provide more applicability in diverse contexts with different political will towards cycling. This highlights an even greater potential in many North American cities as they plan around challenges, including a need for increased density, population growth, and implementing more sustainable transportation solutions, in which increasing cycling modeshare may be seen as a lofty but viable solution.

This reality in Copenhagen presents a compelling counterpoint to the assumption that meaningful community engagement must be formalized and institutionally managed in order to create effective mobility networks and cultural change. Instead, Copenhagen reveals a model in which informal practices, self-organized groups, and a culture of experimentation play a complementary role in advancing cycling infrastructure alongside the dedication of planners and designers in implementing cycling infrastructure that prioritizes users. I aim to explore how

grassroots, bottom-up, and top-down interactions occur, the mechanisms that enable them to function effectively, and what lessons emerge from this interplay.

1.3 Significance and Research Questions

While popular media may define Copenhagen by its canals dotted with colorful row houses, clean and well-designed streetscapes, and Nordic welfare model, there remains a variation in both the physical form of the city and approaches to community governance beyond this generalization. Copenhagen is more than a showcase of innovative urban design; it is a living example of how community governance, experimentation, and structured planning can coexist and collectively shape a mobility system.

This variation spans facets, including community-led neighborhood councils, resident-led tactical urbanism, and at the furthest end of the spectrum, the neighborhood of Freetown Christiania, with its self-governing, car-free model, underscoring Copenhagen's rich presence of community experimentation and bottom-up urbanism beneath the surface of a top-down planning model. Such initiatives suggest that civic participation in mobility planning does not always require structured bureaucratic processes to be effective; instead, an open and adaptive framework that encourages localized solutions also proves its merit (Sørensen & Torfing, 2009).

Understanding how these different approaches operate in Copenhagen and how they interact is crucial to developing a nuanced picture of what makes a cycling city truly thrive. This study does not attempt to determine whether top-down or bottom-up strategies are more effective or even assume that one should be implemented instead of the other, but instead asks: *How do grassroots movements and formal planning interact in shaping Copenhagen's cycling success, and why does this interplay matter for urban mobility planning?* By exploring this relationship, I

aim to gain a deeper understanding of the interplay between infrastructure, policy, and grassroots engagement in shaping the future of cycling cities.

1.4 Research Objectives

I will investigate the impact of various methods of public participation and governance, particularly those operating at the grassroots level, on bicycle planning in Copenhagen. Using a comparative case study approach, I will explore varied neighborhoods and institutional structures, including autonomous zones like Christiania, to understand how top-down and bottom-up forces co-create a cycling-friendly environment.

Key research objectives follow a mixed-methods approach, further defined in the upcoming chapters. The first objective involves reviewing and scoring existing literature, historical context, planning documents, and transportation policies across governance structures within Copenhagen to determine how top-down and bottom-up approaches shape infrastructure design, funding, and implementation.

The second objective involves conducting supplementary interviews with relevant stakeholders to gather firsthand insights on their experiences and perceived barriers in the development of active transportation infrastructure. The final element entails a site-visit analysis and to provide insights into the user experience. These activities will inform a mixed-methods analysis that aims to provide both an understanding of the interplay between top-down and community-led approaches to cycling mobility planning in Copenhagen, and how this translates to the lived experience of a cyclist.

Chapter 2: Foundations and Frameworks - Historical, Theoretical, and Governance Perspectives

2.1 Historical Context

Copenhagen's reputation as a cycling-friendly city reflects a long history shaped by its spatial development and shifting mobility patterns. While bicycles have deep roots in the city, their acceptance and popularity has fluctuated over time. City expansion began in the 1850s with the demolition of fortification walls and the development of neighborhoods like Nørrebro and Østerbro. During this period, trams dominated public investment, though bicycles and walking remained key modes of mobility (Emmanuel, 2018). As cycling grew in popularity in the late 19th century, cyclists adapted streets designed for horse-drawn carriages, often creating informal lanes along softer road edges.

Cyclists' growing presence was met with resistance, with some city officials and horse handlers viewing them as a nuisance, prompting the mayor to lament what he referred to as a case of "bicycle rabies" as the mode increased in popularity (Emmanuel, 2018). This tension spurred the founding of advocacy groups such as the Danish Cyclists' Federation (Cyklistforbundet) in 1905, which helped drive the development of dedicated cycle tracks.

The arrival of cars in Copenhagen brought new competition for street space, but existing bicycle infrastructure and financial constraints preserved cycling's popularity. By 1935, 44% of residents cycled, while only 12% drove, with the rest walking or using transit (Emmanuel, 2018). As cycling became an essential mode, planners increasingly recognized the need to formally integrate it into street design to reduce conflicts and balance competing demands.

Cycling in Copenhagen declined during World War II, as the occupation and material shortages disrupted bicycle production and maintenance availability (Emmanuel, 2018). After

Denmark's liberation in 1945, the city faced the vast challenge of rebuilding amidst significant economic disruption. Danish postwar planning was increasingly influenced by North American car-centric ideals. Prewar plans for Copenhagen were revisited, but fragmented municipal efforts and tensions between Copenhagen and its emerging suburbs complicated implementation.

In 1947, the Five Finger Plan was introduced to guide regional growth, concentrating development along five commuter rail corridors while preserving green spaces between them (Sørensen & Torfing, 2019). Though not explicitly a transportation plan, it shaped the region's spatial development and supported transit-oriented growth. Implementation gained traction in the 1960s with the creation of a Regional Planning Authority, but car use still expanded despite parallel investments in rail (Andersen et al., 2002).

While Copenhagen continued to experience growth in car ownership rates and increased suburban expansion, even amidst the Five Finger Plan for regional growth, planners began to implement further policies and plans that integrated cars into the city throughout the post-war period. This trajectory was disrupted in the 1970s by the OPEC oil crisis, which prompted policies like car-free Sundays. While initially a response to oil shortages, the measure spurred renewed public interest in cycling and walking (Cycling Embassy of Denmark, 2021). By 1975, however, cycling's modal share had fallen to 17%, and cycle lanes were being removed as bicycles were seen as an outdated technology (Emmanuel, 2018).

Grassroots environmental groups and advocates, including Cyklistforbundet, pushed back against this trend. A combination of public resistance and limited funds for road expansion helped cycling regain momentum. Advocacy efforts led to renewed political support and the development of a city-wide bicycle plan, though adapting historic streets for modern cycling remained a slow and complex process (Emmanuel, 2018).

The city resisted the process of creating a bicycle plan at first, and Cyklistforbundet instead led the creation of a proposed plan themselves (Emmanuel, 2018). Although the city never formally adopted this plan, the act of radical co-production of space formed the foundation for many of the city's future efforts. It helped to dispel the reluctance of city planners and engineers to create cyclist-friendly streets. From the 1980s onward, investment in bicycle infrastructure and validation of bicycles as a mode of transportation continued to grow in Copenhagen, aligning with the landscape familiar to current-day viewers.

Copenhagen's emergence as a global cycling leader stems from sustained grassroots activism and civic engagement from the public. Community advocates envisioned a more environmentally friendly city and actively shaped public space, occasionally even in opposition to municipal planning bodies. Today's strong political support for cycling is not simply the result of government action; it is the result of decades of persistent public pressure and activism.

2.1.1 Theoretical Understandings

The following section focuses on the urban theory relevant to this work, providing a theoretical framework for evaluating my research question and building upon the historical context provided. This study aims to understand Copenhagen's cycling planning process and the interplay between public and broader state planning functions, as well as the user experience. I evaluate the network beyond its physical characteristics, providing insights into its experiential qualities. Evaluating these elements requires an understanding of several planning concepts, including theories of participation in the planning process, as well as spatial experience, and the role of infrastructure. The frameworks applied here serve not only to interpret planning processes but also to illuminate the lived experiences that exist.

The Role of Participation in Planning

Urban planning is often presented as a neutral, technical activity, yet at its core, it is deeply political, shaping who has access to space, decision-making, and infrastructure. Planners influence how we inhabit cities, how we navigate their geographies, and how public goods and services are distributed. While the field has long aimed to serve the public good, it carries a history of rationalist approaches, what Herbert Marcuse termed Technician Planning, where planners are framed as technical experts applying a specialized toolkit. Such perspectives invite critique for neglecting social needs and for failing to adopt more expansive understandings of the built environment.

In response, approaches such as advocacy planning (Davidoff, 1965) and equity planning (Krumholz, 2018) prioritize justice and community voice. This thesis builds upon these traditions through Leonie Sandercock's radical planning, which centers on pluralism, conflict, and the emotional dimensions of planning that are often overlooked in more technocratic frameworks. Radical planning recognizes planning as an iterative practice that must make space for diverse experiences and understandings of the public good, particularly in contexts where communities have historically been excluded from formal processes.

This orientation is relevant in evaluating Copenhagen's cycling planning through a participatory lens. While cycling is often celebrated as a universal public good, dominant mobility narratives can obscure whose voices shape the network and whose needs are left out. By applying a radical planning lens, this thesis investigates not only what gets planned in Copenhagen's cycling network but also who is heard, how mobility needs are elevated, and what kinds of knowledge are legitimized through the process.

Building on the radical planning movement's emphasis on lived experience and alternative knowledge, this work also draws from Situationist International (SI) theory to explore how everyday mobility practices challenge dominant spatial narratives. Emerging in 1950s Europe, the Situationist International (SI) movement of artists and activists critiqued capitalist cities for reducing life to consumption, circulation, and control (Debord, 1955). Concepts such as psychogeography and the *dérive* foreground the sensory, affective, and often subversive experience of urban space, resisting the rational, efficiency-driven logics of modern planning. Where Sandercock's radical planning calls for plural voices in decision-making, SI extends this to the embodied experience of space itself, advocating for reappropriation, spontaneity, and individual agency within the urban environment. The *dérive*, navigating the city through mood and curiosity rather than function, offers a direct counterpoint to the instrumental logics underpinning much of transportation planning.

This framing is especially useful in understanding Christiania, Copenhagen's self-governed eco-village and an ongoing site of spatial experimentation. Here, mobility practices are intentionally politicized: cycling is not merely a mode of transportation, but a cultural symbol tied to autonomy, ecological values, and resistance to dominant urban norms. Christiania exemplifies the kind of grassroots, embodied agency both radical planning and SI theory illuminate, where the everyday use of space becomes a form of contestation and co-creation. By drawing on radical planning and SI principles, this thesis foregrounds the embodied, everyday tactics of resistance and agency that shape Copenhagen's cycling spaces, not only through formal planning processes but through how people inhabit, disrupt, and reimagine them.

2.1.2 Current State of Knowledge

Urban Cycling and Planning Practice

Urban cycling literature has expanded significantly in recent decades, reflecting a growing interest in sustainability, public health, and climate action. Early comparative work, such as Pucher and Buehler (2012), positioned Copenhagen as a model city with high ridership, dense infrastructure, and strong political support. However, this technocratic framing often emphasizes engineering and safety metrics, risking the erasure of cycling's social and political dimensions (Koglin, 2015).

More recent scholarship calls for participatory, co-creative planning. He et al. (2025), in a meta-analysis of 241 planning articles, found a growing interest in informal and collaborative engagement methods. Yet dominant sociopolitical norms still shape cycling infrastructure. Ravensbergen et al. (2024) emphasize that mobility systems often privilege those already comfortable within prevailing mobility cultures, which are structured by gender, race, and class. Even in Copenhagen, understanding diverse user experiences remains crucial. This shift aligns with embodied approaches to mobility. Spinney and Lin (2019) advocate for viewing cycling as an everyday practice that shapes meaning and experience, not just movement.

While often praised for its infrastructure, the “Copenhagen model” is not without complexity. Freetown Christiania, with its informal spatial practices and grassroots governance, challenges dominant narratives of top-down cycling success. It illustrates how participatory and everyday practices can reshape urban mobility. More broadly, Copenhagen's cycling history reflects a continual negotiation between technocratic and participatory approaches, a dynamic explored further in the following discussion.

Participation and Governance in Urban Cycling Policy: Copenhagen and Christiania

This sub-theme explores the existing discourse on public participation in active mobility planning in Copenhagen, with Christiania serving as a particularly distinct case study within the city. It examines how differing approaches to participation, top-down in Copenhagen's broader governance and bottom-up in Christiania, shape the implementation of active mobility projects and influence stakeholder roles and perceptions. While Christiania represents only one neighborhood, its unique governance structure offers valuable insights into the dynamics between institutional planning and grassroots agency. This comparative lens remains underexplored in the literature, highlighting key themes such as governmental autonomy, the role of planners, sustainability, and cycling culture within Denmark's mobility landscape.

Theoretical Background

While the role of planners and participatory practices has been long debated, as discussed in the theoretical framework, an understanding of participatory governance is key to distinguishing the contrasting approaches in Copenhagen and Christiania. This background helps frame how each context positions the public within planning processes.

Arnstein's Ladder of Citizen Participation (1969) offers a useful lens for understanding these differences, mapping varying degrees of community power. At its base lie forms of nonparticipation, the middle rungs reflect tokenism and imbalanced power dynamics; and at the top, models of complete citizen control (Figure 2-1). Applying this framework, Copenhagen's participatory practices span the ladder, while Christiania represents near-complete citizen control, a valuable counterpoint for examining alternative approaches to mobility governance.

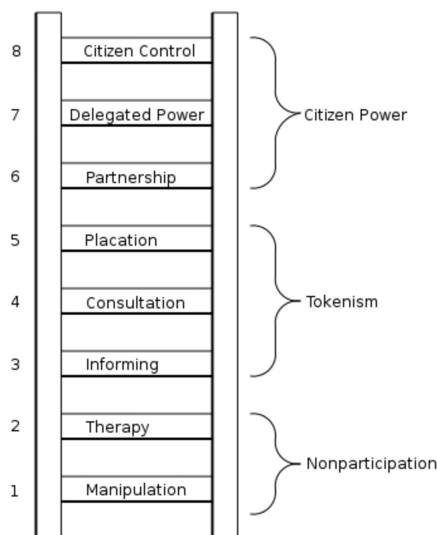


Figure 2-1: Arnstein's Ladder of Public Participation, from "A Ladder of Public Participation" (1969). *Christiania falls at the top rung, with nearly complete citizen control. In contrast, Copenhagen's strategies can be evaluated more broadly in terms of where they would likely fall in relation to tokenism and citizen power strategies.*

Other planning theorists continued to build off the notions presented by Arnstein (1969), notably with the work of Innes and Booher in *Planning with Complexity* (2010), which explores the process of collaborative planning and strategies for practitioners. The authors emphasize the role of inclusive dialogue and collaboration as a strategy for achieving community trust and success in planning efforts.

Further scholars, including John Forester, continue to explore the practical strategies planners can take to engage in effective public participation that avoids some of the outcomes referenced in the lower rungs of the Arnstein ladder of public participation. This background can provide a basis for determining the success and different approaches to community engagement in active mobility planning in both Copenhagen and Christiania, offering a distinct contrast to the commonly generalized, top-down governance approach the city typically employs. This

exploration leads to further discussion of themes related to democracy and power in the city, which is further explored in the thematic analysis of the research.

Public Participation Planning and Active Mobility in Copenhagen

Drawing from existing research on participatory planning, I examine the active mobility context in both Copenhagen and Christiania, aiming to understand the different approaches and beliefs shaping the implementation of cycling infrastructure. As a global leader in cycling mode share and sustainable development, Copenhagen has been extensively studied for its cycling network's design and capacity. The following literature explores the cyclist experience in Copenhagen, examining motivations for sustainable transportation, and contrasts these findings with the unique situation in Christiania.

Freudendal-Pedersen (2015) highlights how cycling in Copenhagen is more than just transportation, it's a cultural norm rooted in community values like freedom, democracy, and sustainability. This is similar to how automobiles might be perceived as symbols of freedom elsewhere. Snizek et al. (2013) take a more form-based approach, exploring cyclists' attitudes towards infrastructure. Positive aspects of Copenhagen's network include separated lanes and access to green spaces, while negative aspects include bus stops, high traffic, and non-signalized intersections. These formal elements of Copenhagen's cycling infrastructure can be further understood in contrast to the informality and grassroots nature of cycling in Christiania.

Public Participation Planning and Active Mobility in Christiania

Although Christiania is central to Copenhagen's culture and tourism, it is often overlooked in mobility discussions, with limited research on its unique governance and consensus-driven approach. By examining Christiania's community ethos, governance models,

and its history within Copenhagen, this research provides critical context for understanding mobility planning in the area.

Christiania emerged as a rejection of capitalist and Western democratic norms, establishing itself as an autonomous zone outside Copenhagen's regulations. Its resistance to formal systems aligns with some elements of Situationist International (SI) theory, which critique the ways modern capitalist cities reduce life to consumption and control (Debord, 1955). Christiania's autonomy mirrors the Situationists' call to subvert traditional uses of space and reclaim urban environments for personal and collective expression. However, questions remain about the true extent of its autonomy. Coppola and Vanolo (2015) explore Christiania's resistance to integration into Denmark's formal system, especially following the 2012 agreement with the City of Copenhagen, which addressed property, taxation, and administrative functions. These agreements raise concerns about the future of Christiania's autonomy, especially as financial pressures increase post-pandemic.

Midtgaard (2007) delves into whether Christiania can truly be autonomous or if it must eventually integrate into broader societal structures. Despite its alignment with general Danish moral values, Christiania's creation of a utopian, autonomous society remains a rare phenomenon. Christiania's cultural autonomy, its rejection of standard urban planning practices, and its use of space for alternative forms of living and movement also evoke the Situationist principle of "dérive" drifting through the city, where navigation of urban space is determined by mood and social interaction rather than the functionalist logic of transportation planning.

While Christiania and Copenhagen share similar goals for sustainability and active mobility, their approaches differ significantly. Winter (2016) critiques Christiania's resistance to a proposed bike path linking to Amager, which would contribute to Copenhagen's broader

cycling network. Christiania's commitment to sustainability, while not rooted in promoting environmentalism per se, stems from a critique of Danish neoliberal consumer culture, aligning with the Situationist critique of consumerism and commodification. In Christiania, sustainable practices emerge organically as part of a broader resistance to dominant socio-economic structures, much like the Situationist view that cities should foster autonomy and free expression, rather than rigid, commercialized uses of space.

This exploration of Christiania highlights the differences in governance and mobility planning, shedding light on the varying degrees of autonomy in the design process and the implications for active mobility within Copenhagen's broader network. By integrating Situationist thought, we see that Christiania not only challenges urban mobility planning conventions but also calls for a reimagining of what urban space, freedom, and mobility can represent beyond functional, institutionalized definitions.

2.1.3 Identified Research Gaps

This literature review identifies important themes in active mobility planning and public power in Copenhagen, while also revealing significant research gaps. One key gap is the lack of comparative studies on formal and informal governance within urban contexts like Copenhagen and Christiania, especially regarding how grassroots participation contrasts with formal planning models. This comparison is crucial for understanding how different levels of public participation shape mobility outcomes and governance, with a focus on the implications for spatial justice and community empowerment.

Additionally, there is limited exploration of how varying public participation approaches influence active transportation outcomes, particularly in the context of Copenhagen's planning system. While Copenhagen is often seen as a model for cycling infrastructure, radical planning

critiques such technocratic, top-down strategies for neglecting the voices of marginalized communities. Similarly, the Situationist International (SI) movement's emphasis on psychogeography and everyday practices of resistance challenges the standardization of urban space, opening alternative understandings of mobility and the built environment.

Participation in Copenhagen's Cycling Governance

Much of the literature portrays Copenhagen's cycling system as a technical success and a model for other cities to emulate. This framing, while important, often overlooks the historical context and the complex interplay among stakeholders in shaping the city's cycling landscape. There is less attention to the processes behind decision-making, who makes the decisions, whose voices are heard, and what sources of input are considered. Although public participation is a frequent focus in mobility planning, fewer studies delve into the quality, depth, and representation of user insights in Copenhagen's cycling policies and infrastructure projects.

While Copenhagen is widely celebrated for its cycling success, the literature tends to downplay the historical and ongoing tensions within the system. The contestation, grassroots influence, and political struggles that have shaped the city's cycling landscape often remain underexplored. A more holistic evaluation of Copenhagen's cycling success would benefit from examining the community efforts that have played a crucial role in its development.

Lived Experience and Spatial Practices Are Undervalued

Dominant cycling research, and particularly research related to the "Copenhagen model," often emphasizes usage statistics, network completeness, and modal share, thus not always considering the everyday experiences of cyclists. While some work (e.g., Spinney & Lin) explores cycling as a lived practice rather than purely as a mode of transportation, few studies apply this perspective to Copenhagen or integrate it with nuanced spatial theories, such as those

provided by the Situationist International or radical planning thought. As a result, the literature has room for additional research that recognizes cycling planning as a political, emotional, and spatially lived practice, particularly in a city like Copenhagen, where mobility planning is often framed as efficient, top-down, and politically supported.

This thesis aims to address these gaps by examining the intersection of formal cycling planning, grassroots participation, and lived experiences through stakeholder interviews and site observations. Using a mixed-methods approach, it provides a more critical and grounded understanding of how cycling is governed, experienced, and contested in Copenhagen. This research will contribute to the broader field of cycling and urban planning, offering insights for designing more bike-friendly cities across diverse cultural and political contexts.

Chapter 3: Document and Plan Review

3.1 Document and Plan Review Process

As much of the literature on cycling in Copenhagen tends to focus on technical successes and general trends, there remains a gap in understanding the deeper dynamics of planning, participation, and community influence. To better address these gaps, this study undertakes a review of relevant documents and plans to explore both top-down and bottom-up approaches to cycling governance and infrastructure in the city.

Relevant documents were selected based on clear criteria, including publication after 2015 (except the original Christiania Green Plan, included for its comparative value). These documents were categorized into top-down (state-derived or led) and bottom-up (community-led or NGO-driven) approaches, with further distinctions made based on themes such as city-wide cycling policies, regional initiatives, and grassroots efforts.

The document review highlights a predominance of top-down approaches, typically published by Copenhagen’s municipality or other authorities. This is likely due to differences in resources and access to planning processes, rather than a lack of grassroots effort. Additionally, many community-led initiatives are indirectly tied to state functions, such as the city’s 12 neighborhood councils, which receive municipal funding (Københavns Kommune, n.d.).

***Table 3-1:** The following table provides an overview of bicycle and mobility-relevant documents reviewed for the supplemental plan review. The following documents represent a variety of planning mechanisms, including both top-down and community-led approaches. This is not a comprehensive review of all relevant plans due to limitations in this work’s scope and timeline.*

DOCUMENT REVIEW INDEX				
DOCUMENT NAME	PUBLISHER	YEAR PUBLISHED	PRIMARY APPROACH	PRIMARY FOCUS
The Climate-Friendly Capital of the Future	Københavns Kommune	2024	Top-Down	Top-Down Community Planning
Our Copenhagen	Københavns Kommune	2024	Top-Down	Top-Down Community Planning
Copenhagen’s Bicycle Strategy 2025	Københavns Kommune	2024	Top-Down	Top-Down Cycling Planning
Christiania Green Plan (1991)	Christiania	1991	Bottom-Up	Bottom-Up Community Planning
Christiania Green Plan (2023-2032)	Christiania	2022	Bottom-Up	Bottom-Up Community Planning
Nørrebro Bydelsplan 2023-2026	Nørrebro Lokaludvalg	2022	Top-Down & Bottom-Up Hybrid	Bottom-Up Community Planning

3.2 Document and Plan Assessment

To further explore the identified gaps in the literature, each document reviewed was evaluated using six criteria designed to assess their goals, framing, and alignment with the key

themes identified in the literature. These criteria allowed for a comparative analysis across a diverse range of plans by accounting for variations in scope, audience, and strategic approach. The evaluation framework was informed by established methodologies in planning analysis, ensuring a balance between analytical depth and clarity of presentation.

Informed by the European Union’s Sustainable Urban Mobility Plan (SUMP) guidelines, which emphasize essential steps in creating sustainable mobility plans, this evaluation framework provided a structured approach to assessing the alignment of the reviewed plans with sustainable mobility goals. Bannister (2008) also contributes to this methodology with a flexible, goal-driven perspective, advocating for the integration of community collaboration. Given that the selected plans were not exclusively focused on mobility, these guidelines were adapted to accommodate the variety of key topics, allowing for comparison across diverse plan typologies.

A five-point scale was applied to each of the six criteria, offering a nuanced but consistent approach to scoring while maintaining comparability across documents. The evaluation template used for this process is presented in Table 3-2 below. The following subsections will summarize the patterns, strengths, and divergences observed in the reviewed documents.

Table 3-2: This table outlines the categories reviewed for each plan, along with a scoring guideline. This approach enabled granularity and consistency across reviews of the diverse scope of plans.

Plan Scoring Guide		
Category	Description	Scale (1-5)
<i>Community Involvement</i>	Extent to which the document acknowledges, supports, or details community-led planning efforts or engagement (e.g., grassroots initiatives, advocacy, outreach).	1 = No mention of community-led efforts. 2 = Brief mention, but no detail or impact provided. 3 = Some discussion, but not a major focus/priority. 4 = Strong acknowledgment with specific case studies/examples. 5 = Central theme with detailed case studies/examples & support.

<i>Government or Institutional Support</i>	Degree of institutional backing for planning efforts, including a description of policies, funding, and strategic frameworks. This can come from community-led mechanisms or other forms of governance.	1 = No mention of institutional support. 2 = Mentioned, but no clear role in planning activities. 3 = Some recognition, but limited commitment provided/described. 4 = Clear backing with moderate perceived implementation. 5 = Fully integrated with strong funding & execution.
<i>Sustainability Focus</i>	Emphasis on long-term environmental or social sustainability in planning goals.	1 = No mention of sustainability. 2 = Mentioned, but not meaningfully integrated. 3 = Some general references, limited commitment provided/described. 4 = Strong commitment with specific strategies. 5 = Core principle in the plan, with clear policies & implementation.
<i>Equity and Inclusivity</i>	Consideration of diverse social groups (e.g., gender, socioeconomic status, accessibility) in planning activities.	1 = No mention of equity/inclusivity efforts or considerations. 2 = Brief reference, but limited depth and integration. 3 = Some acknowledgement but lacking clear strategies. 4 = Strong focus with some policies or initiatives. 5 = Explicit focus with well-defined strategies & implementation.
<i>Conflict and Negotiation</i>	Degree of perceived tension or collaboration between community-led and government-led efforts (mentions of disputes, negotiations, policy conflicts and resolutions).	1 = No mention of conflicts or negotiation areas/strategies. 2 = Limited reference, but not fully developed. 3 = Some discussion, but no conflicts described. 4 = Clear discussion with examples. 5 = Conflict/disputes and challenges mentioned with clear strategies for resolution.
<i>Policy & Infrastructure Integration</i>	How well the document connects its goals with broader urban policies or goals (e.g., transportation networks, land use, housing, climate goals).	1 = No connection to broader urban policies. 2 = Brief mention but lacks depth. 3 = Some connections, but they are not thoroughly developed. 4 = Strong integration with relevant municipal and national planning frameworks, but with limited specificity. 5 = Deeply embedded across relevant policies & strategies.

3.2.1 The Climate-Friendly Capital of the Future

The Climate-Friendly Capital of the Future, Copenhagen's municipal plan, published in 2024, outlines Københavns Kommunes vision for the city's development and planning priorities for the period until 2036. The document outlines strategic goals for the city's development, focusing on a range of topics, with climate mitigation at the forefront, as well as housing, mobility, green spaces, and social and business needs. This review will focus on the plan's

mobility efforts, as well as any participatory processes, which are highlighted primarily in *Chapter 2, 'Urban Development and Mobility in the Capital.'*

The plan outlines five overarching goals relevant to this work. These goals are grouped into the following categories:

- **Increasing Density and Managing Growth:** København Kommune aims to ensure residents can continue living in the city amidst growing populations. This includes strategies to increase housing density, as well as providing access to necessary services.
- **Climate-Friendly Mobility:** The city also highlights the need to increase sustainable mobility options to stay aligned with CO2 emissions goals, as well as support residents' quality of life. This includes increasing investments in sustainable transportation modes, as well as growing modeshare for bike, walk, cycling, and transit trips.
- **Vehicle Parking:** The next goal focuses on ensuring access to vehicle parking while also addressing the need to improve ease of access for non-car modes of transportation. The plan addresses the challenges associated with this need as Copenhagen continues to grow and 'leisure' vehicle ownership increases.
- **Bike Parking:** This goal addresses the city's need to ensure the ease and quality of bike parking, as well as solutions for the lack of space for proper bike storage in residential areas and businesses.
- **Electrification and Carsharing:** The final goal relates to electric vehicle access and car sharing. This goal aims to reduce vehicle emissions and traffic congestion.

Table 3-3: The Climate-Friendly Capital of the Future (2024) scoring metric based on the criteria defined in Table 3-2.

Category	Score	Evaluation Summary
<i>Community Involvement</i>	2/5	• <i>The Climate-Friendly Capital of the Future</i> highlights community feedback as a guiding principle of the city's vision for 2036. • Despite this emphasis, there is limited information available regarding the specifics of the community involvement process that led to the creation of the 2036 plan and its associated goals. There are limited specific mentions of integrating community collaboration as part of plan efforts.
<i>Government & Institutional Support</i>	4 / 5	• The plan emphasizes coordination across city departments and aligns with other identified goals in areas spanning from housing, mobility, business needs, and more. • There is room for more specific policies, frameworks, or implementation details for some goals; however, specificity is often provided, establishing quantifiable benchmarks to be met by 2036.
<i>Sustainability Focus</i>	5 / 5	• The plan emphasizes sustainability across its focus areas, and specifically for mobility, explicitly states a priority for sustainable transportation options to be accessible and easy for all. The plan highlights specific rationale related to pollution, traffic, quality of life, and well-being as part of its sustainability goals. • The plan outlines emission reductions, modeshare goals, and lifestyle changes as part of the plan. It also frames mobility as a central aspect of sustainability and the plan's overarching goal to be climate-friendly.
<i>Equity & Inclusion</i>	3 / 5	• The plan clearly states a goal to ensure quality of life and access to amenities for all, regardless of background. • The plan emphasizes the needs of immigrant populations and those with lower incomes. • Despite these goals, there is room for more specificity in policies or strategies for implementation.
<i>Conflict & Negotiation</i>	1 / 5	• The plan does not emphasize conflict and negotiation in its efforts or creation. It does discuss challenges in accommodating diverse needs and goals, but there is limited specificity in the strategies to address these challenges.
<i>Policy & Infrastructure Integration</i>	3 / 5	• The plan emphasizes a comprehensive approach to its goals and ties directly to a variety of infrastructure projects and policies. Regarding mobility, this is most evident in transit investments, expanding growth, and ensuring connectivity across the region for all modes of transportation.

3.2.2 Our Copenhagen Plan

Our Copenhagen, published in 2024, outlines Københavns Kommunes vision for the city's development and planning priorities for 2035. The document outlines strategic goals for the city's development, focusing on climate mitigation, housing, mobility, green spaces, and other key areas of concern. The structure of the plan outlines a vision for the city and the

associated strategies to achieve each goal. Evaluations and updates of the plan are scheduled every two years to ensure that goals reflect community needs and are effectively addressed.

The plan outlines five overarching goals to be developed in line with the desired vision of Copenhagen. These goals are grouped into the following categories:

- **Space for Urban Life:** The city aims to ensure easy and equitable access to green spaces and community areas while promoting sustainable mobility to access key amenities.
- **Climate-Friendly Life:** This goal focuses on the city’s climate resilience and mitigation efforts, which include infrastructure investments and setting emission goals.
- **A City for Everyone:** The next goal focuses on equitable access to key amenities and community building. This includes an increased focus on the needs of children, older people, and immigrants, as well as ensuring that people of all income levels can live in all areas of the city.
- **Collaboration for the City:** The last goal outlines the city’s objectives to enhance co-creation and partnership with Copenhageners in the design and planning process. This includes diverse representation on councils and supporting experimentation and pilot projects based on resident desires.

Table 3-4: Our Copenhagen (2024) scoring metric based on the criteria defined in Table 3-2.

Category	Score	Evaluation Summary
<i>Community Involvement</i>	3/5	• <i>Our Copenhagen</i> highlights community involvement as a central goal of the city’s vision for 2035. The plan specifically mentions the idea of “co-creation” and increased collaboration with individuals, groups, and businesses in its “Collaboration for the City” vision. • Despite this emphasis, there is limited information regarding the specifics of what these strategies may entail or what the community involvement process was for the creation of the 2035 plan and its associated goals.
<i>Government & Institutional Support</i>	4 / 5	• The plan emphasizes coordination across city departments and aligns with other identified goals in areas such as mobility, housing, climate, and more. • The plan’s accountability measure, which evaluates progress every two years and releases a subsequent report, provides a sense of accountability and support across the city’s governance functions. There is room for

		more specific policies, frameworks, or implementation details.
<i>Sustainability Focus</i>	4 / 5	- The plan emphasizes sustainability across its focus areas, and specifically for mobility, explicitly states a priority for sustainable transportation options to be accessible and easy for all. The plan emphasizes biking and walking as integral to this vision. - Aside from CO2 emission goals, specific targets are not provided for other sustainability measures.
<i>Equity & Inclusion</i>	4 / 5	- The plan clearly states a goal to integrate broader perspectives into planning efforts by 2035, specifically highlighting children, older people, and immigrants as populations of interest. - The plan also emphasizes supporting equitable access to key amenities and a high quality of life for all residents, regardless of their income level. - Despite these goals, there is limited specificity on policies or strategies for implementation.
<i>Conflict & Negotiation</i>	1 / 5	The plan does not make any specific references to conflict or potential differences in approach in the implementation of these goals. While it highlights a desire to collaborate with increasingly inclusive groups and businesses, it doesn't state any strategies for balancing different visions or priorities within the plan's broader goals.
<i>Policy & Infrastructure Integration</i>	3 / 5	The plan emphasizes a holistic approach to planning and community visioning but makes limited connections to specific policies or infrastructure projects. Some connections are made for climate, housing, and green space goals, but for mobility, there are limited projects or policies referenced.

3.2.3 Copenhagen's Bicycle Strategy 2011-2025

Copenhagen's Bicycle Strategy 2011–2025, unanimously adopted by the City Council, outlines København Kommune's vision of becoming "the world's best cycling city" and achieving carbon neutrality by 2025. Although the latter goal has faced delays, particularly due to the COVID-19 pandemic, the plan remains a central policy guiding the city's investment in cycling infrastructure and mobility. The document articulates both infrastructural and behavioral objectives, positioning cycling as a key component of Copenhagen's climate ambitions.

The strategy sets out several primary targets to achieve by 2025:

- **Increase Modal Share:** Raise the share of work and school commutes by bicycle to 50% (from approximately 35% mode share in 2010).
- **Enhance Safety:** Reduce serious cyclist injuries by 70% compared to 2005 levels.

- **Improve Efficiency:** Reduce average cycling travel times by 15% compared to 2010.
- **Boost Satisfaction:** Ensure that 80% of cyclists are satisfied with cycle track maintenance and 90% feel safe in traffic.
- **Infrastructure Development:** Expand the cycling network through projects such as the “PLUS-net” (wider, higher-capacity cycle tracks) and deploy synchronized traffic signals attuned to cycling speeds.
- **Super Bikeways:** Establish a regional network of 26 high-quality cycling corridors totaling 300 km to support long-distance commuting.
- **Bicycle Parking:** Improve and expand parking facilities, especially near transit hubs, to reduce congestion.
- **Intelligent Transport Systems (ITS):** Implement smart signals prioritizing cyclists and buses, aiming to cut cycle commute times by up to 10%.

Given the strategy’s comprehensive and metrics-driven approach, particularly its integration of infrastructure development, the document scored highly across several criteria but had lower scores notably in community involvement. Table 3-5 details this assessment.

Table 3-5: Copenhagen’s Bicycle Strategy 2011-2025 scoring metric based on the criteria and scoring guidance defined in Table 3-2.

Category	Score	Evaluation Summary
<i>Community Involvement</i>	2 / 5	• The plan references collaboration with businesses and organizations for implementation and marketing of the plan but lacks substantive detail on public engagement during the plan’s development. • There are mentions of survey data informing specific priorities, yet no details are provided regarding the survey methods, populations surveyed, or the depth of community representation.
<i>Government & Institutional Support</i>	4 / 5	• There are mentions of survey data informing specific priorities, yet no details are provided regarding the survey methods, populations surveyed, or the depth of community representation. • The strategy is backed by strong political support, having been unanimously adopted by the City Council, and is embedded within the city’s broader

		climate goals. It articulates a vision for significant modal share shifts, safety improvements, and infrastructure upgrades (e.g., the PLUS-net and Super Bikeways).
<i>Sustainability Focus</i>	5 / 5	- Sustainability is central to the strategy, with explicit integration of cycling into the city's climate and environmental agenda. - The document provides quantifiable goals and timelines and aligns cycling improvements with other transportation investments (such as the M3 metro line). - The holistic framing of sustainability, encompassing environmental, social, and infrastructure goals, demonstrates a high degree of emphasis.
<i>Equity & Inclusion</i>	3 / 5	- The plan acknowledges key demographic groups that face barriers to cycling, such as children, older adults, and immigrants. It also specifies the intent to improve accessibility and safety for these populations. - However, concrete mechanisms to ensure inclusive participation, track outcomes, or tailor infrastructure and programming to diverse needs are largely absent. This limits its strength as an equity-driven plan.
<i>Conflict & Negotiation</i>	1 / 5	- There is no explicit discussion of conflicts, tensions, or trade-offs within the planning or implementation processes. - The absence of documented negotiation with communities, competing interests, or institutional stakeholders suggests a potentially centralized or top-down creation process. This hinders understanding of the political and institutional dynamics involved in delivering cycling policy.
<i>Policy & Infrastructure Integration</i>	3 / 5	- The plan makes strong links to climate policy and broader mobility goals, helping position cycling within the city's sustainable transport ecosystem. - However, connections to other urban considerations, such as land use planning, housing, or economic development, are limited. This reduces the perceived integration of cycling as a collaborative policy tool.

3.2.4 Christiania Green Plan (1991 and 2023-2032 editions)

The Christiania Green Plan 2023–2032 outlines a vision and strategic framework for sustainability within the consensus-based, self-governed community of Christiania in Copenhagen. Building on the original 1991 Green Plan, this updated document reaffirms the eco-village's commitment to environmental stewardship while reflecting evolving priorities and new pressures. Though entirely grassroots in origin, the 2023–2032 plan incorporates certain elements common to formal planning practices yet notably diverges from conventional frameworks by centering ecological well-being over more common economic or growth-oriented objectives and frameworks. Both iterations of the Green Plan are reviewed here to provide context on the community's autonomous planning processes and to trace the evolution of

Christiania's planning efforts, particularly as they intersect with an increasingly complex and negotiated relationship with state authorities.

The two plans' emphasis on sustainability and community action led them to score highly across several criteria but also represented changes in approach over time leading to more governmental and institutional coordination. Table 3-6 details this assessment for both plans.

Table 3-6: Christiania Green Plan (1991 & 2022) scoring metric based on the criteria and scoring guidance defined in Table 3-2.

Category	Score (1991)	Score (2022)	Evaluation Summary
<i>Community Involvement</i>	3 / 5	3 / 5	- Both the 1991 and 2022 plans emphasize autonomy, and resident involvement in all community planning activities, though not focused on mobility planning. - There are limited specific references to how each plan was crafted/created, and how members contributed, leaving some uncertainty to specific activities.
<i>Government & Institutional Support</i>	2 / 5	3 / 5	- The 1991 Plan articulates a vision of planning rooted in self-governance and resistance to traditional bureaucratic systems. No external institutional partnerships are acknowledged, and the plan functions more as a counterexample to municipal processes. - Central to this concept is the notion of self-administration and consensus-based decision-making, with community members organized into interest-based working groups. This model reflects a form of grassroots democracy informed by theories such as Henri Lefebvre's <i>autogestion</i> (Lefebvre, 1965). - The 2023 plan, while still grounded in this ethos, takes a shift toward institutional collaboration. It acknowledges formal cooperation with the Danish Agency for Culture and Palaces, particularly in managing Christiania's section of Christianshavns Vold. This collaboration reflects a softening of earlier anti-institutional stances and an evolution toward selective integration with broader governance mechanisms.
<i>Sustainability Focus</i>	5 / 5	5 / 5	- Sustainability is a foundational value in both the 1991 and 2023 Green Plans. The 1991 plan centers on the concept of "ecological balance" and promotes low-impact development, the preservation of green spaces, and the utilization of renewable materials and practices. - These values are reiterated and expanded upon in the 2023 plan, which updates goals in light of current environmental challenges. The 2023 plan places even greater emphasis on stewardship of natural areas, sustainable land use, and local ecological practices that respect both community values and evolving environmental standards.
<i>Equity &</i>	3 / 5	3 / 5	Both plans articulate a strong internal philosophy of equality and

<i>Inclusion</i>			self-determination. - The 1991 plan outlines a vision of a society where “every single individual can freely develop themselves under responsibility for the community,” suggesting that inclusivity is embedded within Christiania’s founding ideals. However, neither plan explicitly addresses the diverse needs of marginalized populations, nor do they outline formal mechanisms for ensuring representational diversity. - The 2023 update continues to promote internal inclusivity through its collective governance model, but it similarly lacks explicit frameworks or strategies for broader equity. Given the commune’s relatively insular structure, this omission may reflect internal cohesion.
<i>Conflict & Negotiation</i>	4 / 5	5 / 5	- Consensus-based governance is central to Christiania’s planning processes. Both the 1991 and 2023 plans emphasize resolving differences through dialogue and mutual understanding rather than hierarchical decision-making. - In the 1991 plan, this is embodied in the emphasis on horizontal self-management. - The 2023 plan builds upon this model and extends it to relationships with external actors. It includes language about maintaining “continuous dialogue” with city and national agencies, specifically the Danish Agency for Culture and Palaces, highlighting a shift toward constructive negotiation beyond the community’s borders. - This reflects a new approach, where Christiania maintains its values while engaging in collaboration with the broader municipality to manage conflicts around land use, preservation, and public access.
<i>Policy & Infrastructure Integration</i>	3 / 5	3 / 5	- The two Green Plans diverge from typical planning conventions, instead focusing on sustainability and autonomy. The 1991 plan emphasizes non-bureaucratic, self-managed processes that prioritize localized needs over coordinated investment. - While this approach supports the community’s values, it limits integration with city-wide systems, including transportation. The 2023-2032 plan shows progress in this regard, with references to shared land management and broader planning dialogue. - However, Christiania remains independent mainly from the city’s formal infrastructure strategies, and most policy connections are informal or selectively adopted. The community’s unique legal and spatial status within Copenhagen continues to shape the limited degree of integration into the larger urban fabric.

3.2.5 Nørrebro Bydelsplan 2023-2026

The Nørrebro Bydelsplan is the community plan for the Nørrebro district north of Copenhagen’s inner city. The plan was created by the Nørrebro Lokaludvalg, a community council partnered with the municipality and led by local elected representatives residing within the district. Each of Copenhagen’s districts has a similar body and associated planning process. The Nørrebro Bydelsplan was evaluated for its unique scope as an entirely community-led effort

financially supported by the municipality and for Nørrebro's high population and density compared to other areas of Copenhagen. Nørrebro thus has challenging mobility and development considerations alongside increasing populations, gentrification, and other concerns.

The plan is divided into subgoals addressing sustainability, housing, affordability, business, cultural, and transportation concerns. For the focus of this work, goals relevant to mobility and community participation were prioritized over other defined action areas.

Areas of particular interest as defined by the Bydelsplan for this work include the following:

- **Traffic in Nørrebro:** This section focuses on Nørrebro's traffic, road safety, and environmental concerns related to transportation. This includes visioning of future investments and priorities to pursue over the course of the plan.
- **Climate and Green and Blue Initiatives:** The plan highlights a desire to increase green space in the district, as well as better maintain existing areas. While this focuses on green space in particular, the plan determines a variety of streets within the district to redesign to increase green space in the district.
- **Gentrification, Public Housing, and Urban Spaces:** This section focuses on rising concerns with gentrification, representation, and accommodating needs of a diverse group of residents in the district's urban spaces.
- **Youth Involvement (ages 13-18):** The plan makes an effort to distinctly plan for youth, and any relevant visions they have for the neighborhood as the smallest demographic.
- **Social sustainability:** This section aims to address social considerations for wellbeing of all residents, including acceptance of diverse backgrounds and perspectives.

Table 3-7: Nørrebro Bydelsplan (2023) scoring metric based on the criteria and scoring guidance defined in Table 3-2.

Category	Score	Evaluation Summary
<i>Community Involvement</i>	5/5	Nørrebro Bydelsplan, as a community-led plan, incorporates community feedback and sentiment into the creation of each of its goals. Survey data from community members is provided for each goal, listing specific goals and interest areas, as well as locations for each goal category.
<i>Government & Institutional Support</i>	5 / 5	The plan references connections and collaboration with the broader municipality in multiple cases, including other surrounding community councils, as well as the city's Technical and Environmental Administration for planning new desired cycle paths and other activities.
<i>Sustainability Focus</i>	5 / 5	- The plan emphasizes sustainability efforts and reducing environmental impact across several goal categories. - Specific to mobility and cycling considerations, the plan highlights a desire to reduce vehicle traffic and continue addressing associated air pollution concerns. - The plan also highlights specific goals to increase car-free planning and building cycle paths along several streets within the district.
<i>Equity & Inclusion</i>	4 / 5	- The plan clearly states a goal to integrate broader perspectives into planning efforts and ensure representation of the district's diverse needs in its work for 2026. - The plan focuses on children, older people, immigrants, and those of lower incomes, specifically highlighting areas of concern for these groups. - Specifically related to mobility, there is additional room for integration and representation in planning efforts and priorities.
<i>Conflict & Negotiation</i>	3 / 5	- The plan addresses areas of conflict, including the need to plan for business needs and provide adequate parking while also promoting the desire to increase car-free development. It also proposes solutions for challenges with limited space by rethinking and reallocating space on streetscapes. - This section could be strengthened by the development of specific policies and strategies, as well as by aligning with broader city planning goals.
<i>Policy & Infrastructure Integration</i>	4 / 5	- The plan emphasizes connections with the broader goals of other community councils and the integration of priorities across the district's various objectives. - More detail could be provided regarding integration with other policy efforts.

3.3 Document Review Findings

The reviewed plans offer a broad spectrum of approaches to mobility and community needs in Copenhagen, each reflecting the city's unique blend of formal planning structures and local, grassroots influences. The plans vary widely in their scope, structure, and the ways they address cycling within the urban environment, providing valuable insights into how these approaches align with broader goals for mobility and sustainability.

One notable pattern is the variation in how goals are set and measured. City-led plans tend to focus on specific, measurable outcomes such as CO2 reductions and improvements in cycling mode share, reflecting the city's commitment to sustainability and provide a sense of accountability. However, while these plans emphasize participation and collaboration, they do not always explicitly tie community input to the formulation of goals, leaving a gap in how well they reflect the lived experiences of cyclists.

In contrast, plans like Christiania's Green Plans and the Nørrebro Bydelsplan take a different approach by integrating more direct community input into their vision-setting processes. Christiania's plans, for example, focus on maintaining harmony with nature and preserving the experiential qualities of the district, rather than specifying concrete objectives for the future. This approach highlights a desire for long-term sustainability, but with a more flexible, evolving vision. On the other hand, the Nørrebro Bydelsplan provides a clear framework for community engagement, using survey data to inform specific areas of interest and set priorities. This transparency offers community members a clearer understanding of how their feedback contributes to shaping the plan and its outcomes.

The review underscores the importance of incorporating a range of perspectives, from formal sustainability goals to community-driven visions, in creating a comprehensive and inclusive urban mobility system. These findings also provide useful context for the subsequent interviews and site observations, offering a richer perspective on how cycling and mobility are approached across different sectors of planning in Copenhagen.

Chapter 4: Methodology

4.1 Research Design

Building on the insights gained from the literature review and the evaluation of key planning documents, I employed two primary methods to deepen the exploration of bicycle infrastructure planning in Copenhagen's varied urban landscapes. To better understand both the planning processes and the lived experiences of users, semi-structured interviews were conducted with key stakeholders, while an unstructured, fluid exploration was applied to site observations. This combined approach offers a multifaceted view of Copenhagen's cycling ecosystem, shedding light on strategies shaping infrastructure and the user experience.

4.2 Data Collection Methods

4.2.1 Interview Selection Criteria

The first method used in this study was semi-structured stakeholder interviews, designed to capture a diverse range of perspectives on mobility planning. Interviewees were selected based on their expertise and involvement in relevant areas to ensure a comprehensive understanding of the various forces shaping bicycle infrastructure in Copenhagen. This approach builds on the context established in the literature and plan review in Chapters 2 and 3, highlighting key stakeholders and topics of relevance. A preliminary evaluation helped identify key actors involved in planning, organizing, and unique circumstances, guiding the selection of interviewees. Email invitations were sent for informal interviews, focusing on their perspectives on bicycle planning. The selected stakeholder groups represent a balance of traditional planning bodies, community-led groups, cycling advocates, and academic or industry thought leaders.

Table 4-1: The following table highlights the interviewees that participated in this work, including their affiliations and roles. Interviewees are kept anonymous in the results of this work, instead using numbered identifiers, based on the agreed upon terms provided in their consent forms.

STAKEHOLDER INTERVIEWEES			
INTERVIEWEE IDENTIFIER	ORGANIZATION	MEMBER ROLE	INTERVIEW SETTING
Interviewee 1	Gehl Urban Design	Senior Planner	Copenhagen, In-Person
Interviewee 2	København University	Former Lecturer, Faculty Member in Public Life and Planning	Copenhagen, In-Person
Interviewee 3	Christiania	Resident and Nyt Forum Employee	Copenhagen, In-Person
Interviewee 4	Nørrebro Lokaludvalg	Project Coordinator	Copenhagen, In-Person
Interviewee 5	Demokrati Garage	Project Coordinator	Copenhagen, In-Person
Interviewee 6	Cyklistforbundet (Danish Cyclist Federation)	Local Representative	Copenhagen, In-Person
Interviewee 7	København Kommune - Technical and Environmental Administration	Project Worker	Remote, via video conferencing

Except for one, all the seven interviews conducted took place in person in Copenhagen for the convenience of the interviewees. Interviews took place in the interviewee's preferred location, which included a variety of settings, such as their workplace, personal home, or quiet outdoor public areas like parks, to facilitate easy recording of the dialogue. The remote interview was conducted during regular working hours in Copenhagen's time zone to minimize differences in outcome or ease for the interviewee.

4.2.2 Interview Protocol

All seven interviews were conducted in English, lasting 30 minutes to one hour, depending on the interviewee's interest and availability. Interviewees all signed a consent form

that detailed the nature of the interview and addressed their privacy concerns. Interviewees were also made aware that they could omit to answer any questions they chose.

Interviews were conducted in a conversational, semi-structured format to ensure participants' ease and comfort. Each interview began with brief introductions and an overview of the interview's purpose for all respondents. The remaining questions to be asked entailed using a set of guiding questions created by the researcher to inform the interview, with the opportunity for follow-up questions and a flow of responses based on the interviewee's interests. Questions were drafted and categorized into overarching topic themes to ensure a breadth of conversations were discussed. While each interview was informed by guiding questions related to mobility planning processes, community participation, and decision-making, the interviewees helped expose areas of particular interest or importance. All interviews were audio recorded onto a cellular device during the interview and then automatically transcribed into written text for analysis, with the interviewee's consent. Additionally, thematic conversational notes were transcribed for further reference. These materials were deleted after needed usage.

Interview Analysis Strategies

Once all interviews were completed, the analysis process began to identify key themes and insights from the diverse group of interviewees. Transcripts and field notes were analyzed thematically, using a hybrid approach that combined both inductive coding and deductive themes based on the literature and planning frameworks discussed in Chapters 2 and 3. Codes were grouped into categories to facilitate comparison across interviews, helping to identify commonalities and differences. Through this process, specific quotes were selected to represent key themes or particularly insightful points, which were then emphasized in the final analysis.

4.3 Unstructured Site Visit Observations

To deepen the insights gathered through stakeholder interviews, I also explored the streets of Copenhagen to observe the city's cycling landscape in an unfiltered form. Instead of sticking to a rigid case-study framework, this process embraced the spirit of exploration embodied by the Situationist International (SI) movement, as introduced in Chapter 2. The Situationists challenged how we experience urban life, pushing back against the conventional ways city planners and politicians shaped our world. (DeBord, 1994).

For the Situationists, mapping was about capturing the hidden, emotional undercurrents of place. They used abstract, free-form maps to chart human experiences, breaking away from the precision of traditional planning. This research taps into that same philosophy, offering a “soft data” perspective that highlights the emotional and behavioral dimensions of cycling in Copenhagen. This approach seeks to uncover what's missing, and the nuances of how it feels to ride in and interact with the city.

4.3.1 Conceptual Framework

The framework for these site observations draws on three key Situationist concepts, which provide a basis for understanding how urban environments shape human experience, particularly in relation to cycling infrastructure:

Psychogeography

Psychogeography explores how the physical environment influences emotional and behavioral responses. In this study, psychogeography is used to examine how Copenhagen's cycling infrastructure affects the emotional and experiential aspects of cycling. This approach provides a means of understanding the city not just as a network of roads and pathways, but as a space that evokes specific feelings, responses, and interactions among cyclists.

Dérive

The concept of *dérive*, or “drifting,” advocates for unstructured, spontaneous exploration of urban space. It is an approach that prioritizes the experience of the environment over the act of reaching a destination. This method is particularly relevant in studying cycling in Copenhagen, as it allows for a more fluid, exploratory engagement with the city’s streets, capturing how cyclists experience different spaces in real time. The *dérive* method also serves as a complement to the structured analysis of planning documents and stakeholder interviews by providing a more direct, experiential understanding of the city’s cycling infrastructure.

Détournement

The final guiding ideology informing the site observation and resulting mapping is *détournement*, which can be understood as a response to the Situationists’ perception of the increasing threat of a commodification of daily life. *Détournement* relies on reinterpreting existing urban elements to highlight alternative uses and meanings (e.g., how infrastructure is used versus how it was intended). It will focus on areas where bike infrastructure or streets are used in alternative or unexplained ways. This will also highlight examples of experimentation in informal infrastructure solutions or behavior changes.

Site Visit Objectives and Process

These guiding principles shape the overall objectives of the site visit observations, which aimed to understand the interplay between formal and informal cycling infrastructure in Copenhagen. I observed a variety of neighborhoods, including residential, commercial, tourist, and alternative community areas. By observing patterns of movement, interactions, and informal cycling behaviors, this research sought to provide a more nuanced understanding of how Copenhagen’s cycling infrastructure functions in practice.

The goal of these observations was to explore the dynamic between top-down policies and community-driven initiatives, investigating how the formal cycling infrastructure supported by the state interacts with the more fluid, grassroots practices adopted by cyclists. Additionally, the research aimed to identify areas where these two systems of cycling infrastructure align or clash, providing insight into the challenges and opportunities for future integration. Sites for observation were selected based on a combination of factors, including the insights provided by the literature and plan reviews, as well as the typology of each neighborhood. This ensured a diverse range of spaces, reflecting various types of cycling infrastructure and community engagement. The selected sites are listed in Table 4-2, and a detailed analysis of each location is provided in Chapter 5.

***Table 4-2:** The following table details the selected sites for unstructured exploration. The sites were selected to ensure a variety of neighborhoods and networks evaluated but still allow for unstructured exploration. This is not a comprehensive review of all areas of the city but represents a diverse selection to evaluate.*

SITE TYPE	LOCATIONS	KEY FOCUS/RATIONALE
Community-Led Spaces	Christiania	Exploration of how grassroots initiatives shape cycling culture and community-driven mobility solutions
Government-Planned Cycling Infrastructure	Approved bike routes, and cycle superhighways (all-over the city), Nørrebro	Analysis of the effectiveness of official state-supported cycling infrastructure in enhancing mobility
Mixed-Use Districts	Refshaleøen	Investigating how cyclists navigate and adapt to changing, multi-functional urban spaces
Tourist and Commercial Zones	Indre By, including Nyhavn, Strøget + nearby streets	Examining bicycle accessibility in areas with high pedestrian traffic and commercial activity
Peripheral and Underserved Areas	Nordvest	Addressing equity in cycling access and alternative mobility challenges in underserved communities

During each site visit, the focus was on informal exploration rather than adhering to a strict list of locations or documentation. This approach, inspired by the Situationist principles of psychogeography, *dérive*, and *détournement*, prioritizes the sensory and emotional experiences of the space over structured observations. Visits were conducted by bike and on foot when needed for ease, lasting several hours to allow for spontaneous exploration and an immersive understanding of the urban environment.

While unstructured, certain core methods were consistently applied across each site visit to ensure comparability and facilitate later analysis. These methods, detailed in Table 4-3 below, provided both immediate field evaluations and materials for further examination. These resources directly inform the hybrid exploratory maps presented in Chapters 5 and 6, offering a foundation for the analysis to come.

Table 4-3: The following table describes the different approaches and methods used for this work's sensory mapping analysis. Each site visit relied on a combination of field notes, photographic documentation of sites and areas of interest, and simultaneous GPS movement tracking, which was conducted in the background rather than leading the explorations. After each site visit, maps were created by building upon and refining the field notes and map sketches generated during the visit and by coordinating insights from the stakeholder interviews.

METHOD	TOOL & USE
Field Notes	Handwritten notes, easy to do on the go for each site visit.
Photographic Documentation	Capture key urban features, informal infrastructure, social interactions, and other relevant sensory points of interest.
Route Mapping	GPS tracking of <i>dérive</i> movements and spontaneous cycling for use in the analysis stage, alongside key details such as weather and time of day. The Strava app GPS function was used for tracking.

Sensory Mapping	Documenting emotional responses, soundscapes, spatial atmosphere. Maps were drawn during and finished shortly after each site visit using photos and notes to create experiential maps for each locale.
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4.4 Data Analysis Approach

In analyzing the interview transcripts, a thematic coding approach was applied to identify emergent themes related to Copenhagen's bicycle planning landscape. Thematic analysis was conducted in two stages: an inductive exploration of the data to capture unanticipated insights, followed by a deductive application of themes drawn from the literature and planning frameworks. The primary codes were derived through a close reading of the interview transcripts, leading to the identification of key thematic areas such as institutional constraints on grassroots action, municipal planning strategic approaches, and modes of public participation. Each of these overarching themes was broken down into subthemes, with particular attention to patterns in stakeholder perspectives and their descriptions of the processes shaping the city's cycling network. The following is an overview of the prominent themes that emerged:

1. **Institutional Constraints on Grassroots Action:** Many participants highlighted the barriers posed by municipal bureaucracy, resource limitations, and conflicting priorities that hinder grassroots organizations.
2. **Municipal Planning Strategic Approaches:** Formal planning bodies were described as prioritizing pragmatic, data-driven solutions, though challenges arose from inter-jurisdictional coordination and shifting priorities.
3. **Modes of Public Participation:** A key distinction was made between formal (e.g., workshops, surveys) and informal (e.g., spontaneous community action) forms of public engagement in cycling-related planning.

4. **Community Influence and Strategy:** Community groups and activists exerted influence through local councils, grassroots advocacy, and experimental interventions.

Site observation notes were analyzed through the same thematic lens to ensure alignment. This process enabled a comparative analysis between the formal planning perspectives from interviews and the experiential, site-based perspectives observed during field visits.

Chapter 5: Copenhagen's Community Voices and Spatial Realities

This chapter brings together site-based experiential mapping and stakeholder interview themes to explore Copenhagen's cycling network not only as planned infrastructure but as a lived and continually reinterpreted space. Inspired by Situationist International methods, particularly the concepts of *dérive* (drifting) and *détournement* (repurposing), I engaged in psychogeographic explorations of key neighborhoods, allowing the city's shape and the embodied experience of moving through it to guide both observation and interpretation. These experiences, combined with stakeholder interviews, reveal the cycling network as a dynamic field shaped as much by everyday practices and community agency as by formal planning decisions. Rather than presenting interview findings and observations separately, this chapter is organized around thematic findings as illustrated by each of the respective site visits completed.

5.1.1 Experiencing Nordvest: Drifting Through a Space in Flux

My *dérive*-inspired exploration began near Nørrebro Metro Station, drifting northward into Nordvest, a neighborhood shaped by industrial legacy, ongoing gentrification, and a diverse, evolving population. Drawing from Situationist practice, this journey sought to reveal how movement through space illuminates both structural conditions and everyday improvisations.

Almost immediately, the shift from Copenhagen's protected cycle tracks to a more fragmented and contested mobility landscape became clear. Rentemestervej, one of Nordvest's primary north-south corridors, lacked dedicated bike lanes. Cycling occasionally meant navigating trucks, parked cars, and pedestrians, negotiating space. Yet the streets of Nordvest pulsed with life, produce stands spilled onto sidewalks, butchers and markets along the corridor, and informal street furniture invited passersby to linger.

A key node along this trajectory was Demokrati Garage. Though not focused on mobility, the organization engages residents in a range of community-driven projects, streetscape improvements, public gathering spaces, and participatory engagement. In conversation with Interviewee 5, the emphasis on community agency, particularly in a neighborhood where many feel overlooked or disenfranchised, emerged as central to Demokrati Garage's mission.

Demokrati Garage's work transforming an empty parking lot into a vibrant social commons exemplified this ethos. Planters made from repurposed materials, DIY seating, and murals reimaged the hardscape as a site of collective possibility. This *détournement*, reclaiming space from automobility and privatization, challenged dominant logics of the street. Inside Demokrati Garage, Interviewee 5 framed the group's philosophy: "We need to actually build community in order to respond to these crises, not just wait for some external actor."

Continuing the drift northward, grassroots creativity and adaptive reuse remained palpable. At the intersection of Rentemestervej and Tomsgårdsvej, the Nordvest Library and adjacent Ungdomshuset (The Youth House) anchored progressive community life. Political graffiti critiquing gentrification, a makeshift skatepark, and hybrid public-private spaces all signaled an active negotiation over urban space.

Further into quieter residential zones, cycling conditions subtly changed. Parked cars and narrowed streets served as informal traffic calming, offering a greater sense of safety and spatial clarity for cyclists. These organic modifications resembled a form of situational urbanism, where mobility was shaped through local knowledge and lived patterns.

Through this exploration, it became clear that Copenhagen's cycling landscape, particularly in Nordvest, is not a uniformly designed system. Rather, it is an evolving terrain of bottom-up adaptation and community negotiation. Conversations with stakeholders would further reinforce this interpretation.

5.1.2 Everyday Agency and Pragmatic Adaptation

The Nordvest exploration illuminated a broader principle echoed across stakeholder interviews: Copenhagen's cycling success is not simply a product of top-down planning, but an ongoing negotiation between formal systems and everyday agency. This dynamic, of iterative adaptation, small-scale intervention, and community creativity, emerged as a consistent theme. As new developments, user needs, and traffic patterns emerge, so do bottom-up responses. These range from informal grassroots actions to more coordinated collaborations between communities and municipal actors. Often, the most effective interventions are pragmatic and contextually rooted rather than large-scale overhauls.

This ethos was especially evident in Nordvest. Demokrati Garage, while not mobility-focused, exemplifies community-driven spatial transformation. Interviewee 5 described the Garage's mission as "rethinking what community involvement and shaping of decision making can look like", especially in a neighborhood navigating gentrification and social change.

This philosophy extends to mobility concerns as well. Rentemestervej, despite its vibrancy, continues to pose challenges for cyclists. In response, community members have led

efforts to install planters and public amenities, subtly calming traffic and reinforcing the idea that the street serves people, not just vehicles. As Interviewee 5 shared, “We are really interested in traffic reduction on Rentemestervej... to improve conditions for bikes, reduce car traffic, and make this street more livable in general.”

Although full redesigns remain beyond their reach, these incremental acts help foster shifts in perception and behavior. Planters, narrower lanes, and public seating create a more inviting, shared streetscape that disrupts dominant vehicular norms. In the residential areas further into Nordvest, related patterns emerged: dense on-street parking, and informal spatial cues aligned with local mobility needs. These elements reflect the everyday negotiations of space. Across Nordvest and the broader network, everyday agency and pragmatic adaptation shape Copenhagen’s cycling landscape. Even in a globally renowned cycling city, much of the system’s action arises from the bottom up, not solely through polished cycle tracks, but through community creativity, and ongoing negotiation of urban space.

5.1.3 Reframing Bottom-Up Urbanism: User Knowledge and Civic Adaptation

The experience of drifting through Nordvest, and the insights from stakeholders, challenge the notion of Copenhagen’s cycling network as a purely top-down achievement. Rather, it is a system co-produced through formal planning and the everyday actions of its users. As Interviewee 6 from Cyklistforbundet observed, Copenhagen’s famed cycling infrastructure is the result of decades of advocacy and incremental progress, not an inevitability. Early advocates responded to lived street conditions, driving changes that gradually shaped today’s network.

Even now, many interventions arise from user knowledge and situational adaptation rather than predefined plans. This gradual evolution reflects a shifting discourse, one that extends beyond individual cycling experiences to broader debates about social responsibility and the role

of cycling within the city's urban fabric. The present-day dynamics observed in Nordvest resonate with this history, grassroots actors, informed by local experience, continually modify urban space to meet community needs.

Whether through formal advocacy or informal action, these efforts underscore the productive tension between planning structures and lived realities. Ultimately, it is this interplay of community agency, civic adaptation, and flexible use of space that enables Copenhagen's cycling system to remain responsive and resilient. The Situationist-inspired site exploration underscores that even in a globally celebrated cycling city, mobility remains an ongoing process of negotiation, creativity, and everyday reinvention.

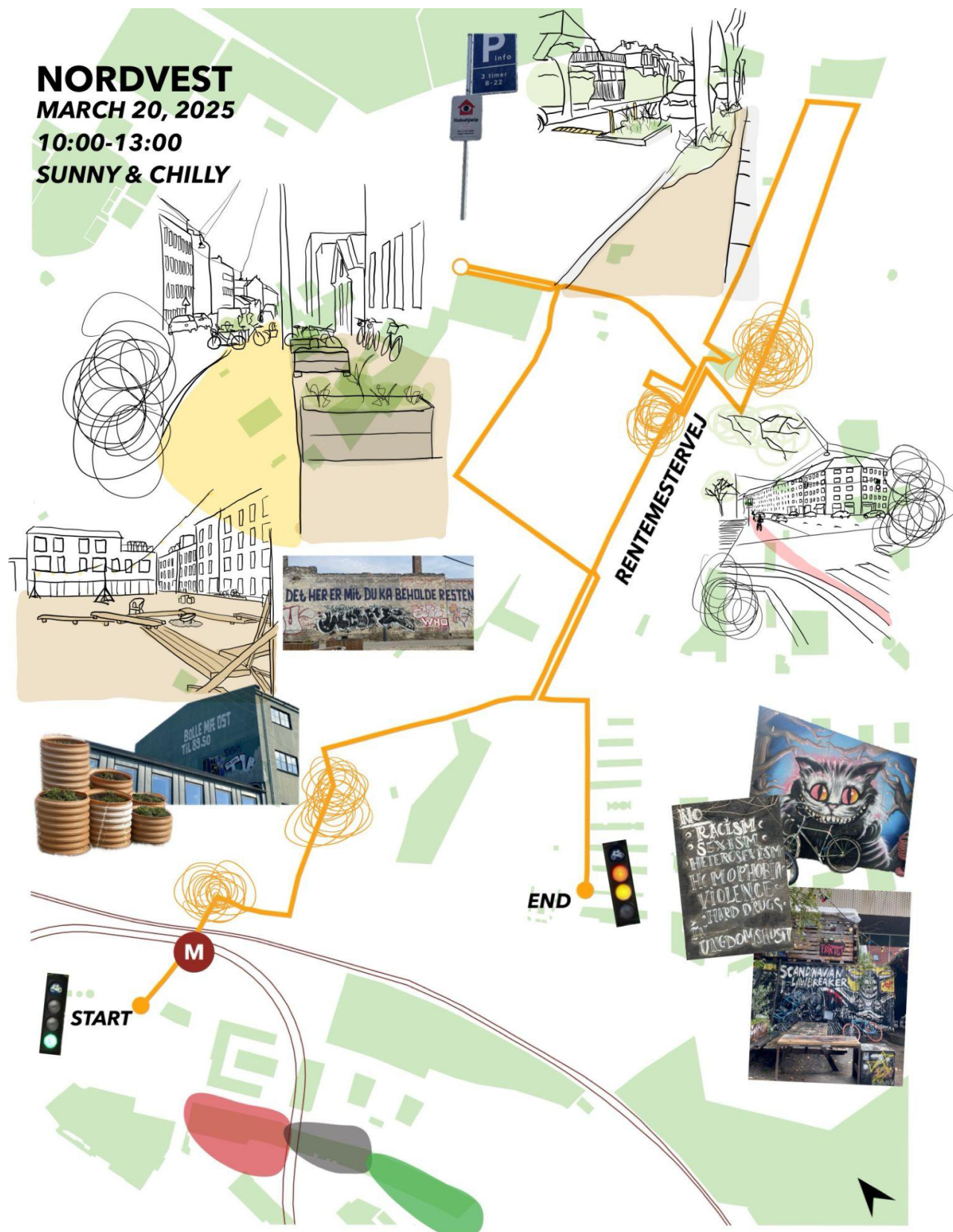
Figure 5-1: Nordvest site exploration highlighting key community anchors, including Demokrati Garage, Rentemestervej Library, and Ungdomshuset. The area reveals increased pressure to accommodate vehicles, contributing to a less comfortable cycling environment in several locations.

NORDVEST

MARCH 20, 2025

10:00-13:00

SUNNY & CHILLY



5.2 Christiania as a Living Laboratory

5.2.1 *Autonomy and Infrastructure Without Bureaucracy*

Site observations in Christiania immediately reveal a spatial contrast to the rest of Copenhagen. The area is characterized by low-level buildings, informal pathways, ranging from pavement to dirt, and a notable lack of cars. Walking through the community, it becomes apparent that mobility is shaped not by formal rules, but by a decentralized, community-driven ethos. There is little formal separation between modes, and while some vehicles are present, Christiania is largely car-free.

This physical informality is a product of Christiania's governance model, which stands in stark contrast to Copenhagen's more formal approach. The community operates with a horizontally organized, consensus-based structure. Founded over 50 years ago, Christiania is home to about 650 adults and 200 children and relies on a model where "all have to take responsibility and action if there is to be development in the local community" (Christiania, n.d.).

Community meetings sit at the top of this governance hierarchy. Decisions must be agreed upon by all members, a time-consuming but essential feature of the commune's political life. Smaller groups and committees handle operational and planning details, covering the commune's 15 sub-areas and special interest functions like traffic and sustainability.

Interviewee 3, a long-time member since the 1970s, described the Common Meeting as "the highest authority" and emphasized the community's efforts to ensure everyone feels heard. The emphasis on autonomy, consensus, and sustainability manifests clearly in the urban form. Compared to the multi-story buildings of surrounding Christianshavn, Christiania's more modest architecture and mobility networks reflect intentional choices.

While Christiania claims to be “car-free,” this status has been contested over time. Interviewee 3 explained that as the population grew, “more families with children moved here, more people got cars, some for personal use and some for their businesses.” Without internal parking, cars lined nearby streets like Refshalevej. Initially this caused little disruption in what was then a working-class area, but with gentrification, local tensions increased. “They got annoyed that we didn’t allow cars in Christiania, yet people parked in their streets,” he recalled. This led to pressure on the local council to allow parking inside Christiania’s gates, a direct challenge to the community’s values and autonomy and emphasis on cycling.

5.2.2 Cycling as Culture

As a self-proclaimed eco-village, Christiania’s commitment to sustainability is visible not only in its governance model but also in the prominence of bicycles within everyday life. Site observations showed a landscape filled with uniquely modified and colorfully decorated cargo bikes, many of them well-worn, and visibly integrated into the rhythms of life in the commune.

While the City of Copenhagen similarly champions sustainability, Christiania’s approach is less focused on performance metrics and more on enabling everyday practices. This focus on the individual and collective scale, on what is feasible and self-directed, is part of what makes the community a distinct site of innovation. Interviewee 3 noted that many practices now adopted by the city, like waste sorting and stormwater filtration, emerged in Christiania first.

Most famously, Christiania is credited with the invention of the Christiania Bike, a pioneering model of cargo bicycle. As Interviewee 3 recalled, “Here in Christiania, the idea of cargo bikes came up again... and began to be called the Christiania bike.” Revived in the 1970s as a car-free mobility solution, the cargo bike was originally considered clunky and improbable. Today, however, it has become a symbol of urban sustainable transport, widely adopted both in

Copenhagen and internationally. The bike's evolution reflects Christiania's unique ability to translate lived environmental values into physical, mobile infrastructure developed not through institutional channels, but through grassroots experimentation and community need.

5.2.3 Slowness as Resistance: Future Plans and Site Observations

Christiania's spatial logic and rhythm offer a powerful contrast to the structured efficiency of Copenhagen's broader cycling and mobility network. As a visitor, one encounters winding, unstructured paths, unexpected visual details, and a general sense of open-ended movement. Graffiti murals, impromptu shrines, hand-built benches, colorfully decorated cargo bikes, and garden beds all contribute to a sensory environment that is more experiential than practical. These elements support *dérive* and *détournement* exploration through a built environment that encourages interpretation and individual expression.

Yet this "slow life" model is increasingly under pressure. As Copenhagen expands, particularly through development in Amager, Refshaleøen, and the planned artificial island of Lynetteholm, Christiania's autonomy and spatial identity are coming into question. Interviewee 3 explained that the community has begun to consider ways to grow without compromising its core principles. This includes allowing new residents to apply for housing and planning for approximately 25,000 square meters of social housing. "Everyone living there must be part of the community and involved in decision-making," he emphasized. This will bring about a 25% population increase, but one the community believes it can manage while preserving its values.

A critical spatial manifestation of Christiania's evolving relationship with the city is the new cycle route connecting Christiania to Amager. During field visits, this route was visibly well-used, carrying between 3,000 to 5,000 daily commuters, according to Interviewee 3. "We support bikes, so we agreed [with the city] to support it," he said. Yet, the development of this

route was not universally accepted. Some community members protested, and construction equipment was destroyed. “The individuals responsible believed the machines belonged to the municipality. But in fact, they were Christiania’s own,” Interviewee 3 recalled.

Despite the conflict, the project ultimately gained consensus support through the commune’s established processes. While not everyone initially agreed, the episode strengthened internal dialogue and deepened cooperation with city officials. Even as Christiania adapts, the experience of moving through the space remains distinctive. The built environment reflects collective decision-making rather than top-down planning: a patchwork of paths and visual interventions that communicate values through form. Interviewee 3 noted, “We want to be an alternative society, but not isolated... We want to inspire the rest of society.”

Christiania’s influence, visible in everything from cargo bikes to waste policy, demonstrates how grassroots experiments in mobility and infrastructure can have a lasting impact far beyond their boundaries. As the community moves forward, balancing autonomy with external connection, its everyday urban form continues to serve as both a critique of and a contribution to the broader planning landscape in Copenhagen.

Figure 5-2: The winding, informal paths of Christiania present a stark contrast to the structured infrastructure just outside its gates, especially when compared to the busy arterial road along its northern boundary. Within Christiania, the irregular and fluid layout encourage exploration, diverging from any consistent grid. Resident expression is evident throughout the area: vividly decorated cargo bikes, graffiti, makeshift seating, planters, and other personalized interventions dot the pathways, reinforcing the neighborhood’s distinct sense of autonomy and creativity.

A key theme emerging from both interviews and site observations was the collaborative nature of spatial production of the bicycle mobility system. These findings underscore the dynamic character of Copenhagen's urban environment, shaped not only by static planning but also through ongoing redefinition by its residents. The mobility network is one element of this process; as cyclists adapt routes, contest space, and develop new ways of using the streetscape. Drawing on the interview data collected and my explorations of space, this section will examine

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how planners and users mutually shape space through both intentional and improvisational processes through a reflection of Nørrebro.

5.3.1 Situationist Experience of Nørrebro

My Situationist informed exploration of Nørrebro remained one of the most insightful. The neighborhood's vibrancy and bustle are unique in Copenhagen, as one of the highest-density and most diverse areas in Denmark. Starting from the Indre By near the Nørreport station, I began my journey north, quickly falling into the flow of the Dronning Louises Bro and Nørrebrogade. While a straightforward, efficient, and easy path through the neighborhood, Nørrebrogade offers sensory exploration, as six-story buildings line the relatively narrow street for much of its length and feature a high level of pedestrian activity, diverse storefronts, and engagement from people of all ages.

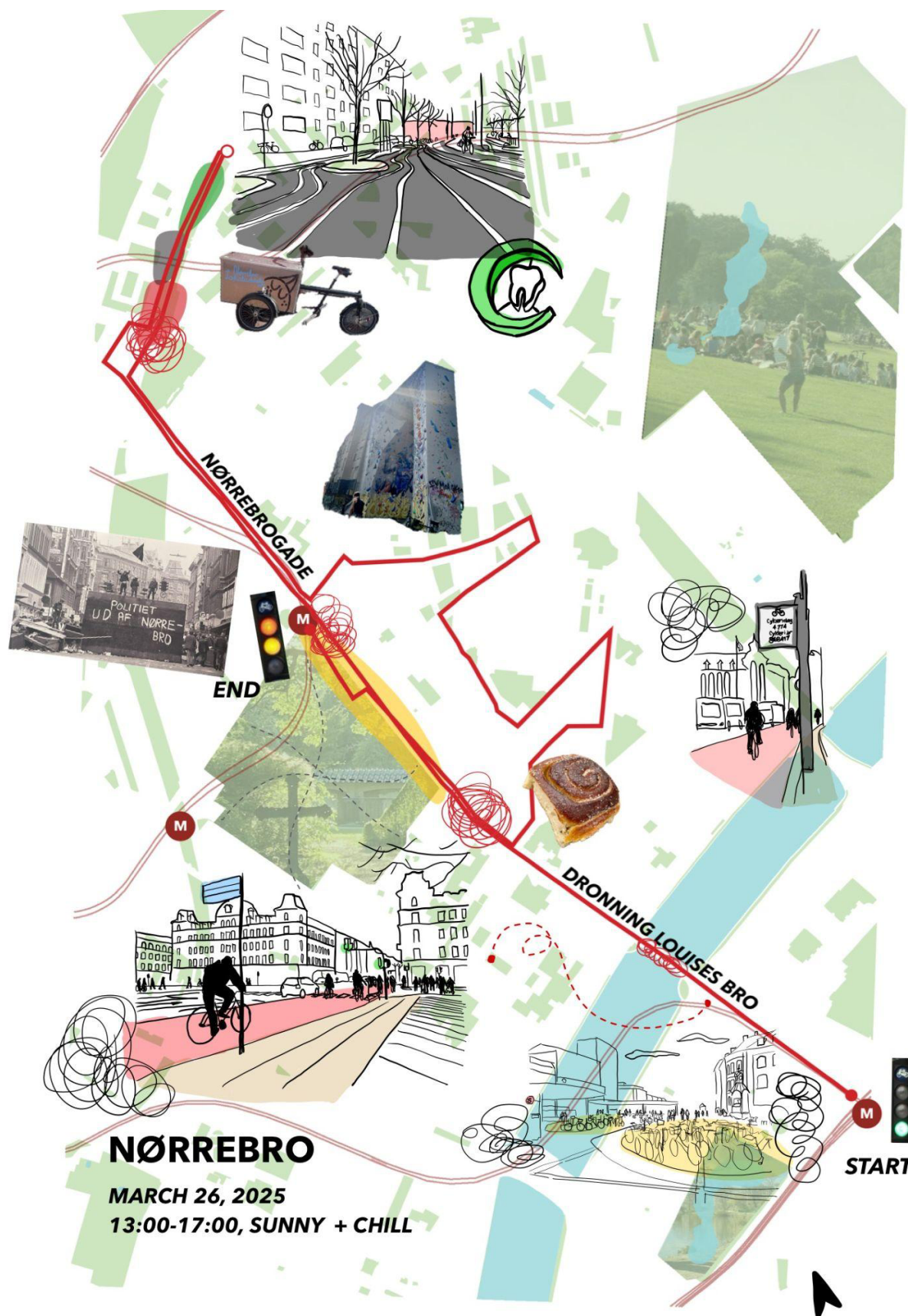
Some of the busiest points for pedestrian activity and mode intermingling along this exploration were found in the blocks adjacent to Nørreport Station and nearby Torvehallerne food market, and further north on the edges of Assistens Kirkegaard, the famed cemetery where notable Danes, including Hans Christian Andersen rest. The cemetery is surrounded by a large, yellow-painted wall that opens the feel of the street and provides a gathering space for residents, serving as a distinct community identifier. Beyond the wall and continuing north, the density and the variety of storefronts begin to shift again, with signs of more multicultural spaces and less polished buildings surrounding Nørrebrogade than further south, perhaps because of gentrification and proximity to the city center.

The last central node identified on this exploratory path along Nørrebrogade is adjacent to the entrance of the neighborhood's famed Superkilen Park. Superkilen is itself an experiment and a rejection of common conceptions of what makes a park. The area is divided into three

distinct sections, following a color coding of red, black, and green, to mimic the colors of the area's many immigrants' home country flags. Beyond its unique design, the park rethinks what a neighborhood bike connection can look like, as the primarily hardscape park also allows for efficient yet engaging bike traffic through to the eastern areas of Nørrebro and the nearby Østerbro district. The result is a simultaneously lively gathering and transitory space, with interesting nods to the diverse nature of the community, providing a museum-esque feel to the exploration. The park also incorporates subtle elements of play for cyclists seeking a different experience, featuring winding paths, a large hill to ride down if desired, and visually engaging features that blend in with the park's black-and-white striped asphalt segment.

Dérive-inspired travel off the main flow of traffic on Nørrebrogade provided a distinctly different experience, as many streets lack bike lanes and instead shared the narrower space much more fluidly. There are numerous opportunities to stop and enjoy the scenery, including the neighborhood's extensive graffiti and vibrant street art. I also encountered children learning to bike on these streets, providing relative safety while also learning to abide by traffic laws. Nørrebro, with its vibrant, busy streets and mix of formal, tested cycling solutions and informal experimentation, shows the value in diverse approaches to a collaboratively created cycling network.

Figure 5-3: The Nørrebro site exploration map highlights key locations such as Dronning Louises Bro, Nørrebrogade, Superkilen, and other community spaces. The area's ability to accommodate high bicycle traffic within its dense urban form is evident, showcasing the diverse and dynamic nature of this neighborhood.



5.3.2 *Tactical Urbanism as Community Ownership*

Cycling through Nørrebro revealed a strong sense of community-led space and informal mobility solutions, though within a more institutionalized context than Nordvest or Christiania. Stakeholder interviews emphasized a shared responsibility for cycling infrastructure and a sense of organic ownership.

Copenhagen's cycling success is often credited to its formal, well-maintained infrastructure, which can make tactical urbanism, with its improvised, temporary nature, seem out of place. Interviewee 1, a Senior Planner at Gehl, noted this cultural difference, explaining: "That's a very American thing ... it comes from the perspective of the government is small, so I need to take this into my own hands." He added, "Here, people pay 50% in taxes, and there's the expectation that the government is supposed to do those things."

In Copenhagen, tactical interventions are less about filling institutional gaps and more about creative experimentation. Stakeholder insights and site observations underscored their value not just in improving streetscapes but in fostering community identity and ownership.

The projects led by Demokrati Garage reflect principles of tactical urbanism, both as responses to resident concerns and as tools for inclusive planning. As their representative explained, the process fosters local ownership by centering voices often excluded from formal processes: "That's the beauty of it, it's truly neighborhood-owned, and no one group has a grand plan. We negotiate with everyone who has ideas."

This ethos of community empowerment extends to the organization's work on streetscape, biodiversity, and public space initiatives. A similar perspective was shared by Interviewee 4, from the Nørrebro Lokaludvalg (Neighborhood Council), who noted the district's distinct character. Nørrebro is renowned for its multiculturalism, activism, and long-standing

resistance, particularly along Nørrebrogade, a street that is central to both daily life and political expression. From squatters' riots in the 1980s to EU-related protests in the 1990s, the street has long served as a stage for public dissent. Despite its heavy traffic and complex functions, Nørrebrogade remains a site of place-based adaptation. Residents express identity and agency through small-scale interventions and creative uses of public space.

Nørrebro Lokaludvalg, one of 12 community councils in Copenhagen, serves as a semi-independent body within the municipal system. While staffed by city employees, it operates with a degree of autonomy. It acts as a bridge between grassroots concerns and city-wide planning, a governance model that blends bottom-up engagement with institutional access. The council is led by a 25-person elected committee of Nørrebro residents who serve four-year terms. The work of the commission is primarily determined by the members, who each year work to represent their respective communities.

For the past seven years, a recurring priority for the group has been an event on Nørrebrogade called Bilfri Søndag, or Car-free Sunday. Bilfri Søndag began as a one-off event suggested by the council as a festival welcoming an international chalk artist to create an installation on the street but then gained momentum in later years without the installation element, as citizens wanted to continue reimagining Nørrebrogade as a gathering space. Though it takes place only once a year, the annual Bilfri Søndag plays a significant role in shaping both the spatial dynamics and community identity of Nørrebrogade, a street long embedded with layers of function, cultural expression, and a history of protest, gathering, and resistance.

As described by the interviewee with Nørrebro Lokaludvalg, the event has now become a sense of reclaiming the space and opportunity for the community, "You see teenagers and elderly

people walking in the street together, marveling that they're able to walk in the middle of the road with no cars around. There's no alcohol, it's not a party, just a relaxed community day”.

The concept of Nørrebrogade Bilfri Søndag, although a community-led initiative by Nørrebro residents, has existed in Danish streetscapes for a long time. Initially introduced by the government in the 1970s to address the ongoing international oil crisis, residents were not allowed to drive vehicles except without special permission and associated permitting. The lasting community appreciation for car-free spaces appears to have endured, evolving from a response to necessity into an expression of collective values and shared intention.

Figure 5-4: Bilfri Søndag past and present. Photos were taken from my visit to the event in September of 2024, as well as from local press coverage by Politiken, and historic photos of the activity in Copenhagen beginning in 1973 at the advice of the Danish government as a solution to volatile oil supplies. (Author's personal photos, Albrechtsen & Kiersgaard, 2021, Nørrebro Lokaludvalg)



Residents have also introduced other initiatives related to tactical urbanism and have made ongoing mobility-related requests to the Nørrebro Lokaludvalg. “There are smaller street

parties around the district led by residents. And this year, there's going to be a new tradition: a bike race called "Kommune Sprint", afterward, the streets will be closed to the public".

In terms of street interventions for safety, efforts are less visible than the street parties and community gatherings by foot and bike that have become part of Nørrebro's identity, but still evident. One example of a tactical urbanism pilot project that gradually became more formalized is found at the intersection of Sjællandsgade and Guldbergsgade to the east of Nørrebrogade. The intersection features relatively simple paint and plantings that both enhance the streetscape and reduce confusion and conflict between vehicles and cyclists. The playful nature of the mural also contributes to the neighborhood's creative atmosphere.

Figure 5-5: The intersection of Sjællandsgade and Guldbergsgade in September 2024 (left), compared to September 2009 (right). The formalized project helps users negotiate the space more safely and efficiently, while being a subtle diversion from the typical intersection design of the area. (Author's own and Google Maps)



5.2.2 Feedback Loops Between Use and Design

On the other end of the spectrum from community-led efforts to shape space lies the role of the state in creating the built environment and influencing the everyday lives of its residents. In the realm of bicycle mobility, this typically involves the development of infrastructure designed to prioritize safety, efficiency, and ease of use. While these objectives are essential, cycling infrastructure is also shaped by temporal dynamics, rush hours, school drop-off times, and seasonal weather, all of which structure movement patterns and influence how the infrastructure is experienced and interpreted. The network, therefore, cannot be viewed as static or isolated from the diverse and evolving needs of its users. This sub-theme draws from both interviews and site observations to explore how design responds to, and is shaped by, the interplay between user behavior and planning processes, whether top-down or bottom-up.

A key factor in Copenhagen's success as a cycling city is the broad-based support it receives from a diverse and representative group of cyclists. Cycling is a normalized mode of transport across demographics, which demands a pragmatic and inclusive approach to design. As Interviewee 1, a senior planner at Gehl, explained, the city's approach treats cycling as a serious mode of transportation. "It's planned for, accommodated, and integrated just like any other mode, like buses, cars, or trains are in other contexts."

This pragmatism is evident across the city's cycling infrastructure: cycle tracks follow consistent design principles, signage is intuitive, and the system is structured to reduce friction points. In many cases, cycling is faster and more convenient than driving or public transit. While experimentation and pilot projects continue, there is a shared understanding of what constitutes best practice, reducing the need for constant reinvention.

Yet, this clarity is the result of decades of iterative development, experimentation, and a consistent commitment to designing around observed user behavior. Interviewee 2, a long-time professor and expert in public life studies who collaborated closely with Jan Gehl, offered insight into how cycling has evolved alongside the city itself. “The key to making all these places work together is the bicycle infrastructure. It’s like glue, it connects all the parts of the city and lets kids move around independently. That’s invaluable for families.” His reflection highlights that treating cycling as a mode of transportation is necessary, but not sufficient: understanding how mobility shapes urban culture and everyday life is equally important.

Designing for users, then, does not end with the installation of a bike lane or other major infrastructure. It requires attention to the subtleties of how people interact with the system, both intentionally and informally. As Interviewee 2 further noted, “It’s not just the big elements, like the bike lanes. It’s the little things, too, traffic signals timed for bikes, or letting cyclists turn left where cars can’t. There are examples of some of these things starting informally in Copenhagen, with people engaging in them before they were made legal. Eventually, the city made them official.” This feedback loop, where observed behavior leads to formalized design, illustrates Copenhagen’s adaptive approach. By remaining responsive to lived experiences and evolving user needs, the city continually refines a system that is not just efficient but deeply embedded in the rhythms of urban life.

While long-range planning, coordinated reviews, and goal tracking remain essential, allowing room for spontaneity and experimentation fosters creativity and more responsive design. Such user-driven adaptation shows how urban space can evolve through dialogue between people and planners.

5.2.3 Case Study in Collaborative Shaping of Space

Dronning Louises Bro emerged organically as a focal point across interviews, mentioned by four out of seven participants without prompting. Spanning the inner lakes and linking the Indre By to Nørrebro, the bridge exemplifies how design, user behavior, and experimentation interact to shape public space. Often cited as the busiest cycle bridge in the world, it plays a vital role in Copenhagen's daily commute while also serving as a vibrant social hub.

Interviewee 6 from Cyklistforbundet traced its evolution from early 20th-century conflicts between emerging car traffic and under-supported cyclists. Originally narrow and car-dominated, the cycle tracks were gradually widened, especially following the 1970s oil crisis, and further redesigned in the early 2000s. "The whole bridge's infrastructure was rethought," he explained. "They broadened both the bicycle lanes and the pedestrian areas. Now, people socialize there in the evenings, sometimes playing music."

This transformation reflects a broader cultural shift: mobility infrastructure is no longer just about movement but about shaping public life. As Interviewee 2 observed, "Cycling is part of public life. It happens at a moderate speed... Cyclists can stop, say hello, and have a coffee. It's social." This perspective is embedded in the bridge's success, it functions not only as a transportation corridor but also as a space of joy, connection, and shared urban experience.

Figure 5-6: Dronning Louises Bro through the years. The gradual experimentation increasing pedestrian and cyclist space as a result of observed behavior has created an unexpected popular gathering space in an otherwise transitory space in the city. (Author's own images, Flickr (Berger, 2014 & Burke, 2011), and Wikimedia Commons).



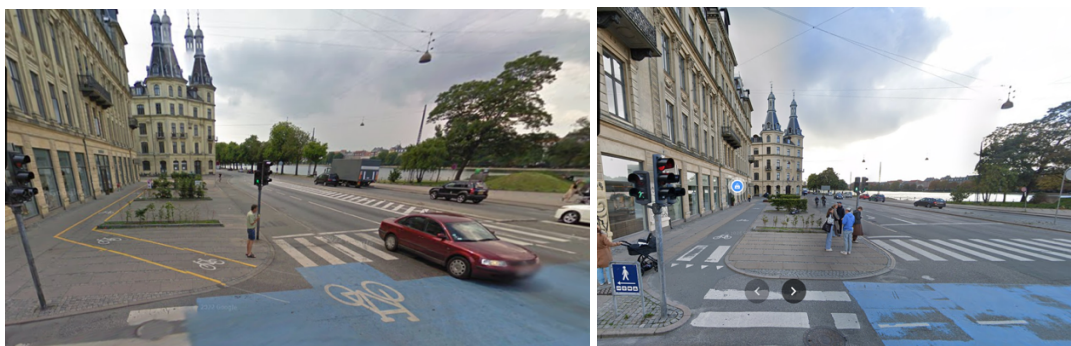
To understand how Copenhagen balances top-down planning with responsiveness to cyclist behavior, I spoke with Interviewee 7, a project worker in the city's Technical and Environmental Administration. Her work spans both local and international initiatives, including a collaborative project with Bogotá focused on cycling and pedestrian infrastructure. "We're working on mobility," she explained, "particularly with cycling infrastructure... and we exchange lessons between cities."

As a lifelong Copenhagener, Interviewee 7 reflected on how Dronning Louises Bro exemplifies a more human-centered evolution of space. "It wasn't just about saying, 'We need a

3-meter-wide bike lane.’ It was more like: ‘We want people to cycle side by side, maybe holding hands.’” This shift illustrates how design can foster both mobility and social interaction.

However, not all improvements originate within City Hall. At the southern end of the bridge, near Søtorvet and Frederiksborggade, one of the city’s busiest cycling intersections, grassroots behavior prompted change. Cyclists began informally turning right through a paved sidewalk area to avoid a congested intersection. As Interviewee 6 from Cyklistforbundet noted, this behavior eventually led to an official redesign: a dedicated cycling cut-through was added, physically separating bike and pedestrian flows. This adaptation highlights Copenhagen’s iterative, behavior-responsive approach to mobility design.

Figure 5-7: The intersection of Søtorvet and Frederiksborggade as Dronning Louises Bro connects to the nearby Indre By. An image from 2009 (Left) shows the initial pilot after being introduced by Cyklistforbundet, and then the current state of the project in 2024 after it was formalized by the city (Right). (Google Maps)



This intersection, although an uncommon typology for the city, highlights the collaborative process of shaping space that occurs within Copenhagen and the importance of adapting to user behavior, even when it extends beyond the perceived scope of a project. In the case of this specific pressure point, formality was necessary to accommodate user needs fully. Still, it isn’t always the case in Copenhagen, and the presence of informality can also bring about a more nuanced and interesting experiential understanding of the city.

5.4 Formality for Ease and Informality as a Nexus for Exploration

It cannot be overlooked that Copenhagen's formality, of clearly demarcated lanes, well thought out details and logical approach in designing its bike network contributes to much of its success and ease as a user. This formal structure allows for extensive efficiency and coverage of the entire city, and even surrounding areas, in a way that makes other modes of transportation inferior in many cases. Yet, elements of informality and flexibility provide a humanizing and diversified feel to cyclists when intertwined effectively. This section will cover the duality and application of both approaches in Copenhagen's cycling landscape, and the role of both formal planning mechanisms and grassroots effort in driving this.

5.4.1 All Over: Journeys through Commercial, Residential, and Mixed-Use Neighborhoods

Reflecting on formality in the cycling experience of Copenhagen yields a variety of sensory takeaways through the *dérive* and *détournement* methodology. To support this thematic observation, I evaluated a day of unstructured exploration through the city, through areas such as Christianshavn, the Indre By, Vesterbro, Østerbro, and Nordhavn. These areas span use types. This effort was also the longest of all site visits by distance and area traveled.

The longer distance traveled was indicative of the ease of navigating the city and the lack of friction in the network, with many connections made on streets using separated cycle tracks and logical, efficient grid connections. While efficiency and effectiveness were top-of-mind as design priorities, small details also made the experience more comfortable, with quick traffic signals, frequent curbside footrests, and accessible bicycle parking facilities. This emphasis made it seem that network efficacy was an equal priority to ensuring a comfortable user experience throughout the journey. This strategy is something Copenhagen excels at and rarely was there an

intersection or street that felt difficult or confusing to navigate due to the repetitive and predictable nature of the network.

This approach was also emphasized in several of the interviews conducted. As explained by Interviewee 1 at Gehl, “In Copenhagen, we collect up-to-date data, like the number of bicycle trips and traffic on different corridors. There are also clear design typologies for bike infrastructure, so planners aren’t reinventing the wheel on every street”. This consistency and predictability foster Copenhagen’s bicycle culture, specifically the ease with which a diverse range of users can access nearly any area of the city with relative safety and comfort.

As shared by Interviewee 2, this priority has shifted over time, as cycling has been treated as an equal mode of transportation alongside other motorized modes and as a representation of the human experience of the city. He stated, “So yes, engineering plays a role, but the good kind, where it’s about solving real problems. We’ve tried to time traffic lights so that cyclists and pedestrians don’t have to wait forever... And sometimes, the system adapts to behavior... real-life examples show us that the shortest and most direct routes matter, especially for vulnerable users”. In combination with this practical sensibility and emphasis on planning for the human experience, my travel path incorporated visual interest and novelty, whether through playful crossings of bridges, street art, or the occasional winding path, helping to make the journey not just efficient and comfortable, but also engaging.

5.4.2 Formal Infrastructure and Efficient Mobility

At the core of much of Copenhagen’s bicycle ethos is ensuring efficiency and ease and utilizing tested solutions so that cycling is not something residents need to think about much in their daily lives. This results in a broader network that pays attention to both big-picture mobility needs and small details, from the timing of bicycle traffic signals on streets, to providing

adequate bike parking options. This strategy isn't to say that Copenhagen does all these things perfectly but rather that the prioritization of a streamlined network results in a sense of formality and regularity within the city's streetscapes.

This approach also extends to the planning processes that guide much of Copenhagen's cycling infrastructure, from the municipality's technically rigorous methods to public engagement embedded in project development. As Interviewee 7 explained, "During the last budget process, we reached out to all of the neighborhood councils to ask: 'In your area, which infrastructure interventions would you prioritize or like to see?'" This style of engagement not only informs the office's project prioritization but also leverages community input to reinforce tried-and-tested solutions that enhance continuity across the cycling network.

5.4.3 Points of Friction in the Formal Network

This success should not be generalized across all areas or projects in Copenhagen, as balancing efficiency and user experience perfectly is not always achievable. While my site-observation-based understanding is subjective, several friction points emerged during my exploration. One notable issue was the Indershavn Bridge; completed in 2016, this visually striking pedestrian and cycling bridge was a major investment in the city's cycling infrastructure. It connects Nyhavn and Christianshavn, offering an easy route for tourists visiting these popular neighborhoods, as well as serving a significant number of commuters from Amager.

Despite its daily success in terms of user numbers, the practical experience on the bridge can be uncomfortable for both cyclists and pedestrians. The bridge's nickname, "Kissing Bridge," comes from the sharp turn cyclists must navigate at the middle junction, where the two bridge ends meet. With colorful partition glass on either side, this tight corner becomes a bottleneck, especially during peak morning and afternoon traffic, sometimes creating discomfort

for both cyclists and pedestrians. This friction was further exacerbated during my visit due to ongoing construction, which reduced the available space even more, leading to conflicts as pedestrians and cyclists shared a narrower path. The bridge even seems to have permanent warning tape on the colored plexiglass along each sharp turn, suggesting that cyclists are struggling with visibility and the narrowness of the turn.

Figure 5-8: The turns required of the bidirectional cycle lane of Inderhavnsbroen. The turn is uncomfortable and is constrained due to oncoming traffic sharing the same space. The plexiglass adjacent to each end of the bridge also permanently displays a warning tape that has been added to inform riders in advance, albeit detracting from the bridge's design. (Google Maps)



Additionally, the bridge features a slight incline up to its midpoint, followed by a descent towards the busy Nyhavn when heading north. While this slight grade may provide a welcome challenge for some in an otherwise flat city, it overlooks the diversity of users, particularly those with cargo bikes or children, common in Copenhagen.

The descent into Nyhavn itself becomes a point of conflict, especially given that Nyhavn is the most visited tourist attraction in Denmark. The incline allows cyclists to pick up speed before entering narrow blocks teeming with pedestrians, many of whom may not be accustomed

to cycling-friendly environments. This can create tension, particularly as tourists often aren't as aware of cyclists' movements. While the bridge has been a massive success in terms of daily users, it overlooks some practicalities that contribute to a positive sensory experience. As a result, it stands out as one of the few areas of negative experience during my site visits.

Another friction point was the southern terminus of Lille Langebro. While the bridge itself is used less frequently compared to other major cycling bridges, its southern end in Christianshavn presented difficulties due to the high volume of pedestrians on the sidewalk. The bridge terminates at a shared bike and pedestrian street, where merging with pedestrian traffic creates congestion, particularly during peak times.

Figure 5-9: Mapping of the unstructured exploration day highlighted that formal infrastructure and planning mechanisms perform a necessary role. As a cyclist I was able to travel smoothly through neighborhoods, navigate intersections confidently, and access diverse destinations without interruption or difficulty, all within a well-organized space.

5.4.4 Refshaleøen: A Reflection of Informality as a Means of Exploration

The neighborhoods of Holmen, Refshaleøen and the city's former medieval ramparts include some of the most underdeveloped parts of the city. There is a standard divergence from much of the city's famed separated bike lanes, architectural cycling bridges, and careful attention to detail. This informality can create a sense of novelty and break into the carefully defined paths of much of the rest of the city when done in safe and contextually appropriate settings.

The presence of separated bike lanes is limited, and space is often shared with cars or occasionally in areas shared with pedestrians. This simplicity and lack of separation are surprising to see, but they contextually align with both the lower levels of vehicle traffic and the available road space. Users can see signs warning of shared traffic with horses, the occasional nature-related informational signpost, and a surplus of wandering paths and somewhat undefined trails with views of the marshy ramparts and nearby Copenhill trash incineration facility.

This typology also extends to areas of Refshaleøen, the former shipyard transformed into a multi-use, experimental space in the city. Refshaleøen feels like an island, separated from much of the rest of Copenhagen, both spatially and developmentally, marked by its former industrial buildings, the lack of housing in an otherwise densely populated city, and its artistic and creative scene. However, the location has limited bus service, no metro service, and relatively informal bike paths compared to much of the rest of the city. This informality contextually fits in with the former industrial space, and lower traffic, as the area does not provide any housing or other essential amenities.

This novelty is reiterated with the actual establishments and attractions on-site, taking advantage of the ample space and industrial feel, including the Copenhagen Contemporary Art Center, craft beer halls, sports facilities, and one of Europe's largest food markets, Reffen, which

opened in the 2010s. Refshaleøen's popularity seems to be a testament to the creativity and desires that can arise on a mostly blank canvas for development and perhaps a desire for some experimental expression.

Much of the area remains entirely undeveloped, as my journey took me across large regions of unbuilt, paved surface. It was less clear what sort of engagement residents had with such typologies, aside from the addition of some signage and minor adjustments to the space. Still, both the formal and informal approaches to infrastructure contributed to the cycling experience in Copenhagen, creating a hybrid cyclescape that balances structure and spontaneity.

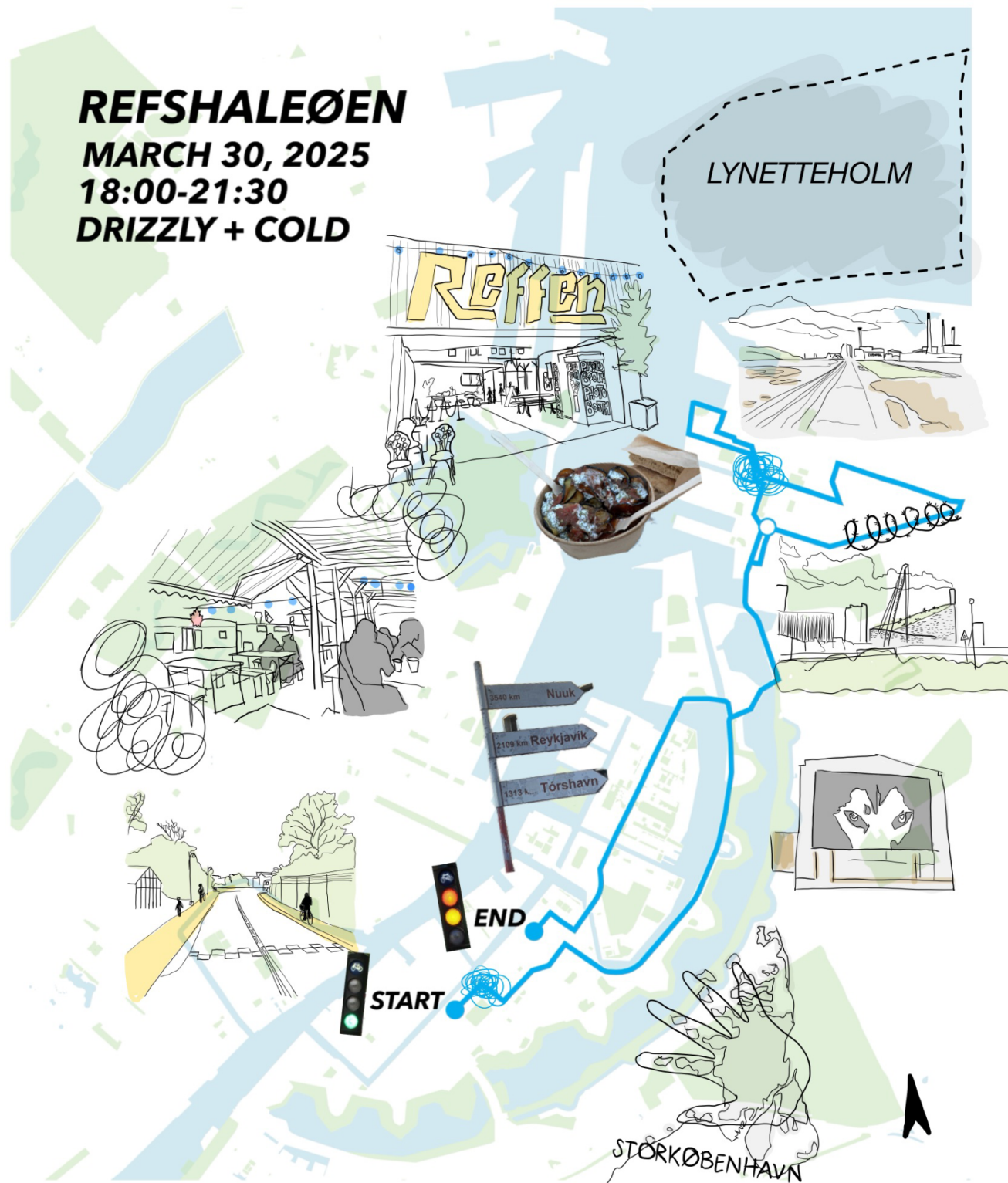
Figure 5-10: Exploration of the Refshaleøen area highlighted a slower, and more fluid experience as a cyclist. Shared space among modes, lack of formal separation, and limited direction served as a contrast to many of the other site visits. Development of the area and the surrounding artificial island of Lynetteholm will likely greatly shift the user experience in the coming years.

REFSHALEØEN

MARCH 30, 2025

18:00-21:30

DRIZZLY + COLD



Chapter 6: Discussion

6.1 Making Sense of Copenhagen's Cycling

In a landscape like Copenhagen, where separated formal bike lanes, well-thought-out networks, and extensive physical approaches to bicycle infrastructure are widespread, the planning mechanisms behind the process, and especially the role of community-led planning, can be overshadowed. Understanding how Copenhagen both supports and sustains its cycling culture requires moving beyond a view that is focused on infrastructure and examining the social and participatory dimensions that enable its success and community buy-in.

The goal of this thesis was to explore the role of grassroots initiatives and informal civic action in shaping Copenhagen's cycling landscape and associated public life. The combination of stakeholder interviews and experiential methods in this study provides a multidimensional perspective on Copenhagen's cycling network, enabling an exploration of Copenhagen's infrastructure, as well as the perspectives of the people who shape and use it.

Through interviews with diverse participants and independent site exploration informed by Situationist International psychogeographic techniques, this study provides a new understanding of both the role of bottom-up and top-down mobility planning mechanisms, as well as the user's experience of exploring the system organically and spontaneously. Several themes emerged that reflect the balance Copenhagen reaches between implementing pragmatic, effective planning and retaining innovation. Users advocate for their needs, and the municipality supports experimentation while ensuring that solutions remain practical and responsive.

These patterns provide clarity into the phenomenon of Copenhagen's cycling success and how this is not solely the product of top-down formal planning efforts or grassroots efforts but rather a constant adaptive interplay of the two. This chapter defines this dynamic in four core

conclusions, each capturing a different aspect of how infrastructure, users' behavior, and shared values shape the city's cycling landscape. Together, these insights offer an understanding of how cycling and community participation intersect in Copenhagen and what this could imply for mobility planning more broadly.

6.2 Interweaving of the Formal and Informal

Copenhagen's cycling system relies on a well-developed, intuitive approach to design that balances formal infrastructure with community-driven, informal adaptations. The formal elements, from dedicated cycle tracks, protected intersections, and carefully planned traffic signal timings, facilitate smooth movement across the network, ensuring comfort for thousands of riders each day. This results in a predictable, easy-to-navigate system that adapts to the city's ongoing growth. As Interviewee 1, a Senior Planner at Gehl, pointed out, "The simplest and most effective way to support that kind of cycling culture is to create safe spaces to ride."

The city's focus on efficiency is also reflected in the site observations and coordinating mapping exercise, especially during *dérive*-influenced explorations. These explorations highlighted how effortlessly riders can travel from peripheral areas to the Indre By and surrounding neighborhoods. The fluid experience is enhanced by investments in user experience, such as footrests at stop signs, well-planned intersections, and clear wayfinding. This combination of technical precision and user experience creates a cycling environment that is both functionally supportive of high volumes and integrated into daily life. It reinforces cycling not only as a practical mode of transportation but as a socially responsible part of the city's rhythm.

However, this planned efficiency doesn't tell the full story of Copenhagen's cycling culture. Alongside formal, tested solutions is an undercurrent of informality, community-driven adaptations and a culture of experimentation. These adaptations include desire lines, tactical

urbanism, street reclamation, and community shaping of spaces, all of which reveal the lived experience of the cycling network in ways that infrastructure alone can't capture.

This dynamic is most apparent in neighborhoods like Nordvest, Christiania, and Nørrebro, where collective action and improvisation shape the built environment. Interviewees spoke about how community agency and ownership come into play, with creative solutions that reflect local needs and values.

These informal efforts don't hinder the broader network but instead enrich it. The winding paths through Christiania, the community gatherings along Nørrebrogade, and the reclaiming of vehicle space in Nordvest add layers of novelty and emotional connection to the network. The relationship between formal and informal elements is not conflicting but complementary. Formal design creates clarity and ease, while informal interventions bring a sense of collective ownership and turn streets into shared, democratic spaces. Together, they produce a cycling environment that's both efficient and expressive of its users.

6.3 Everyday Engagement with Space

Copenhagen's cycling landscape represents a continuous negotiation of space, shaped by both top-down and bottom-up planning mechanisms. Even top-down approaches, however, rely heavily on grassroots urbanism and a close alignment with users' actual behavior. Whether it's adapting intersections to reflect cyclist behavior, adjusting cycle track widths for more conversational riding, or providing tangible financial support for community-identified needs, it's clear that the everyday behavior of cyclists is both the driving force behind system changes and the central metric for the success of planning efforts.

The process of gathering behavioral insights takes a nuanced approach that preserves governmental autonomy when most effective, while also elevating community voices and agency

when possible. Although defining community engagement strategies proved challenging based on available public documents, mobility plans, and interviews with stakeholders, many interviewees still acknowledged the efficacy of the city's efforts to engage residents.

Municipality-funded but relatively independent neighborhood councils offer a unique balance: they provide community agency while coordinating resources and aligning with government priorities. This process, combined with community-driven project prioritization, underlines the collaborative nature of Copenhagen's top-down planning. It allows space for community-driven experimentation, creating a system that is both practical and responsive. This iterative approach is rooted in a culture of responsive governance, where informal, individual-use, and community-driven efforts provide valuable data for future redesigns. The model reflects a commitment to adaptability, viewing the cycling network and its stakeholders not as static, but as evolving in response to user needs and desires.

This spirit of experimentation is most visible in Christiania, Copenhagen's self-described autonomous eco-village. Christiania is a place where deviation from traditional planning norms is celebrated, particularly in the physical design and governance system, where citizens play a central role in shaping and reimagining urban space. Cycling is deeply embedded in Christiania's community fabric, from the creation of the Christiania cargo bike to upholding the eco-village's ethos of sustainability and responsible decision-making. Though less formally structured than the broader city network, Christiania's cycling infrastructure reflects a strategy rooted in communal values, ecological consciousness, and creative expression.

Psychogeographically informed spontaneous explorations highlight interventions like unmarked, winding shared pathways and informal negotiations between cyclists and pedestrians. These deviations from the predominant physical infrastructure aren't in conflict with the city's

cycling system but represent an experimental approach to mobility and autonomy. While Christiania's model and its long history of community-informed development can't be fully replicated in other contexts, they offer valuable insights into the role experimentation can play in shaping the broader cycling network and enhancing the user experience.

6.4 Translating Insights: Lessons, Tensions, and Limits

6.4.1 Designing for Both Structure and Flexibility

The thematic analysis, drawing from both stakeholder interviews and experiential fieldwork, reveals that Copenhagen effectively balances the retention of formal infrastructure with flexibility and user-driven direction. This creates a network that is both easy to navigate and adaptable enough to accommodate changes. This adaptability is mirrored in the planning approach, which blends municipal direction with community input. As Interviewee 1, a planner at Gehl, described, “[Copenhagen has] this exciting blend: solid, intentional design paired with flexibility and responsiveness... They will test something, collect data before, during, and after implementation, and use that to decide whether it is worth making permanent. That culture of experimentation, backed by data, is a big part of why the system keeps improving.”

Community-driven processes, such as the use of community councils and advocacy groups, further enhance this dynamic. The community councils offer a unique structure that fosters collaboration between local communities and the municipality with relatively minimal oversight, all while utilizing publicly sourced funds. This interplay between municipal planning and community-led efforts provides valuable insights for cities aiming to improve their cycling networks. As demonstrated in this research, Copenhagen's success shows that formal planning and grassroots creativity don't have to be mutually exclusive but can instead complement and reinforce one another when managed effectively.

While specific strategies must be adapted to local contexts, some transferable approaches include the increased use of low-cost, informal pilot projects or temporary installations in tandem with community-informed planning. Encouraging community-led charrettes, neighborhood work/build parties, or other hands-on activities can empower residents to re-envision their infrastructure while taking ownership of the transformation process.

However, as emphasized by the interviewees, pilot projects must be tested and formalized to ensure their long-term viability within a broader transportation system. As Interviewee 1 noted, “Pilot projects must have an exit plan and a clear follow-up strategy. You need to know what happens next, whether that is removing it, adapting it, or making it permanent.” While community input can heavily inform the creation of these projects, successful implementation still requires coordination with planning agencies to ensure sustainable outcomes.

6.4.2 Valuing Informal Use as Data

The findings of this work also highlight the importance of viewing informal or unplanned use not just as a diversion from design or as failures but as valuable sources of insight into users’ actual everyday needs. Recognition of such diversions, whether that be the occurrence of desire paths, the accumulation of unexpected areas as bike parking, or diversion from bicycle paths, provides insights into user-informed solutions to discomforts or inefficiencies in the network. This theme was apparent through both stakeholder interviews and personal biking explorations.

Stakeholders emphasized the concept of data-informed cycling decision-making as a crucial tool for ensuring effective infrastructure investments. Alongside this, the value of adapting to user experience was reiterated. The incorporation of user insights may take various forms, depending on contextual needs. For cities seeking to learn from Copenhagen, user insights

could include observational or participatory mapping, citizen reporting applications, or pilot projects for increased behavior tracking in coordination with planning agencies.

6.4.3 Tensions and Limitations

While these themes provide valuable takeaways, Copenhagen's cycling model and methods of participation and governance still have areas for growth. In interviews with stakeholders, tensions between state-led plans and community interests and goals emerge. Sometimes, these tensions are small-scale or site-specific, such as residents' cited dissatisfaction with cycling infrastructure on Rentemestervej in Nordvest, or larger conflicts, such as tensions over proposed cycling connections through Christiania, which resulted in controversy, delays, and protests. Such points of friction generally seemed uncommon, or when they arose, they appeared to be negotiable with the municipality after piloting, such as formalizing the intersection to allow for protected right turns off Dronning Louises Bro.

Though these examples serve as evidence of friction between community-led mobility planning efforts and top-down approaches, they also raise a more fundamental question regarding the determination of decision-making and power when it comes to adapting space.

The topic of equity and representation arose in multiple interviews, although it was less explicitly referenced in the identified plans and documents reviewed as part of Chapter 3's contextual exploration. For example, in discussing with Interviewee 4, of Nørrebro Lokaludvalg, she stated, "Representation is still an issue. I have worked here for 12 years and witnessed three different councils. We have a non-binary person on the council and a fairly equal gender balance, with members predominantly in their 30s and 40s, one person in their 20s, and a few retirees. It is not dominated by retirees, which is more common in other areas".

Demokrati Garage in Nordvest, another diverse neighborhood, shared a similar emphasis in their work, stating that “It has been an attempt to centralize the voices of those who are not always able to influence what is happening...and the beauty of these workdays has been that we have had people across different groups”. While grassroots organizing and access to involvement provided by these organizations are central to uplifting marginalized voices, they are not a guarantee that the opinions of all are being represented in the planning process, especially on representative groups like the community councils.

In addition to these limitations, interviewees and site observations reiterated some examples of the municipality’s difficulty in balancing stakeholder tensions and needs. Multiple interviewees touched on issues in which the municipality and local politicians would aim to appease a variety of different transportation stakeholders, balancing a desire for increased bicycle infrastructure with other needs, particularly personal vehicle parking. As Interviewee 1 stated, “Copenhageners are becoming wealthier. Wealthier people often want to go to the countryside on weekends, so they buy a car for that purpose...they park it Monday through Thursday on the street, do not use it much during the week, and then drive out of the city for the weekend. That dynamic creates significant political pressure regarding parking”. So, even when Copenhagen achieves an infrastructure network in which few residents *need* cars for essential travel, there remains pressure to accommodate vehicles, and thus also limit the reallocation of space for other uses, such as expanded cycling infrastructure.

The same general issue was alluded to by the Interviewee from Demokrati Garage, as the neighborhood balances issues with gentrification and changing land uses. She stated, “There have been recordings on Rentemestervej to check out how many parking spaces are actually in the street and how many people park. Moreover, I think something like 120% of cars are parked

there compared to how many spaces there are...despite the city having this reputation for being cycle friendly, it is a constant struggle over conservative forces pushing for more parking”.

Another tension mentioned by some interviewees were difficulties in approaches to regional and municipal planning. As shared by Interviewee 1, regional transportation planning is far less collaborative than in many North American cities. He stated, “There is a regional authority, but it does not have much power... Instead, Copenhagen looks within its borders and says, “We want more people, more tax revenue. Why should we look outside when we have this piece of water right here?” So, they propose something like Lynetteholm: a brand-new neighborhood on reclaimed land, filled with high-income earners who can pay higher taxes.”

Developments like Lynetteholm, are controversial and, while not directly focused on transportation or cycling, have been significant sources of tension in mobility planning efforts. However, the city’s ability to expand within its city limits, a rarity for many other cities across the globe, also poses potential benefits for cycling mobility planning as a fresh canvas for development. As stated by Interviewee 6, a longtime employee of Cyklistforbundet and resident of Copenhagen, “[in] new developments, like Nordhavn, for instance... We are starting from scratch. That gives us a rare opportunity to design excellent infrastructure from the beginning”. This insight suggests a delicate balance between utilizing new development as an opportunity to design better mobility systems and managing other impacts on the urban fabric, as well as potential adverse network effects resulting from construction.

6.4.4 Scalability and Contextual Transferability

While this paper has aimed to counter the “we can’t be like Copenhagen” narrative often encountered by cities striving to transform their bicycle networks, it’s important to acknowledge the real differences in political, spatial, and economic conditions that may shape these efforts. As

highlighted in an interview with Interviewee 1, a planner at Gehl, he pointed out the challenges posed by different approval processes for bicycle projects, saying, “In some U.S. cities, if they want to build a new intersection or bicycle facility, they need federal funding. So, if they propose something that makes it safer for pedestrians or cyclists but reduces car throughput, they might not qualify for funding. That creates a real barrier”.

While these barriers are significant and must be acknowledged in the push for progress, they should not be seen as insurmountable obstacles for cities and individuals eager to advance their cycling networks. Though Copenhagen’s political and spatial conditions are unique, its approach to mobility planning, one that prioritizes lived experience, iterative design, and community participation, offers lessons that can be adapted to various contexts. The goal is not to replicate Copenhagen exactly but to embrace its spirit and tailor it to local realities.

6.5 Methodological Reflection

This research has demonstrated that understanding Copenhagen’s multifaceted approach to shaping its cycling network and broader urban fabric necessitates equally complex methods. By pairing thematic interviews with on-the-ground site observations inspired by Situationist International methods, this study aimed to capture not only what stakeholders experience in shaping Copenhagen as the cycling leader it is but also how people feel and move through the city by bike every day. This work’s approach sought to explore not only the technical elements of cycling in Copenhagen but also the experience of biking the city, recognizing both the network’s intentions and the improvisations that occurred.

While this approach did lend to unique implications and insights into the complex, multilayered approach to cycling planning in Copenhagen, there remain important limitations.

6.5.1 Subjectivity and Bias

While efforts have been made to limit the impact of subjectivity and researcher bias, particularly regarding the sensory mapping exploration, the experiential, fluid methodology used and the emphasis on emotional reaction and intrigue relied heavily on my interests and perceptions of the city. This is further impacted by my own experiences in the environment, having visited multiple times before, which provided a sense of familiarity that likely influenced my explorations, even if unintentional. This requires an understanding of my position as a researcher, a foreign visitor, and a relatively comfortable cyclist.

6.5.2 Temporal Considerations

Relatedly, this work was also conducted over a 6-month period, limiting the impacts of seasonality, time, or other external factors. Site observations were conducted on an even more condensed timeline of approximately two weeks from mid-March until early-April of 2025. This may limit how space is utilized, the adaptive behaviors exhibited, or the city's continued evolution. As such, this work can be considered a snapshot of the negotiation and shaping of space that occurs within Copenhagen's cycling mobility landscape.

6.5.3 Standardization and Impact of Findings

Another limitation of this work is the standardization of the findings, particularly in site observation techniques, as they rely on individual insights from me as the researcher. These insights, paired with the unstructured approach emphasized by Situationist International psychogeography concepts like *dérive* and *détournement*, use an unstructured approach, further limiting exact standardization of the takeaways. This method, instead, can be understood as having value for its insights into experiential exploration and complements existing knowledge on the technical specifications of Copenhagen's cycling system.

While the methodology itself is replicable, the findings are attuned to each individual participating in psychogeographic mapping, and extended participation in this process would provide a more nuanced view.

6.5.4 Interview Representation and Interpretation

Though an effort was made to select a diverse range of interviewees across various roles and stakeholder groups in Copenhagen's cycling landscape, the interviewees are not representative of all groups and their understandings of mobility planning in Copenhagen. Interviews were conducted only with those solicited and who agreed to participate, which may skew the narratives provided. Future research could incorporate additional top-down affiliated interviewees, or additional community councils for a more comprehensive understanding.

6.6 Final Conclusions and Reflections

This thesis set out to explore how Copenhagen's cycling infrastructure and planning mechanisms, both top-down and bottom-up, function as a system of planning and a space of lived experience. By combining stakeholder interviews with experiential site observations, I aimed to understand the interplay between formal and grassroots planning efforts and how this collaboration manifests in the city's bicycle user experience and network.

A recurring dynamic emerged between structure and spontaneity, regulation and adaptation, top-down strategy, and grassroots creativity in cycling and mobility planning. These findings suggest that Copenhagen's cycling success cannot be reduced to an infrastructure-focused approach. It can be understood as a deeper, shared negotiation and shaping of space, underscored by a culture of experimentation. Copenhagen's planning institutions have cultivated a mobility model that encourages evolution and experimentation, in which everyday users contribute to shaping public space and the bicycle network, whether through advocacy, behavior,

or informal adaptations. This is evident not only in the functionality of Copenhagen's meticulous network, but also in how people reclaim the street for social and sensory experiences, as demonstrated in neighborhoods like Nordvest and Nørrebro.

Christiania serves as one of the most experimental examples of bottom-up urbanism, where planning is woven into the daily lives of its residents. The ethos of Christiania, emphasizing creativity, trial, and the continual shaping of its car-free space, can also be seen reflected throughout Copenhagen's broader cycling network. While these insights may be less overtly visible, both stakeholder interviews and mapping exercises revealed numerous community-led improvisations, acts of care, and advocacy that humanize Copenhagen's infrastructure and contribute to its cycling culture.

This research also demonstrates the vital role of community-led action in planning. The government's openness to experimentation and its responsiveness to user needs provide valuable insights for other cities seeking to improve their cycling networks, even under different conditions. This work underscores the importance of approaching cycling mobility from both functional and emotional perspectives. A truly great cycling city is not just defined by efficient travel and high mode shares, but also by its rhythm, expression, and adaptability.

Ultimately, this study offers a model for mobility planning that integrates both formal, effective cycling infrastructure and the informal expressions of urban life. Copenhagen's approach to cycling reflects the creativity of its users, supports adaptation, and acknowledges emotion as a valid dimension of mobility design. For cities aiming to emulate Copenhagen, the key lesson is not just in building better bike lanes, but in creating space, both physically and politically, for people to shape their environment in responsive and meaningful ways.

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Appendix

Codebook for Interview Analysis

This codebook provides an in-depth reference for the thematic analysis conducted during the interview phase. The codes were derived from interviews with key stakeholders involved in cycling infrastructure planning in Copenhagen. The following sections outline each theme, subtheme, and the definitions used to guide the analysis.

5.2.1 Institutional Constraints on Grassroots Action

- **Bureaucracy:** Descriptions of challenges related to complex municipal planning systems and the influence of diverse political agendas on grassroots efforts.
 - Example quote: *“Is it really your policy to say no when citizens raise money themselves for this? So, we try to support initiatives politically when necessary.”*
(Interviewee 4)
- **Coordination and Involvement:** Reflections on the challenges of organizing community groups and maintaining engagement, particularly with underrepresented groups.
 - Example quote: *“We could potentially have a lot more insight and influence if we had the resources, if we had more people, more time to be engaged in every single project the municipality works on. But unfortunately, we don’t. So, we have to use the time and resources we have as strategically as possible, focusing on where we think we can make the most impact.”* (Interviewee 6)
- **Resource Limitations:** Challenges related to securing financial and institutional support for grassroots projects.

- Example quote: *“If you show enough support in your neighborhood, then the municipality, if chosen, will support you in doing some of the bigger kind of infrastructure work needed. That’s difficult for grassroots projects like ours.”*
(Interviewee 3)
- **Goal Setting and Project Prioritization:** Tensions in reaching consensus on shared goals and prioritizing projects, especially when resources were limited.
 - Example quote: *“In central Copenhagen, we have limited space, and we need to figure out how to use that space wisely and fairly so that everyone can continue living well in the city.”* (Interviewee 6)

5.2.2 Municipal Planning Strategic Approaches

- **Efficacy and Pragmatic Solutions:** Focus on measurable outcomes to guide municipal planning decisions, with a preference for data-driven interventions.
 - Example quote: *“There’s dedicated planning, robust data collection, and consistent design standards to support cycling as a regular mode of transport.”*
(Interviewee 1)
- **Broader Coordination Across Scales:** Challenges and opportunities of working across different levels of government.
 - Example quote: *“With the Regional Cycle Superhighway model, there are really two achievements: one is building the infrastructure, and the other is getting the political setup in place to enable it.”* (Interviewee 1)
- **Safety as a Planning Priority:** Safety as a key goal in cycling and mobility planning, often used to gain public and political support.

- Example quote: *“The simplest and most effective way to support that kind of cycling culture is to create safe spaces to ride.” (Interviewee 1)*
- **Pilot Projects and Controlled Experimentation:** Municipal use of pilot projects to test new ideas and approaches in cycling infrastructure.
 - Example quote: *“They didn’t wait for political mandates, they just used opportunities that arose, like when streets were dug up. They’d say, “Do we really need these parking spots? Maybe we can put a bench and a tree instead.” That was the beginning of a new way of thinking” (Interviewee 2)*

5.2.3 Modes of Public Participation in Bicycle and Mobility Planning

- **Formal Engagement:** Structured methods for involving the public, such as workshops, surveys, and neighborhood forums.
 - Example quote: *“I meet regularly with the school boards of the five local schools, and we have similar networks in the social area.” (Interviewee 4)*
- **Informal Engagement:** Informal, grassroots methods of participation, including temporary interventions and spontaneous community actions.
 - Example quote: *“People aren’t just like, “Oh, everything’s fine, no need to change anything.” There’s a lot of engagement, just maybe not always in formal ways.” (Interviewee 7)*
- **Representation and Inclusion:** Concerns about who gets to participate in the planning process and how to ensure diverse perspectives are included.
 - Example quote: *“We have a kind of consensus democracy. We try to reach agreement on every decision, at least a strong majority, and everyone should feel heard, even small minorities.” (Interviewee 5)*

- **Transparency and Partnership:** Calls for more openness and collaboration between community groups and the municipality.
 - Example quote: *“I think something that’s really important, when you talk about inclusion, you have to include people from the very beginning. But in a municipality, it’s really about what has already been decided politically and what’s been budgeted. And these processes can be very obscure, even to me, and I work in this field!” (Interviewee 7)*

5.2.4 Community Influence and Strategy

- **Local Councils and Institutional Bridging:** The role of local councils as intermediaries between grassroots actors and formal planning bodies.
 - Example quote: *“It’s quite ambitious to have these local councils. We’re also fighting against outdated perceptions, that it’s just retirees sitting around not doing much. That’s something we’re working hard to change.” (Interviewee 4)*
- **Experimentation from Below:** Grassroots-led experiments in cycling infrastructure or mobility solutions, often in areas with limited formal intervention.
 - Example quote: *“It also comes from an idea that we want to actually create change together with people, not for other people.” (Interviewee 3)*
- **Advocacy and Pressure:** How community groups advocate for improved cycling conditions and exert pressure on municipal bodies to act.
 - Example Quote: *“Some say, “We have good cycling infrastructure anyway, regardless of what the Federation says or does,” ... But we still see it as our role to point things out to the authorities, whether that’s politicians or municipal planners, so that projects can be improved.” (Interviewee 6)*