

D1.1 Report on the key elements of mobility cultures and the proximity city

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Executive summary

This literature review explores how the principles of the proximity city and mobility cultures can guide the development of more equitable, sustainable, and inclusive urban environments. The aim of this review is to lay the groundwork for future research and the operation of civic labs by summarizing the state of research within the framework of the CONIFER project. Relevant academic literature was identified using pre-defined search terms. In addition, the consortium members processed policy documents in their local language.

The proximity city concept, closely aligned with the 15-minute city (15mC), envisions compact urban forms where daily needs—such as education, work, housing, services, and recreation—are within easy reach of residents. This approach is not only about reducing travel time, but also about improving quality of life, supporting local economies, and fostering spatial justice across diverse populations.

The review highlights four key domains shaping proximity cities: education, housing, public space, mobility, transport and urban planning. It shows that access to services like schools is influenced by more than just location—factors such as transport infrastructure, walkability, and neighborhood inequality significantly affect whether people can benefit from proximity. Housing patterns also shape urban inclusion, as compact development does not automatically lead to fair access unless supported by socially responsive planning. Similarly, well-designed public spaces enhance social life, safety, and health, especially when local needs and participation are prioritized.

Urban and mobility planning is presented as the central mechanism that links these domains. Effective proximity planning requires coordination across sectors, data-driven decision-making, and policies that respond to real-world behaviors rather than abstract ideals. Importantly, the review emphasizes that applying proximity principles without considering local contexts or existing inequalities can deepen rather than resolve urban divides.

Mobility cultures are examined as a complementary lens, revealing how social norms, values, and behavioral expectations shape travel behavior. The review demonstrates that people's choices around walking, cycling, or driving are not only practical decisions but also expressions of identity and community belonging. Promoting sustainable mobility thus requires attention to culture, communication, and public engagement—not just infrastructure investment.

A central focus of the review is youth mobility. Active travel among children and adolescents—such as walking or cycling to school—is linked to physical health, social development, and greater independence. However, many young people face structural and cultural barriers that limit their mobility, including unsafe environments, long distances, and parental concerns. The review identifies family habits, built environment quality, and school

proximity as major factors influencing youth travel behavior. It also presents successful public policy interventions that support active youth mobility, including school programs, infrastructure improvements, and community initiatives.

Overall, the review concludes that achieving proximity and fostering sustainable mobility cultures requires an integrated, socially conscious approach. A truly inclusive city is one where people of all ages, backgrounds, and abilities can access opportunities safely and independently, and where mobility is both a right and a reflection of community values.

Relation to other deliverables

This deliverable (D1.1 Report on the key elements of mobility cultures and the proximity city) is one of the foundations for the activities in WP2 (e.g., Task 2.2 *Lab coordination and training*). The first step in connecting to WP2 was the consortium online workshop held in June 2025, when the main findings of the first versions of the other deliverables in WP1 were synthesized to develop the context-specific methodology for each civic lab. In other words, D1.1 also contributed to creating the D2.1 (*Methodology handbook for civic labs* (incl. Description of participatory and evaluation approach)). In addition, this deliverable also influenced the planning of activities for other work packages (e.g., WP3).

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1. Introduction

As cities face increasing challenges related to climate change, environmental pollution, social inequality, and public health, quite new approaches to urban development are gaining attention. To support the shift from car-dependent mobility cultures toward post-car urban futures centered on proximity-based living, it is essential to embed the principle of proximity into strategic planning through long-term scenarios, visions, and policy pathways. For future 15mC strategies to be both effective and equitable, a participatory, needs-driven approach is required—one that includes the voices of those often excluded from shaping the spaces they use most. By summarizing the state of research in the area of proximity cities, mobility cultures, and youth mobility, this review lays the groundwork for future research and the operation of civic labs within the framework of the CONIFER project.

The proximity city offers a promising vision for organizing urban life around local access to essential services. Closely related to the 15mC model – which approach is relatively new –, the proximity city emphasizes spatial integration, where residents can meet their daily needs within a short walk or bike ride from home. This approach seeks to reduce car dependency, strengthen local communities, and create more inclusive, sustainable urban environments. The 15mC and proximity city model are similar in the sense that they aim at bringing urban functions – work, education, housing, services, leisure – closer to each other. However, while the 15mC model focuses mainly on time-based access, the proximity city emphasizes spatial relationships and urban forms.

This literature review examines the key components of the proximity city and the broader concept of mobility cultures. It explores how physical infrastructure, planning decisions, and social factors intersect to shape access to education, housing, public space, and transport. It also considers the cultural and psychological dimensions that influence how people move through their environments and how these patterns reflect deeper values and norms.

A central theme of the review is youth mobility. The ability of children and adolescents to travel actively and independently—by walking, cycling, or using public transport—is a powerful indicator of how safe, accessible, and inclusive a city truly is. Youth mobility not only supports physical and mental development but also reflects the broader success of proximity-based planning.

By drawing on recent studies and examples from diverse urban contexts, this review aims to offer insights into how proximity and mobility can be designed and governed in ways that promote health, equity, and resilience for all residents, with a particular focus on younger generations.

2. Methodology

The literature review was conducted through a combination of structured literature searches, analysis of grey literature, and contributions from consortium members. The objective was to provide an overview of the main elements shaping proximity cities, mobility cultures, and youth mobility, with a particular focus on European and international contexts relevant to the CONIFER project.

Academic literature was identified using predefined search terms such as proximity city, 15-minute city, mobility cultures, sustainable transport, active travel, and youth mobility. Searches were carried out across major scientific databases, including Scopus, Web of Science, and Google Scholar. Peer-reviewed articles, books, and conference papers were prioritized, while snowballing from reference lists was used to capture additional sources.

Grey literature and policy documents were also included to complement the academic findings. Consortium partners collected and processed local and national documents in their own languages, ranging from municipal mobility plans to government strategies. Due to their heterogeneity, these materials were reviewed descriptively rather than synthesized, and country-specific insights are summarized in Appendix 1.

The material was processed and categorized according to the three main thematic areas of the report:

1. Proximity cities (education, housing, public spaces, urban and transport planning)
2. Mobility cultures (psychology, transport policies, planning approaches)
3. Youth mobility (influencing factors, built environment, parental role, school commuting, supportive policies, and best practices)

This thematic framework ensured comparability across different sources and contexts, while also highlighting tensions and contradictions, for example between compact urban forms and social equity.

Limitations should be acknowledged. Grey literature and policy documents vary widely in scope and format, which limited systematic comparison. The focus of consortium contributions also means that findings lean toward a European perspective. Finally, as urban and mobility research evolves rapidly, this review represents a snapshot in time rather than a final assessment.

As the work is based entirely on secondary data, there were no ethical concerns related to primary data collection. Academic integrity was ensured through careful referencing and the inclusion of diverse perspectives.

3. Proximity cities

The concept of the proximity city is closely related to the idea of the 15mC (Moreno, 2024, Perry, 1929). Together, they offer a shared vision for creating more sustainable, equitable, and connected urban environments. The following sections explore how this vision is applied in areas such as education, housing, public space, urban and transport planning, highlighting recent studies and practical examples from various cities.

This section focuses only on academic literature – the review of relevant policy documents and grey literature can be found in Appendix 1.

3.1. The impact of education on proximity cities

The idea of the 15mC is closely tied to how easily people can reach schools, services, and transport. A study by Villalba et al. (2025) in València highlights this clearly. They found that students from wealthier neighborhoods have better access to schools than those from disadvantaged areas. By using a method called the Two-Step Floating Catchment Area (2SFCA), they measured how easily students can reach schools, showing that fairer access is not just about having more schools, but also about transport and infrastructure that work well for everyone. In light of this, it can be stated that transport, especially cycling and walking, plays a big part in improving access to education and other services. Williams et al. (2024) show that cities with better bike infrastructure tend to have higher cycling rates. Similarly, Hosford et al. (2022) found that walkability and bikeability can vary a lot across neighborhoods, affecting how people get to places like grocery stores or schools in Vancouver.

To better understand and plan for access, open-source tools and data are becoming essential. For example, Badii et al. (2021) use open data to show how far people live from essential services, helping planners make more informed decisions. In Barcelona, Ferrer-Ortiz et al. (2022) used similar methods and found that people living in the city center have much better access to services than those in the outer areas, underlining existing inequalities.

Taken together, these studies show that access to education and services is shaped by more than just where things are located. It's also about how cities are designed and how people can move around in them. Improving education access, then, means improving the whole urban environment—especially how people walk, cycle, and connect to transit. If cities want to become truly inclusive and follow the 15mC model, they need to plan in a way that links education, transport, housing, and public space as part of a single, integrated system.

In Polish literature, Burdziej (2016) analyzed the spatial accessibility of public utility facilities in Toruń using GIS technology, based on OpenStreetMap data and network analysis to calculate travel times. This research demonstrated that access to public services has a significant impact on residents' quality of life, with improved accessibility translating into shorter travel times and lower costs.

3.2. The impact of housing on proximity cities

Building on the accessibility discourse, housing and neighborhood structure emerge as critical dimensions that shape proximity-based urban models. Casarin et al. (2023) argue that urban planning often leaves certain groups behind. While many plans focus on making neighborhoods more compact and connected, this doesn't always help the people most in need. They stress the importance of the "right to the city"—meaning everyone should have fair access to housing, work, education, and public services.

The COVID-19 pandemic made social inequalities even clearer. Szmytkowska (2020), looking at Polish cities, shows that some neighborhoods – with stronger local resources and identities – were better equipped to meet people's needs during the crisis. Tammaru et al. (2023) also highlight that as cities shift towards more sustainable transport, like walking and cycling, they must also think about how these changes affect people who live on the edges of cities or who already face disadvantages.

Travel behavior also shows how urban design affects people differently. For example, based on the fact that housing is more expensive in central areas and thus not affordable for low-income households, Poorthuis and Zook (2023) found that people's travel distances often reflect their income and needs, which sometimes makes the idea of a strict 15mC too simplistic. Kim and Lee (2025) further explain that land-use patterns – job-housing balance, the mix of residential and business uses – also affect how people use cities, suggesting that we need flexible approaches that reflect these differences.

These questions about fairness and access are being tackled in different ways across Europe. Ibric (2023), for example, looks at how circular economy ideas—reusing resources and minimizing waste—can be built into city planning to support local resilience. Fuhrmann (2024) focuses on how small-scale governance and participatory planning can help local communities shape their neighborhoods. Rodríguez (2023) examines how certain areas of Sevilla, often overlooked in urban planning, can become vibrant and connected parts of the city if they are carefully designed with local needs in mind.

In short, housing and urban form are deeply connected to proximity. Cities must pay attention not only to where things are, but also to who lives there, what their needs are, and how new policies might affect them. This means understanding local histories, power dynamics, and patterns of exclusion. Studies by Elldér (2025) and Aguilera and Romero (2024)

show that transport and access still depend heavily on where people live, especially when comparing city centers with outer areas. To create inclusive proximity cities, urban planning must address both physical distances and social inequalities at the same time.

3.3. The impact of public spaces on proximity cities

Another important part of the 15mC is how people use public spaces, like parks, streets, and sidewalks. These are not just places to pass through—they can bring people together, improve well-being, and support daily life. Fayyaz et al. (2022) explore how cities like Paris and Barcelona are turning roads into shared public areas, helping people walk, cycle, and connect with others. These changes make urban life more social and active, rather than just being about traffic and commuting.

Alberti and Radicchi (2022) compare how the 15mC idea has been applied in different cities—Paris, Milan, and Barcelona. They find that when local traditions, urban form, and social life are taken into account, changes to public space become more meaningful and effective. In these cases, the transformation of streets and neighborhoods into more walkable, social places doesn't just happen from above—it builds on local strengths and needs.

Walkability itself also contributes to safety and health. Carpio-Pinedo et al. (2021) explain how walkable neighborhoods in Spain tend to have lower crime rates and stronger social ties. In Santiago de Chile, Ulloa-León et al. (2023) show that older adults benefit from well-designed sidewalks and street networks, which help them stay mobile and engaged in the community.

Some researchers are trying to measure how friendly cities are for people of different ages and abilities. Zysk and Zalewska (2024), for instance, propose a new way to evaluate how walkable neighborhoods are for older people. This shows that walkability is not just a technical measure—it also reflects how inclusive and thoughtful a city is.

Health is another key reason to invest in public spaces. Nieuwenhuijsen et al. (2024) argue that urban design should be seen as a kind of public health policy. Creating environments that encourage walking and reduce car use can lower pollution and help prevent various diseases.

Modern work patterns further influence how proximity is experienced. Hölzel et al. (2022) look at how coworking spaces are becoming more common, often in locations with good public transport. This shift fits well with the idea of the 15mC, where people can live, work, and socialize close to home.

New methods are also helping cities understand their own structures better. Murgante et al. (2024) suggest ways to study the spatial relationships between where people live and where

services are located. Similarly, Gleeson et al. (2024) and Gaglione et al. (2022) offer tools to improve how sidewalks and public spaces are planned. Furthermore, Moro (2022) emphasizes that local involvement is key: when people help shape their own neighborhoods, public spaces become more meaningful and better used.

Together, these studies show that the provision of high-quality public space and walkability are not just add-ons to city planning—they are central to making cities more connected, healthy, and fair.

3.4. The impact of urban planning on proximity cities

All of these elements—education, housing, public space, and transport—come together in urban planning and governance. During the pandemic, cities had to adapt quickly. Guzmán et al. (2021) show how many cities shifted from car-based systems to more flexible, local ways of organizing access to services. This change highlights the potential of the 15mC, especially in times of crisis.

Digital tools are also shaping how cities are planned. Hasselwander et al. (2024) explain how smart city technologies can help reduce carbon use and improve urban services. At the same time, Gritton et al. (2024) and Caselli et al. (2022) remind us that encouraging walking and cycling has clear health benefits, so cities need to make these modes of travel more attractive and accessible.

Still, not all efforts are equally fair. Casarin et al. (2023) and Pozoukidou and Angelidou (2022) warn that without careful planning, social mix policies can increase exclusion through gentrification, displacement, and paternalistic governance instead of reducing it. That's why participation and social justice must be part of any proximity strategy. People must be included in decisions that affect their daily lives.

Urban planning must also deal with competing demands. Schultheiss et al. (2024) find that people's housing choices often don't match official city plans. This gap suggests that planners need better tools to measure what's really happening. Murgante et al. (2024) offer a tool to measure levels of realization of the 15-minute city concept criteria integrating distance, density and diversity dimensions of services, helping cities test how well their plans match real-world conditions.

Cities are also very different from one another. Alberti and Radicchi (2022) show that applying the 15mC idea requires adjusting it to local conditions, cultures, and values. Caselli (2021) provides a method for comparing different cities' accessibility, helping planners make informed choices.

Some people are skeptical about the 15mC idea. Marquet et al. (2024) explore why people resist these changes—sometimes because they fear gentrification or losing what makes their neighborhoods unique. Including community voices from the beginning can help build trust and make changes more accepted.

In Poland, Beim (2021) analyzed the theoretical foundations of the 15-minute city concept, focusing on the relationship between spatial planning and transport policy. Additionally, Rynio (2024) studied the implementation of the short-distance city concept as a component of building resilience in contemporary urban settlements, analyzing the cases of Vienna and Wrocław. These cases demonstrated that the process supports the multifaceted resilience of the city. Pytel et al. (2023) examined access to primary healthcare for senior migrants in Katowice, assessing the availability of hospitals, clinics, and pharmacies, as well as ambulance response times. It was found that spatial exclusion due to location affects only a small portion of Katowice's residents, with the majority of seniors living in close proximity to primary healthcare facilities—a result of their favorable distribution across the city.

Finally, good governance relies on strong data and flexible approaches. Balletto (2023) and Phua et al. (2024) argue that digital tools and better planning methods can make cities more resilient. They stress that creating a proximity city is not just about reducing travel distances—it's about designing cities that respond to people's real needs in a smart, fair, and caring way.

4. Mobility cultures

Urban mobility is not only a matter of infrastructure or individual preference—it is deeply shaped by cultural norms, social expectations, and planning frameworks. The concept of mobility cultures captures this intersection by recognizing that how people move through their environments is influenced by shared values, psychological drivers, and societal routines. These patterns vary across regions and populations, shaped by both internal beliefs and external conditions. Increasingly, ideas like the 15mC—which envisions urban neighborhoods where daily needs are accessible within a short walk or bike ride—highlight the importance of aligning mobility systems with local cultures. This model depends not only on compact urban design, but also on a shift in how people perceive and engage with mobility: favoring sustainable, community-based, and low-emission modes of transport. Exploring the psychological, political, and spatial dimensions of mobility cultures provides a deeper understanding of how such transitions can be made viable and equitable across diverse contexts.

According to Hefter & Deffner (2012) mobility culture is “... the entity of mobility related rational-material and symbolic-emotional active practices. This term of culture incorporates modes of transport, infrastructure, buildings, and urban and natural environments as well as individual mobility styles and local discourses. Mobility culture describes the process related interaction of actors, stakeholders, infrastructures and methods as a socio-technical system.”

Klinger et al. (2013) formulate the definition in a slightly different way: “Drawing on the socio-technical concept of urban mobility cultures, which combines socio-economic and urban form characteristics, mode-specific infrastructure supply, as well as the travel behavior and underlying attitudes of a city’s inhabitants”. Hence, the concept of urban mobility cultures can be understood as an integrative approach incorporating both habitual practices, including underlying preferences and lifestyles, as well as rather objective and structural components such as infrastructure and spatial characteristics. Moreover, city-specific discourses and transport policy are added to the concept of urban mobility cultures (Fig. 1). These two components can be best considered as hybrid forms combining objective and subjective elements.”

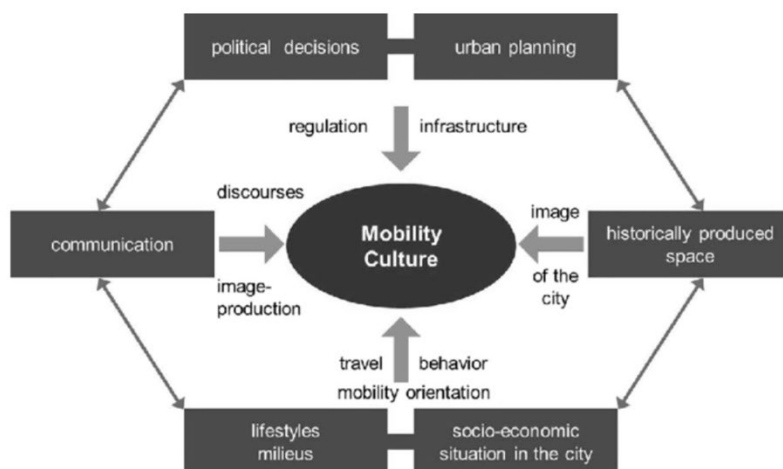


Figure 1: Concept of urban mobility cultures. Source: Klinger et al. (2013)

In this section psychology, transport policy, and urban planning were chosen because they capture the three key dimensions of mobility cultures: the psychological/behavioral (values, norms, decisions), the political/institutional (policy frameworks and priorities), and the spatial/structural (city design and infrastructure). Together, they illustrate how individual attitudes, governance, and urban form interact to shape travel behavior. Other impact areas were left aside to keep the scope focused and comparable across contexts, while still reflecting the most influential levers for sustainable mobility.

This section focuses only on academic literature – the review of relevant policy documents and grey literature can be found in Appendix 1.

4.1. The impact of psychology on mobility cultures

In recent years, there has been growing interest in how social norms shape individual behavior, especially within cultural psychology. Researchers now see these norms as key to understanding how culture influences what people do. Eom and Kim (2025) point out that while past research has often focused on personal values and beliefs, looking at shared group norms—called intersubjective norms—offers a better way to understand differences in behavior. These norms reflect what people think others in their group expect of them. As a result, individuals may follow certain behaviors not just because of their own values, but because of how they see their social environment.

Supporting this view, Kashima et al. (2013) highlight the importance of descriptive norms—understanding what most people do—in shaping everyday behavior. They show that people learn what is expected within their social circles and often adjust their behavior to match.

This adds to the idea that behavior is not just a personal choice but is also influenced by the wider social and cultural context.

Bringing this into the field of mobility, Hoffmann et al. (2017) review how cognitive processes affect decisions about how people travel. Although their focus is on transportation, their findings support the broader point that behavior is shaped by a mix of internal thinking and external expectations. They argue that decisions—such as how to get from one place to another—are not only practical but are also influenced by social meanings and shared norms.

Further extending this perspective, Hunecke et al. (2007) look at how psychological factors work together with demographics and infrastructure to shape mobility patterns. Their findings show that personal attitudes, the design of transport systems, and broader social influences all play a role in how people move. Understanding this mix is important for designing policies that encourage more sustainable ways of getting around.

In a similar direction, Prillwitz and Barr (2011) explore individual travel behaviors within the wider context of sustainability. They point out that while segmenting travel types can help understand behavior, this method has limits. They argue that attitudes toward mobility are flexible, and that good policy should take into account people's real-life experiences, not just statistical trends. This calls for transport strategies that combine both numbers and narratives to support sustainable mobility.

4.2. The impact of transport policies on mobility cultures

Transport policies play a foundational role in setting modal priorities, which subsequently shape both the built environment and public perceptions of mobility. As Pooley et al. (2014) observe, in English cities, car-centric planning has rendered walking an "invisible" mode—perceived primarily as a leisure activity rather than a legitimate form of transport. This marginalization is reinforced by transport planning frameworks that prioritize traffic flow and economic growth, often to the detriment of sustainable mobility modes such as walking. Similarly, Sagaris et al. (2022) highlight that this invisibility is even more pronounced in countries of the Global South. Despite being the majority mode of travel in many of these contexts, walking is largely excluded from planning, policy, and research agendas—resulting in unsafe, unregulated, and inequitable pedestrian environments.

The case of Bahrain, as analyzed by Al Hammadi (2023), exemplifies how modernist urban design ideals—coupled with rapid economic transformation, poor urban governance, and limited financial resources—have contributed to the rise of car culture and the systemic neglect of pedestrian infrastructure. In this context, walking has not only become physically challenging due to poor connectivity and infrastructure, but it is also socially stigmatized—

associated with discomfort, danger, and low-income groups. This reinforces a cycle of disinvestment and marginalization, where the pedestrian realm continues to be overlooked in both planning discourse and everyday mobility practices.

Transport policies are also deeply shaped by cultural attitudes. Basaran et al. (2021) explore this by looking at how safety and attitudes impact cycling behavior among educated young adults from different cultural backgrounds. Their research shows that emotions like excitement and feelings of independence can encourage cycling, especially when paired with a positive view of the local context. This view is shared by Aldred and Jungnickel (2014), who note that in the UK, cycling is tied to identity and community values, not just function. Their work suggests that policymakers need to consider cultural meanings when promoting cycling.

Ryghaug et al. (2023) take this further, suggesting that future transport research should focus more on the cultural side of mobility. They call for studies that explore how social values shape transport behavior across Europe. Hoor (2023) echoes this call, arguing for a shift in policy thinking—one that puts culture and public involvement at the center of sustainable mobility planning.

Sonnberger and Graf (2021) push back against the idea that technology alone can fix transport problems. Instead, they call for a deeper look at social justice and cultural change. They argue that efforts to promote sustainability should go beyond technical fixes and include voices from the community. Similarly, Bosen and Leicht-Scholten (2020) stress that research and policy should include not only technology but also social and political perspectives to be effective.

Kesselring et al. (2023) bring attention to the value of local knowledge and community action. Their research shows how real-world experiences can inform large-scale transitions toward sustainable mobility. On the other hand, Sattlegger and Rau (2016) offer a more personal view by examining life stories related to car use. They challenge the idea that car culture is fixed and show that people can and do make alternative choices, even in car-dominated societies.

Looking at recent shifts, Greene et al. (2022) explore how mobility habits have changed after the pandemic across countries like Norway, Ireland, and the U.S. They find that deeply rooted cultural habits influence how people adapt to crises, which in turn affects the future of transport systems. O'Regan (2012) adds a different angle by looking at the return of hitchhiking and other alternative travel modes. This shows how people are rethinking mobility in ways that challenge mainstream transport options.

Kwarciński (2018) analyzes the role of public transport in meeting the needs of residents in rural areas of Poland. He emphasizes the importance of public transport for individuals with limited access to private vehicles. He highlights specific characteristics of rural areas, such as

dispersed settlement patterns and low population density, which contribute to lower demand for transport services compared to urban areas. Despite these challenges, public transport plays a crucial role in fulfilling social and economic needs—particularly in commuting to work and education—although appropriate services for shopping or healthcare purposes are lacking.

Finally, Vos and El-Geneidy (2021) highlight how academic work on transport should be both rigorous and relevant. They argue that strong research needs to include cultural and social insights, not just technical data, if it wants to truly help shape better transport policies.

4.3. The impact of urban planning on mobility cultures

Urban planning plays a major role in shaping how people move through cities. Research in this area shows that personal background, the design of neighborhoods, and mobility habits are closely linked. For example, Klinger and Lanzendorf (2016) find that how people travel for leisure is influenced not just by who they are, but also by where and how they live. Mokhtarian and Cao (2008) take this further by showing that where people choose to live affects how much they walk or use other travel modes. This points to the strong influence of residential choices on travel behavior.

Adding a cultural layer, Jensen (2009) argues that mobility is not only practical but also symbolic. Getting around is part of daily life and carries meanings shaped by culture and identity. Cairns et al. (2014) support this by framing mobility within social theory. They show how habits, class, and social norms shape travel decisions, adding depth to the conversation around why people move the way they do.

Planning also affects travel through design. Khattak and Rodríguez (2005) examine how neighborhood layouts influence walking. Their study finds that planning choices can help—or hinder—sustainable travel. Similarly, Schwanen et al. (2001) compare different city layouts in the Netherlands and show how centralization or decentralization changes travel habits. These findings confirm that the physical shape of a city can guide how people choose how to move.

Boarnet and Crane (2001) offer a more technical view. They create methods to measure how land use affects travel and call for better tools to understand these links. Their work supports the idea that smart planning can directly shape how people get around.

In the Polish context, Rosik et al. (2018) presented the results of car traffic flow models on national and regional road networks, taking into account various travel motivations. The study showed that different types of traffic tend to concentrate on the same road segments,

and that integrating travel motivations into a unified model significantly improves its performance. Bul (2013), on the other hand, studied commuting patterns of residents in the Poznań metropolitan area, including travel to work and school. He employed various measurement techniques, including GPS devices and mobile phones, which hold significance for the development of local policy.

Looking ahead, Schäfer and Victor (2000) project global travel trends and identify future challenges for urban mobility. As cities grow, they argue, planning will need to become more flexible and forward-looking. Their work reminds us that mobility patterns are not fixed—and that good planning today can shape better outcomes tomorrow.

5. Youth mobility

Youth mobility is a topic that is gaining importance in the context of public health, urban planning, and transport policy. As cities develop and lifestyles become increasingly automated, a noticeable decline in active mobility among children and adolescents can be observed (Shaw et al., 2015). Active mobility refers to forms of transportation requiring physical effort, such as walking, cycling, or scooters. On the other hand, passive mobility refers to using mechanical transport, such as private cars, buses, or motorcycles.

Active mobility offers numerous health benefits. Regular use of active transport contributes to increased levels of physical activity, which is crucial in preventing obesity, type 2 diabetes, cardiovascular diseases, and other health issues. Research shows that children who walk or bike to school achieve better physical fitness outcomes and are more likely to meet recommended daily physical activity guidelines (Schoeppe et al., 2013; Bookwala et al., 2014).

Youth mobility plays a critical role in the development of cognitive and social skills. Physical activity can positively impact children's ability to focus and perform at school (Blank et al., 2023). Children who travel independently to school develop important skills such as decision-making, responsibility, and adaptability in various social situations. Interacting with peers during the commute promotes relationship-building and interpersonal skills. Research indicates that children who actively participate in mobility are more self-confident and better at managing social interactions (Mitra, 2013). In cities where children can move around independently, they often develop greater independence, which is key to personal development.

This section focuses only on academic literature – the review of relevant policy documents and grey literature can be found in Appendix 1.

5.1. Factors influencing youth mobility

Youth mobility is shaped by a range of factors that affect how children and teenagers get around in their daily lives. These include social and family background, the local environment, and attitudes from both parents and society. Understanding these influences is key to helping more young people choose active ways of moving, like walking or cycling.

Social and family background—called sociodemographic factors—includes things like age, gender, income level, and parents' education. These factors all play a part in shaping how young people move around. For example, older children and teens are usually more independent, which can lead to more active travel. Boys also tend to use active transport more often than girls, possibly due to differences in how they're raised or safety concerns (Hecker et al., 2025). Families with higher incomes may have better access to bikes or safer routes, while those with lower incomes might rely more on cars or public transport. On the

other hand, more affluent families might have more access to cars which can restrict the choice of active mobility. Parents who are physically active themselves often encourage their kids to move more, too. Research shows that when parents are active, their children are more likely to walk or bike as well (Schoeppe et al., 2013).

In the Polish context, Bajerski and Kisiała (2023) examined the impact of selected socio-economic and spatial factors on the frequency of commuting to different types of upper secondary schools in Poznań. They demonstrated that the level of education in the student's home municipality played the most important role in explaining commuting patterns to general secondary schools, while the distance from Poznań and the availability of local educational options had the greatest influence on commuting to vocational schools.

The design of neighborhoods and public spaces also affects how children get around. Things like sidewalks, bike lanes, and safe crossings make a big difference. Studies show that children living in places with good walking and biking infrastructure are more likely to use active transport. For example, research from China found that areas with more bike paths and sidewalks encouraged children to walk or cycle to school (Sun et al., 2018). Safety is a major factor—kids in areas with heavy traffic or high crime are less likely to walk or bike (Herrador-Colmenero et al., 2018). How close a child lives to school also matters. In cities where schools are nearby and easy to reach, more kids walk or cycle (Bosch et al., 2020).

What parents think—and what society expects—also shapes how children travel. Parents who value physical activity are more likely to let their children walk or bike. But many are concerned about traffic and safety, which leads them to drive their kids instead (Mammen et al., 2012). In some places, driving is simply the norm. When car use is seen as the default, active travel becomes less common, and children miss out on chances to move more.

How children travel affects their health and well-being. Active mobility—walking, biking, or scootering—supports physical fitness, strengthens bones and muscles, promotes cardiovascular health, and improves mood by reducing stress and anxiety (Veitch et al., 2014). It also fosters social connections and a sense of neighborhood belonging (Mitra, 2013).

On the other hand, passive transport—cars, buses, and motorbikes—often results in less physical activity, increasing risks of obesity, diabetes, and heart disease (World Health Organization, 2020). It also contributes to air pollution and traffic congestion, with children in high-traffic areas at greater risk of respiratory problems (Wang et al., 2016). Although passive travel may seem more convenient or safer in the short run, it has long-term negative effects on health and community engagement.

In summary, choosing how to get around can have lasting consequences. Promoting youth mobility requires addressing family backgrounds, environmental factors, and social attitudes to create safe, accessible options that encourage active, healthy travel for all children.

Understanding all these factors—background, environment, and social attitudes—helps create better policies to support active mobility for children. In the next sections, we'll look more closely at how active and passive forms of travel compare, and what can be done to support healthier choices.

5.2. The impact of built environment on youth mobility

The way neighborhoods are designed has a big impact on how children get around, especially when it comes to traveling to school. In recent years, more attention has been given to how urban planning and public health can encourage active forms of transportation, like walking or cycling. Many studies have shown that features such as safe sidewalks, bike paths, and access to parks or green areas can strongly influence whether children choose to walk or bike. This section brings together findings from different studies to better understand how the built environment can support active travel among school-aged children.

Walkable environments incorporate various design features that facilitate pedestrian movement. A well-connected street network encourages walking by shortening travel distances and offering multiple route options, which can positively influence children's mobility (Bejleri et al., 2009). However, a higher number of intersections may require children to cross more roads, raising safety concerns—particularly when crossing major arterial roads versus local streets.

Several studies have shown that bike lanes, safe street crossings, and connected paths can encourage kids to cycle and walk more. For instance, Larouche (2015) found that these elements help promote cycling and increase physical activity, which can help fight childhood obesity. Similarly, Page et al. (2010) found that children's freedom to move around on their own—often shaped by how they see their neighborhood—was linked to more walking, cycling, and outdoor play. As well as Scheiner et al. 2019 conclude, that pavement design and traffic calming have significant impact on active mobility modes of children. These studies highlight how important it is for cities to have designs that make it easy and safe for children to get around. Additional factors such as land use mix and population density may also impact children's active travel, although research findings on their significance vary depending on context (Larsen, 2015).

Ikeda et al. (2018) supported these findings through a large review of studies, showing that things like neighborhood density and the availability of sidewalks are linked to higher levels of walking and cycling to school. Their research points out how important it is for policymakers to improve local infrastructure if they want to support children's active travel. Adding to this, Helbich (2016) looked at school commuting in the Netherlands and stressed that not all cities are the same—what works in one place may not work in another. He warned

against one-size-fits-all policies and argued for taking local context into account. His findings show that commuting habits among children are complex and need tailored approaches depending on the area's design and layout.

Traffic-related safety concerns—including traffic volume, crossing safety, and the proximity of pedestrian infrastructure to busy roads—are among the most influential factors shaping parents' decisions regarding children's independent mobility and travel mode choices (Rezasoltani, 2017; Katsavounidou, 2024).

Social aspects of neighborhoods also matter. Lin et al. (2017) found that when communities feel close-knit and neighbors trust each other, children are more likely to walk or bike. This suggests that improving streets and parks alone is not enough—strong community ties also help support children's independent mobility. Therefore, combined focus on both physical surroundings and social factors can lead to more effective strategies. In addition, street infrastructure maintenance strongly affects the walking experience and perceived safety. Factors such as littering, graffiti, poor lighting, and damaged or narrow pedestrian paths can create a sense of danger and discourage children from walking (Muhati-Nyakundi, 2019).

School areas play a special role in this picture. Cottagiri et al. (2021) looked at students in Ontario and found that walkability around schools made a big difference in how kids got there. Bosch et al. (2020) had similar results, showing that built features along the routes children take—like green spaces or pedestrian-friendly crossings—were closely linked to how often children walked or cycled. Together, these studies suggest that designing school zones with safety and access in mind can greatly increase children's chances of using active transport.

Moreover, accessibility concerns such as long distances, inadequate pedestrian crossings and signage, and the absence or narrow width of sidewalks discourage children from active travel. Distance to school and other key destinations remains a major determinant of whether children choose to walk or cycle, with longer distances strongly reducing active travel likelihood (Rezasoltani, 2017; Katsavounidou, 2024).

5.3. The impact of parents on youth mobility

Parents play a key role in shaping how their children get around. They make decisions about travel modes and influence how children think about and adopt active lifestyles. For example, parents often choose how their children will get to school or activities. Research shows that parents who rely heavily on cars often limit their children's opportunities for active travel. Studies across different countries confirm that when parents drive regularly, their children are less likely to walk or cycle (Mammen et al., 2012). On the other hand, parents who lead active lives tend to encourage walking or biking, which increases their children's participation in sports and physical activity (Schoeppe et al., 2013). Parents also shape how children view mobility by setting expectations and attitudes around physical activity. If parents walk or cycle regularly, their kids are more likely to do the same (Mitra, 2013; Schoeppe et al., 2015). Hecker et al. (2025) studied the same phenomenon across multiple locations and found a strong link between the way parents commute and their children's travel choices. This creates a cycle where parents pass down travel habits that shape both current and future behaviors. Shared family activities like walking or cycling together can help build healthy habits and turn active travel into a family tradition. Parents can also play a more direct role by encouraging active transportation—organizing walks, family bike rides, or other group activities that make movement part of everyday life.

One of the main reasons parents limit active travel is concern for their children's safety. Worries about traffic, unsafe crossings, or crime are common. Research in countries like Spain, Germany and Canada shows that these concerns are among the biggest reasons children don't walk or bike more often (Herrador-Colmenero et al., 2018; Bookwala et al., 2014; Scheiner et al, 2019). Educating parents about the benefits of active travel can help shift these views. Programs that explain how physical activity supports children's health—through workshops, seminars, or flyers—can change attitudes and increase support for walking or cycling (Mammen et al., 2012). In the U.S., common parental fears include strangers and high traffic volumes (Wolfe & McDonald, 2016). However, when parents perceive their neighborhood as safe—both in terms of traffic conditions and social cohesion—children are more likely to engage in active commuting (Mendoza, 2011).

Parents can also work with local governments to improve their surroundings by pushing for better infrastructure, like safer sidewalks and bike paths. When the environment feels safe and accessible, parents are more likely to let their children move around independently.

Parental expectations also play a big part in how children travel to school. Queiroz et al. (2024) used text analysis to explore what parents expect from public transportation for school commutes. Their findings show that these expectations are shaped by safety concerns, how accessible transport options are, and the parents' social and economic backgrounds. Nyström et al. (2023) found that in low-income neighborhoods, parents' views on active

school travel are strongly influenced by safety fears and financial limitations. These concerns shape whether or not parents allow their children to walk or bike. In Valparaíso, Chile, Castillo-Paredes et al. (2021) identified poor infrastructure and safety fears as the biggest barriers. Their research shows that these problems go beyond personal choice—they're often part of how communities are built. Cadima et al. (2024) argue that cities designed mainly for cars reflect a wider cultural preference for driving, which can limit children's freedom to move around safely and independently. In addition, Mah et al. (2017) found a strong correlation between active school travel and consistent daily support from parents.

A key idea in this discussion is independent mobility—a child's ability to travel alone without an adult. This is linked to both their physical and emotional development. Rodríguez-Rodríguez et al. (2021) found that factors like a parent's income and education level affect how likely children are to travel independently. This points to the need for tailored solutions that respect different cultural and social backgrounds. Katsavounidou et al. (2024) show that even when children are physically active, they are often still accompanied by an adult. This challenges the idea that physical activity always equals independence and highlights how complex children's mobility really is.

Understanding the factors influencing children's mobility requires recognizing the strong link between travel mode and children's independent mobility. Research suggests that parents typically decide first whether to accompany their child and then choose the mode of transport (Faulkner et al., 2010).

Psychological and social factors also come into play. Parents often worry about accidents or crime, and these fears limit how freely their children move. Both Castillo-Paredes et al. (2021) and Nyström et al. (2023) point out that these concerns often prevent parents from giving their kids more independence, which in turn keeps children more sedentary. Cadima et al. (2024) argue that looking closely at parents' daily routines can reveal a lot about what helps or hinders children's mobility. Understanding these routines can help identify practical ways to make active travel a normal and safe part of children's lives.

5.4. The impact of school commuting on youth mobility

In recent years, active commuting by bike among children and teens has gained a lot of attention. Many factors influence this behavior, as mentioned above, making it a complex topic. This section brings together research on active school travel, looking at how school programs, demographics, city design, long-term trends, and weather all affect how young people commute actively.

Schönbach et al. (2019) set out a clear review plan focused on school-based programs that encourage kids to bike or walk to school. They stress the importance of carefully studying both randomized and non-randomized trials to find out what really works. Their work highlights the need for thorough and unbiased research to guide public health efforts that promote active commuting. The authors also emphasize the role of independent researchers in making sure the data is accurate and reliable, which is key to understanding which interventions are effective.

Looking at specific influences, Bookwala et al. (2014) studied Canadian youth to explore links between how they commute and whether they smoke. Their results suggest that young smokers might use active commuting time as a chance to smoke, while non-smokers face different challenges that stop them from biking or walking more. This points to the need for more research to understand these motivations and barriers so that targeted programs can be developed for different groups of youth.

On a different note, Marique et al. (2013) focus on how city design—land use and urban planning— affects energy use related to school commuting. Their findings show that the way cities are built can either encourage or discourage active travel. This makes a strong case for urban policies that build cycling-friendly infrastructure to support sustainable travel options.

Gálvez-Fernández et al. (2022) look at how young people's commuting habits change as they move through school. Their long-term study shows that kids' travel choices shift with their age and the different social, environmental, and structural factors they face. Understanding these changing patterns is important for creating health programs that stay effective as children grow.

Weather is another key factor. Herrador-Colmenero et al. (2018) studied how seasonal changes and temperature affect Spanish youths' travel modes. They found that weather strongly influences whether kids walk or bike to school. This shows schools and communities need to find ways to support active commuting, even when the weather is not ideal, or provide feasible travel alternatives.

In Polish literature, Szczepański and Szczepańska (2023) describe the issue of transport exclusion among upper secondary school students resulting from insufficient public transport services. Their research shows that students are often forced to cope with this problem on their own.

Pilch et al. (2013) point out that commuting to upper secondary schools poses a serious social, educational, and health challenge. The closure of small schools in rural areas leads to increased distances between students' homes and educational institutions. This, in turn, contributes to chronic fatigue among students, sleep disorders, and difficulties in managing leisure time.

Together, these studies highlight that promoting active school travel is not simple—it requires a mix of efforts. School programs, demographic differences, urban planning, environmental factors, and weather all play a role. Successful interventions must combine health promotion, education, smart city design, supportive policies, and seasonal planning. This multi-faceted approach can help today's youth build lasting habits of active commuting that fit their lifestyles.

5.5. Public policies supporting youth mobility

Public policies play a vital role in creating the right conditions to support active mobility. Well-designed strategies can help children grow healthily, encourage active ways of getting around, and improve life quality in communities.

One important strategy is building safe, well-kept bike paths and sidewalks. These make walking and biking easier and safer for children and teens. For example, programs like "Bike-Friendly Cities" help expand cycling networks and encourage more people to bike (Pucher et al., 2010). In connection to this, creating parks, playgrounds, and public spaces also encourage kids to be active. Car-free zones where children can walk or bike freely also promote physical activity (Veitch et al., 2014).

Another strategy is improving safety near schools. Adding clear signs, traffic lights, and other safety features around schools can help children cross busy streets more safely. Programs like "Safe Route to School" are often part of local efforts to boost safety for children traveling to and from school (Wang et al., 2016). More details about these programs are discussed in the next section.

Education is key to making these policies work. School programs that teach kids about the benefits of active travel help shape healthy habits early on. Learning about a healthy lifestyle and being encouraged to be active can lead to long-term benefits (Mammen et al., 2012). These efforts can be supported by campaigns like "Walk to School Week" or "Bike to School," which raise awareness and involve parents, teachers, and the local community in promoting active travel (Schoeppe et al., 2013).

Collaboration between schools, local governments, and nonprofit organizations can make a big difference. Local groups that promote active lifestyles encourage community involvement in mobility activities (Mitra, 2013), and parent-led walking groups or volunteer programs help keep kids safe and promote being active (Bookwala et al., 2014).

The importance of context-specific public policies is highlighted by González et al. (2020), who assessed active transportation among children and adolescents across 49 countries. Their study identifies two broad categories: one where active commuting is prevalent despite safety concerns, lack of infrastructure, and minimal supportive policies—often driven by

necessity due to limited access to motorized vehicles; and another where active travel is actively promoted through compact urban design, school siting policies ensuring schools are within walking distance, and supportive infrastructure and regulations. The authors caution that without deliberate policies to preserve walking and cycling, economic growth in the first group of countries could unintentionally reduce levels of active travel. This finding underscores the critical role of public policy in not only enabling but safeguarding children's active mobility amid changing socioeconomic conditions.

Similarly, Riazi and Faulkner (2018) emphasize that countries with the highest levels of children independent mobility owe much of their success to policies that actively promote and protect independent travel. This highlights the need for policies that go beyond infrastructure to address cultural and regulatory frameworks supporting children's freedom to move safely and independently.

It's also important to regularly research and track how children and youth travel. This data helps measure how well policies are working and understand which transport methods kids use and what barriers they face (Wang et al., 2016). Setting success markers, like more kids walking or biking and safer school zones, helps evaluate progress. Ongoing monitoring makes it possible to update policies as needed.

In response to problems with school commuting and transport exclusion, public policy should include compensatory measures. Pilch et al. (2013) emphasize that schools and local governments should implement such measures to ensure equal educational opportunities regardless of place of residence and travel time to school.

Szczepański and Szczepańska (2023) point out that identifying and signaling problems with public transport should be the responsibility of relevant institutions so that students are not forced to cope with transport exclusion on their own. Additionally, Gil and Semczuk (2020) note that the involvement of local communities was crucial in counteracting the negative effects of school closures and the resulting commuting problems.

In summary, public policies are essential to encourage active mobility among young people. Investing in infrastructure, education, and community partnerships can boost physical activity in children and teens. These policies play a crucial role in building healthier, more sustainable communities.

5.6. Examples of successful programs promoting active mobility

Programs and campaigns have been implemented in many countries to promote active mobility among children and adolescents. These innovative initiatives contribute to increased physical activity, improved health, and raising awareness of the benefits of an active lifestyle. Below are several examples of successful programs that may serve as inspiration for other communities.

- "Safe Routes to School" Programs
 - Program Description: The "Safe Routes to School" program was initiated in the United States in the early 2000s. It aims to increase the number of children walking or biking to school and improve safety along school routes. This program focuses on cooperation with local communities, parents, and schools.
 - Activities: Construction of bike paths and sidewalks, improvement of traffic signage, organization of events promoting active mobility (e.g., "Car-Free Day"), and education on traffic safety.
 - Outcomes: Research shows that these programs lead to an increase in the number of children using active transport. In some locations, there has been a 20–30% increase in children walking or biking to school (Gustat et al., 2015).
- "Walk to School" Initiatives
 - Program Description: "Walk to School" initiatives are organized in many countries, including the USA, UK, Australia, and Canada. These programs encourage children to walk to school daily as part of community action campaigns.
 - Activities: Organization of events such as "Walk to School Day," during which children and parents are encouraged to walk together. The programs also often include workshops on road safety and healthy lifestyles.
 - Outcomes: Studies have shown that these programs increase the number of children walking to school while improving their physical fitness and overall well-being (Mendoza et al., 2011; McKee et al., 2007).
- "Bike to School" Programs
 - Program Description: "Bike to School" programs aim to promote cycling as a daily mode of transport for children. They are popular in various countries, including Germany and the Netherlands, with a well-developed cycling culture.

- Activities: Events such as "Bike Day", during which children are encouraged to ride to school, are organized. These programs often include road safety workshops and bike maintenance sessions.
- Outcomes: Studies conducted in Germany have shown that these programs increase the number of children cycling and improve their cycling skills and road safety knowledge (Pucher et al., 2010).
- "Bike-Friendly Cities" Campaigns
 - Program Description: "Bike-Friendly Cities" is an initiative to create favorable conditions for cycling in urban areas. These programs are implemented in various cities worldwide, including Copenhagen and Amsterdam.
 - Activities: Investments in cycling infrastructure include bike paths, bike parking, and educational programs for residents on cycling.
 - Outcomes: In cities such as Copenhagen, where extensive cycling infrastructure has been introduced, about 62% of residents use bicycles as their primary means of transport (Fosgerau et al., 2023). These programs have contributed to a significant increase in physical activity and improved quality of life for residents.
- Community-Integrating Programs
 - Program Description: Initiatives that involve parents, teachers, and local communities in promoting children's active mobility can bring tangible benefits. An example is the "Safe School" program, which brings together all stakeholders to create a safe and supportive environment for children.
 - Activities: Organization of community meetings, parent workshops, and events promoting active mobility and road safety.
 - Outcomes: Increased community engagement in promoting active mobility, leading to a rise in the number of children using active transport and improved road safety (Mitra, 2013).
- School Streets
 - Program Description: Temporary traffic restrictions during school drop-off and pick-up times create car-free zones outside schools, encouraging walking, cycling, and scooting. Originating in Italy, the model has expanded globally.

- **Activities:** Pilot closures, physical or camera-enforced access control, and integration with travel planning and education campaigns. Strong community involvement is essential.
- **Outcomes:** Studies show reduced car traffic and increased active travel without compromising safety. In Vienna, traffic dropped by 68%, and in Salzburg, scooting rose from 1% to 18%. Benefits include better air quality and children's independence (Davis, 2020; CIVITAS, 2017).

Examples of successful programs promoting active mobility show how diverse actions can support a healthy lifestyle among children and adolescents. Investments in infrastructure, event organization, and community involvement in promoting active mobility bring tangible benefits to the health and well-being of young people. These initiatives offer inspiration and can be replicated in different communities to boost active mobility among youth.

6. Summary

The concept of the proximity city offers a compelling vision for urban futures where everyday life unfolds within compact, accessible neighborhoods. This review finds that proximity-based planning, when executed thoughtfully, can enhance social equity, reduce negative environmental impact, and improve public well-being. Education emerges as a critical factor, with evidence showing that physical distance, infrastructure quality, and socio-economic inequalities significantly shape students' ability to access schools. Addressing these gaps requires urban designs that connect educational institutions seamlessly with residential areas and transport networks.

Housing is similarly vital to proximity planning. While compact urban forms can theoretically support greater accessibility, they often fail to account for deep-rooted social inequalities. Research reveals that those living in peripheral or marginalized areas continue to face significant barriers in accessing urban opportunities, underscoring the need for inclusive and participatory planning processes. The transformation of public spaces—particularly streets, sidewalks, and parks—plays a crucial role in this context, fostering social interaction, active lifestyles, and improved safety when designed with local needs in mind.

Urban planning acts as the framework that ties together all these dimensions, from transport systems to neighborhood design. Planning tools, data analysis, and community engagement must be used in concert to ensure that proximity principles do not unintentionally exclude or displace vulnerable populations. Mobility cultures—shaped by norms, identities, and emotions—must also be considered in planning processes, as they influence how people choose to move and what forms of travel are considered acceptable or desirable within a community.

A significant portion of this review is devoted to youth mobility, which serves as a revealing lens into the successes and shortcomings of current urban practices. The ability of children and adolescents to engage in active, independent travel is closely tied to the physical design of neighborhoods, the presence of safe infrastructure, and the attitudes of parents and caregivers. Public policies and school-based programs have demonstrated success in increasing walking and cycling rates among young people, but these efforts must be sustained and adapted to local contexts. Ultimately, the review shows that supporting youth mobility is not just a question of health promotion—it is a measure of a city's overall inclusiveness, safety, and responsiveness to the needs of its future generations.

The findings of this review will support the needs assessment within the civic labs, where the characteristics of the current mobility cultures in terms of perceptions and discourses of proximity will be identified through quantitative, qualitative and participatory research.

Disclaimer

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7. References

Aguilera, A. and Romero, G. (2024). La ciudad de los 15 minutos y la escala metropolitana: el caso de la zona metropolitana del valle de México. *Ciudad Y Territorio Estudios Territoriales*, 56(220). <https://doi.org/10.37230/cytet.2024.220.2>

Alberti, F. and Radicchi, A. (2022). The proximity city: a comparative analysis between Paris, Barcelona and Milan. *Techne - Journal of Technology for Architecture and Environment*, 69-77. <https://doi.org/10.36253/techne-12151>

Aldred, R. and Jungnickel, K. (2014). Why culture matters for transport policy: the case of cycling in the UK. *Journal of Transport Geography*, 34, 78-87. <https://doi.org/10.1016/j.jtrangeo.2013.11.004>

Al Hammadi, F. A. (2023). Understanding the impact of socio-cultural, built environment, and policy factors on walkability in Bahrain: The case study of Hidd City (Doctoral dissertation). Newcastle University. <http://hdl.handle.net/10443/6204>

Aliyas, Z., Collins, P. A., Sylvestre, M. P., & Frohlich, K. L. (2024). Investigating social inequalities in children's independent mobility, active transportation and outdoor free play in two Canadian cities. *Preventive Medicine Reports*, 102642. <https://doi.org/10.1016/j.pmedr.2024.102642>

Axhausen, K. (2008). Social networks, mobility biographies, and travel: survey challenges. *Environment and Planning B Planning and Design*, 35(6), 981-996. <https://doi.org/10.1068/b3316t>

Badii, C., Bellini, P., Cenni, D., Chiordi, S., Mitolo, N., Nesi, P., ... & Paolucci, M. (2021). Computing 15mincityindexes on the basis of open data and services., 565-579. https://doi.org/10.1007/978-3-030-87010-2_42

Bajerski, A., & Kisiąła, W. (2023). Selected factors influencing the frequency of commuting to various types of secondary schools in Poznań. [Wybrane czynniki kształtujące natężenie dojazdów do różnych typów szkół ponadpodstawowych w Poznaniu.] *Czasopismo Geograficzne*, 94(2), 289-306. <https://doi.org/10.12657/cza-geo-94-12>

Balletto, G. (2023). Mobility and land-use system in the sport mega-events. the case of the Cagliari stadium (Sardinia, Italy). *European Transport/Trasporti Europei*, (93), 1-16. <https://doi.org/10.48295/et.2023.93.4>

Basaran, G., Kristoffersen, D., & Haustein, S. (2021). Safety perceptions and cycling frequency of highly educated young people who grew up in different mobility cultures. *Active Travel Studies*, 1(1). <https://doi.org/10.16997/ats.1003>

Beim, M. (2021). Teoretyczne podstawy koncepcji miasta piętnastominutowego w kontekście debaty o związkach planowania przestrzennego i polityki transportowej. *Prace Komisji Geografii Komunikacji PTG*, 24(1), 57-63. <https://doi.org/10.4467/2543859XPKG.21.005.14948>

Bejleri, I., Steiner, R. L., Provost, R. E., Fischman, A., & Arafat, A. A. (2009). Understanding and Mapping Elements of Urban form that Affect Children's Ability to Walk and Bicycle to School: Case Study of Two Tampa Bay, Florida, Counties. *Transportation Research Record*, 2137(1), 148-158. <https://doi.org/10.3141/2137-16>

Blank, Stefanie, Natasa Hodzic-Srndic, and Julia Kammer. 2023. The Positive Effects of Active Mobility on Health with a Focus on Children's and Youth Mobility. In *LET IT GROW, LET US PLAN, LET IT GROW. Nature-based Solutions for Sustainable Resilient Smart Green and Blue Cities. Proceedings of REAL CORP 2023*, 1065–1069. Vienna: CORP – Competence Center of Urban and Regional Planning. <https://repository.corp.at/989/>

BMI. (2020). *Neue Leipzig Charta: Die transformative Kraft der Städte für das Gemeinwohl*. Bundesministerium des Innern, für Bau und Heimat.

Boarnet, M. and Crane, R. (2001). The influence of land use on travel behavior: specification and estimation strategies. *Transportation Research Part a Policy and Practice*, 35(9), 823-845. [https://doi.org/10.1016/s0965-8564\(00\)00019-7](https://doi.org/10.1016/s0965-8564(00)00019-7)

Bookwala, A., Elton-Marshall, T., & Leatherdale, S. T. (2014). Factors associated with active commuting among a nationally representative sample of Canadian youth. *Canadian Journal of Public Health*, 105(5), 4139. <https://doi.org/10.17269/cjph.105.4139>

Bosch, L., Wells, J., Lum, S., & Reid, A. (2020). Associations of the objective built environment along the route to school with children's modes of commuting: a multilevel modelling analysis (the slic study). *Plos One*, 15(4), e0231478. <https://doi.org/10.1371/journal.pone.0231478>

Bosen, J. and Leicht-Scholten, C. (2020). Sustainable mobility cultures and the SDGs: towards an interdisciplinary approach., 1-9. https://doi.org/10.1007/978-3-319-71061-7_118-1

Budapest Főváros Önkormányzata. (2023). *Budapesti Mobilitási Terv*. <https://budapest.hu/kozlekedes/kozlekedesfejlesztes/budapesti-mobilitasi-terv>

Bul, R. (2013). Commuting migration of inhabitants of the Poznań agglomeration during the period of intensive suburbanization [Migracje wahadłowe mieszkańców aglomeracji poznańskiej w okresie intensywnej suburbanizacji]. <https://repozytorium.amu.edu.pl/items/66f6abe4-5997-4022-b608-ca1930079e76>

Bundesanstalt für Straßen- und Verkehrswesen. (2019). *Schulwegpläne leicht gemacht—Der Leitfaden*. <https://www.zukunftnetz->

mobilitaet.nrw.de/media/2021/8/10/b29467a0b4d6af5d6a48e0af48f279d7/2019-bast-leitfaden-schulwegplaene__5ff2e2d161eba.pdf

Burdziej, J. (2016). Analysis of spatial accessibility using GIS technology on the example of public buildings in Torun. [Analiza dostępności przestrzennej za pomocą technologii GIS na przykładzie obiektów użyteczności publicznej w Toruniu.] Prace Komisji Geografii Komunikacji PTG, 19(1), 43-51. <https://doi.org/10.4467/2543859XPKG.16.004.6302>

Burke, J., Alomà, R., Yu, F., & Kruguer, J. (2022). Geospatial analysis framework for evaluating urban design typologies in relation with the 15-minute city standards. *Journal of Business Research*, 151, 651-667. <https://doi.org/10.1016/j.jbusres.2022.06.024>

Cadima, C., Schönfeld, K., & Ferreira, A. (2024). Beyond car-centred adultism? exploring parental influences on children's mobility. *Urban Planning*, 9. <https://doi.org/10.17645/up.8643>

Cairns, S., Harmer, C., Hopkin, J., & Skippon, S. (2014). Sociological perspectives on travel and mobilities: a review. *Transportation Research Part a Policy and Practice*, 63, 107-117. <https://doi.org/10.1016/j.tra.2014.01.010>

Carpio-Pinedo, J., Benito-Moreno, M., & Daudén, F. (2021). Beyond land use mix, walkable trips. an approach based on parcel-level land use data and network analysis. *Journal of Maps*, 17(1), 23-30. <https://doi.org/10.1080/17445647.2021.1875063>

Casarin, G., MacLeavy, J., & Manley, D. (2023). Rethinking urban utopianism: the fallacy of social mix in the 15mC. *Urban Studies*, 60(16), 3167-3186. <https://doi.org/10.1177/00420980231169174>

Caselli, B. (2021). From urban planning techniques to 15-minute neighbourhoods. a theoretical framework and GIS-based analysis of pedestrian accessibility to public services. *European Transport/Trasporti Europei*, (85), 1-15. <https://doi.org/10.48295/et.2021.85.10>

Caselli, B., Carra, M., Rossetti, S., & Zazzi, M. (2022). Exploring the 15-minute neighbourhoods. an evaluation based on the walkability performance to public facilities. *Transportation Research Procedia*, 60, 346-353. <https://doi.org/10.1016/j.trpro.2021.12.045>

CIVITAS. (2017, July 5). Walking, cycling and congestion: 15 quick facts for cities [Brochure]. CIVITAS. https://civitas.eu/sites/default/files/15_quick_facts_eng_final.pdf

Castillo-Paredes, A., Inostroza Jiménez, N., Parra-Saldías, M., Palma-Leal, X., Felipe, J. L., Págoła Aldazabal, I., ... & Rodríguez-Rodríguez, F. (2021). Environmental and psychosocial barriers affect the active commuting to university in Chilean students. *International Journal of Environmental Research and Public Health*, 18(4), 1818. <https://doi.org/10.3390/ijerph18041818>

Cottagiri, S., Groh, M., Srugo, S., Jiang, Y., Hamilton, H., Ross, N., ... & Villeneuve, P. (2021). Are school-based measures of walkability and greenness associated with modes of commuting to school? findings from a student survey in Ontario, Canada. *Can J Public Health*, 112(2), 331-341. <https://doi.org/10.17269/s41997-020-00440-0>

Cresswell, T. (2010). Towards a politics of mobility. *Environment and Planning D Society and Space*, 28(1), 17-31. <https://doi.org/10.1068/d111407>

Davis, A. 2020. School Street Closures and Traffic Displacement: A Literature Review and semi-structured interviews. Transport Research Institute, Edinburgh Napier University.

Deffner, J., Götz, K., Schubert, S., Potting, C., Stete, G., Tschann, A., & Loose, W. (2006). Entwicklung eines integrierten Konzepts der Planung, Kommunikation und Implementierung einer nachhaltigen, multioptionalen Mobilitätskultur. Schlussbericht zu dem Projekt „Nachhaltige Mobilitätskultur“. Im Auftrag des BMVBW [Schlussbericht]. Institut für sozial-ökologische Forschung.

Die Bundesregierung. (2024). Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024: Transformation gemeinsam gerecht gestalten. <https://www.bundesregierung.de/resource/blob/975274/2289440/d601791c924f24175a2c4f479425c284/2024-05-30-dialogfassung-der-deutschen-nachhaltigkeitsstrategie-data.pdf>

Elldér, E. (2024). The 15mC dilemma? balancing local accessibility and gentrification in Gothenburg, Sweden. *Transportation Research Part D Transport and Environment*, 135, 104360. <https://doi.org/10.1016/j.trd.2024.104360>

Elldér, E. (2025). Exploring socio-economic inequalities in access to the 15mC across 200 Swedish built-up areas. *Journal of Transport Geography*, 122, 104060. <https://doi.org/10.1016/j.jtrangeo.2024.104060>

Eom, K. and Kim, H. (2015). Intersubjective norms. *Journal of Cross-Cultural Psychology*, 46(10), 1313-1316. <https://doi.org/10.1177/0022022115600262>

Faulkner, G. E., Richichi, V., Buliung, R. N., Fusco, C., & Moola, F. (2010). What's "quickest and easiest?": Parental decision making about school trip mode. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1), 62. <https://doi.org/10.1186/1479-5868-7-62>

Fayyaz, M., González-González, E., & Nogués, S. (2022). Autonomous mobility: a potential opportunity to reclaim public spaces for people. *Sustainability*, 14(3), 1568. <https://doi.org/10.3390/su14031568>

Ferrer-Ortiz, C., Marquet, O., Mojica, L., & Vich, G. (2022). Barcelona under the 15mC lens: mapping the accessibility and proximity potential based on pedestrian travel times. *Smart Cities*, 5(1), 146-161. <https://doi.org/10.3390/smartcities5010010>

Fosgerau, M., Łukawska, M., Paulsen, M., & Rasmussen, T. K. (2023). Bikeability and the induced demand for cycling. *Proceedings of the National Academy of Sciences*, 120(16), e2220515120. <https://doi.org/10.1073/pnas.2220515120>

Fuhrmann, M. (2024). 15mC – from concept to practical dimension. complexity of housing estates: a proposal for a measuring tool. *Prace I Studia Geograficzne*, 69(4), 61-72. <https://doi.org/10.48128/pisg-2024-69.4-04>

Fults, K. K., Fransen, K., & Boussauw, K. (2025). An exploration into the levels of automobile usage and independent mobility for children in Belgium. *Transport Policy*, 2431719. <https://doi.org/10.1080/14733285.2024.2431719>

Gaglione, F., Gargiulo, C., Zucaro, F., & Cottrill, C. (2022). Urban accessibility in a 15-minute city: a measure in the city of Naples, Italy. *Transportation research procedia*, 60, 378-385. <https://doi.org/10.1016/j.trpro.2021.12.049>

Gallarday, S. and Valdivia, A. (2023). Quality of life metrics in terms of facilities and urban reputation: a case study in the city of Ventanilla, Lima Peru. *Civil Engineering and Architecture*, 11(1), 372-380. <https://doi.org/10.13189/cea.2023.110129>

Gálvez-Fernández, P., Chillón, P., Timperio, A., & Herrador-Colmenero, M. (2023). The patterns of active commuting to school change along the school-life in Spanish youth. *International Journal of Environmental Research and Public Health*, 20(6), 2133651. <https://doi.org/10.1080/15568318.2022.2133651>

Gil, A., & Semczuk, M. (2015). Factors influencing recent changes in the primary education network in rural Małopolska. [Uwarunkowania współczesnych zmian w sieci szkół podstawowych na obszarach wiejskich województwa małopolskiego.] *Przedsiębiorczość Edukacja*, 11, 152-164. <https://p-e.uken.krakow.pl/article/view/2741>

Gleeson, M. L. B., Monzon, A., & Alonso, A. (2024). Diseñando la Ciudad de los 15 minutos a escala calle: un análisis bottom-up de la proximidad social. *Ciudad y Territorio Estudios Territoriales*, 56(220). <https://doi.org/10.37230/CyTET.2024.220.1>

Gmina Miasta Toruń. (2023). Plan Zrównoważonej Mobilności Miejskiej dla Miejskiego Obszaru Funkcjonalnego Torunia [Sustainable Urban Mobility Plan for the Toruń Functional Urban Area]. https://sump-torun.pl/wp-content/uploads/2023/11/SUMP_dla_MOFT_26_10_2023_po_posiedzeniu_Rady_Miasta_Torunia.pdf

González, S., Aubert, S., Barnes, J., Larouche, R., & Tremblay, M. S. (2020). Profiles of active transportation among children and adolescents in the Global Matrix 3.0 initiative: A 49-country comparison. *International Journal of Environmental Research and Public Health*, 17(16), 5997. <https://doi.org/10.3390/ijerph17165997>

Götz, K. (2025). Lessons learned – drei Jahrzehnte automobilkritische sozialwissenschaftliche Mobilitätsforschung. In W. Canzler, J. Haus, A. Knie, & L. Ruhrort (Hrsg.), *Handbuch Mobilität und Gesellschaft* (S. 443–464). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-37557-7_26

Greene, M., Ellsworth-Krebs, K., Volden, J., Fox, E., & Anantharaman, M. (2022). Practicing culture: exploring the implications of pre-existing mobility cultures on (post-) pandemic practices in Norway, Ireland, and the United States. *Sustainability Science Practice and Policy*, 18(1), 483-499. <https://doi.org/10.1080/15487733.2022.2091328>

Gritton, J., Martínez, M., Bostean, G., & Thiele, M. (2024). Bikeability disparities in Orange County, California: intersection of place and demographics. *Sage Open*, 14(2). <https://doi.org/10.1177/21582440241252477>

Gustat, J., Richards, K., Rice, J., Andersen, L., Parker-Karst, K., & Cole, S. (2015). Youth walking and biking rates vary by environments around 5 Louisiana schools. *Journal of school health*, 85(1), 36-42. <https://doi.org/10.1111/josh.12220>

Guzmán, L., Arellana, J., Oviedo, D., & Aristizábal, C. (2021). Covid-19, activity and mobility patterns in Bogotá. are we ready for a '15mC?'. *Travel Behaviour and Society*, 24, 245-256. <https://doi.org/10.1016/j.tbs.2021.04.008>

Hasselwander, M., Weiss, D., & Werland, S. (2024). Local super apps in the 15mC: a new model for sustainable smart cities?. *Frontiers in Sustainable Cities*, 6. <https://doi.org/10.3389/frsc.2024.1404105>

Hecker, V., Blanchette, S., Faulkner, G., Riazi, N., Tremblay, M., Trudeau, F., ... & Larouche, R. (2025). Parental travel behaviours, accompaniment, and children's active transportation: a multi-site study. *Journal of Transport & Health*, 41, 101988. <https://doi.org/10.1016/j.jth.2025.101988>

Helbich, M. (2016). Children's school commuting in the Netherlands: does it matter how urban form is incorporated in mode choice models?. *International Journal of Sustainable Transportation*, 11(7), 507-517. <https://doi.org/10.1080/15568318.2016.1275892>

Herrador-Colmenero, M., Harrison, F., Villa-González, E., Rodríguez-López, C., Ortega, F., Ruiz, J., ... & Chillón, P. (2018). Longitudinal associations between weather, season, and mode of commuting to school among Spanish youths. *Scandinavian Journal of Medicine and Science in Sports*, 28(12), 2677-2685. <https://doi.org/10.1111/sms.13268>

Hoffmann, C., Abraham, C., White, M., Ball, S., & Skippon, S. (2017). What cognitive mechanisms predict travel mode choice? a systematic review with meta-analysis. *Transport Reviews*, 37(5), 631-652. <https://doi.org/10.1080/01441647.2017.1285819>

Hoor, M. (2020). Mobilitätskulturen: Über die Notwendigkeit einer kulturellen Perspektive der integrierten Verkehrsplanung (IVP-Discussion Paper) [IVP-Discussion Paper]. Technische Universität Berlin, Fachbereich Integrierte Verkehrsplanung. <https://doi.org/10.26128/2023.55>

Hoor, M. (2023). Public mobility and a new mobility culture: foundations, developments and paths to a cultural transport turnaround., 149-175. https://doi.org/10.1007/978-3-658-39579-7_7

Hosford, K., Beirsto, J., & Winters, M. (2022). Is the 15mC within reach? evaluating walking and cycling accessibility to grocery stores in Vancouver. *Transportation Research Interdisciplinary Perspectives*, 14, 100602. <https://doi.org/10.1016/j.trip.2022.100602>

Hölzel, M., Kolsch, K. H., & de Vries, W. T. (2022). Location of coworking spaces (CWSs) regarding vicinity, land use and points of interest (POIs). *Land*, 11(3), 354. <https://doi.org/10.3390/land11030354>

Hudde, A. (2023). It's the mobility culture, stupid! winter conditions strongly reduce bicycle usage in German cities, but not in Dutch ones. *Journal of Transport Geography*, 106, 103503. <https://doi.org/10.1016/j.jtrangeo.2022.103503>

Hunecke, M., Haustein, S., Grischkat, S., & Böhler, S. (2007). Psychological, sociodemographic, and infrastructural factors as determinants of ecological impact caused by mobility behavior. *Journal of Environmental Psychology*, 27(4), 277-292. <https://doi.org/10.1016/j.jenvp.2007.08.001>

Ibric, A. (2023). Transnational urban circularity, green transition and innovative city development projects, funded through the JPI urban Europe and the DUT partnership instruments. *Argument Spațiul Construit Concept Și Expresie*, 15. <https://doi.org/10.54508/argument.15.15>

Ikeda, E., Stewart, T., Garrett, N., Egli, V., Mandic, S., Hosking, J., ... & Smith, M. (2018). Built environment associates of active school travel in New Zealand children and youth: a systematic meta-analysis using individual participant data. *Journal of Transport & Health*, 9, 117-131. <https://doi.org/10.1016/j.jth.2018.04.007>

ILS (2006). Schulisches Mobilitätsmanagement für 15- bis 17-jährige. Ein Handlungsleitfaden für die Praxis. Institut für Landes- und Stadtentwicklungsforschung und Bauwesen des Landes Nordrhein-Westfalen. https://www.hamm.de/fileadmin/user_upload/Medienarchiv_neu/Dokumente/Praeventive_Jugendhilfe/Informationsmaterial/_ILS_Schule_Mobilitaet.pdf

IVM (2018). Schulisches Mobilitätsmanagement. Sichere und nachhaltige Mobilität für Kinder und Jugendliche. Handbuch für die kommunale Praxis. Schriftenreihe der ivm Nr. 2.

Jensen, O. (2009). Flows of meaning, cultures of movements – urban mobility as meaningful everyday life practice. *Mobilities*, 4(1), 139-158. <https://doi.org/10.1080/17450100802658002>

Kashima, Y., Wilson, S., Lusher, D., Pearson, L., & Pearson, C. (2013). The acquisition of perceived descriptive norms as social category learning in social networks. *Social Networks*, 35(4), 711-719. <https://doi.org/10.1016/j.socnet.2013.06.002>

Katsavounidou, G., Voutsas, E., & Sepetzi, S. (2024). Active but not independent: children's school travel patterns in a compact-city environment in Greece. *Urban Planning*, 9. <https://doi.org/10.17645/up.8682>

Kecskeméti Városfejlesztő Kft., & KTI Közlekedéstudományi Intézet Nonprofit Kft. (2016). *Kecskemét fenntartható városi mobilitási terve*. https://kecskemet.hu/uploaded_files/files/document/2022-02/Kecskem%C3%A9t_Fenntarthat%C3%B3_V%C3%A1rosi_Mobilit%C3%A1si_Terve_%28SUMP%29.pdf

Kesselring, S., Simon-Philipp, C., Bansen, J., Hefner, B., Minnich, L., & Schreiber, J. (2023). Sustainable mobilities in the neighborhood: methodological innovation for social change. *Sustainability*, 15(4), 3583. <https://doi.org/10.3390/su15043583>

Khattak, A. and Rodríguez, D. (2005). Travel behavior in neo-traditional neighborhood developments: a case study in USA. *Transportation Research Part a Policy and Practice*, 39(6), 481-500. <https://doi.org/10.1016/j.tra.2005.02.009>

Kidical Mass Bündnis. (2025). Gutachten: Schulstraßen. Rechtliche Möglichkeiten der Kommunen bei der Errichtung von Schulstraßen. <https://kinderaufsrad.org/rechtsgutachten-schulstrassen/>

Kim, Y. and Lee, S. (2025). Neighborhood-level determining factors of travel distance by trip purpose: policy implications for the n-minute city. *Cities*, 156, 105464. <https://doi.org/10.1016/j.cities.2024.105464>

Klinger, T., Kenworthy, J. R., & Lanzendorf, M. (2013). Dimensions of urban mobility cultures—a comparison of German cities. *Journal of Transport Geography*, 31, 18-29. <https://doi.org/10.1016/j.jtrangeo.2013.05.002>

Klinger, T. and Lanzendorf, M. (2016). Moving between mobility cultures: what affects the travel behavior of new residents?. *Transportation* 43, 243–271. <https://doi.org/10.1007/s11116-014-9574-x>

Kwarciński, T. (2018). The role of public transport in meeting the transport needs of rural residents in Poland. [Rola publicznego transportu zbiorowego w zaspokajaniu potrzeb

transportowych mieszkańców obszarów wiejskich w Polsce.] *Studia i Prace Kolegium Zarządzania i Finansów*, (166), 77-89. <https://econjournals.sgh.waw.pl/SiP/article/view/804>

Land Hessen. (2024). *Besser zur Schule. Besser zur Schule*. <https://www.besserzurschule.de/>

Larouche, R. (2015). Built environment features that promote cycling in school-aged children. *Current Obesity Reports*, 4(4), 494-503. <https://doi.org/10.1007/s13679-015-0181-8>

Larsen, K., Buliung, R. N., & Faulkner, G. (2016). School travel route measurement and built environment effects in models of children's school travel behavior. *Journal of Transport and Land Use*, 9(2), 5–23. <http://www.jstor.org/stable/26203218>

Lin, E., Witten, K., Smith, M., Carroll, P., Asiasiga, L., Badland, H., ... & Parker, K. (2017). Social and built-environment factors related to children's independent mobility: the importance of neighbourhood cohesion and connectedness. *Health & Place*, 46, 107-113. <https://doi.org/10.1016/j.healthplace.2017.05.002>

Liu, D., Kwan, M., Wang, L., Kan, Z., Wang, J., & Huang, J. (2024). Development of a chrono-urbanism status composite index under the 5/10/15-minute city concept using social media big data. *Tijdschrift Voor Economische en Sociale Geografie*, 115(4), 554-570. <https://doi.org/10.1111/tesg.12613>

Mah, S. K., Nettlefold, L., Macdonald, H. M., Winters, M., Race, D., Voss, C., & McKay, H. A. (2017). Does parental support influence children's active school travel? *Preventive Medicine Reports*, 6, 346–351. <https://doi.org/10.1016/j.pmedr.2017.04.008>

Mammen, G., Faulkner, G. E. J., Buliung, R., & Lay, J. (2012). Understanding the drive to escort: A cross-sectional analysis examining parental attitudes towards children's school travel and independent mobility. *BMC Public Health*, 12(1), 862. <https://doi.org/10.1186/1471-2458-12-862>

Marique, A. F., Dujardin, S., Teller, J., & Reiter, S. (2013). School commuting: the relationship between energy consumption and urban form. *Journal of transport Geography*, 26, 1-11. <https://doi.org/10.1016/j.jtrangeo.2012.07.009>

Marquet, O., Anguelovski, I., Nello-Deakin, S., & Honey-Rosés, J. (2024). Decoding the 15mC debate: conspiracies, backlash, and dissent in planning for proximity. *Journal of the American Planning Association*, 91(1), 117-125. <https://doi.org/10.1080/01944363.2024.2346596>

Marquet, O., Mojica, L., Núñez, M., & Maciejewska, M. (2024). Pathways to 15mC adoption: can our understanding of climate policies' acceptability explain the backlash towards x-minute city programs?. *Cities*, 148, 104878. <https://doi.org/10.1016/j.cities.2024.104878>

McKee, R., Mutrie, N., Crawford, F., & Green, B. (2007). Promoting walking to school: results of a quasi-experimental trial. *Journal of Epidemiology & Community Health*, 61(9), 818-823. <https://doi.org/10.1136/jech.2006.048181>

Mendoza, J. A., Watson, K., Baranowski, T., Nicklas, T. A., Uscanga, D. K., & Hanfling, M. J. (2011). The walking school bus and children's physical activity: a pilot cluster randomized controlled trial. *Pediatrics*, 128(3), e537-e544. <https://doi.org/10.1542/peds.2010-3486>

Metropolregion Hamburg. (2025). Leitfaden—Schulische Mobilitätsmanagement. <https://metropolregion.hamburg.de/resource/blob/1014052/53f147fe192cf261e9c23b23af547efb/leitfaden-schulisches-mobilitaetsmanagement-data.pdf>

Ministerstwo Infrastruktury. (2019). Strategia Zrównoważonego Rozwoju Transportu do 2030 roku [Sustainable Transport Development Strategy until 2030]. <https://www.gov.pl/attachment/8ca82ea2-ddf5-4cff-8bfc-b7d7bfb1237b>

Ministerstwo Rozwoju. (2017). Strategia na rzecz Odpowiedzialnego Rozwoju do roku 2020 (z perspektywą do 2030) [Strategy for Responsible Development until 2020 (with a perspective until 2030)]. <https://www.gov.pl/documents/33377/436740/SOR.pdf>

Mitra, R. (2013). Independent mobility and mode choice for school transportation: A review and framework for future research. *Transport reviews*, Volume 33, 2013 - Issue 1 21-43. <https://doi.org/10.1080/01441647.2012.743490>

Mobilissimus Kft. (2018). *Nyíregyháza fenntartható városi mobilitási terve: Rövidített változat*. Nyíregyháza Megyei Jogú Város Önkormányzata.

Mokhtarian, P. and Cao, X. (2008). Examining the impacts of residential self-selection on travel behavior: a focus on methodologies. *Transportation Research Part B Methodological*, 42(3), 204-228. <https://doi.org/10.1016/j.trb.2007.07.006>

Moreno, C. (2024). *The 15-Minute city: a solution to saving our time and our planet*. John Wiley & Sons. <https://www.wiley.com/en-us/The+15-Minute+City%3A+A+Solution+to+Saving+Our+Time+and+Our+Planet-p-9781394228140>

Moro, A. (2022). Co-design of public spaces for pedestrian use and soft-mobility in the perspective of communities reappropriation and activation. *Transportation Research Procedia*, 60, 36-43. <https://doi.org/10.1016/j.trpro.2021.12.006>

MSB Fejlesztési Tanácsadó Zrt. (2017). *Pécs megyei jogú város fenntartható városi mobilitási terve (SUMP)*. Pécs Megyei Jogú Város Önkormányzata & Pécsi Városfejlesztési Nonprofit Zrt.

Muhati-Nyakundi, L. I. (2018). Agency on journeys to school through urban slum terrains: experiences of preschool OVC. *Vulnerable Children and Youth Studies*, 14(1), 76-90. <https://doi.org/10.1080/17450128.2018.1524189>

Murgante, B., Valluzzi, R., & Annunziata, A. (2024). Developing a 15mC: evaluating urban quality using configurational analysis. the case study of Terni and Matera, Italy. *Applied Geography*, 162, 103171. <https://doi.org/10.1016/j.apgeog.2023.103171>

Niedersächsisches Kultusministerium. (2015). Das Curriculum Mobilität. Ein Bausteinkonzept für den fächerverbindenden Unterricht in allen Schulen in Niedersachsen. <https://bildungsportal-niedersachsen.de/index.php?elD=dumpFile&t=f&f=7692&token=e8d5a133c9b818333c99650248b9b9a31d10de37>

Nieuwenhuijsen, M., Nazelle, A., García-Aymerich, J., Khreis, H., & Hoffmann, B. (2024). Shaping urban environments to improve respiratory health: recommendations for research, planning, and policy. *The Lancet Respiratory Medicine*, 12(3), 247-254. [https://doi.org/10.1016/s2213-2600\(23\)00329-6](https://doi.org/10.1016/s2213-2600(23)00329-6)

Nyström, M., Henriksson, M., Lindqvist, A. K., & Rutberg, S. (2023). Making the right decision for our children's future: Parents' perceptions of active school travel in disadvantaged neighborhoods. *Journal of Transport & Health*, 101617. <https://doi.org/10.1016/j.jth.2023.101617>

O'Regan, M. (2012). 10. alternative mobility cultures and the resurgence of hitch-hiking., 128-142. <https://doi.org/10.21832/9781845412821-012>

Page, A., Cooper, A., Griew, P., & Jago, R. (2010). Independent mobility, perceptions of the built environment and children's participation in play, active travel and structured exercise and sport: the peach project. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1), 17. <https://doi.org/10.1186/1479-5868-7-17>

Perry, C. (2020). "The neighborhood unit": From the regional plan of New York and its environs (1929). In *The city reader* (pp. 557-569). Routledge. <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315748504-77/neighborhood-unit-clarence-perry>

Phua, S., Hofmeister, M., Tsai, Y., Peppard, O., Lee, K., Courtney, S., ... & Kraft, M. (2024). Fostering urban resilience and accessibility in cities: a dynamic knowledge graph approach. *Sustainable Cities and Society*, 113, 105708. <https://doi.org/10.1016/j.scs.2024.105708>

Pilch, T., Janicka, A., Janiuk, P., Kasprowicz, M., Klimek, W., Kubicka, J., Kulaszewska, P., Łupaczewska, M., & Witkowska E. (2013). Children on the roads of warmia and masuria: a report on the school commutes of children and youth in selected municipalities of the warmian-masurian voivodeship [Dzieci na drogach warmii i mazur raport o dojazdach dzieci i młodzieży w wybranych gminach województwa warmińsko-mazurskiego. Raport o

dojazdach dzieci i młodzieży do szkół.] *Warmińsko-Mazurski Kwartalnik Naukowy, Nauki Społeczne*, (2), 41-96.

Plevnik, A., Balant, M., & Mladenovic, L. (2017). Alarming changes in youth mobility: Primary school pupils in Novo Mesto. *Urbani Izziv*, 28(2), 6-17. <https://doi.org/10.5379/urbani-izziv-en-2017-28-02-006>

Pooley, C. G., Horton, D., Scheldeman, G., Mullen, C., Jones, T., & Tight, M. (2014). 'You feel unusual walking': The invisible presence of walking in four English cities. *Journal of Transport & Health*, 1(4), 260–266. <https://doi.org/10.1016/j.jth.2014.07.004>

Poorthuis, A. and Zook, M. (2023). Moving the 15mC beyond the urban core: the role of accessibility and public transport in the Netherlands. *Journal of Transport Geography*, 110, 103629. <https://doi.org/10.1016/j.jtrangeo.2023.103629>

Pozoukidou, G. and Angelidou, M. (2022). Urban planning in the 15mC: revisited under sustainable and smart city developments until 2030. *Smart Cities*, 5(4), 1356-1375. <https://doi.org/10.3390/smartcities5040069>

Prillwitz, J. and Barr, S. (2011). Moving towards sustainability? mobility styles, attitudes and individual travel behaviour. *Journal of Transport Geography*, 19(6), 1590-1600. <https://doi.org/10.1016/j.jtrangeo.2011.06.011>

Pucher, J., Dill, J., & Handy, S. (2010). Infrastructure, programs, and policies to increase bicycling: An international review. *Preventive medicine*, 50, S106-S125. <https://doi.org/10.1016/j.ypmed.2009.07.028>

Pytel, S., Piechota, A., Ciepły, M., Apollo, M., Maciuk, K., Skorupa, B., & Borowski, Ł. (2023). Katowice as a "15-minute city" in access to health services for senior citizens of migrants. [Katowice jako „miasto 15 minutowe” w dostępie do usług medycznych dla seniorów migrantów.] *Zeszyty Naukowe Akademii Górnośląskiej*, (7), 129-140. [https://opus.us.edu.pl/docstore/download/@USLd55fb7c121b0421787e175c8e86e8794/Katowice_jako_%20,,miasto_15_%20minutowe".pdf](https://opus.us.edu.pl/docstore/download/@USLd55fb7c121b0421787e175c8e86e8794/Katowice_jako_%20,,miasto_15_%20minutowe)

Queiroz, M., Roque, C., Moura, F., & Marôco, J. (2024). Understanding the expectations of parents regarding their children's school commuting by public transport using latent Dirichlet allocation. *Transportation Research Part a Policy and Practice*, 181, 103986. <https://doi.org/10.1016/j.tra.2024.103986>

Rezasoltani, M., Behzadfar, M., & Said, I. (2017). Children's Walking to School: Driving and impeding factors. *Asian Journal of Behavioural Studies*, 2(7), 11–19. <https://doi.org/10.21834/ajbes.v2i7.38>

Riazi, N. A., & Faulkner, G. (2018). Children's independent mobility. In R. Larouche (Ed.), *Children's active transportation* (pp. 77–91). Elsevier. <https://doi.org/10.1016/B978-0-12-811931-0.00005-3>

Rodríguez, R. (2023). La periferia urbana desde una perspectiva de género.. *Astrágalo Cultura De La Arquitectura Y La Ciudad*, (33-34), 241-257. <https://doi.org/10.12795/astragalo.2023.i33-34.13>

Rodríguez-Rodríguez, F., Gálvez-Fernández, P., Huertas-Delgado, F. J., Aranda-Balboa, M. J., Saucedo-Araujo, R. G., & Herrador-Colmenero, M. (2021). Parent's sociodemographic factors, physical activity and active commuting are predictors of independent mobility to school. *International journal of health geographics*, 20(1), 26. <https://doi.org/10.1186/s12942-021-00280-2>

Rojas-Rueda, D., Norberciak, M., & Morales-Zamora, E. (2024). Advancing health equity through 15-min cities and chrono-urbanism. *Journal of Urban Health*, 101(3), 483-496. <https://doi.org/10.1007/s11524-024-00850-2>

Romano, E. F. T., Baquero, B., Hicks, O., Gardner, V., Shannon, K. L., & Hoerster, K. D. (2022). "No one should feel like they're unsafe": Mobility justice photovoice as a youth advocacy tool for equitable community mobility. *Family & Community Health*, 45(4), 344-353. <https://doi.org/10.1097/FCH.0000000000000344>

Rosik, P., Komornicki, T., & Goliszek, S. (2018). Travel purposes and the distribution of individual traffic on the network of national and voivodship roads. [Motywacje podróży a rozkład ruchu w transporcie indywidualnym na sieci dróg krajowych i wojewódzkich.] *Prace Komisji Geografii Komunikacji PTG*, 21(1), 43-53. <https://doi.org/10.4467/2543859XPKG.18.004.9184>

Ryghaug, M., Subotički, I., Smeds, E., Wirth, T., Scherrer, A., Foulds, C., ... & Wentland, A. (2023). A social sciences and humanities research agenda for transport and mobility in Europe: key themes and 100 research questions. *Transport Reviews*, 43(4), 755-779. <https://doi.org/10.1080/01441647.2023.2167887>

Rynio, D. (2024). Implementing the concept of short distance cities as an element of building the resilience of modern settlement centers. [Wdrażanie koncepcji miast krótkich odległości jako element budowy odporności współczesnych ośrodków osadniczych.] *Rozwój Regionalny i Polityka Regionalna*, (70), 45-61. <https://doi.org/10.14746/rrpr.2024.70s.05>

Sagaris, L., Costa-Roldan, I., Rimbaud, A., & Jennings, G. (2022). Walking, the invisible transport mode? Research on walking and walkability today [Report]. Volvo Research and Education Foundation. https://vref.se/wp-content/uploads/2022/09/Sagaris-et-al-2022-Bibliometric-study-walking_220630.pdf

Sattlegger, L. and Rau, H. (2016). Carelessness in a car-centric world: a reconstructive approach to qualitative mobility biographies research. *Journal of Transport Geography*, 53, 22-31. <https://doi.org/10.1016/j.jtrangeo.2016.04.003>

Schäfer, A. and Victor, D. (2000). The future mobility of the world population. *Transportation Research Part a Policy and Practice*, 34(3), 171-205. [https://doi.org/10.1016/s0965-8564\(98\)00071-8](https://doi.org/10.1016/s0965-8564(98)00071-8)

Scheiner, J. (2006). Housing mobility and travel behaviour: a process-oriented approach to spatial mobility. *Journal of Transport Geography*, 14(4), 287-298. <https://doi.org/10.1016/j.jtrangeo.2005.06.007>

Scheiner, J. (2007). Mobility biographies: elements of a biographical theory of travel demand. *Erdkunde*, 61(2), 161-173. <https://doi.org/10.3112/erdkunde.2007.02.03>

Scheiner, J., Huber, O., & Lohmüller, S. (2019). Children's mode choice for trips to primary school: a case study in German suburbia. *Travel behaviour and society*, 15, 15-27. <https://doi.org/10.1016/j.tbs.2018.09.006>

Scheler, C. (2019). Wie bauen wir die „Stadt der kurzen Wege“? Ein Leitfaden für die integrierte Entwicklung von Quartieren. In *Flächennutzungsmonitoring XI: Flächenmanagement—Bodenversiegelung—Stadtgrün: Bd. IÖR Schriften Band 77 (S. 117–127)*. Rhombos-Verlag. <https://slub.qucosa.de/api/qucosa%3A72259/attachment/ATT-0/>

Schoeppe, S., Duncan, M. J., Badland, H., Oliver, M., & Curtis, C. (2013). Associations of children's independent mobility and active travel with physical activity, sedentary behaviour and weight status: a systematic review. *Journal of science and medicine in sport*, 16(4), 312-319. <https://doi.org/10.1016/j.jsams.2012.11.001>

Schoeppe, S., Duncan, M. J., Badland, H. M., Rebar, A. L., & Vandelanotte, C. (2015). Too far from home? Adult attitudes on children's independent mobility range. *Children's Geographies*, 14(4), 482–489. <https://doi.org/10.1080/14733285.2015.1116685>

Schönbach, D. M., Altenburg, T. M., Chinapaw, M. J., Marques, A., & Demetriou, Y. (2019). Strategies and effects of promising school-based interventions to promote active school transportation by bicycle among children and adolescents: Protocol for a systematic review. *Systematic reviews*, 8(1), 296. <https://doi.org/10.1186/s13643-019-1216-0>

Schultheiss, M., Pattaroni, L., & Kaufmann, V. (2024). Planning urban proximities: an empirical analysis of how residential preferences conflict with the urban morphologies and residential practices. *Cities*, 152, 105215. <https://doi.org/10.1016/j.cities.2024.105215>

Schwanen, T., Dieleman, F., & Dijst, M. (2001). Travel behaviour in Dutch monocentric and polycentric urban systems. *Journal of Transport Geography*, 9(3), 173-186. [https://doi.org/10.1016/s0966-6923\(01\)00009-6](https://doi.org/10.1016/s0966-6923(01)00009-6)

Schwedes, O., Daubitz, S., Rammert, A., Sternkopf, B., & Hoor, M. (2013). Kleiner Begriffskanon der Mobilitätsforschung (IVP-Discussion Paper) [IVP-Discussion Paper]. Technische Universität Berlin, Fachbereich Integrierte Verkehrsplanung. <https://doi.org/10.26128/2023.53>

Schwedes, O., Daubitz, S., Rammert, A., Sternkopf, B., & Hoor, M. (2018). Kleiner Begriffskanon der Mobilitätsforschung (IVP-Discussion Paper No. 2. Auflage; IVP-Discussion Paper). Technische Universität Berlin, Fachbereich Integrierte Verkehrsplanung. <https://doi.org/10.26128/2023.53>

Schwedes, O., Pech, D., Becker, J., Daubitz, S., Röhl, V., Stage, D., & Stiller, J. (2021). Von der Verkehrserziehung zur Mobilitätsbildung (IVP-Discussion Paper) [IVP-Discussion Paper]. Technische Universität Berlin, Fachbereich Integrierte Verkehrsplanung. <https://doi.org/10.26128/2023.59>

Shaw, B., Bicket, M., Elliott, B., Fagan-Watson, B., Mocca, E., & Hillman, M. (2015). Children's independent mobility: an international comparison and recommendations for action. <https://westminsterresearch.westminster.ac.uk/item/98xyq/children-s-independent-mobility-an-international-comparison-and-recommendations-for-action>

Sonnberger, M. and Graf, A. (2021). Sociocultural dimensions of mobility transitions to come: introduction to the special issue. *Sustainability Science Practice and Policy*, 17(1), 173-184. <https://doi.org/10.1080/15487733.2021.1927359>

Spitta, P. (2022). *Praxisbuch Mobilitätsbildung: Unterrichtsideen zu Mobilität, Verkehr und Bildung für nachhaltige Entwicklung für die Klassen 1-6* (1st ed). wbv Media GmbH & Co. KG.

Stadt Köln. (2023). *Stadtstrategie 2.0 „Kölner Perspektiven 2030+“ Kurzfassung*. <https://www.stadt-koeln.de/mediaasset/content/pdf15/kp2030/kurzfassung-deutsch.pdf>

Stadt Leipzig. (2018). *Integriertes Stadtentwicklungskonzept Leipzig 2030*. https://static.leipzig.de/fileadmin/mediendatenbank/leipzig-de/Stadt/02.6_Dez6_Stadtentwicklung_Bau/61_Stadtplanungsamt/Stadtentwicklung/Stadtenwicklungskonzept/INSEK_2030/INSEK-Leipzig-2030_B-Stadtentwicklungsstrategie.pdf

Stadt Lüneburg. (2025). *Integriertes Stadtentwicklungskonzept Lüneburg 2025—2040*. <https://lg-isek.de/>

Stadt Neumünster. (2023). Masterplan Mobilität. https://www.neumuenster.de/fileadmin/neumuenster.de/media/verkehr_und_umwelt/Masterplan_Mobilitaet/Masterplan_Mobilitaet_NMS_Endbericht.pdf

Stadt Tuttlingen. (2022). Mobilitätskonzept Tuttlingen 2035. <https://www.tuttlingen.de/de/Die-Stadt/Stadtentwicklung/Verkehrsplanung/Mobilitaetskonzept>

Stowarzyszenie Metropolia Warszawska. (2023). Plan zrównoważonej mobilności miejskiej dla metropolii warszawskiej 2030+ [Sustainable Urban Mobility Plan for the Warsaw Metropolis 2030+]. <https://sm.waw.pl/wp-content/uploads/2023/11/Plan-zrownowazonej-mobilnosci-miejskiej-dla-metropolii-warszawskiej-2030.pdf>

Sun, G., Xili, H., Sun, S., & Oreskovic, N. (2018). Living in school catchment neighborhoods: perceived built environments and active commuting behaviors of children in China. *Journal of Transport & Health*, 8, 251-261. <https://doi.org/10.1016/j.jth.2017.12.009>

Szczepański, J., & Szczepańska, B. (2023). Organization of commutes to secondary schools – coping with transportation exclusion. [Organizacja dojazdów do szkół ponadpodstawowych– sposoby radzenia sobie z wykluczeniem komunikacyjnym.] *Przegląd Zachodniopomorski*, 38, 491-512. <https://www.ceeol.com/search/article-detail?id=1212849>

Szmytkowska, M. (2020). Consequences of the pandemic and new development opportunities for polish cities in the (post-)covid-19 era. *R-Economy*, 6(3), 196-207. <https://doi.org/10.15826/recon.2020.6.3.017>

Tammaru, T., Sevtsuk, A., & Witlox, F. (2023). Towards an equity-centred model of sustainable mobility: integrating inequality and segregation challenges in the green mobility transition. *Journal of Transport Geography*, 112, 103686. <https://doi.org/10.1016/j.jtrangeo.2023.103686>

TRENECON Tanácsadó és Tervező Kft. (2016). Debrecen fenntartható városi mobilitási terve. Debrecen Megyei Jogú Város Önkormányzata.

TRENECON Tanácsadó és Tervező Kft. (2017). Szeged fenntartható városi mobilitási terve: Egyeztetési változat. Szeged Megyei Jogú Város Önkormányzata.

UBA (2006). Nachhaltige Mobilität in der Schule: Beratungsleitfaden für allgemeinbildende Schulen. Umweltbundesamt. <https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/3083.pdf>

UBA. (2011). Leitkonzept—Stadt und Region der kurzen Wege: Gutachten im Kontext der Biodiversitätsstrategie (S. 118). Umweltbundesamt. <https://www.umweltbundesamt.de/sites/default/files/medien/461/publikationen/4151.pdf>

UBA (2017). Die Stadt für Morgen: Umweltschonend. Umweltbundesamt. mobil—lärmarm—Grün—Kompakt—Durchmischt (S. 56). https://www.umweltbundesamt.de/sites/default/files/medien/421/publikationen/20170505_stadt_von_morgen_2_auflage_web.pdf

Ulloa-León, F., Correa, J., Vergara-Perucich, F., Cancino-Contreras, F., & Aguirre, C. (2023). 15mC and elderly people: thinking about healthy cities. *Smart Cities*, 6(2), 1043-1058. <https://doi.org/10.3390/smartcities6020050>

Umweltministerium NRW. (2023). „Schulstraßen“—Temporäre Sperrung von Straßen für den Kfz-Verkehr im Nahbereich von Schulen. Verkehringenieur-Besprechung VIB II/2023, Düsseldorf. <https://www.umwelt.nrw.de/system/files/media/document/file/vib-ii-2023-top-6-schulstrassen.pdf>

Universitas Arrabona Kft. (2023). *Győr megyei jogú város fenntartható városi mobilitási terve (SUMP)*. Győri Térségfejlesztési és Projektmenedzsment Kft. https://gytp.hu/wp-content/uploads/sites/16/2023/06/SUMP-Gyor_2023____.pdf

Veitch, J., Carver, A., Hume, C., Crawford, D., Timperio, A., Bell, K., & Salmon, J. (2014). Are independent mobility and territorial range associated with park visitation among youth? *International Journal of Behavioral Nutrition and Physical Activity* <https://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-11-73>

VELOPLAN. (2024). Mobilitätskultur verstehen und gestalten: Wie lässt sich der Kulturkampf beenden? VELOPLAN. <https://www.veloplan.de/MOBILITAETSKULTUR-VERSTEHEN-UND-GESTALTEN-WIE-LAESST-SICH-DER-KULTURKAMPF-BEENDEN/>

Villalba, A., Vila, L., & Carot, J. (2025). Analyzing patterns of accessibility to schools: a gravitational metrics study in València. *Aims Mathematics*, 10(1), 809-825. <https://doi.org/10.3934/math.2025038>

Vos, J. and El-Geneidy, A. (2021). What is a good transport review paper?. *Transport Reviews*, 42(1), 1-5. <https://doi.org/10.1080/01441647.2021.2001996>

Wang, X., Huang, J., Qin, Z., Gan, W., He, Z., & Li, X. (2025). Is the Children’s 15-Minute City an Effective Framework for Enhancing Children’s Health and Well-Being? An Empirical Analysis from Western China. *Buildings*, 15(2), 248. <https://doi.org/10.3390/buildings15020248>

Willberg, E., Fink, C., & Toivonen, T. (2023). The 15mC for all? – measuring individual and temporal variations in walking accessibility. *Journal of Transport Geography*, 106, 103521. <https://doi.org/10.1016/j.jtrangeo.2022.103521>

Williams, T., Bonsma-Fisher, M., Nelson, T., Whitehurst, D., & Winters, M. (2024). Cycling towards complete communities: estimating access to destinations via low traffic stress

cycling. *Transportation Research Interdisciplinary Perspectives*, 26, 101179. <https://doi.org/10.1016/j.trip.2024.101179>

Wolfe, M. K., & McDonald, N. C. (2016). Association between neighborhood social environment and children's independent mobility. *Journal of Physical Activity and Health*, 13(9), 970–979. <https://doi.org/10.1123/jpah.2015-0662>

World Health Organization. (2020). WHO guidelines on physical activity and sedentary behaviour. <https://www.who.int/publications/i/item/9789240015128>

Wu, Y., Hu, X., Ji, X., & Wu, K. (2023). Exploring associations between built environment and crash risk of children in school commuting. *Accident Analysis & Prevention*, 193, 107287. <https://doi.org/10.1016/j.aap.2023.107287>

Zukunftsnetz Mobilität NRW. (2017). Verkehrszähler Leitfaden. https://www.zukunftsnetz-mobilitaet.nrw.de/media/2021/8/2/d8cf0eae2f2661b21cece3eec05ab6b5/znm-verkehrszaehmer-leitfaden__5fa8ea49785bb.pdf

Zysk, E. and Zalewska, K. (2024). The methodology for assessing the 15 minute age-friendly walkability (AFW) of urban public spaces. *Sustainability*, 16(15), 6406. <https://doi.org/10.3390/su16156406>

Appendix 1

Hungarian policy documents

Mobility culture

Mobility culture is becoming more and more important in Hungarian cities towards a safer and more sustainable transport. Cities are seeking ways to better driver safety by improving infrastructure and educating citizens on safe driving. These programs often consist of the introduction of traffic education like the national KRESZ curriculum into schools, and/or public communication with a particular focus on rule-following and cooperative behavior among various road users and wider social gains of responsible commuting.

Cities are working to promote a more thoughtful and safe travel environment through ongoing outreach, maps, guides, and online tools designed to facilitate responsible travel decisions. As cycling gains in popularity, teaching inexperienced riders a thing or two has come under focus in recent years; with growing numbers of new cyclists breaking the rules and behaving in a manner that's not only potentially dangerous, but it also infuriates the more experienced.

In Debrecen (TRENCON Tanácsadó és Tervező Kft., 2016) and Szeged (TRENCON Tanácsadó és Tervező Kft., 2017), facilitating cooperation among road users can increase awareness, which may ultimately lower the number of accidents. In Nyíregyháza (Mobilissimus Kft., 2018) emphasis is given to the variation between travel mode with motorized travel of the type carried out by drivers and by motorcyclists being more likely to commit infringements than non-motorized travel (cyclist, pedestrian). Pécs (MSB Fejlesztési Tanácsadó Zrt., 2017) therefore relates the question of mobility above all as a social and cultural issue beyond pure transport. Kecskemét (Kecskeméti Városfejlesztő Kft., & KTI Közlekedéstudományi Intézet Nonprofit Kft., 2016) aims to develop an integrated system which serves the needs of all types of users by upgrading infrastructure, establishing information services, and rearranging organizations in a way that promotes an environmentally friendly culture of mobility. Here, a mobility center is developed with the goal to take decisions, related to transportation in a local territory, in a holistic way—from public transport schedules and infrastructure maintenance to information and user involvement.

Proximity city

Budapest has embraced the “15-minute city” model as a cornerstone of its urban development strategy (Budapest Főváros Önkormányzata, 2023), with the aim of reducing

travel demand by bringing key services—such as work, education, and shopping—closer to where people live. This compact urban structure encourages walking, cycling, and the use of public transport, while helping to cut emissions and promote healthier, more liveable neighborhoods.

Reducing transport-related greenhouse gas emissions is best achieved by improving access to local services and supporting remote work and decentralized city functions. The transformation of Budapest into a network of accessible sub-centers is supported by strong cooperation between city planning and transport development. With integrated infrastructure investments and renewed street design, Budapest seeks to redistribute space in favor of pedestrians and active mobility, while easing traffic congestion and avoiding projects that would attract additional car use.

The goal is a city where public spaces are clean, green, and safe, and where walking, cycling, and public transport are the most convenient options. Investment in intermodal hubs, smart infrastructure, and accessible networks is improving the competitive edge of sustainable transport. All city development projects are expected to support the vision of compactness, not only in central Budapest but also in suburban and agglomeration areas. Strategic decentralization strengthened institutional cooperation, clear planning rules, and alignment with private developers are seen as essential to achieving this vision. The city also promotes transport-oriented real estate development and supports public-private partnerships that strengthen the role of sustainable transport in urban growth.

Youth mobility

Creating equitable and accessible transport systems for all age groups is a core principle of mobility planning in Hungary. Special attention is given to young people, along with other vulnerable users such as the elderly, people with disabilities, and low-income populations. Cities are working to ensure that these groups have safe and equal access to public transport, services, and infrastructure.

National and regional plans acknowledge significant gaps in infrastructure, particularly outside of major cities. Non-continuous cycling networks, dangerous crossings on national roads, and poor public transport links limit the mobility of many, especially young people in smaller settlements. In some rural areas, cyclists are entirely banned from key roads, with no viable alternative routes available. This severely restricts independence and reduces the overall liveability of these areas.

The Budapest Mobility Plan (Budapest Főváros Önkormányzata, 2023) stresses the importance of making school environments safer by reviewing traffic regulations and signage around educational institutions. Public transport vehicles must meet strict safety standards, and efforts to improve accessibility—through barrier-free infrastructure and information

services—aim to serve children, parents with strollers, and the elderly alike. Physical access is being complemented by digital inclusion, such as audio announcements and visible, comprehensible signage.

In Debrecen (TRENECON Tanácsadó és Tervező Kft., 2016), travel patterns show a clear difference by age: younger and older residents are far more reliant on public transport than middle-aged adults, who predominantly use private cars. For youth and seniors, ensuring access to urban services is vital. Accordingly, mobility policies are designed to promote fairness while encouraging socially and environmentally responsible behavior.

Local strategies from Szeged (TRENECON Tanácsadó és Tervező Kft., 2017), Pécs (MSB Fejlesztési Tanácsadó Zrt., 2017), Győr (Universitas Arrabona Kft., 2023), and Kecskemét (Kecskeméti Városfejlesztő Kft., & KTI Közlekedéstudományi Intézet Nonprofit Kft., 2016) consistently emphasize the need for inclusive, barrier-free mobility, not only for people with disabilities but also for families, children, and others with reduced mobility. Public education campaigns and community events are used to raise awareness of the needs of these groups. Across the board, the goal is to make active transport modes not only accessible but also attractive and safe for young people, reinforcing their ability to move freely and confidently in urban environments.

Polish policy documents – mobility cultures and proximity cities

Government documents

In 2017, the Polish government adopted a new national development strategy – the Strategy for Responsible Development (SOR). The directions for Poland's development set out in the strategy, as well as dynamic economic growth focused on the increasingly widespread use of modern technologies, made it necessary to redefine the country's transport policy. Its new vision was included in the Sustainable Transport Development Strategy until 2030, adopted in September 2019 (Ministerstwo Rozwoju, 2017).

The SOR points out that the ongoing suburbanization of large urban centers generates transport problems, which constitute one of the barriers to development. This is caused by the suboptimal spatial and functional integration of public transport services, insufficient use of so-called Intelligent Transport Systems, insufficiently developed infrastructure, and a small fleet of modern, low-emission vehicles. There are also shortcomings in terms of insufficient coordination of the work of entities involved in planning changes in cities and their functional areas. Further improvements in access to public transport, fare integration and, in some locations, the use of passenger rail transport are necessary.

These demands were addressed in the Sustainable Transport Development Strategy until 2030 (SRT2030) adopted in 2019 (Ministerstwo Infrastruktury, 2019). It notes that the state of the transport system in Polish cities and their functional areas is not uniform. However, most cities share a tendency to invest mainly in road transport. The integration of public transport systems in urban agglomerations is also not a common standard. This leads to the domination of urban space by private vehicles and to a reduction in the safety and comfort of other road users. As a result, the attractiveness of public spaces decreases, and walking, cycling, or using public transport becomes burdensome.

In view of the above challenges, it is necessary to organize a sustainable transport system in Polish cities, among other things, by:

- increasing the efficiency of passenger and freight transport in the city;
- ensuring that all residents have access to jobs and services;
- ensuring the comfort and safety of urban transport;
- improving the attractiveness and quality of the urban environment;
- reducing environmental pollution, the greenhouse effect, and energy consumption by passenger and freight transport in the city.

Due to the specific nature of government administration, its tasks in the field of urban mobility will focus on:

- providing local governments with optimal legal conditions (by analyzing existing legal solutions and possibly updating existing regulations or creating new legal frameworks);
- disseminating so-called good practices in the design and management of urban transport in all its aspects;
- providing substantive and financial support for selected directions of urban transport development, including from European funds.

Municipal documents

These ambitious goals in national documents are reflected in recently adopted documents of Polish cities, which replaced the previous ones, adopted several or a dozen or so years earlier. They are discussed here on the example of Warsaw, the capital of the country, and Toruń, where research is planned as part of our project. However, the situation is similar in other centers, and certainly in the so-called Big Five, i.e., the five largest and fastest-growing urban centers in Poland (Warsaw, Wrocław, Kraków, Poznań, and Gdańsk).

The most space is devoted to the issues of interest to us in relation to Warsaw and its agglomeration in the “Sustainable Urban Mobility Plan for the Warsaw Metropolis 2030+” adopted in 2023 (Stowarzyszenie Metropolia Warszawska, 2023). As a result of analyses and

consultations, it was indicated that the most anticipated scenario for the Warsaw Metropolitan Area is the “Public Transport Development Scenario” (Scenario 3), while the best scenario for local governments in terms of financing possibilities is the “Active Mobility Development Scenario” (Scenario 2).

The public transport development scenario assumes that Warsaw will continue to be the most important destination for metropolitan travel, and for this reason, it should be based on well-developed low- and zero-emission public transport. However, efforts to create integrated, competitive public transport in the MW area will pose a challenge for the budgetary policy of smaller municipalities in particular. In this scenario, local governments, faced with prolonged budgetary constraints (both their own and external), decide to take measures (at the inter-municipal level) aimed at developing public transport, shaping high-quality local space, and cooperation that goes beyond the measures defined in Scenario 2 (primarily related to the development of public transport).

The Active Mobility Development Scenario assumes that local governments will focus their efforts on creating an integrated, attractive active mobility system based primarily on compact and comprehensive spatial planning, taking into account educational facilities, workplaces, and commercial facilities that can be reached from residential areas within a contractual 15 minutes by bicycle and on foot, and in Warsaw Metropolitan Area (MW) cities and some MW municipalities – also by other types of electric two-wheelers, which reduces the need for inter-municipal travel to the necessary, mainly carried out by public transport.

Participants in the Warsaw public consultations indicated what they expect and accept as mobility in the future. They consider the following to be the most important:

- a high quality of life in connection with the implementation of the idea of a 15-minute city (town), allowing basic needs to be met close to home,
- mobility in MW based on short-distance travel, and in longer-distance travel – on close, comfortable, functional integrated public transport, supplemented by bicycle transport,
- development of sustainable mobility in MW, taking into account the reduction of the negative impact of passenger and freight transport on the natural and anthropogenic environment: from the level of spatial planning, through the implementation of measures and investments, to the use of solutions and infrastructure,
- joint planning, design, management, and maintenance of sustainable mobility elements by all local governments forming the MW structure, based on social participation and close cooperation with residents and stakeholders.

In transport, one of the objectives is to increase the current accessibility of all MW residents to public transport lines. In terms of very good and good accessibility (up to 5 minutes' walking distance to bus and tram stops and up to 10 minutes to railway stations and stops

and to metro stations), the goal is to increase the share of MW residents with access to public transport lines with at least good frequency by about 8% in 2030 and by about 13% in 2040 (compared to 2022).

The package of measures adopted for implementation includes, among others, such points as accelerating public transport lines, increasing access to public transport, improving road safety, sustainable spatial development (including the creation and planning of “short distance areas” and “15-minute cities”), fare and ticket integration, traffic calming, development of a network of transfer hubs, development of P+R (park and ride) and B+R (bike and ride) parking systems, development of electromobility, reduction of transport emissions, development of active mobility, and integration of passenger information.

In the case of Toruń, which will be the location of the Polish team's research, the issues of interest to us in the project have been addressed in the “Sustainable Urban Mobility Plan for the Toruń Functional Urban Area (SUMP for MOFT)” also adopted in 2023 (Gmina Miasta Toruń, 2023). It presents a number of strategic objectives which, in general terms, refer to those developed for Warsaw. These include the development of bicycle traffic, the development of pedestrian traffic, the calming and improvement of road safety, increasing the number and expanding the range of existing integrated transport hubs, planning space in a way that reduces the need for travel, improving the competitiveness of public transport, developing public transport (rail and bus), optimizing access to information and services for residents, and implementing promotional and educational activities related to sustainable mobility.

German Documents

Mobility Cultures

The concept of mobility cultures has gained widespread application within Germany. German research institutions have played a pioneering role in the development of this concept, contributing to a broad spectrum of research projects and German-language publications that explore the cultural dimensions of mobility. A central example of this engagement is the research project “Nachhaltige Mobilitätskulturen” (Sustainable Mobility Cultures), conducted by the Institute for Social-Ecological Research (ISOE), which has significantly shaped the discourse (Deffner et al., 2006).

During the early 2000s, the term attracted substantial attention in both academic and public discourse, to the extent that it was even referred to as a “buzzword.” Despite its widespread use across science, policy, and everyday discourse, the concept of mobility cultures has not been sufficiently defined or conceptualized (Schwedes et al., 2018). Hoor (2020) notes that cultural perspectives on mobility and transport remain underdeveloped within the German

research landscape and are applied inconsistently. Nevertheless, the cultural dimension has gained greater significance in the social sciences, particularly in contrast to the more technical and quantitative orientation of traditional transport planning and research (ibid.).

A frequently cited definition frames mobility cultures as the “totality of everyday practices, objects, and symbolic meanings—often contradictory—that, embedded in material structures and social dispositions, represent and reproduce individual possibilities for spatial movement” (Schwedes et al., 2018; Hoor, 2020).

The understanding of mobility cultures in the literature varies considerably, encompassing aspects such as infrastructure, travel behavior, planning paradigms, and transport policy. In recent years, the term has become especially prominent in discussions surrounding the transition towards sustainable mobility. As Schwedes et al. (2018) argue, this transition requires the deconstruction of deeply embedded lifestyles and societal norms at both the individual and collective level in order to enable the development of a truly sustainable transport system.

Moreover, the concept is also invoked in debates framed as a “culture war” between automobile-centric transport systems and environmentally friendly alternatives—a particularly charged issue in Germany, where the automobile industry and automobility are deeply entrenched in society. The cultural dominance of automobility has been critically examined (Götz, 2025), for instance, in the Fraunhofer ISI research project MobilKULT, which focused explicitly on the cultural dimensions of car dependency and alternative mobility practices.

This broad application context illustrates the dual role of mobility cultures as both a normative and an analytical concept. On the one hand, it serves as a guiding framework for political and transport planning strategies aimed at reshaping mobility in more sustainable, inclusive, and multimodal directions. On the other hand, it provides a heuristic tool for analyzing the diverse social, cultural, and material factors that shape mobility practices.

In Germany, various policy initiatives at different political levels aim to foster a transition towards a sustainable mobility culture. At the federal level, for example, the National Cycling Plan (NRVP 3.0) defines the promotion of cycling culture as a key objective, pursued primarily through communication and educational measures. At the level of the federal states, the shift towards a socially and ecologically equitable mobility culture is embedded in strategic frameworks, such as the coalition agreement in Rhineland-Palatinate and the State Mobility Act of Baden-Württemberg. The state of Baden-Württemberg contributes in particular through targeted campaigns, including the “RadKULTUR” initiative, which seeks to reshape the public image of cycling, and the “bewegt” program, which supports a range of marketing activities promoting public transport. Furthermore, at the municipal level, a variety of strategies are being implemented to encourage the development of a new, sustainable

mobility culture across Germany. A practical example of the application of this concept can be found in the city of Tuttlingen, Germany. In its 2035 Mobility Concept (Stadt Tuttlingen, 2022), the city explicitly refers to the need for a transformation of its local mobility culture. This transformation aims to move away from a car-centric model towards a multimodal, climate-friendly, and socially inclusive mobility paradigm. The process involves not only the population but also institutions, businesses, and public administrations. Importantly, the transformation of mobility culture in Tuttlingen is closely tied to public outreach and the implementation of concrete measures designed to support cultural and behavioral change.

Proximity City

The concept of the Proximity City has a long tradition in Germany. With the adoption of the (new) Leipzig Charter (BMI, 2020), interest in developing compact and mixed-use urban quarters has grown significantly. Already in the 1990s, a number of cities began to pursue the goal of becoming Proximity Cities. For example, the city of Tübingen implemented this approach in the French Quarter and the Loretto area. Today, the objectives of this model are anchored in a variety of planning documents—ranging from traditional transport development plans and urban development strategies to, more recently, Sustainable Urban Mobility Plans (SUMPs). These documents may not always explicitly reference the “Proximity City” or the “15-minute city” by name, but they frequently embody the underlying principles: compact urban form, mixed land uses, and polycentric development.

Examples include the city of Cologne, which promotes “compact and livable neighborhoods” as part of its urban strategy (Stadt Köln, 2023), and the city of Leipzig (Stadt Leipzig, 2018), which has adopted the Proximity City as a planning ideal for the development of new districts. Berlin also actively promotes this concept in its urban development plans. Additional cities that have explicitly embraced this planning paradigm include Bremen, Düsseldorf, Munich, Hamm, and again, Tübingen. The cities of Neumünster (Stadt Neumünster, 2023) and Lüneburg (Stadt Lüneburg, 2025) have gone a step further by explicitly adopting the goal of becoming a 15-minute city in its mobility plan.

Moreover, the Proximity City is embedded in Germany’s national sustainability strategy (Die Bundesregierung, 2024) and is supported by a growing body of planning guidelines and urban development visions (e.g. UBA, 2011; UBA, 2017; Scheler, 2019). Recently, both the Proximity City and the 15-minute city have become prominent topics of research at German universities and research institutions.

Youth Mobility

Youth Mobility is a relevant topic in both research and practice in Germany. Particular attention is given to what is known as school mobility management, which encompasses

various approaches to shaping and organizing school-related mobility. Schools and mobility are closely interconnected in several ways: schools are both places of learning and generators of traffic. The journey to school, in particular, represents an important experiential and educational space for children and adolescents to develop competencies in navigating their own mobility (ILS, 2006). It is important to distinguish between school mobility management and the broader concepts of mobility education and training for children and young people.

The (grey) literature on this subject is extensive and includes discussion papers, policy guidelines, informational brochures, and educational materials. These resources are produced and disseminated by a wide range of actors, including federal states, municipalities, regional authorities, research institutions, and advocacy organizations.

School Mobility Management

Key measures within the context of school mobility management in Germany include school route plans, school streets, designated parent drop-off zones (“Elternhaltestellen”), walking school buses (“Laufbusse”), and a variety of mobility-related action days. These initiatives aim to improve the safety, sustainability, and independence of student mobility.

In Berlin, school mobility management is legally anchored in the Berlin Mobility Act, the first mobility law enacted at the federal state level in Germany. The law mandates the development of a school-specific mobility management concept and requires the appointment of a full-time coordinator. Additionally, so-called children’s city maps (“Kinderstadtpläne”) are developed to promote independent mobility among schoolchildren.

The federal state of Hessen has established a dedicated Competence Center for School Mobility Management, which provides a range of informational materials, including a comprehensive handbook on school mobility management.

In North Rhine-Westphalia (NRW), the “Zukunftsnetz Mobilität NRW” offers extensive support services and practical guidelines, including a tailored school route planning guide for primary schools (Zukunftsnetz Mobilität NRW, 2017), as well as brief informational materials on school streets, walking buses, and a practical handbook on mobility education.

In Germany, a number of additional guidelines have been developed to support the implementation of school mobility management—among them, resources published by the Hamburg Metropolitan Region (Metropolregion Hamburg, 2025) and the Frankfurt Rhine-Main Region (ivm 2018). This topic has played a central role in Germany for several decades, as evidenced by the existence of handbooks and guidelines dating back as far as 2006 (e.g. UBA, 2006; ILS, 2006).

Moreover, specific guidance documents are available for a range of individual measures, such as school route plans (published by the Federal Highway Research Institute, BASt), designated drop-off zones for parents (e.g., by ADAC), walking school buses, and school streets.

In the context of school streets, a significant advancement was achieved at the federal state level in North Rhine-Westphalia (NRW), Germany. The state government issued a decree entitled “Closure of Roads to Motor Vehicle Traffic in the Vicinity of Schools” (Umweltministerium NRW, 2023) thereby establishing a uniform regulation for school streets across NRW. Prior to this decree, the implementation of school streets was generally possible; however, a legally secure and standardized framework was lacking. To address this gap, a legal expert opinion (Kidical Mass Bündnis, 2025) was commissioned to examine legally sound methods for implementing school streets. Following the issuance of the decree by the NRW Ministry of Transport, the process for municipalities to establish school streets was substantially simplified. Since January 1, 2024, twenty-four new school streets have been established within NRW. The city of Cologne is regarded as a pioneer in the implementation of school streets.

Additionally, the advocacy group “Kidical Mass” plays an active role in promoting safe and independent mobility for children and adolescents, particularly in relation to school streets and cycling buses. The organization also advocates for revisions to traffic legislation to better accommodate the mobility rights and safety of younger populations.

Mobility Education and Training

The topic of mobility education and training has played a significant role in Germany for many decades, and a wide range of grey literature exists on the subject. A comprehensive overview is provided, for instance, in a discussion paper published by TU Berlin (Schwedes et al., 2021). Initially, the focus was primarily on traffic education, especially concerning the safety of children and adolescents in road traffic. However, in recent years, the concept of mobility education has increasingly been integrated into the broader context of Education for Sustainable Development (ESD), gaining growing importance in Germany.

At the federal level, children and adolescents are identified as a key target group within the framework of the National Cycling Plan, with dedicated communication and educational campaigns designed to encourage cycling habits from an early age.

Mobility education and training are regulated by law or administrative directives in many German federal states. For example, in North Rhine-Westphalia (NRW) and Lower Saxony, mobility education is governed by ministerial decrees, while in Berlin it is enshrined in the state’s school law. These legal frameworks are accompanied by a wide array of educational and informational materials. In Lower Saxony, the so-called “Curriculum Mobility” provides an interdisciplinary and cross-school-type approach to integrating mobility topics into

education (Niedersächsisches Kulturministerium, 2015). In NRW, a dedicated practice handbook for mobility education has been developed (Spitta, 2022).

In addition, several advocacy organizations—such as the VCD (German Transport Club), BUND Berlin and the ADAC Foundation—offer further publications and practical resources to support the implementation of mobility education in schools.

The Federal Youth Strategy explicitly calls for the development of mobility services tailored to the needs of young people. Within the framework of a dedicated working group, a set of recommendations was formulated, to which the Federal Government subsequently issued an official response. Furthermore, the “Child-Friendly Cities” program provides nationwide support to municipalities in improving their services and planning processes in a child-sensitive manner, including through initiatives aimed at promoting sustainable mobility. In the state of Baden-Württemberg, recommendations for achieving greater equity in mobility for children, adolescents, and families were jointly developed in collaboration with various youth organizations. These recommendations set out concrete proposals for policy-makers and public administrations across a range of action areas.