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EMBEDDING EQUITY, DIVERSITY, INCLUSIVE REQUIREMENTS: TOWARD A NEW DEFINITION OF MOBILITY AS A RIGHT

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About GOLIA

GOLIA is a project focused on Governing, Optimising and Leveraging Innovation in cities through data-driven and social-optimum led approach. It aims to ensure an adaptive, accessible and just mobility system planned and governed with the help of digital assets, but also with the inclusive and co-creational policy making processes. Through the integration of STEM and SSH expertise and approaches, GOLIA will revolutionize spatial and mobility planning by co-developing and testing vision-led Social Optimum Mobility Index, a metric to assess urban mobility systems based not only on economic variables but also on indicators such as social support, healthy life quality or freedom to make life choices. The index will be location and time dependent to enable dynamic management of transport offer and spaces.

The project will analyse the policy making processes, citizen engagement practices and digital assets of the three Partner cities and with the gained knowledge, it will create an integrated, interdisciplinary and Adaptive Mobility Smart Governance Model. GOLIA aims at understanding to which extent and under which conditions, data generated by Smart Cities supported by AI-based tools novel communication and consultation channels and methodologies to engage citizens and stakeholders might foster the establishment of a new inclusive and adaptive mobility governance. GOLIA's goal is to identify governance models able to deliver policies resilient to political instability, extreme weather events, pandemics or any other more or less disruptive event, as they are co-developed, co-designed, and co-monitored by and for citizens and firms.

Deliverable Detailed Information

Key words

#Smart mobility, #infrastructure and networks (TEN-T, ITS, data), #road safety, #sustainable urban mobility plan, #TEN-T, #urban mobility flow, #data, #private/public cooperation, #responsibility

GOLIA Outputs Mapping to GA Commitments

[Guidance: This table should contain a description of how the deliverable maps to the work package and task requirements, that is how it addresses the deliverable and relevant task requirements set out in the GA.]

GOLIA GA Item	GOLIA GA Item Description	Document Chapter(s)	Justification
DELIVERABLE			
Embedding equity, diversity, inclusive requirements: toward a new definition of Mobility as a Right	GOLIA will first analyse the hierarchy of legal norms, i.e. the structured order of authority and importance of laws and regulations in the legal system under study, by conducting a critical analysis of relevant sources, including academic articles, legal textbooks, case law and regulatory documents. Understanding this hierarchy is crucial for legal professionals, legislators and citizens in order to navigate the legal system effectively.	<i>Ch. 5 Defining Mobility as a Right – Legal Interpretation and Principles</i> <i>Ch. 6 Multi-level Legal Analysis of Mobility as a Right</i>	Chapters 5 and 6 directly address the GA requirement by analysing the hierarchy of legal norms relevant to <i>Mobility as a Right (MaaR)</i> . Chapter 5 provides a structured examination of the legal order—constitutions, international treaties, EU law, national legislation, regulations, and administrative acts—and critically reviews academic doctrine, case law, and regulatory texts to position MaaR within this hierarchy. It also explains how EU law primacy and judicial interpretation shape the enforceability of mobility-related rights. Chapter 6 applies this hierarchical

			framework across European, national, and local levels, showing how EU mobility, accessibility, sustainability, and data regulations cascade into national laws and local implementation in Belgium, Italy, and the Czech Republic. This multi-level analysis demonstrates how the hierarchy of norms operates in practice and enables policymakers to understand how legal obligations interact across governance levels. Together, the chapters fully meet the GA requirement by offering a clear, critical, and operational understanding of the legal system relevant to MaaR.
TASK			
Embedding equity, diversity, inclusive requirements: toward a new definition of Mobility as a Right	A formalised definition of MaaR will be co-designed and will guide the evaluation of existing and new mobility models and solutions. To this end, GOLIA provides a new definition of MaaR.	Ch. 8 Towards a New Inclusive Definition of Mobility as a Right Ch. 10 Conclusions and Policy Recommendations	Chapters 8 and 10 meet the GA requirement by providing GOLIA's new co-designed definition of Mobility as a Right (MaaR) and by translating it into practical guidance for evaluating mobility models. Chapter 8 formulates the inclusive MaaR

			definition, while Chapter 10 outlines how this definition underpins policy recommendations and assessment criteria for existing and future mobility solutions.
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Table 1: Deliverable Adherence to Grant Agreement deliverable and work description

Executive summary

Mobility is no longer merely the physical ability to travel: it is a prerequisite for accessing essential rights and opportunities such as employment, education, healthcare, culture, and civic participation. The GOLIA Horizon Europe project builds on this understanding and proposes a paradigm shift in mobility governance by recognising Mobility as a Right (MaaR). This approach moves beyond the traditional view of transport as a service and reframes mobility as an entitlement grounded in equity, inclusion, and sustainability.

According to the inclusive definition developed in Chapter 7, MaaR is understood as the guarantee that every individual can access the essential resources of society through mobility systems that are physically, economically, and digitally accessible, inclusive, safe, sustainable, and non-discriminatory. This definition rests on three core pillars:

- Equity, both horizontal and vertical, ensuring that mobility systems respond fairly to diverse needs across territories and social groups;
- Accessibility, covering infrastructure design, digital and analogue information, affordability, and the removal of physical, cognitive, sensory, and economic barriers;
- Sustainability, aligning mobility systems with ecological transition goals, public health, and long-term social cohesion.

MaaR differs from concepts such as *transport poverty*: rather than diagnosing vulnerability, MaaR constitutes a proactive normative framework, establishing obligations for public authorities and mobility providers. It requires that mobility be designed for universal usability and inclusiveness, especially for people with disabilities, older adults, women, low-income households, migrants, rural residents, and digitally excluded users.

Recognising MaaR as a right carries significant legal and institutional implications. It implies positive obligations for states to ensure minimum service levels, integrate accessibility requirements into public service contracts, enforce non-discrimination, and ensure affordability. Operators must offer inclusive information, ensure compatibility with assistive technologies, and provide non-digital alternatives. MaaR also contributes to policy evaluation through its integration into the Social Optimum Mobility Index (SOMI), which enables measurement of equity, accessibility, and environmental performance.

Overall, MaaR provides a transformative policy framework for building mobility systems that are inclusive, resilient, and aligned with the EU's social justice, digital transition, and climate objectives. This deliverable establishes the conceptual, legal, and operational bases needed to support the integration of MaaR into national legislation, regional mobility plans, and local governance mechanisms, ensuring that mobility becomes a guaranteed right rather than a privilege.

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List of abbreviations and acronyms

Acronym	Meaning
AI	Artificial Intelligence
ASAP	As Soon As Possible
B2B	Business-to-business
B2C	Business-to-Consumer
CEF	Connecting Europe Facility
DGITM	Directorate-General for Infrastructure, Transport and the Sea
DIA	Digitální a informační agentura
DPA	Data Protection Authority
DPO	Data Protection Officer
EC	European Commission
ECHR	European Convention on Human Rights
ERTMS	European Rail Traffic Management System
GA	Grant Agreement
GDPR	General Data Protection Regulation
ITS	Intelligent transport systems
ITS	Intelligent Transport Systems
KoM	Kick-off Meeting
KPI	Key Performance Indicator
LEZ	Low Emission Zones
LOM	Mobility Orientation Law
MaaR	Mobility as a Right
MaaS	Mobility As A Service
MMTIS	Multimodal travel information services
NKOD	National open data catalogue
PRM	people with reduced mobility
PSO	Public service obligations
SNCB	Société nationale des chemins de fer belges
SUMP	Sustainable Urban Mobility Plan
TEN-T	Trans-European Transport Network
TFEU	The Treaty On The Functioning Of The European Union
TOA	Transport organising authorities

UOOU	Úřad pro ochranu osobních údajů
WP	Work Package
ZTL	Zona a Traffico Limitato

1 Introduction

1.1 Purpose of the deliverable

Task T1.3 of the GOLIA project is part of a research and innovation initiative aimed at redefining mobility as a fundamental right, in line with the project's overall objectives. GOLIA aims to propose a universal definition of the concept of **Mobility as a Right (MaaR)**, based on the principles of inclusion, democracy and transformative governance. This task explores the legal, social and political aspects of mobility, integrating the requirements of equity and diversity into transport systems. The concept of MaaR is introduced as a lever for transformation in modern mobility governance, in response to the challenges posed by digitalisation, smart cities and inequalities of access. This deliverable will analyse the legal implications of MaaR through a comparative study of European, national and local regulatory frameworks, identifying normative barriers and inconsistencies. It will also address the social and political dimensions of the right to mobility, particularly in relation to environmental impacts, collective costs and societal responsibilities.

1.2 Methodology and Approach

An interdisciplinary approach was adopted to examine MaaR, combining a **legal review**, **comparative analysis**, and **stakeholder perspectives**. Part of the allocated time was dedicated to conducting a thorough review of the doctrine and scientific articles collected by the project partners. This ensured that the analysis was grounded in the most relevant academic and legal sources.

Following this review, the partners engaged in consultations and reached an agreement on a structured plan to guide the work. This plan was proposed by **IDIT** and validated collectively, ensuring alignment with the task requirements and the objectives of the deliverable.

A collaborative working process was then implemented, enabling contributions from all partners and fostering interdisciplinary exchanges. This approach ensured that legal, technical, and operational dimensions were integrated into the analysis, and that the final structure of the deliverable accurately reflects the agreed methodology and the expectations outlined in the project framework.

1.3 Relation to Golia Framework

This study operationalizes GOLIA's vision by embedding the principles of inclusion, equity, and adaptability into the legal and governance analysis of Mobility as a Right (MaaR). By mapping normative frameworks and identifying barriers, it provides the foundation for designing mobility systems that are universally accessible, environmentally sustainable, and responsive to diverse user needs. This work also anticipates the requirements of Task 1.4 and SOMI development by defining conceptual and legal parameters, highlighting equity and accessibility metrics, and creating a multi-level governance map. These elements will enable the formulation of indicators and policy tools that translate MaaR into actionable strategies, ensuring coherence between European objectives, national legislation, and local implementation.

1.4 Legal analyst introduction

1.4.1 History and definition of mobility

"Since the dawn of time, humans and their objects have moved through various spaces (land, oceans, rivers, air) that they have gradually invested for different reasons (survival, conquest, war, tourism, work, leisure)¹ "

Mobility is a complex and multidimensional concept. According to the dictionary, it refers to *"the characteristic of something that can be moved or that moves in relation to a place or position² "*. But this definition does not suffice to capture its full richness.

Mobility is polysemic and varies according to discipline (anthropology, geography, urban planning, etc.), each of which has its own framework for interpretation.

It raises a central question: why do we move? There are many reasons: leisure, work, visits, shopping... Each movement involves a change of role or status.

A more comprehensive definition presents it as *"the social relationship to change of place, that is, the set of actions that contribute to the movement of people and material objects³ "*.

It is essential to distinguish between mobility and movement. For example, during the Covid period, movement was not prohibited, but the conditions of movement were, which affected mobility⁴.

Mobility depends on several characteristics. It is part of a specific infrastructure, adapted to the type of travel (leisure, work, tourism, etc.). It is linked to technologies that have made it possible to go further and in different ways (the wheel, the engine, automated vehicles). It influences lifestyle and citizenship: the right to travel depends on permits and regulations. It is affected by the social contract: a sustainable society's social contract will favour different forms of mobility than a profit-oriented society. It is limited by economic, physical or legal factors (nationality, borders, etc.).

In conclusion, mobility can be defined as the individual's ability to move around within a given social framework. It has two meanings:

- It is synonymous with movement, where citizens become mobile and active, rather than simply being transported. It involves helping them to move around using public or private means, by mobilising various levels (information, multimodality, urban transport plans, car-free days, etc.).
- It refers to the ability to be mobile, particularly for people with reduced mobility (PRM).

Mobility policy aims to integrate all forms of travel, promote the most environmentally friendly and rational ones, and even reduce the need for travel (e.g. teleworking). The right to transport is becoming a right to mobility, or even a right to non-mobility. Some go so far as to describe mobility as a "quasi-social right or quasi-human and civil right".

The right to mobility is historically linked to the recognition of freedom of movement, but its extension to a broader concept of social and territorial mobility is relatively recent.

The first recognition of the right to mobility appears in Article 13 of the Universal Declaration of Human Rights (1948)⁵, which enshrines freedom of movement and the right to leave any country, including one's own, and to return to it. This right is reiterated in Protocol No. 4 to the European Convention on Human Rights (ECHR)⁶, which prohibits arbitrary restrictions on freedom of movement within a State.

¹ Forget C., Salazar N.B., "Mobile lifestyles: an anthropological perspective," Rev. Anthropologie et Sociétés 2020, no. 2, pp. 15–40.

² www.cntrl/definition/mobility

³ Levy J., Transport, Mobility and Society, Encyclopedia Universalis (Accessed online 09/2025).

⁴ Fontenelle (DE) L., Martin S., The right to mobility. LexisNexis, 2024, p.11.

⁵ <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

⁶ <https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatyenum=005>

Political scientist Catherine Wihtol de Wenden⁷ has played a major role in conceptualising the right to mobility as a universal human right. She emphasises that in a globalised society, the ability to move freely determines access to other fundamental rights: work, education, health and culture. She refers to a historic reversal in migration patterns: whereas in the 18th century, the right to leave was restricted and the right to enter was unrestricted, the 21st century has seen a democratisation of departure but increasing restrictions on entry.

In the European Union, the right to mobility has been consolidated through the free movement of persons, enshrined in the Treaties (Article 45 TFEU) and enriched by the case law of the Court of Justice of the European Union (CJEU). The CJEU ruling in *Grzelczyk*⁸ describes European citizenship as a "*fundamental status of Union citizens*", paving the way for broader recognition of derived rights, including mobility.

Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States is a key step in formalising the right to mobility within the EU.

At the global level, since the 2000s, the United Nations has been reflecting on the global governance of migration, integrating mobility into global public goods. Under the impetus of Kofi Annan, the right to mobility is gradually being considered as a pillar of human dignity and social justice.

1.4.2 Issues

"Our society is based primarily on a model of vehicle-based mobility, in which transport and infrastructure play a decisive role. It is also characterised by a remarkable densification of flows generated by the acceleration of globalisation since the end of the Second World War and its economic, tourist and climatic consequences."

Today, mobility is therefore a driving force from both an economic and social perspective. But while mobility has many advantages, it also has costs for society in terms of air and noise pollution, which have an impact on health, as well as in terms of road accidents and traffic congestion. In addition, there are disparities in access and a certain degree of precariousness in terms of transport. The question that arises is how to ensure that mobility is no longer a privilege for some but a right for all. How can we achieve the goal of a right to mobility and sustainable mobility while considering the different needs of users and offering equal accessibility to all users in terms of transport that respects the environment?

1.4.3 Outlines

This deliverable is structured into three main parts that collectively establish, analyse, and operationalise the concept of Mobility as a Right (MaaR).

The first part presents the conceptual and legal foundations of MaaR, tracing the historical evolution of mobility rights and examining connections with fundamental rights and the principles of equity, accessibility, and sustainability.

The second part develops a multi-level legal analysis, reviewing European, national, and local frameworks to identify obligations, governance mechanisms, and normative gaps that influence the real-world implementation of mobility rights.

Finally, the third part offers a new inclusive and operational definition of MaaR, co-designed within the GOLIA project, and provides concrete recommendations for embedding this right into policy design,

⁷ Wihtol de Wenden, C. (2022). The right to mobility as a human right. *Relations*, (819), 33–35.

⁸ [CJEU, 20 Sept. 2001, case C-184/99.](#)

governance models, and planning tools, including its integration into the Social Optimum Mobility Index (SOMI).

2 Mobility as a Right – Legal Interpretation and Principles

The purpose of this section is to define the “Maar” from a legal perspective. It will determine its status in the legislation of the target countries, as well as its position in the hierarchy of norms and the implications of a possible recognition of the Maar as a fundamental right.

2.1 Concept of MaaR

The concept of Mobility as a Right refers to the implementation by the State, local authorities and civil society of conditions that enable everyone to access the resources of the territory (employment, education, health, culture) through modes of transport that are open to all. It is in line with fundamental rights such as freedom of movement and the right to equality.

Mobility is not just about physical movement; it is a prerequisite for social and professional integration. Without mobility, access to rights and opportunities is limited. For example, lower-income households are often forced to live on the outskirts of cities because housing is more affordable than in city centres.

However, the lack of alternatives to car use, such as public transport services, cycling infrastructure and shared transport, raises questions of equity⁹. This is why it is important to ensure fairness in transport, accessibility for all and clean, sustainable mobility.

The concept of Mobility as a Right (MaaR) is a transformative approach to transport planning and governance that views the ability to move as a foundational entitlement necessary for participating fully in society.

It requires a multi-level governance approach, whereby the state, regional and local authorities, alongside civil society implement conditions that enable everyone to access the territory's resources (employment, education, health and culture) via inclusive means. This concept aligns with fundamental rights such as freedom of movement and equality. In short, accessibility + inclusiveness = freedom.

According to the Public Transport and Shared Mobility EGUM report¹⁰, the concept must be “*one of the pillars of future transport systems. A strategic vision aiming to ensure inclusive mobility where all citizens are taken into consideration, regardless of their physical and mental capabilities or social and economic background*”.

MaaR directly supports several EU strategies and targets, such as the Sustainable and Smart Mobility Strategy and the Urban Mobility Framework, which promote safe, accessible, and inclusive mobility through sustainable modes. Key initiatives include the European Accessibility Act for digital services and a 2025 recommendation on tackling transport poverty by ensuring affordable mobility no matter where you live. MaaR equally helps address the social dimensions of climate policies while supporting the EU 's digital and green transitions. In addition, MaaR aligns with the EU 's territorial cohesion objectives by addressing mobility disparities between urban, suburban and rural areas.

Ensuring that everyone can benefit from mobility requires addressing diverse needs. This includes creating safe, walkable and bike-friendly environments, promoting mixed-use planning, and supporting compact urban development connected to accessible and reliable public transport. These considerations are

⁹ Fandio C., Maheu M., Nicolas J.P., Bouzouina L. and Déprés C. (2020), Taking equity into account in urban mobility policies. The cases of Clermont-Ferrand and Lyon, Canadian Journal of Regional Science Revue canadienne des sciences regionales.

¹⁰ EGUM, 2022. How to guarantee public transport inclusiveness considering aging, gender, disabilities and reduced mobility. Public Transport and Shared Mobility EGUM Subgroup, Topic 4A.

especially crucial for people with reduced mobility — including older adults, individuals with motor disabilities, and those with visual or hearing impairments — for whom accessibility is essential to autonomy. Shared mobility solutions can also help meet travel needs, particularly in areas where public transport is not economically viable, while supporting an inclusive mobility system for all users.

Mobility as a Right (MaaR) stands on the heels of various rights frameworks introduced in transport literature, including but not limited to Transport Justice¹¹, Mobility Justice¹², and related concepts of spatial justice stemming from the foundational Right to the City and in particular, the “*the right to access*” the city, as put forth by the French theorist, Henri Lefebvre. Despite well-known limitations of rights-based discourses in evaluating urban policy, due to their instability, indeterminacy, reification, and limited political utility¹³ such discourses remain valuable as normative ideals against which the actions of the state, capital, and other powerful actors can be assessed and held accountable. While rights rhetoric often fails to disrupt entrenched bureaucratic and policy paradigms, “*rights talk*” continues to function as a critical political tool for progressive mobilization, framing mobility rights not as a fixed solution but as an opening toward a new urban politics.

Transport poverty, a widely discussed diagnostic condition in the context of mobility globally today, focuses specifically on accessibility to different transport modes in intersection with socioeconomic vulnerability. In the EU context, transport poverty is frequently discussed in relation to policies aimed at achieving a just transition to climate neutrality, as systemic challenges such as car dependence and inadequate public transport infrastructure disproportionately affect marginalized populations. The European Commission defines transport poverty as “[...] *individuals and households’ inability or difficulty to meet the costs of private or public transport, or their lack of or limited access to transport needed for their access to essential socioeconomic services and activities, considering the national and spatial context*”¹⁴. While a useful framework that covers transport affordability, mobility poverty and accessibility poverty, transport poverty remains inconsistently defined and insufficiently addressed, despite affecting anywhere from 10% to 90% of the population depending on the specific definition¹⁵.

The topic of justice has increasingly attracted attention from transportation scholars in recent years. There are different approaches to justice, including distributive, procedural, epistemic, restorative justice. By far, the distributive justice approach is the most frequently used in the transport context¹⁶.

One of the most prominent theories is Karel Martens’ work on transport justice¹⁷ as a normative understanding of transport poverty. In transport and mobility, several justice frameworks have emerged in the past few years that contest current paradigms of transport provision and offer a foundation for the emerging concept of Mobility as a Right (MaaR). Transportation justice theory interrogates how transport systems distribute access to opportunities, decision-making power, and social recognition, shifting normative focus away from aggregate efficiency or mobility gains toward questions of fairness and equity.

11 Martens, K., *Transport Justice*, Routledge 2016, 256 pages.

12 Sheller M., *Mobility Justice: The Politics of Movement in an Age of Extremes*, Verso, 2018, 240 p.

13 Mitchell, D. (2003). *The right to the city: Social justice and the fight for public space*. Guilford Press.

14 Cludius, J., Noka, V., Unger, N., Delfosse, L., et al., *Transport poverty: definitions, indicators, determinants, and mitigation strategies : final report*, European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Publications Office of the European Union, 2024. <https://data.europa.eu/doi/10.2767/0662480>. (Accessed on 06.2025).

15 Lucas K, Mattioli G, Verlinghieri E, Guzman A (2016), “*Transport poverty and its adverse social consequences*”. Proceedings of the Institution of Civil Engineers - Transport, Vol. 169 No. 6 pp. 353–365, doi: <https://doi.org/10.1680/jtran.15.00073>

16 Amorim, J.d.M.; De Abreu E Silva, J.; Gonçalves, J.M. “Equity and Spatial Justice Perspectives in Transportation”. *Urban Sci.* 2025, 9, 163. <https://doi.org/10.3390/urbansci9050163>

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Within this framework, Karel Martens' central theoretical intervention is the redefinition of the primary transport good as accessibility rather than mobility, arguing that the ethical relevance of transport lies in people's ability to reach essential destinations, not in movement per se¹⁸. By extension, Martens criticises cost-benefit analyses and transportation modelling, presenting the arguments for need-based models as opposed to demand-based approaches¹⁹. Martens' work and transportation justice theory, in general, is criticised for their issues of paternalism and the difficulty of defining a sufficient level of accessibility, as well as for overlooking questions about systems of production²⁰.

Decades earlier, the French theorist, Henri Lefebvre, published his monumental *Le Droit à la Ville* (The Right to the City)²¹, causing ripple effects in the Anglo-American world of urban theory when it was translated into English three decades after it was originally published in 1968²². According to Lefebvre, the right to the city '*manifests itself as a superior form of rights*', a right which contends that all citizens share a right to participate in the production of urban spaces²³. Considered one of the primordial rights frameworks in urban planning, Lefebvre's concepts provided a solid framework to advocate for a diverse range of minority groups urban rights²⁴. Fundamentally, Lefebvre raised the issue of social justice to understand who produces (and reproduces) the city. He called for a "*transformed and renewed right to urban life*" and his ideas were widely reinterpreted to address concerns and trajectories of the 21st century city. This right to space production is threefold: a right to access (the city), to be (in the city), and to participate (in the production of the city). The right to public space in the Lefebvrian sense is thus not understood merely as binary physical access to existing urban resources, but as a continuous, processual right to claim and shape access to what the city offers, extending beyond static notions of use or permission²⁵.

In contrast, Mobility Justice frames movement and immobility as politically produced across multiple scales (body, street, city, nation, planet), foregrounding power, borders, race, gender, and colonial histories as contending forces that shape it. It extends beyond urban transport systems to migration regimes, logistics, and uneven freedoms of movement²⁶. As phrased by Cheung (2020), Sheller's mobilities framework emphasises "*the multiscalar and entangled dimensions of how power and inequality inform the governance and control of movement, how unequally mobile subjects are created, and how a justly mobile future can be imagined*"²⁷. In a nutshell, Sheller argues that a localised understanding of mobility justice through the lens of urban accessibility is shortsighted and masks larger global inequalities in mobility rights as exercised transnationally and at global scale.

¹⁸ Martens, K. Justice in transport as justice in accessibility: applying Walzer's 'Spheres of Justice' to the transport sector. *Transportation* 39, 1035–1053 (2012). <https://doi.org/10.1007/s11116-012-9388-7>

¹⁹ Vanoutrive, T. & Cooper, Erin, 2019. "How just is transportation justice theory? The issues of paternalism and production," *Transportation Research Part A: Policy and Practice*, Elsevier, vol. 122(C), pages 112–119.

²⁰ *Ibid.*

²¹ Lefebvre H., *Le Droit à la ville*, Economica, 3ème Edition, 15 avril 2009, 135 pages.

²² Mitchell, D. (2003). *The right to the city: Social justice and the fight for public space*. Guilford Press.

²³ Pugalís L, Giddings B (2011) A renewed right to urban life: A twenty-first century engagement with Lefebvre's initial 'cry'. *Architectural Theory Review* 16(3): 278–295.

²⁴ Mayer, M., "The 'Right to the City' in the context of shifting mottos of urban social movements. *City*, 13(2–3), 2009, p. 362–374. <https://doi.org/10.1080/13604810902982755>

²⁵ *Ibid.*

²⁶ Sheller M., *préc.*

²⁷ Cheung, N. (2020). Mobility Justice: The Politics of Movement in an Age of Extremes: Mimi Sheller. *The AAG Review of Books*, 8(3), 138–139. <https://doi.org/10.1080/2325548X.2020.1760059>

Mobility as a Right must encompass a wider vision of fairness that looks at equality from multiple perspectives. The concept of fairness in transport should consider equality of treatment, equality of opportunities or equity, and dimensions of social justice²⁸. When conceptualising a progressive definition of MaaR, it is also important to disentangle the right to mobility from the assumption that more mobility is inherently valuable. In her 2000 work, Elizabeth Pritchard critiques postmodern feminist theory for reproducing a binary that equates mobility with liberation and development, and stasis with oppression or underdevelopment. She shows how normative Enlightenment and development tropes rely on a root metaphor of mobility as “an escape or exit from a locatedness that is deemed to be restrictive” (Pritchard, 2000), thereby rendering locatedness itself problematic. This rhetoric of exit as freedom - and mobility as its proxy - ultimately constrains the political imagination, obscuring the possibility of a world in which people enjoy not only the right to move, but also the right to remain rooted within a local environment, i.e. voluntary immobility.

Immobility is an integral component of sustainable mobility thinking and practice. To advance a balanced notion of MaaR, mobility theory must recognise that privileged forms of “leisure” mobility exist alongside exploitative “worker” mobility and must challenge the notion of the “consumption of distance”^{29 30}. As Pritchard³¹ argues, in a world where hypermobility is a chronic problem –signified at the global scale by increasing refugeeism, but also at the local scale by an increasing need to commute large distances daily—the notion of mobility as a symbol of freedom is oppressive.

The concept of Mobility as a Right thus needs to, first, free mobility from the notion of freedom and consider compulsory mobility as a societal ill. In line with sustainable consumption research and mobility theory, an emphasis on proximity planning, telecommuting, and related voluntary immobility practices is essential to a comprehensive and socially conscious narrative of Mobility as a Right (MaaR).

2.1.1 Equity

Equity can be defined as “the morally just distribution of benefits and burdens among members of society³². It differs from equality, which assumes that everyone is at the same starting point and faces the same circumstances and challenges. Equity recognises the shortcomings of this universal approach and understands that different levels of support must be provided to ensure equitable outcomes”³³.

Equity differs from equality in that it refers to a fair distribution that considers the needs and circumstances of everyone, rather than simply aiming for uniformity.

²⁸ Hail, Y., & Mcquaid, R. (2021). The Concept of Fairness in Relation to Women Transport Users. *Sustainability*, 13(5), 2919. <https://doi.org/10.3390/su13052919>

²⁹ Rau, H., & Mögele, M. (2025). A new direction for mobility? Integrating immobility into sustainable consumption corridors. *Consumption and Society*, 1–18. <https://doi.org/10.1332/27528499Y2025D000000050>

³⁰ Toivanen, A.-L., & García, P. (2024). Mobility, Immobility and the City: Theoretical Orientations and Concepts. In P. García & A.-L. Toivanen (Eds), *Urban Mobilities in Literature and Art Activism* (pp. 1–24). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-42798-5_1

³¹ Pritchard, E. A. (2000). The Way Out West: Development and the Rhetoric of Mobility in Postmodern Feminist Theory. *Hypatia*, 15(3), 45–72. <https://doi.org/10.1111/j.1527-2001.2000.tb00330.x>

³² Martens, K. AND Lucas, K., “Measuring Transport Equity”, Elsevier, 2019.

³³ Leaven L. et al, “Inclusive and Accessible Transportation for All: Strategies for Integrating Equity” in Transportation Research, 2025.

Equity vs. equality:

- **Equality: everyone has the same theoretical access to transport (same fares, same infrastructure).**
- **Equity: it is recognised that certain groups (people with disabilities, rural residents, low-income households and less digitally skilled) need specific measures to achieve real and effective mobility.**

Equity refers to a fair and appropriate distribution of benefits and burdens among members of society, considering the specific needs of everyone. It differs from equality, which proposes identical treatment for all, without considering individual differences.

Horizontal equity aims to achieve a fair distribution between people with similar needs³⁴, for example by improving services in disadvantaged neighbourhoods and reducing disparities in transport quality and frequency³⁵. However, achieving horizontal equity in transport networks requires overcoming certain challenges such as pollution, congestion and lack of multimodal integration.

Vertical equity³⁶ considers differences in abilities and needs (income, disability, etc.). Its aim is to compensate for inequalities through targeted resources (subsidies, reductions, adapted season tickets). It requires targeted planning and multimodal systems that are accessible to all. Academic literature largely agrees that low-income households and people who cannot drive are most likely to be disadvantaged; among these, children, young people and older people, single-parent families, low-skilled workers, ethnic minority groups and people with physical or mental disabilities are generally identified as being the most underserved. Women are also likely to be more disadvantaged than men within each of these social groups and may be particularly affected by certain issues such as sexual harassment during travel, which may also affect other vulnerable groups such as lesbian, gay, bisexual and transgender (LGBT) people³⁷.

In conclusion, horizontal equity is about treating people with similar needs and abilities equally, while vertical equity is about distributing impacts among groups with different abilities and needs.

Equity in transport aims to correct inequalities rather than enforce uniformity. Without it, innovations mainly benefit already privileged groups, widening gaps in accessibility and opportunities³⁸.

In law, "*equity*" is the moderating principle of objective law according to which everyone is entitled to fair, equal and reasonable treatment³⁹. Equity and the rule of law both aim at justice. Equity, as the pursuit of ideal justice, tempers the rigidity of the law by taking situations into account, while the law remains formal and general. Judges apply the law first, but may use equity to temper specific cases, particularly in arbitration. Equity thus remains an essential complement to the law, without replacing it. Equity is a principle that aims to ensure fair and reasonable treatment, considering the circumstances of a case, rather than applying the law in a rigid and impersonal manner. It complements the law without replacing it. The role of a judge is to settle disputes based on specific and applicable rules of law. For example, the

³⁴ *Ibid.*

³⁵ Manaugh K et al., "Integrating Social Equity into Urban Transportation Planning: A Critical Evaluation."

³⁶ Leaven L. et al, préc.

³⁷ Martens, K. and Lucas, K., *Measuring Transport Equity*, Elsevier, 2019.

³⁸ Zhou, Q.F.; Dai, D.H.; Wang, Y.W.; Fan, J.S., "Decade-Long Changes in Disparity and Distribution of Transit Opportunity in Shenzhen China: A Transportation Equity Perspective."

<https://onlinelibrary.wiley.com/doi/10.1155/2018/7127342> (Accessed on 09/2025).

³⁹ Dictionary of Private Law, by S. Braudo, Honorary Advisor to the Court of Appeal of Versailles.

French Civil Code refers to equity to assess compensation or fill legal gaps⁴⁰. In certain limited cases, the law makes room for the concept of equity by allowing the judge to decide "*ex aequo et bono*" (according to what is fair and good), i.e., in, setting aside legal rules when he or she considers that their strict application would have unequal or unreasonable consequences⁴¹.

In practice, there are two forms of equity:

- Objective equity consists of a set of principles that judges develop in parallel with the rules of law to soften the application of overly rigid laws. For example, in situations where the literal application of a rule could lead to injustice, the judge may refer to equity to adjust the rule without transgressing it.
- Subjective equity allows judges to adapt the rule of law to the particularities of a case, considering the specific situation of the parties involved. This case-by-case interpretation allows judges to nuance the application of the rule of law to better meet the requirements of justice. For example, in a dismissal case, a judge could adjust the consequences according to the personal situation of an employee, while remaining within the legal framework.

In arbitration, the parties may ask the arbitrator to judge in equity rather than in law. In Belgium and Italy, the parties may ask an arbitrator to rule "in equity", without strictly applying the legal rules, to find a fair and appropriate solution. This is a common solution in family and commercial disputes.

Certain legal measures aim to correct de facto inequalities (e.g. quotas for gender equality), which is a fair approach rather than a strictly egalitarian one.

In short, equity is a quest for ideal justice that corrects or supplements the law to avoid overly rigid decisions. It does not replace the law but allows it to be adapted to specific cases.

Distinction from the rule of law:

- **The rule of law is formal and codified, applied in a general manner.**
- **Equity nuances this rigidity to make the solution more humane and adapted to specific situations.**

2.1.2 Accessibility

Accessibility is the ability of individuals and households to access essential services (education, employment, health) within a reasonable time frame, considering the quality and convenience of transport options and inclusiveness, particularly for people with disabilities or reduced mobility.

Physical accessibility depends on adapting infrastructure (ramps, lifts, etc.), but also on the availability of clear and accessible information. The aim is to promote independence, equal opportunities and the well-being of all citizens. Young and older people are more dependent on public transport, walking and cycling, as car ownership and the proportion of young and older people with driving licences are relatively low. As a result, the two ends of the age spectrum tend to travel less often than other age groups and are more likely to make local journeys⁴². Transport is often cited as one of the most significant problems faced by persons with disabilities, as the inaccessible design of the road environment and public transport vehicles,

⁴⁰ See, for example, French Civil Code, Art. 1135.

⁴¹ Dictionary of Private Law, op. cit.

⁴² Martens, K. And Lucas, K., Measuring Transport Equity, Elsevier, 2019.

as well as the attitude of drivers and other passengers when boarding or alighting from vehicles, can severely limit the ability of persons with disabilities to travel. Transport costs are also generally higher for persons with disabilities due to their heavy reliance on expensive modes of transport such as taxis⁴³.

Financial and non-financial practices targeting persons with disabilities can be identified, particularly in Belgium, in the Flanders region. The authorities are focusing on combating exclusion and raising awareness of the barriers that persons with disabilities encounter in public transport. For example, the DIGNITY project⁴⁴ supports public and private mobility providers in designing digital products and services that are accessible to as many people as possible. The aim of this project is to improve the quality of life of persons with disabilities and to help policy makers formulate strategies that promote innovation in digital transport while responding to global, social, demographic and economic changes. The focus is on commuters with disabilities, with a view to improving the availability of information to the public and the overall efficiency of the service, but also on the needs of different categories of commuters with disabilities. In addition, the product will be tested in four EU cities and regions (Barcelona, Ancona, Tilburg and Flanders) and, based on the information gathered, the final application will be refined to meet multiple needs⁴⁵.

Affordability refers to the possibility of using transport without excessive economic constraints. Transport costs have a greater impact on low-income populations.

Equitable access to transport is guaranteed by ensuring that it is affordable. This involves implementing policies aimed at subsidised public transport (reduced-price tickets and season tickets) or developing active mobility infrastructure such as cycle paths and footpaths.

Accessibility in law, particularly in the European Union, is a fundamental legal principle that aims to ensure that all persons, especially those with disabilities, have access to goods, services, infrastructure and rights on an equal basis. It is a legal obligation for states and businesses, with monitoring by the competent authorities. The European Union has reinforced this principle through several texts, for example:

The Charter of Fundamental Rights of the EU (Article 26) recognises the right of persons with disabilities to measures ensuring their independence and integration. European Directive 2019/882⁴⁶ (European Accessibility Act), which came into force on 28 June 2025, imposes accessibility requirements for products and services. These products and services must be designed in such a way that they can be used by as many people as possible, regardless of their abilities. This requires clear interfaces, alternatives to visual or audio content, and compatibility with assistive technologies. This directive aims to harmonise standards between Member States and remove physical and digital barriers.

Accessibility is a corollary of equity, it aims to ensure that all citizens, regardless of their means or abilities, can move around and access essential services under fair and appropriate conditions.

2.1.3 Sustainability

Sustainable mobility is a legal and urban planning concept that refers to an approach to travel that aims to reduce its environmental impact while meeting the social and economic needs of citizens. In other words, sustainable mobility is the set of transport modes and policies that meet travel needs while

⁴³ *Ibid.*

⁴⁴ <https://www.dignity-project.eu/>

⁴⁵ European Commission, Final report, Transport poverty: definitions, indicators, determinants, and mitigation strategies, 2024.

⁴⁶ Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements applicable to products and services, OJ L 151, 7.6.2019, pp. 70-115.

reducing their negative impacts on the environment, society and the economy⁴⁷. It aims to reconcile accessibility for all, reduction of CO₂ emissions, energy efficiency and quality of life. Sustainable mobility combines two concepts: mobility, i.e. the ability to move around, historically linked to transport; and sustainability as a principle of development that respects the environment, resources and future generations. It aims to gradually replace the concept of "transport" with that of "mobility", which is broader and more integrated into public policy.

The sustainable nature of mobility is twofold. It involves not only the integration of an environmental dimension aimed at preserving a certain state of the environment, but also the long-term reproduction of this state⁴⁸. Sustainable mobility is a model aimed at developing a transport system that integrates environmental concerns and limits the negative externalities generated by transport, by promoting alternatives to polluting modes of transport. The sustainability of this model requires reflection on the role of public and private actors as well as on land use planning⁴⁹.

Sustainable mobility implies that travel is assessed in its entirety. Due to this comprehensive nature, it is a development model that *"is not only a cost or a source of emissions"* but *"also a condition for social integration and participation in wealth creation"*⁵⁰. Fundamentally, this model aims to make mobility more accessible to everyone⁵¹. Added to this are the economic challenges associated with this accessibility, requiring the pursuit of financial sustainability and a balance between individual costs and benefits.

Within EU law, the concept of sustainable mobility is based on a series of principles, strategies and regulations aimed at making travel more environmentally friendly, fairer and more efficient.

The EU's overall objectives are:

Climate neutrality by 2050: in line with the Paris Agreement, the EU is aiming for a 90% reduction in greenhouse gas emissions in the transport sector by 2050⁵².

A 55% reduction in emissions by 2030 compared to 1990 levels, as part of the 'Fit for 55' legislative package.

In 2021, the Council of the EU adopted a strategy for sustainable and smart mobility. This strategy aims to decarbonise all modes of transport (road, rail, sea and air), promote green, smart and resilient mobility, and strengthen connectivity between European regions while reducing dependence on fossil fuels⁵³. The sustainable mobility plan is one of the most important tools in EU law for achieving sustainable mobility. It should be noted that, in its 2013 communication⁵⁴, the European Commission highlighted the need to move away from the compartmentalised approaches of the past and develop comprehensive strategies based on more sustainable modes of transport, such as cycling, walking, *car sharing* and, above all, public

⁴⁷ Sadaune A., "Esquisse d'une définition de la mobilité durable" (*Outline of a definition of sustainable mobility*), in "Durabilité & Droit" (*Sustainability & Law*), Presses de l'Université Toulouse Capitole, 2025, pp. 217-230.

⁴⁸ Gudmundsson H., *Giving meaning to concepts. Sustainable mobility and indicator systems in transport policy*, RISS, 2003/2, No. 176, pp. 221-242.

⁴⁹ Pelgrims C., "Infrastructures: urban planning, networks and temporalities," in *History of Transport and Mobility in France*, p. 147.

⁵⁰ Orfeuil J.P., "Towards climate-friendly transport ?", *Revue Projet*, 2015/1, no. 344, pp. 27-36.

⁵¹ Kahn R., "Les paradigmes économiques de la mobilité durable" (The economic paradigms of sustainable mobility), in *Les faux-semblants de la mobilité durable. Social and Environmental Risks*, H. Reigner, T. Brenac (eds.), Sorbonne Press, "Mobilities and Societies" series, 2021, p. 33: "mobility is first and foremost a matter for the individual before being socially organised".

⁵² [Clean and sustainable mobility](#)

⁵³ *Ibid.*

⁵⁴ <https://eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=CELEX:52013DC0913>

transport. The Commission has implemented guidelines⁵⁵ and created an Urban Mobility Observatory⁵⁶ to help different cities in Europe draw up their sustainable mobility plans⁵⁷.

To achieve this, the EU has put in place regulatory and policy tools. These include Regulation (EC) No 1370/2007⁵⁸, which regulates public rail and road transport services, and Directive (EU) 2022/362, which regulates the taxation of heavy goods vehicles and eco-taxes⁵⁹. Following a proposal from the European Commission, the European Parliament adopted the Mobility Package in July 2020. In terms of sustainable mobility, the Mobility Package contributes to reducing CO₂ emissions in road transport, encouraging the use of cleaner vehicles and optimising logistics flows to limit unnecessary journeys. It was validated by the CJEU in 2024.

This is reflected, for example, in the requirement for local authorities to use zero-emission urban buses in the EU by 2035⁶⁰, the financing of cycle paths and footpaths by European funds⁶¹, and the creation of multimodal systems to facilitate modal shift (walking, cycling, public transport)⁶².

Sustainable mobility is based on key principles:

1. **Reducing greenhouse gas emissions: promoting low-pollution transport (cycling, walking, public transport, electric vehicles).**
2. **Reducing dependence on fossil fuels: encouraging renewable energies and alternative fuels.**
3. **Accessibility for all: ensuring that everyone can get around, regardless of their age, disability or economic situation.**
4. **Improving quality of life: reducing noise pollution, urban congestion and road accidents.**
5. **Optimisation of infrastructure: developing efficient, interconnected and well-maintained transport networks.**

The right to mobility is a "*right to...*", but is it a fundamental right, i.e. an enforceable right? The enforceability of a right is a legal concept which means that the right has been recognised for the individual, who can "enforce" it against an authority responsible for implementing it. In other words, the individual has legal remedies to obtain the effective implementation of their right. The public authority has an obligation to achieve a result. To answer the question of whether it is a fundamental right, we must first define what a fundamental right is and its place in the hierarchy of norms.

⁵⁵ <https://eur-lex.europa.eu/legal-content/FR/TXT/HTML/?uri=CELEX:52013DC0913>

⁵⁶ https://urban-mobility-observatory.transport.ec.europa.eu/index_en?prefLang=fr

⁵⁷ Stella Richter, P. and Parisio, V., "Chapter 7 - Italy" in Renders, D. et al. (eds.), *La mobilité urbaine / Urban Mobility*, 1st edition, Brussels, Bruylant, 2020, pp. 309-321.

⁵⁸ [Regulation \(EC\) No 1370/2007](#) of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road, *OJ L 315*, 3.12.2007, pp. 1-13.

⁵⁹ Directive (EU) 2022/362 of the European Parliament and of the Council of 24 February 2022 amending Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520 as regards the charging of vehicles for the use of certain infrastructures, *OJ L 69*, 4.3.2022, pp. 1-39.

⁶⁰ [Regulation \(EU\) 2024/1610](#) of the European Parliament and of the Council of 14 May 2024 amending Regulation (EU) 2019/1242 as regards the strengthening of CO₂ emission performance standards for new heavy-duty vehicles, *OJ L*, 2024/1610, 6.6.2024.

⁶¹ [Europe is committed to developing cycle paths.](#)

⁶² Multimodal transport hubs: a tool for modal shift in cities and sparsely populated areas, [CEREMA](#), (Accessed on 10/2025).

2.2 Legal Scope of the MaaR

2.2.1 Definition and applicable texts

What is a fundamental right? A fundamental right is an essential freedom or guarantee recognised for every individual, considered indispensable to human dignity and life in society. These rights are protected by higher legal texts, such as constitutions, international treaties or European charters⁶³.

These fundamental rights are:

- Universal: they apply to everyone, without distinction.
- Inalienable: they cannot be taken away from a person.
- Indivisible: all fundamental rights are interlinked.
- Justiciable: they can be invoked before a judge.

In practice, fundamental rights serve to monitor the legality of laws and administrative acts, protect citizens from abuse of power, and guide the interpretation of judges.

However, they are not absolute. Although they are essential to human dignity and protected by higher laws, they may be regulated, limited or balanced against other rights or public interests. For example, freedom of expression may be limited to protect privacy or prevent hate speech. Judges often must arbitrate between two conflicting fundamental rights. The European Convention on Human Rights (ECHR) and the Charter of Fundamental Rights of the European Union provide that certain rights may be restricted by law for legitimate reasons (public safety, public order, health, etc.) and if the restriction is proportionate. In European Union law, Article 52 of the Charter of Fundamental Rights specifies that "*any limitation must respect the essence of the right and be necessary and proportionate to the objective of general interest or the protection of the rights of others*".

The restriction of a fundamental right is possible under certain strict conditions, governed by the principle of proportionality, which is a pillar of European and constitutional law. This is a legal rule that allows a fundamental right to be restricted, provided that the restriction is:

- Provided for by law: The restriction must have a clear and accessible legal basis.
- Pursue a legitimate aim: For example: public safety, health protection, public order, rights of others.
- Necessary and appropriate: The measure must be indispensable to the achievement of the objective pursued.

⁶³ Constitution; Charter of Fundamental Rights of the European Union; European Convention on Human Rights (ECHR); Universal Declaration of Human Rights (UN).

A concrete example of a fundamental right in mobility. The right to accessible public transport for persons with disabilities is recognised as fundamental by the Charter of Fundamental Rights of the European Union (Article 26: integration of persons with disabilities) and the United Nations Convention on the Rights of Persons with Disabilities⁶⁴. If a person in a wheelchair wishes to use a city bus, but the bus is not equipped with an access ramp, the bus stop is not adapted, or the staff refuses access, this may constitute a violation of the fundamental right to equal access to transport. As a result, the person may refer the matter to the competent authorities. The transport operator may be ordered to bring its facilities into compliance. The judge may directly invoke European or international law, even against local regulations. This fundamental right is not absolute (it may depend on technical or budgetary constraints), but it requires the authorities to ensure progressive development and active non-discrimination.

The right to mobility is not explicitly recognised as an autonomous fundamental right in European legal texts. However, it is closely linked to several fundamental rights recognised by European treaties, the Charter of Fundamental Rights of the European Union, and certain national laws:

- **Freedom of movement and residence:** Article 45 of the Charter of Fundamental Rights of the EU guarantees all EU citizens the right to move and reside freely within the territory of the Member States. This right is an attribute of European citizenship (Article 20 TFEU).
- **Right to dignity, equality and inclusion:** The right to mobility is often considered a right of access to other fundamental rights: employment, education, health, culture, civic participation, etc. It is therefore instrumental: without mobility, the effective exercise of many other rights is compromised.
- **Right to autonomy and non-discrimination:** The right to accessible public transport for persons with disabilities is recognised as fundamental by the Charter of Fundamental Rights of the European Union (Article 26: integration of persons with disabilities) and the United Nations Convention on the Rights of Persons with Disabilities⁶⁵.

The right to mobility is not a fundamental right in European texts, but it is closely linked to freedom of movement (a recognised fundamental right), European citizenship and the effectiveness of other fundamental rights. Some legal scholars classify it as a generic right because mobility determines access to other social and civil rights⁶⁶. Institutions such as the Federal Institute for Human Rights (IFDH)⁶⁷ in Belgium are calling for the explicit inclusion of the right to mobility in the Constitution to strengthen its legal and symbolic significance.

⁶⁴ Convention on the Rights of Persons with Disabilities, 12 Dec. 2006.

⁶⁵ [Convention on the Rights of Persons with Disabilities](#), 12 Dec. 2006.

⁶⁶ Le breton E. "From the right to mobility to social cohesion", Europa Symposium, 30 Nov. 2018, Limoges
<https://www.europaong.org/wp-content/uploads/2018/12/Eric-LE-BRETON.pdf> (accessed on 11/2025).

"In a mobile society such as ours, we must consider mobility as the right of rights. We all have a right to housing, a right to health, culture, education... But we must also be able to travel to the places where these rights are implemented, and for that, we need to be mobile. In a mobile society, mobility is a fundamental right."

⁶⁷ <https://www.federalesinstitutmenschenrechte.be/sites/default/files/2022-08/IFDH%20-%202021%20-%20Avis%20sur%20le%20droit%20%C3%A0%20la%20mobilit%C3%A9.pdf>

2.2.2 MaaR in target countries

The approach to mobility as a right differs between Belgium, Italy and the Czech Republic. Belgium enshrines it in its constitutional and social framework, while Italy integrates it into its constitutional framework and sustainable mobility policies. In contrast, the Czech Republic approaches it mainly through access to public transport and European obligations, without explicitly recognising it as a fundamental right.

2.2.2.1 Belgium

In Belgium, the right to mobility is not yet explicitly enshrined in the Constitution. However, in 2023, the Federal Institute for the Protection and Promotion of Human Rights (IFDH) issued an official opinion considering its inclusion in Article 23 (economic and social rights)⁶⁸. The IFDH believes that explicitly enshrining the right to mobility in the Constitution would increase its visibility and enforceability, provide better protection for vulnerable people and be consistent with international standards and other fundamental rights. However, this enshrinement must be done with caution and must meet certain criteria, such as consistency with existing rights and the fundamental nature of human dignity. Furthermore, its content should be precise to enable concrete implementation through effective enforcement mechanisms.

Before any inclusion in the Constitution, the IFDH recommends organising a broad consultation with specialised bodies and civil society to enrich the debate and strengthen support.

Finally, if the inclusion were to take place, the IFDH recommends clarifying the scope of the right to mobility in the explanatory memorandum and explicitly incorporating the concept of accessibility into the proposed text. With this opinion from the IFDH, **Belgium is a pioneer in Europe** about the possible inclusion of the MaaR in its Constitution.

Similarly to Italy, Belgium has a minimal service guarantee as well during strikes: the “*Act on the continuity of rail passenger transport services in the event of strike*”⁶⁹.

2.2.2.2 Italy

Although the Italian Constitution protects freedom of movement (Art. 16), the right to mobility is not enshrined in it.

During the pandemic, Italy restricted freedom of movement through a national lockdown and a system of zones (red/orange/yellow), sometimes rendering mobility “*virtually non-existent*”. These measures, adopted by decrees of the Prime Minister based on decree-laws and health orders, sparked a debate on the principle of legality (Articles 13 and 16 of the Constitution) and proportionality about Article 32 (health)⁷⁰. The Constitutional Court has accepted restrictions on mobility on condition that they are regulated by law, justified and strictly proportionate in time. Otherwise, they are subject to censure for lack of legal basis and disproportionate nature under the Italian Constitution⁷¹ and ECHR standards⁷².

⁶⁸ Federal Institute for the Protection and Promotion of Human Rights, Opinion No. 2/2021, 30 April 2021.

⁶⁹ It is explained on the SNCB website: <https://www.belgiantrain.be/en/travel-info/train-network-travel-info/strike>.

⁷⁰ Tribunale di Pisa, sentenza n° 1842/2022: criticism of the DPCM for violating fundamental rights.

⁷¹ Constitutional Court, judgment 198/2021.

⁷² ECHR, 23 February 2017, De Tommaso v. Italy.

Today, Italian doctrine considers mobility to be a fundamental right associated with dignity and equality⁷³. According to this doctrine, the right to mobility also derives from Article 2, which recognises the inviolable rights of the human person. This allows for a more positive and active interpretation of the right to mobility in relation to economic, social and cultural development⁷⁴. The legal debate focuses on the need to explicitly recognise the right to mobility as a fundamental right, rather than as a mere freedom of movement. This would imply a positive obligation on the part of the State to guarantee access to transport for all. In 2021, the Ministry of Infrastructure became the Ministry of Sustainable Mobility, integrating ecological transition into transport. The government has also invoked the "*right to mobility*" to limit certain transport strikes in the name of continuity of public services.

2.2.2.3 Czech Republic

Although the Czech Constitution of 1993 and the Charter of Fundamental Rights guarantee freedom of movement (Art. 14), the right to mobility is not explicitly recognised as an autonomous social right.

The Czech Republic guarantees freedom of movement and residence through the Charter of Fundamental Rights and Freedoms (Art. 14), which is incorporated into the Constitution. This right is universal for citizens and legal residents, with possible restrictions by law on grounds of security, public health or the rights of others. The right to mobility is a right linked to freedom of movement and choice of residence. It is also found in the National Plan for the Promotion of Equal Opportunities for Persons with Disabilities, which provides access to public transport and infrastructure adapted for persons with disabilities⁷⁵. Examples of accessibility measures and practical implications include the removal of architectural barriers in public transport and fare reductions for persons with disabilities (TP, ZTP, ZTP/P cards).

However, restrictions on mobility are possible in the event of a state of emergency, pandemic or for reasons of national security. These must be proportionate and provided for by law⁷⁶.

Although the right to mobility is recognised indirectly, it is not yet considered as a fundamental right. European initiatives and reports by the EESC (European Economic and Social Committee) encourage Member States, including the Czech Republic, to strengthen the inclusiveness and accessibility of their mobility policies.

73 Romana, N., 'Il diritto alla mobilità nel contesto costituzionale italiano e la crisi pandemica' [The right to mobility in the Italian constitutional context and the pandemic crisis], *Rivista di Diritto dell'Economia, dei Trasporti e dell'Ambiente*, vol. XXII, 2024, iris.unipa.it; accessed 10/2025.

74 Ibid.

75 <https://vlada.gov.cz/assets/ppov/vvozp/dokumenty/Narodni-plan-2021-2025-revize-2022.pdf>

76 Charter of Fundamental Rights and Freedoms, Art. 4

Country	Legal framework	Public policy
Belgium	Not yet enshrined in the Constitution but planned for inclusion in Article 23	Differentiated regional policies (Brussels, Wallonia, Flanders)
Italy	The Constitution (Art. 16) guarantees freedom of movement, but there is no enshrinement of the MaaR	Creation of the Ministry of Sustainable Mobility (2021) Restriction of certain strikes in the name of the 'right to mobility'
Czech Republic	MaaR is not explicitly mentioned as a fundamental right in the Constitution	European initiatives and reports by the EESC (European Economic and Social Committee) encourage Member States, including the Czech Republic, to strengthen inclusion and accessibility in mobility policies ⁷⁷ .

Figure 1 Comparative table

While Belgium and Italy are moving towards explicit legalisation of the right to mobility, the Czech Republic favours a more pragmatic approach, focused on improving the accessibility of public transport.

2.3 Legal Effects of Recognizing MaaR

This section presents Kelsen's pyramid, which organises the hierarchy of legal norms to ensure coherence within the legal system. At the top stands the Constitution, followed by international treaties and European Union (EU) law, then national legislation, government regulations, and finally administrative acts. Lower-level norms must comply with superior norms, and courts can invalidate any act that contradicts a higher rule.

⁷⁷ [Fundamental rights and the rule of law – Czech Republic – Country visit report](#)

Kelsen's Pyramid

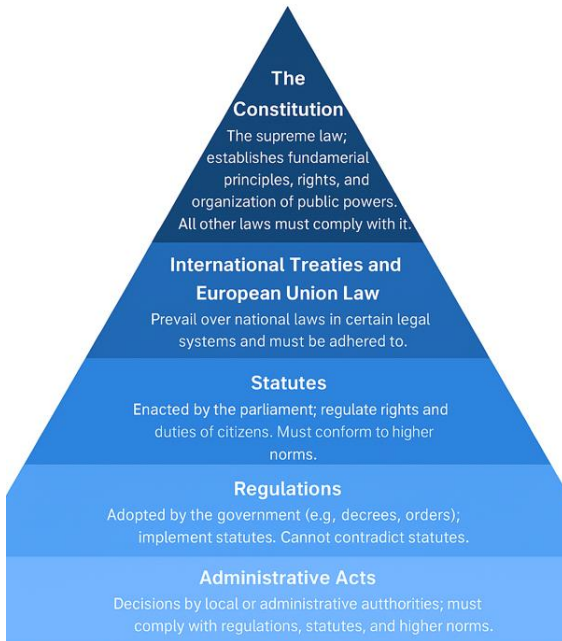


Figure2 Kelsen Pyramid @ade with copilot

International treaties and EU legislation take precedence over national laws. EU regulations apply directly in all Member States, while directives require national transposition. Public authorities and citizens rely on this hierarchy to challenge unlawful administrative acts, interpret rules, or defend rights. National courts may also refer questions to the Court of Justice of the European Union (CJEU) when clarification of EU law is needed.

In mobility policy, EU rules impose accessibility requirements for people with disabilities or reduced mobility. If national law contradicts EU obligations, it can be annulled and replaced by EU law. Member States that fail to comply may face sanctions from the CJEU or liability before national courts⁷⁸.

Ensuring Accessible Mobility Through the Hierarchy of Norms

Suppose a city introduces a local regulation allowing public bus operators to deploy new vehicles without wheelchair ramps. This by-law conflicts with Regulation (EU) 2019/2144, which sets mandatory accessibility requirements for buses, and with Regulation (EU) No 181/2011, which guarantees free assistance for passengers with reduced mobility.

An association representing disabled passengers brings the matter to the administrative court. The court finds that the local rule violates EU law. Following the primacy of EU law, the court annuls the local regulation and prohibits bus operators from using non-accessible vehicles. The city must amend its regulation and ensure compliance. If the State fails to enforce these obligations, the CJEU may sanction it.

⁷⁸ Refer to Appendix 1 for an overview of the primacy of European law over national legislation in Golia's target countries.

Recognising the right to mobility as a fundamental right would have a structuring effect on the entire legal system, both in domestic law and in European and international law. It would involve transforming this right from a social or functional right into an enforceable subjective right, with direct consequences for public policy, litigation and related rights.

2.3.1 The legal effects of recognising a fundamental right

The right to mobility is already mentioned in several texts. One example is Article 13 of the Universal Declaration of Human Rights (1948): "*Everyone has the right to leave any country, including his own, and to return to his country,*" or the French Transport Code, in particular Article L1111-1, which recognises the right of every person, including those with disabilities, to travel and choose their means of transport⁷⁹. However, enshrining the right to mobility as a fundamental right would have several effects.

Citizens could invoke this right in court to challenge obstacles to their movement (territorial exclusion, lack of public transport, discrimination).

Direct enforceability refers to the ability of a legal text to be invoked directly before a court, without the need for it to be transposed or clarified by national law.

A standard is directly enforceable when it:

- Creates clear rights or obligations for individuals,
- Is sufficiently precise and unconditional,
- Can be used as a legal basis in a dispute.

If the right to mobility were enshrined in a constitution or international treaty, it could be directly invoked by a migrant or refugee before a judge. This would also make it possible to challenge an administrative measure (visa refusal, expulsion, etc.) based on this right. The state would be required to guarantee accessibility to transport, particularly for vulnerable people (disability, precariousness, rurality).

Mobility is an essential factor in social inclusion, access to rights and citizen participation. If it were recognised as a fundamental right:

- States would have an obligation to guarantee everyone the possibility of moving freely, safely and without discrimination. This would imply a profound transformation of public policies on transport and accessibility.
- States would be obliged to incorporate the right to mobility into their fundamental texts, to legislate by adopting laws guaranteeing universal accessibility to transport, and to create mechanisms for monitoring and recourse.

In practice, it will be up to States to use urban planning tools to implement accessibility plans, which they will be responsible for financing by setting up dedicated budgets or subsidies for inclusive infrastructure and services.

⁷⁹ C. Transp. Art. L1111-1 to L1121-2.

Recognising the right to mobility as a fundamental right would impose greater responsibility on States in terms of accessibility. This would require a transformation of public policies, the mobilisation of resources and strong political will to guarantee everyone, without distinction, the right to move freely and with dignity.

A judge could censor decisions or regulations that contravene this right, as demonstrated by the case law of the CJEU on free movement. The judge plays an essential role in guaranteeing respect for fundamental rights, particularly in terms of free movement and accessibility. They may be called upon to censor administrative decisions or regulations that contravene these rights, based on constitutional principles, European standards and case law. This judicial review is part of a drive to strengthen the protection of vulnerable people, particularly when an administrative act creates discrimination or hinders access to public services, such as transport.

A prime example of this approach is the *Metock* judgment⁸⁰ handed down by the CJEU in 2008. In this case, the CJEU ruled that Member States could not restrict the free movement of third-country nationals married to European citizens, even if they had entered the territory illegally. This case law has had a considerable impact on national policies, reminding us that rights derived from European Union law take precedence over conflicting national legislation.

A judge could therefore rely on this case law to annul administrative acts that would infringe on rights guaranteed by mobility law. This power of censorship helps to strengthen the rule of law and ensure the consistent application of the principles of social justice and inclusion.

Transport companies, local authorities and private actors would also be required to respect this right in their practices. Horizontal effect refers to the ability of fundamental rights to apply not only to public authorities (vertical effect), but also to private actors – companies, associations, local authorities – in their relations with each other or with users. In the field of transport accessibility, this means that private transport operators, local authorities and infrastructure managers are legally obliged to respect the rights of persons with disabilities or vulnerable persons to equitable mobility.

Article 26 of the Charter of Fundamental Rights of the European Union recognises the right of persons with disabilities to benefit from measures ensuring their independence and participation in social life. Since the Treaty of Lisbon, this Charter has had binding force equivalent to that of the Treaties (Article 6 TEU), which means that it can be invoked in disputes, including between private individuals, where the dispute relates to EU law⁸¹.

However, the case law of the CJEU⁸² has limited the direct invocability of the principles of the Charter in horizontal disputes by refusing to recognise a direct horizontal effect for certain social rights. Nevertheless, legal doctrine emphasises that this position is evolving and subject to interpretation, particularly in areas where the Union is actively legislating, such as transport and accessibility⁸³.

Directive (EU) 2019/882⁸⁴ on the accessibility of products and services imposes specific obligations on private companies and local authorities in the transport, digital and public services sectors. It provides for penalties in the event of non-compliance, including for transport operators.

⁸⁰ [CJEU, 25 July 2008, case C-127/08](#).

⁸¹ LumareT C., *The horizontal effect of the EU Charter of Fundamental Rights*. Panthéon ASSAS, University of Paris, Thesis supervised by De Frouville O. (Thesis defended in March 2015).

⁸² CJEU, 15 January 2014, case C-176/12

⁸³ Tiniere R., 'The invocability of the principles of the Charter of Fundamental Rights in horizontal disputes', *RDLF* 2014, Chron. No 14.

⁸⁴ [Directive \(EU\) 2019/882](#) of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements applicable to products and services, OJ L 151, 7.6.2019, pp. 70–115.

2.3.2 MaaR: relationship with other fundamental rights.

Although MaaR has yet to be explicitly enshrined in constitutional texts, it is recognised as a fundamental right in several legal instruments and by legal doctrine. In France, it is defined in Article L1111-1 of the Transport Code as *“the right of every person, including those with disabilities, to move freely and choose their means of transport”*.

According to legal doctrine⁸⁵, MaaR must be considered a universal human right, essential to the exercise of other fundamental rights such as the right to education, work, health and culture. This right is also mentioned in constitutional discussions in Belgium, where the Federal Institute of Human Rights (IFDH) proposes its inclusion in Article 23 of the Constitution.

MaaR may conflict with other freedoms, in particular the right to strike, which is enshrined in France. The right to strike, enshrined in paragraph 7 of the Preamble to the 1946 Constitution, is also a fundamental right. However, its exercise may conflict with the right to mobility, particularly in the public transport sector. The *Dehaene* case law⁸⁶ lays the foundations for reconciling the right to strike with the continuity of public service, a principle of constitutional value recognised by the Constitutional Council.⁸⁷ The administrative judge affirms that the right to strike may be limited to preserve public order and the essential needs of the population. At the European level, the CJEU ruling in *Viking Line*⁸⁸ illustrates this tension. The Court recognises the right to strike as fundamental but affirms that it may be restricted if it disproportionately affects freedom of establishment and movement within the internal market. This balancing of rights shows that mobility, even when fundamental, cannot be absolute. Similarly, in the *Guzzardi v. Italy* case⁸⁹, the ECHR acknowledged that restrictions on freedom of movement may be justified by security imperatives, if they are proportionate and provided for by law. Judges play a key role in this regulation, ensuring that limitations are proportionate and justified by the general interest.

Political scientist Catherine Wihtol de Wenden defends the idea of a universal right to mobility, which she describes as a *“right of rights”*, essential to individual autonomy and human dignity. However, she acknowledges that these right faces legal, political and material obstacles, particularly in the context of migration and security surveillance⁹⁰. For her part, Ségolène Barbou des Places highlights the limits of EU law on free movement, analysing the *Metock*⁹¹ and *Payir*⁹² judgments, which show that even rights derived from European citizenship can be restricted by Member States on legitimate grounds⁹³.

The right to mobility must be articulated with other fundamental rights in a logic of flexible prioritisation and balancing. Fundamental freedoms can be “adjusted” to form a coherent system, where no freedom systematically takes precedence over another, but where their exercise is regulated to avoid arbitrary conflicts. The balance between the right to mobility and the right to strike is based on the implementation

⁸⁵ Wihtol de Wenden, C. (2022). The right to mobility as a human right. *Relations*, (819), 33–35.

⁸⁶ [CE 7 July 1950, Dehaene](#). The Council of State had to determine whether a public servant could exercise their right to strike and under what conditions this right could be restricted in the context of public service.

⁸⁷ [C. const. Decision No. 79-105 DC of 25 July 1979](#).

⁸⁸ [CJEU, 11 Dec. 2007, case C-438/05](#)

⁸⁹ [ECHR, 6 November 1980, GUZZARDI v. Italy](#).

⁹⁰ Wihtol de Wenden, C. (2022). The right to mobility as a human right. *Relations*, (819), 33–35.

⁹¹ CJEU, 25 July 2008, case C-127+/08, prec.

⁹² [CJEU, 10 July 2008, Case C-33/07](#).

⁹³ Girard, C., *“The conflict of freedoms: Can fundamental rights be ‘adjusted’?”* *Archives de philosophie*, Vol. 84(4), 9–28. 2021. <https://doi.org/10.3917/aphi.844.0009> (Accessed on 11/2025).

of minimum services in public transport, the legal framework for requisitioning measures and a judicial review of excessive infringements of right.

Thus, the recognition of the right to mobility as a fundamental right requires increased vigilance regarding its normative and operational limits. It requires a balanced approach, based on the principle of proportionality, to avoid conflict with other rights that are equally essential in a democratic society.

3 Multi-level Legal Analysis of Mobility as a Right: the EU Level

This section presents and analyses the measures taken in favour of MaaR at the EU, national and regional levels. It also provides examples from other parts of the world.

The European Union is committed to making mobility more accessible and equitable by implementing concrete initiatives aimed at reducing costs and improving infrastructure for all citizens (3.1) but it also ensures that mobility is sustainable (3.2).

3.1 More equitable mobility.

Ensuring an equitable mobility, that is, affordable and non-discriminatory mobility, is a central objective of transport policy. This involves offering fare solutions adapted to all users, developing inclusive infrastructure for people with reduced mobility and ensuring a balanced distribution of services across the territory. The challenge is to reduce inequalities in access to transport, while promoting social and territorial cohesion.

From a legal perspective, freedom of movement, enshrined in Articles 3 and 21 of the Treaty on the Functioning of the European Union (TFEU) and the Charter of Fundamental Rights, is complemented by the EU's commitment to comply with the United Nations Convention on the Rights of Persons with Disabilities, which establishes accessibility as a general principle. In this regard, Directive (EU) 2019/882, known as the "*European Accessibility Act*", which entered into force on 28 June 2025, imposes harmonised requirements to ensure the accessibility of products and services, particularly in transport, by removing national disparities and establishing control mechanisms by the competent authorities.

Article 2.2 of Regulation (EU) 2023/955⁹⁴ establishing the Social Climate Fund defined "transport poverty" at Union level. It is not just a question of financial resources but also of availability. Indeed, this article refers to "the inability or difficulty of individuals and households to meet the costs of private or public transport, or their lack of access or limited access to the transport necessary to access essential socio-economic services and activities, taking into account the national and spatial context".

Real mobility depends on access to affordable and reliable modes of transport. Precarious transport (high cost, lack of infrastructure, poorly served areas) creates a social barrier that limits the exercise of the right to mobility, especially for people on low incomes or living in rural areas. Accessibility is not only about price, but also physical availability (network, frequency) and compatibility with specific needs (people with disabilities, families). Equitable mobility is affordable and accessible in terms of availability and inclusivity. All are a concern for the EU.

3.1.1 Promoting the affordability of mobility

In Recommendation (EU) 2025/1021⁹⁵, the European Commission called on Member States to integrate the fight against transport poverty into their anti-poverty strategies, thereby ensuring affordable, accessible and equitable mobility, while respecting climate objectives. In this text, the Commission notes a significant disparity between Member States (up to 34% of poor households do not own a car in Romania,

⁹⁴ Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060, [OJ L 130, 16.5.2023, p. 1](#), ELI: <http://data.europa.eu/eli/reg/2023/955/oj>.

⁹⁵ [Recommendation](#) (EU) 2025/1021, *supra*.

Finland and Slovakia in particular). Rural areas, islands and outermost regions are particularly affected by transport insecurity.

The Commission justifies its recommendations by referring to the right established in Principle 20 of The European Pillar of Social Rights, which states *that "everyone has the right to access essential services, including transport, and those in need should receive support to access these services."*⁹⁶ Adopted in November 2017 by the European Commission, Parliament and Council, the European Pillar of Social Rights is a political initiative aimed at strengthening the social dimension of the European Union. It is not legally binding but serves as a compass to guide social and employment policies. It is based on 20 key principles, organised into three chapters⁹⁷ : Equal opportunities and access to the labour market (lifelong learning, gender equality, equal opportunities, active employment support); Fair working conditions (secure and adaptable employment, fair wages, information on employment conditions, protection in the event of dismissal, work-life balance) and Social protection and inclusion (childcare, minimum income, unemployment benefits, inclusion of people with disabilities, access to healthcare and essential services).

One of the tools for combating precariousness is the Social Climate Fund (2026-2032)⁹⁸, which was created to mitigate the social effects of the energy transition, particularly in transport. Financed by carbon market revenues, it finances temporary direct aid and sustainable investments, such as energy renovation, the development of affordable public transport, clean mobility and recharging infrastructure.

Each Member State must develop a social climate plan, in consultation with local stakeholders, to effectively target needs and maximise the impact of measures. Each of these plans must include measures and investments aimed at reducing energy and mobility poverty, (...) clean mobility, and offering temporary direct aid (capped at 37.5% of the total cost of the plan). These measures and investments must remain consistent with the EU's climate objectives, national energy and climate plans, renovation plans and plans for a just transition. Finally, they are the result of public consultation with local authorities, social partners and civil society. In Belgium, the plan focuses among other things on support for sustainable mobility (electric vehicles, public transport)⁹⁹. In France, approximately €1.2 billion per year is earmarked to finance energy vouchers, renovations and clean mobility solutions¹⁰⁰. In Italy, measures have been put in place to accelerate the transition to electric buses.

3.1.2 Ensuring availability

Ensuring the free movement of people and goods, territorial cohesion and economic competitiveness include the establishment of a trans-European transport network (TEN-T) to improve interconnections and the reliability of services.

The **Trans-European Transport Network (TEN-T)**¹⁰¹ is a strategic programme of the European Union aimed at connecting the transport infrastructure of Member States to create an integrated, multimodal network. It includes roads, railways, waterways, ports and airports. Its objective is to remove bottlenecks,

⁹⁶ Recommendation (EU) 2025/1021, supra.

⁹⁷ https://employment-social-affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union/european-pillar-social-rights-20-principles_en.

⁹⁸ Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060, OJ L 130, 16.5.2023, p. 1.

⁹⁹ <https://climat.be/politique-climatique/belge/nationale/plan-social-climat>.

¹⁰⁰ <https://ccl-france.org/europe-fonds-social-pour-le-climat-scf/>.

¹⁰¹ Reg. (EU) 2024/1679 of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013, OJ L, 2024/1679, 28 June 2024.

fill in missing links and ensure full interoperability between modes of transport through priority corridors connecting major cities and logistics hubs. The regulation also provides for the deployment of intelligent traffic management systems and digital solutions for passenger booking and information, contributing to the harmonisation of services. In addition, it requires infrastructure to be accessible to people with reduced mobility and connected to rural, island or peripheral areas to reduce territorial inequalities and ensure social and economic cohesion.

Priority is given to non-polluting modes of transport, such as rail and maritime, to reduce emissions. To this end, the regulation makes it mandatory to install charging points for electric vehicles and infrastructure for alternative fuels along the corridors.

Regulation (EU) 2024/1679 on the Trans-European Transport Network (TEN-T) enshrines the principle of universal accessibility and territorial cohesion in Articles 3, 18 and 28. Firstly, it requires isolated regions – mountainous areas, islands and sparsely populated areas – to be connected to major economic centres, thereby ensuring equal access to essential services.

TEN-T facilitates cross-border travel for citizens and businesses by integrating multimodal corridors that combine rail, road, river and sea transport (Article 10). This intermodality allows travellers to move easily from train to plane or bus via connected hubs, reducing the need to reload.

Finally, by promoting public and sustainable transport, the regulation helps to reduce dependence on private cars, which is crucial for people without vehicles or with reduced mobility. These provisions are in line with the European Union's objective of promoting inclusive mobility, in accordance with the Green Deal and fundamental social rights.

Article	Effect on inclusion
Art. 3	Objective of inclusive mobility and territorial cohesion
Art. 10	Multimodal corridors to facilitate travel
Art. 18	Accessibility for persons with reduced mobility and adapted infrastructure
Art. 28	Connecting isolated areas to major economic centres

Figure 3 Summary table of articles and effects on inclusion

In summary, the TEN-T is the backbone of European mobility, ensuring connectivity, sustainability and accessibility. It creates a system where all citizens, including those in rural areas or with reduced mobility, can benefit from smooth and affordable mobility.

Member States are encouraged to develop **Sustainable Urban Mobility Plans (SUMP)**¹⁰² to ensure the availability of public transport, both in terms of network and frequency, and to ensure inclusive mobility. These plans must provide comprehensive coverage of urban and peri-urban areas, frequencies adapted to population density, and solutions for areas with poor service, in accordance with Regulation (EC) No 1370/2007 relating to public passenger transport services by rail and road, which authorises the imposition of public service obligations to ensure continuity of service. SUMPs must also integrate intermodality (bus, tram, bicycle, carpooling) and digital systems for planning and passenger information. Although there are no direct penalties for implementing SUMPs, the conditionality of European funding

¹⁰² See below for more information p.79

(ERDF, Connecting Europe Facility) and the possibility of infringement proceedings in the event of non-compliance with accessibility or TEN-T obligations reinforce their legal scope.

Element	EU requirement
Network	Urban coverage + peri-urban interconnection
Frequency	Adapted to density (e.g. 10 min centre, 30 min outskirts)
Accessibility	People with reduced mobility, rural areas, on-demand solutions
Intermodality	Multimodal hubs, integration of cycling/walking
Planning	Mandatory PMUD for functional urban areas
Green transition	Emissions reduction (-90% by 2050)

Figure 4 Summary table of keys obligations

Concrete examples:

- France: Regions impose a minimum frequency for intercity buses (e.g. 2 return trips/day in rural areas) as part of public service contracts.
- Germany: The Länder guarantee regional trains every 60 minutes, even during off-peak hours, through subsidies.
- Spain: Madrid includes bus lines with a maximum frequency of 10 minutes during peak hours, and multimodal hubs connected to the metro in its PMUD.
- Italy: Subsidies for daily ferries between Sardinia and the mainland to ensure territorial continuity.
- Belgium: Regional plans (Brussels, Wallonia) require integrated bus-tram networks with regular timetables and single pricing.

The aim of Regulation (EC) No 1370/2007¹⁰³ is to guarantee accessible and regular public transport services, while respecting competition. It applies to passenger transport by rail and road (bus, tram, metro, train). It aims to guarantee the continuity, accessibility and quality of transport services, which are considered essential for citizens' mobility. This mechanism aims to reconcile the general interest with the principles of competition and transparency, avoiding market distortions while ensuring fair mobility. Any compensation or exclusive rights must be governed by a public service contract¹⁰⁴. Public authorities may impose public service obligations (PSOs) and grant financial compensation or exclusive rights to operators. In practice, this involves rigorous governance¹⁰⁵, financial audits and coordination with national mobility policies. The Commission is responsible for monitoring compensation in the public transport sector, which must comply with EU rules on state aid¹⁰⁶.

¹⁰³ Reg. (EC) No 1370/2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70, OJ L 315, 3.12.2007, pp. 1–13.

¹⁰⁴ In France, the regulation has led to the widespread use of public service contracts for transport networks (buses, trams, metros), with regulated award procedures and transparent compensation. This development has been incorporated into French law (Law No. 2009-1503) to comply with the European regulation.

¹⁰⁵ CJEU, 27 October 2016, *Hörmann Reisen GmbH*, Case No. C-292/15: German contracting authorities published a contract notice for bus transport services, limiting subcontracting to 30% of the kilometres travelled. The Court of Justice of the EU was asked to determine whether this restriction was in line with Regulation 1370/2007 and the public procurement directives. This judgment illustrates the application of the procurement rules and public service obligations laid down in the regulation.

¹⁰⁶ CJEU, 19 Sept. 2018, *Buonotourist v Commission*, Case No C-586/18

Transport organising authorities (TOAs) are public entities (or sometimes delegated structures) responsible for planning, organising and financing public transport services (buses, trams, metros, regional trains). They apply Regulation (EC) No 1370/2007. They are not directly created by a European rule. They are defined by national legislation (e.g. in France: The Mobility Orientation Law).

However, the EU imposes obligations that influence their role:

- Regulation (EC) No 1370/2007: This regulates public service contracts for land transport (buses, trams, trains). Member States must designate a competent authority to:
 - Define public service obligations (frequency, accessibility, fares).
 - Conclude contracts with operators.
- Accessibility Directive 2019/882: TAOs must ensure that the services they organise comply with accessibility standards.
- TEN-T policy and sustainable mobility: Member States must guarantee territorial continuity, which requires TAOs capable of planning and coordinating networks.

The EU does not impose the creation of AOTs or their structure. It requires Member States to have a competent authority to enforce its rules (public service, accessibility, continuity). Each country chooses its own organisation (in France: regions, metropolitan areas, urban communities).

Country	Level of TAs	National legal basis	Link to EU rules	Examples of competences
France	Regions, metropolitan areas, urban communities	Mobility Orientation Law (LOM)	Application of Regulation (EC) No 1370/2007 and the Accessibility Directive	Defining bus/train services, pricing, accessibility
Germany	Länder Zweckverbände (inter-municipal associations)	+ Federal law on public transport	Public service contracts in accordance with Regulation 1370/2007	Regional rail bus planning, coordination
Spain	Autonomous communities + municipalities	Sustainable Mobility Act	Compliance with public service obligations and accessibility	Urban bus frequency, fare integration
Italy	Regions + municipalities	Highway Code + regional legislation	Application of EU rules on territorial continuity (ferries, trains)	Organisation of regional lines, ferry subsidies
Belgium	Regions (Flanders, Wallonia, Brussels)	Regional mobility decrees	Public service contracts and accessibility requirements imposed by the EU	Management of TEC, De Lijn and STIB networks
Czech Republic	Regions + municipalities	Public Transport Act (Zákon o veřejné dopravě)	Application of Regulation 1370/2007 for contracts	Organisation of intercity buses, regional trains

Figure5 Comparative table of transport organising authorities in certain EU countries.

In the European Union, the organisation of transport authorities varies from country to country. In France and Italy, responsibility is highly regionalised: the regions play a central role in the planning and financing of rail and intercity services. For example, in Belgium, the distribution is based on linguistic regions, with separate public operators: De Lijn for Flanders, TEC for Wallonia and STIB/MIVB for Brussels, each responsible for its own urban and regional network. In Germany, Zweckverbände play a key role. These are inter-municipal associations, i.e. associations of several municipalities or districts (Kreise) that pool their expertise to organise public transport at regional level. They define public service obligations, award contracts and coordinate timetables. Finally, in the Czech Republic, the model is mixed: the regions (kraje) coordinate rail and interurban services, while the cities manage their urban networks. For example, the Moravian-Silesian Region supervises regional lines in cooperation with operators such as České dráhy (Czech Railways).

Transport organising authorities (TOAs) have legal powers to ensure the continuity and quality of public passenger transport services. In accordance with the provisions of Regulation (EC) No 1370/2007, they carry out their tasks in accordance with the principles of transparency, proportionality and non-discrimination. TOAs are required to determine the nature and scope of the transport services needed to meet users' mobility needs. This responsibility includes network planning, timetable setting and coordination of different modes of transport, within the framework of a sustainable mobility policy. Pursuant to Article 3 of the regulation, public transport authorities may impose public service obligations to guarantee service to low-profit areas, continuity of service and affordable fares. These obligations must be formalised in a legal act or a public service contract. Public transport authorities are required to provide clear and accessible information to users, particularly regarding timetables, fares and travel conditions. They must also set up complaint mechanisms and ensure the protection of passenger rights in accordance with EU law. Finally, AOTs are responsible for promoting network interoperability and encouraging the integration of digital solutions and clean technologies, in line with the ecological and digital transition objectives set by European policies.

Directive (EU) 2019/882¹⁰⁷ of 17 April 2019 on the accessibility requirements applicable to products and services aims to harmonise rules within the internal market to ensure accessibility for persons with disabilities and older persons. It is part of the implementation of the United Nations Convention on the Rights of Persons with Disabilities, to which the European Union and its Member States are parties. Directive (EU) 2019/882 is a major legal instrument for ensuring equal access to essential services, including mobility. It requires public transport operators and infrastructure managers to implement accessible solutions, which are a prerequisite for ensuring that networks are available to all citizens, in accordance with the principles of non-discrimination and social inclusion.

The main objective is to remove barriers linked to divergent accessibility requirements between Member States by establishing a common basis applicable to certain products (computers, smartphones, payment terminals, ATMs) and services (telephony, banking, e-commerce, transport, e-books).

Economic operators must design their products and services in such a way that they can be used by as many people as possible, regardless of their physical, sensory or cognitive abilities. This implies:

- Accessible interfaces (compatibility with assistive technologies, visual and audio alternatives)¹⁰⁸

¹⁰⁷ Dir. (EU) 2019/882 of 17 April 2019 on the accessibility requirements for products and services, OJ L 151, 7.6.2019, pp. 70–115.

¹⁰⁸ Mobility websites and applications (SNCF Connect, De Lijn in Belgium)

- Clear and understandable information for all users¹⁰⁹.
- An accessible built environment in places where services are provided (requirement specified in Annex III of the Directive)¹¹⁰. Certain small stations or terminals in rural areas benefit from temporary exemptions when accessibility represents a disproportionate burden in relation to the volume of passengers, in accordance with Annex VI.

The directive has a direct impact on mobility and transport infrastructure, as it includes transport services among the sectors concerned. Transport authorities and operators must incorporate these requirements into their public service contracts, in accordance with Regulation (EC) No 1370/2007, to ensure that networks are effectively available to all users. In practice, the Directive strengthens the universal dimension of mobility by requiring that accessibility is not only a technical obligation but also a condition of free movement and non-discrimination in access to transport services.

Each Member State is required to designate one or more competent authorities responsible for monitoring the compliance of products and services with the accessibility requirements laid down in Directive (EU) 2019/882. This monitoring mechanism aims to ensure the uniform application of the provisions throughout the internal market.

Economic operators who fail to comply with these obligations are liable to administrative penalties imposed by the competent national authorities, as well as civil liability actions brought by aggrieved users, in accordance with national and European rules on consumer protection and non-discrimination.

Finally, the Directive promotes interoperability and innovation by requiring the adoption of harmonised standards and compatibility with assistive technologies. This requirement has a direct impact on the design of intelligent transport systems, such as Mobility as a Service (MaaS) solutions and digital ticketing systems, which must incorporate accessible features to ensure equal access to mobility services.

Directive 2010/40/EU¹¹¹ establishes a framework for the deployment of intelligent transport systems (ITS) in the field of road transport and their interfaces with other modes of transport. It aims to harmonise technical specifications to ensure the interoperability of ITS services in the European Union. Directive (EU) 2023/2661, adopted on 22 November 2023, amends this framework to respond to the new challenges of connected, multimodal and sustainable mobility. It strengthens Member States' obligations in terms of:

- Accessibility of dynamic data (traffic, infrastructure availability, disruptions)¹¹²,
- Cooperation between modes of transport (road, rail, active mobility),
- And interoperability of digital services (ticketing, passenger information).

Directive (EU) 2023/2661 amending Directive 2010/40/EU imposes enhanced obligations on Member States to ensure the harmonised deployment of intelligent transport systems (ITS). This requirement aims

Booking and passenger information platforms must comply with digital accessibility standards (perceptible, usable, understandable and robust content). This includes text alternatives, appropriate contrasts and compatibility with assistive technologies (screen readers, voice commands).

¹⁰⁹ Transport terminals in France (SNCF, RATP): Ticket machines and information terminals are now equipped with tiltable screens, touch controls with audio feedback, enhanced contrast and compatibility with screen readers. These devices meet the requirements of Annexes I and II of the Directive for self-service terminals.

¹¹⁰ Modernisation of stations in Italy (RFI): Stations are equipped with ramps, adapted lifts, Braille signage and magnetic loops for the hearing impaired, in accordance with Annex III, which requires accessibility to the built environment where services are provided.

¹¹¹ [Directive 2010/40/EU](#) on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport, OJ L 207, 6.8.2010, p. 1-13.

¹¹² Integration of road and rail data in Germany: The ITS systems of the Länder are interconnected with train timetables and car park information to facilitate combined journeys.

to enable the real-time provision of information necessary for the management and optimisation of mobility flows. The directive also extends the scope of application to include multimodal interfaces. This provision involves coordinating road data with rail and urban transport systems to promote continuity of service and the planning of journeys combining several modes of transport. In addition, the directive imposes mandatory interoperability through the adoption of harmonised standards at European level. This obligation guarantees the compatibility of ITS systems between Member States and ensures the smooth exchange of data for cross-border services.

Finally, the directive sets out a binding timetable, under which Member States must gradually implement the technical specifications and ensure the availability of data within the deadlines set out in the annexes. Compliance with these deadlines is essential to achieving the objectives of smart and sustainable mobility.

The directive is directly linked to the availability of networks and infrastructure, as it requires real-time data on the status of roads, car parks, charging stations and roadworks to be made available. This obligation enables ITS services to provide reliable and up-to-date information to users.

In addition, multimodal information systems must be designed to enable the planning of journeys combining several modes of transport, such as road, rail and active mobility. This requirement means that physical infrastructure – stations, terminals, car parks – must be equipped with digital devices capable of transmitting accurate and secure data¹¹³. In practice, the availability of infrastructure is no longer limited to its physical existence; it now includes its digital integration into mobility platforms, which is a prerequisite for ensuring smooth and inclusive mobility.

From a legal standpoint, Member States are required to designate competent authorities responsible for monitoring the compliance of ITS services with the technical specifications set out in the directive. This monitoring mechanism aims to ensure uniform application of obligations throughout the internal market.

Operators who fail to comply with data availability obligations are liable to administrative penalties and, where appropriate, civil liability actions. These enforcement measures ensure the effectiveness of European provisions. Finally, the Directive encourages interoperability and innovation by requiring systems to be compatible with assistive technologies and European standards. This requirement promotes the development of Mobility as a Service (MaaS)¹¹⁴ and integrated digital ticketing solutions, contributing to the modernisation of transport services.

European mobility data regulations are based on several legislative instruments¹¹⁵ aimed at ensuring the interoperability, accessibility and availability of the information necessary for smart and sustainable mobility. The main texts are:

- Directive 2010/40/EU, known as the "ITS Directive", which establishes the framework for the deployment of intelligent transport systems in the field of road transport and their interfaces with other modes,
- Directive (EU) 2023/2661, which amends the directive to incorporate requirements relating to connected mobility, multimodal services and the mandatory provision of dynamic data,

¹¹³Smart charging stations in the Netherlands: Electric charging stations communicate their availability in real time via open APIs, in accordance with the requirements of Annex III.

¹¹⁴ Connected Mobility Project in France: Deployment of a national platform for aggregating road and multimodal data (traffic, parking, electric charging stations) to feed regional MaaS applications.

¹¹⁵ See Appendix 3

- Delegated Regulations (EU) No 2017/1926 et seq., which specify the technical specifications for the provision of multimodal and real-time information.

These instruments are part of the European strategy for sustainable and smart mobility, which aims to ensure continuity of services and equal access to data throughout the internal market.

Directive (EU) 2023/2661 introduces enhanced obligations for Member States and transport operators. Firstly, it requires dynamic data to be accessible, stipulating that data sets relating to traffic, parking, charging points and infrastructure availability must be made available in real time.

In Spain, the national platform Datos Abiertos de Movilidad publishes real-time information on public car parks, charging points and roadworks, accessible via API for navigation applications. The directive also extends the scope of application to include multimodal interfaces. In Germany, the Mobility Inside system aggregates data from road, rail and urban networks to enable combined journey planning (bus + train + bicycle). It imposes mandatory interoperability through the adoption of harmonised standards at European level. In the Netherlands, the NDOV (Nationale Databank Openbaar Vervoer) project provides standardised data on timetables and disruptions, which is used by Google Maps and MaaS applications.

Finally, the directive sets out a binding timetable, under which Member States must gradually implement the technical specifications and ensure the availability of data within the deadlines set out in the annexes. In France, the decree of 5 May 2021 requires the publication of mobility data (traffic, parking, electric charging) on the national platform transport.data.gouv.fr, in accordance with European deadlines. The directive is directly linked to the availability of networks and infrastructure, as it requires real-time data on the status of roads, car parks, charging stations and roadworks to be made available.

In Italy, the Smart Road ANAS project is equipping national roads with sensors to transmit traffic and weather data to ITS systems. Multimodal information systems must enable the planning of journeys combining several modes of transport. In Belgium, the SNCB/NMBS application integrates data on car parks and shared bicycles to facilitate intermodal journeys. Member States must designate competent authorities responsible for monitoring the compliance of ITS services. In France, the DGITM (Directorate-General for Infrastructure, Transport and the Sea) supervises the implementation of data publication obligations.

Operators who fail to comply with the obligations are liable to administrative penalties. In Austria, financial penalties are imposed on operators who fail to transmit their charging station availability data. The directive encourages interoperability and innovation, promoting the development of MaaS solutions. In Finland, the Whim app offers integrated ticketing for buses, trains, taxis and bicycles, powered by open data that complies with European standards.

Text / Reference	Main Purpose	Key Obligations	Impact on Mobility / Inclusion
Regulation (EU) 2024/1679 – TEN-T	Development of an integrated and multimodal European transport network	• Priority to sustainable modes • Mandatory accessibility • Connection of isolated areas	• Improves regional connectivity • Strengthens accessibility for persons with reduced mobility • Reduces territorial inequalities

		• Deployment of intelligent transport systems	
Regulation (EC) No 1370/2007	Framework for public passenger transport services (bus, tram, train)	• Permits Public Service Obligations (PSOs) • Regulates financial compensation • Requires public service contracts	• Ensures continuity, accessibility and quality of services • Covers low-profit or remote areas
Directive (EU) 2019/882 – European Accessibility Act	Harmonisation of accessibility rules for products and services	• Accessible interfaces • Clear user information • Accessible built environment (with exemptions)	• Improves access to transport services, ticketing and information • Strengthens rights of persons with disabilities and older persons
Directive 2010/40/EU – ITS Directive	Framework for Intelligent Transport Systems	• Technical harmonisation • Access to mobility data	• Enhances digital services and network integration
Directive (EU) 2023/2661 (ITS revision)	Updated framework for connected and multimodal mobility	• Mandatory dynamic data (traffic, parking, charging points) • Digital interoperability • Multimodal integration	• Enables multimodal journey planning • Supports MaaS platforms • Improves fluidity and inclusion
Delegated Regulations (EU) No 2017/1926 and subsequent acts	Technical specifications for multimodal travel information	• Publication of static and dynamic data • Harmonised formats	• Data accessible to apps (Google Maps, MaaS) • Simplifies multimodal travel
UN Convention on the Rights of Persons with Disabilities (CRPD)	Guarantee the rights of persons with disabilities	• Non-discrimination • Accessibility to transport services	• Cross-cutting legal basis requiring accessibility in mobility systems

Table 2 Summary table

3.1.3 Ensuring inclusivity

The EU's objective is to create inclusive and gender-sensitive mobility that considers the specific needs of women and vulnerable groups to ensure equality, safety and autonomy in travel.

3.1.3.1 People with disabilities or reduced mobility.

The European Union addresses the issue of disability in mobility through a comprehensive and integrated approach that combines fundamental rights, sectoral legislation and project funding.

The European Union's legal framework in the field of disability is based on several key texts. The EU Charter of Fundamental Rights prohibits any discrimination based on disability (Article 21) and guarantees the right to social integration of persons with disabilities (Article 26). The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), ratified by the EU, imposes accessibility as a general principle in all areas of public life. Finally, Article 10 of the Treaty on the Functioning of the European Union (TFEU) stipulates that the EU must take disability issues into account in all its policies and actions. The European Court of Human Rights, while leaving some discretion to Member States regarding physical accessibility, requires reasonable accommodation and non-discrimination to ensure access to fundamental rights, such as access to justice or education for persons with disabilities.

The EU has adopted specific regulations for each mode of transport, guaranteeing non-discrimination, free assistance and accessible information.

- Regulation (EU) 2021/782 concerns air transport and guarantees the rights of persons with disabilities or reduced mobility. It prohibits refusal of boarding on the grounds of disability (except in the case of safety) and requires airlines and airport operators to provide free assistance, particularly for check-in, boarding and baggage collection.
- Regulation (EU) 2021/782 on rail passengers' rights and obligations guarantees free assistance to persons with disabilities or reduced mobility in stations and on-board trains. It also requires the provision of accessible information and prohibits discrimination when booking or travelling.
- Regulation (EU) No 181/2011 on bus and coach services stipulates that passengers with disabilities cannot be denied access to transport on the grounds of their disability. It requires the provision of free assistance in terminals and requires travel information to be accessible to all.
- Regulation (EU) No 1177/2010 concerning the rights of passengers travelling by sea and inland waterway establishes similar rights. It guarantees free assistance in ports and on-board ships, as well as access to appropriate information, to enable persons with disabilities to travel on equal and safe terms.

The European Union imposes technical standards and requirements to ensure that infrastructure and vehicles are accessible to persons with reduced mobility. Stations, terminals, ports and airports must be equipped with appropriate facilities such as ramps, lifts and spaces reserved for wheelchairs. Public transport vehicles, whether trains, buses, coaches or ships, must gradually incorporate facilities to facilitate access and safety for passengers with disabilities. Signage and information systems must be accessible, with adapted formats such as Braille, large print, audio and visual announcements¹¹⁶. Ticket machines and online booking sites must comply with digital accessibility standards, in accordance with the European Accessibility Act, which requires interfaces to be compatible with assistive technologies. These standards aim to ensure inclusive mobility, enabling every citizen to travel independently and safely

¹¹⁶ CJEU, 11 April 2013, C-335/11 HK Danmark: Although the case concerns employment, the principle of reasonable accommodation can be applied to mobility: transport operators and authorities must adapt their services (e.g. ramps, signage, assistance) to ensure access for persons with disabilities, unless this would impose a disproportionate burden.

throughout Europe. In terms of accessibility, European legislation requires the installation of ramps, adapted pavements and clear signage for wheelchairs and pushchairs. European Directive 2019/882 (European Accessibility Act)¹¹⁷, which came into force in 2025, requires transport operators' ticket machines, websites and mobile applications to be accessible (standard EN 301 549). In practical terms, this means that ticket machines must be usable by wheelchair users and that audio and visual announcements must be available in stations and on buses.

European funding and programmes play a key role in promoting accessible mobility. The European Structural and Investment Funds (ESF, ERDF) finance the accessibility of transport infrastructure and public spaces. The Connecting Europe Facility (CEF) supports projects aimed at developing an inclusive transport network adapted to the needs of people with disabilities. Finally, the Horizon Europe programme encourages innovation for inclusive mobility, through the development of adapted vehicles and accessible digital solutions.

The EU aims to achieve inclusive mobility, where every citizen, regardless of disability, can travel freely and safely, by promoting autonomy, social participation and equal opportunities.

3.1.3.2 The gender dimension.

The European Union integrates the gender dimension into mobility to ensure that transport systems are inclusive, safe and equitable for all. Mobility systems are not neutral: women and marginalised groups (the elderly, minorities, people with children) often face specific barriers (insecurity, limited accessibility, high costs)¹¹⁸. Women use public transport more, walk more, and combine several trips (work, care, shopping), which requires tailored solutions¹¹⁹. European policies and initiatives on equality and mobility include several major actions.

The European Strategy for Equality between Women and Men (2020-2025) requires the integration of gender mainstreaming into all policies, including those related to mobility. For example, some Member States have adapted their transport plans to improve women's safety on public transport by installing better lighting in stations and creating secure waiting areas. The Platform for Equality in Transport, created in 2017 by the European Commission, aims to promote equality in transport sector jobs and meet the specific needs of female users. In concrete terms, it has led to the establishment of mentoring programmes for female engineers in rail and aviation companies. Finally, the CIVITAS and MobiliseYourCity projects offer practical guides for integrating gender into Sustainable Urban Mobility Plans (SUMP), providing diagnostics, indicators and concrete recommendations for inclusive policies. For example, some partner cities have introduced flexible bus routes to better serve areas where women make multimodal journeys (work, school, shopping) and have added specific surveys to measure user satisfaction. One example is the "on-demand" bus stops in Spain, which illustrate a concrete measure to improve women's safety and mobility at night¹²⁰.

The European Union is implementing concrete actions to ensure safety, accessibility and equality in transport, in line with its commitments to fundamental rights and inclusion. In terms of safety, European regulations impose standards for the design of stops and infrastructure to reduce risks for people with disabilities: improved lighting, surveillance devices and platform design to prevent falls. For example,

¹¹⁷ <https://handicap.gouv.fr/sites/handicap/files/2025-07/Fiche-conso-transports.pdf>

¹¹⁸ Martens, K. And Lucas, K., Measuring Transport Equity, Elsevier, 2019.

¹¹⁹ *Ibid.*

¹²⁰ https://www.lepoint.fr/monde/espagne-deux-villes-mettent-en-place-des-bus-de-nuit-pour-femmes-06-02-2018-2192712_24.php

Regulation (EU) 2021/782 on rail passenger rights provides for secure areas and assistance facilities in stations (art. 27).

In terms of fares and timetables, adjustments are encouraged for people who combine several journeys (work, healthcare, school). In France, for example, the Mobility Orientation Law (LOM) and accessibility master plans allow for reduced fares for accompanying persons and the collection of accessibility data to inform travellers¹²¹.

The European Parliament report (2023) entitled *"European transport that works for women"*¹²² is a strategic document adopted on 3 October 2023. It is an own-initiative report drawn up by the Committee on Women's Rights and Gender Equality. Its main objective is to integrate the gender dimension into transport policies to improve safety, accessibility and employment for women in this sector. This approach aims to ensure that transport systems are more inclusive and adapted to the specific needs of women, while promoting their participation and representation in governance and transport-related professions.

The report highlights several key findings concerning the situation of women in public transport in Europe. Firstly, it highlights the extent of sexual harassment: according to data from the Fundamental Rights Agency (FRA), up to 55% of women in the European Union report having been victims of sexual harassment on public transport¹²³. This reality is a significant barrier to women's mobility and freedom of movement.

Next, the report highlights the under-representation of women in the transport sector. Currently, women account for only around 22% of jobs in this field, which limits their influence on the design and governance of transport systems. This low representation contributes to a lack of consideration for women's specific needs in mobility policies. Finally, the report highlights gendered mobility: women use public transport more than men, often for complex journeys involving multiple connections and made during off-peak hours. These characteristics increase their vulnerability to harassment and assault, particularly in unsafe or poorly lit environments. In response to these findings, the report makes several strategic recommendations. First, it recommends improving safety on public transport by improving lighting, installing CCTV systems and ensuring a human presence in stations and vehicles. It also recommends the introduction of alert systems, such as emergency buttons and immediate assistance services for victims.

The report then emphasises the need to collect gender-disaggregated data to better understand mobility behaviours and guide public policy. This data should be integrated into the European Common Data Space, which would enable more detailed analysis and inclusive planning.

Another key recommendation concerns transport planning: it is essential to integrate a gender perspective into the design of infrastructure and services, consulting women directly to identify their specific needs. This participatory approach aims to create safer and more accessible transport systems.

Finally, the report encourages the promotion of women's employment and training in the transport sector to increase their representation and influence on strategic decisions. It also proposes launching awareness campaigns to combat sexual harassment and promote respect in transport spaces.

The implementation of the report's recommendations is expected to have a significant impact on the quality and safety of women's travel in Europe. By improving safety on public transport and integrating gender considerations into planning, it is expected that gender-based violence and harassment will be reduced, promoting freedom of movement and confidence among female users.

¹²¹ <https://www.ecologie.gouv.fr/politiques-publiques/laccessibilite-transports-individuels-collectifs>

¹²² [European Parliament Report A9-0239/2023 \(2023\)](#) entitled *"European transport that works for women"*.

¹²³ Mariani S., *What solutions for sustainable and inclusive mobility in sparsely populated areas?* Opinion of the Economic, Social and Environmental Council, July 2023.

In addition, improved data collection and consultation with women will enable the design of more inclusive transport systems that are better adapted to real needs, contributing to equitable mobility.

Finally, by increasing the presence of women in the sector's professions and governance, the report aims to establish sustainable professional equality, while strengthening diversity and innovation in transport policies. These measures are in line with the European objectives of promoting gender equality and sustainable development, in accordance with UN SDG 5¹²⁴.

3.2 Sustainable mobility

At European level, the transition to zero-emission mobility has been strongly promoted for several years to make the transport sector carbon-free and energy-efficient.

Launched in the 1980s and incorporated into the Maastricht Treaty in 1992, the Trans-European Transport Network (TEN-T) aims to improve transport infrastructure to facilitate trade within the single market.

One of the programme's objectives is to ensure the interoperability of transport modes, i.e. to ensure that they complement each other, to make the entire European network more fluid. Most of the projects funded by the European Commission concern the establishment of major road, rail, river, sea and air routes connecting Member States.

3.2.1 Decarbonisation of transport

The greening of mobility makes it possible to introduce decarbonised, sometimes referred to as clean, means of transport that will ensure healthy mobility that is more respectful of people's health¹²⁵. The package of proposals, known as "*Fit for 55*", adopted on 14 July 2021 by the European Commission, sets out how the EU intends to achieve climate neutrality by 2050, including the interim target of a net reduction of at least 55% in greenhouse gas emissions by 2030 compared to 1990. EU Regulation 2021/1119¹²⁶ establishing the framework for achieving climate neutrality, known as the "*European Climate Law*", enshrines in legislation the binding target of climate neutrality in all sectors of the economy by 2050.

A set of legislative proposals for sustainable transport was presented in December 2021, including:

- The revision of the guidelines for the development of the Trans-European Transport Network (TEN-T), with the new Regulation No 2024/1679¹²⁷. The regulation aims, among other things, to reduce greenhouse gas emissions, pollution and congestion by promoting also greater use of rail and short sea shipping or inland waterways for freight. The regulation devotes specific sections to different modes of transport (rail, river, sea, road, air), urban nodes and multimodal freight terminals.
- The action plan to promote¹²⁸ cross-border and long-distance rail passenger transport.

¹²⁴ <https://sdgs.un.org/goals/goal5>

¹²⁵ LACOSTE O. "The concepts and forms of sustainable mobility", in "The law of mobility." LexisNexis, 2024, pp. 309-324.

¹²⁶ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ("European Climate Law"), OJ L 243, 9.7.2021, pp. 1-17.

¹²⁷ Regulation (EU) 2024/1679 of 13 June 2024 on Union guidelines for the development of the trans-European transport network, amending Regulations (EU) 2021/1153 and (EU) No 913/2010 and repealing Regulation (EU) No 1315/2013, OJ L, 2024/1679, 28 June 2024.

¹²⁸ COM. (2021) 810 final, Action plan to boost long distance and cross-border passenger rail

- The new framework for urban mobility¹²⁹ ;
- The revision of regulations for the deployment of intelligent transport systems in road transport and in interfaces with other modes of transport¹³⁰.

These various revisions aim to contribute to the implementation of *the European Green Deal*, which estimates that to achieve climate neutrality by 2050, the entire transport sector must reduce its greenhouse gas emissions by 90%.

In accordance with Regulation (EU) 2019/631¹³¹, from 2025 onwards, for each year from 2025 to 2029, a 15% reduction target for CO2 emissions¹³² will apply, with manufacturers facing fines for exceeding emissions limits. However, in a recent proposal for a regulation by the European Commission on 1 April 2025¹³³, aims to amend Regulation (EU) 2019/631 to introduce some flexibility for manufacturers about their CO2 emission targets between 2025 and 2027. According to the latest news, the proposal is expected to be discussed in 2026. During the strategic dialogue on 12 September 2025, Commission President Ursula von der Leyen reopened the debate¹³⁴.

Regulation (EU) 2023/851 of 19 April 2023 amended the previous Regulation (EU) 2019/631 to further strengthen the CO2 emission performance standards for new passenger cars and vans, with a view to meeting the climate targets set by the European "Fit for 55" strategy to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

3.2.2 Sustainable urban mobility

The communication¹³⁵ entitled "*The new EU framework for urban mobility*", adopted by the European Commission on 14 December 2021, presents a new framework for urban mobility in the European Union. This framework is in line with the objectives of the European Green Deal, the strategy for sustainable and smart mobility and the "Fit for 55" package, which aims to reduce greenhouse gas emissions by 55% by 2030 and achieve climate neutrality by 2050. Cities, as key nodes in the trans-European transport network (TEN-T), play a decisive role in achieving these objectives.

The framework aims to establish sustainable, inclusive, safe and smart urban mobility by reducing the negative externalities of transport (air and noise pollution, congestion, accidents). It provides for the implementation of sustainable urban mobility plans (SUMP) in all major cities in the TEN-T network by 2025, to ensure coherent and integrated planning of public transport, active mobility (walking, cycling) and shared solutions.

129 COM. (2021) 811 final, The new EU framework for urban mobility.

130 Dir. (EU) 2023/2661 of the European Parliament and of the Council of 22 November 2023 amending Directive 2010/40/EU on the framework for the deployment of Intelligent Transport Systems in the field of road transport and interfaces with other modes of transport, OJ L, 2023/2661, 30.11.2023.

131 Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2 emission performance standards for new passenger cars and new light commercial vehicles, OJ L 111, 25.4.2019, pp. 13-53.

¹³² Compared to 2021 values.

¹³³ COM (2025) 136 final, Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 to provide additional flexibility in the calculation used to determine manufacturers' compliance with CO2 emission performance standards for new passenger cars and new light commercial vehicles for the calendar years 2025 to 2027.

¹³⁴ VON DER LEYEN U., Concept Note for the Third Strategic Dialogue on the Future of the European Automotive Industry, Brussels, September 2025.

¹³⁵ Communications are documents without legal force sent by the Commission to other European institutions presenting new programmes and policies.@eurlex

The European framework establishes a common list of measures and initiatives for Member States and cities, including priority for sustainable modes of transport (public transport, active mobility, zero-emission urban logistics), digital integration (increased use of intelligent transport systems and digital multimodal services), harmonised data collection (establishment of common indicators to monitor progress in sustainable urban mobility) and participatory approach (involvement of local authorities, citizens and stakeholders in the development of SUMP).

The framework complements the revision of the TEN-T guidelines by imposing specific obligations on urban nodes: adoption of a SUMP in line with European requirements, collection and transmission of mobility data, and implementation of measures to improve the flow of passengers and goods, through zero-emission vehicles.

SUMPs are a strategic tool recommended by the European Union to steer urban mobility towards sustainable, inclusive and efficient models. These plans aim to address climate challenges, improve the quality of life in urban areas and ensure accessible mobility for all. The European framework is based on several texts and initiatives, including Recommendation (EU) 2023/550 on SUMPs¹³⁶, Regulation (EU) 2024/1679 on the Trans-European Transport Network (TEN-T)¹³⁷ and the European Strategy for Sustainable and Smart Mobility¹³⁸. These instruments are in line with the objectives of carbon neutrality by 2050 and a 90% reduction in greenhouse gas emissions in the transport sector. SUMPs are designed as long-term strategic plans, integrating environmental, social and economic dimensions and involving participatory governance.

The SUMPs are based on guiding principles that ensure their consistency with European policies:

- Environmental sustainability: reduction of pollutant emissions, promotion of alternative fuels and electrification of networks.
- Universal accessibility: inclusion of people with reduced mobility and equal access to transport services.
- Multimodality and interoperability: integration of different modes of transport (public, active, shared) and harmonisation of systems.
- Territorial cohesion: consideration of urban, peri-urban and rural areas to avoid geographical divides.
- Participation and transparency: involvement of stakeholders and citizens in the development and monitoring of plans.

Although Sustainable Urban Mobility Plans (SUMPs) are not legally binding at European Union level, the European Commission recommends their adoption for all agglomerations with more than 100,000 inhabitants. This recommendation is consistent with European climate and energy objectives, in particular the reduction of greenhouse gas emissions and the transition to sustainable mobility. To this end, Member States are invited to set up national support programmes to assist with the development and implementation of SUMPs. They must also provide for appropriate financing mechanisms, including the use of the Connecting Europe Facility (CEF) and the European Structural and Investment Funds. Furthermore, the Commission stresses the need to ensure regular monitoring and evaluation of the plans,

¹³⁶ Commission Recommendation (EU) 2023/550 of March 8, 2023 on national programs to support sustainable urban mobility planning.

¹³⁷ See above p.39

¹³⁸ Doc. Com. (2020), 789 final, December 9, 2020, "Strategy for smart and sustainable mobility," pt. 20.

based on performance indicators and periodic reports, to guarantee their effectiveness and compliance with European guidelines.

SUMPs are an essential tool for achieving European sustainable mobility objectives. Although their adoption is based on incentives, their implementation determines access to certain European funding and contributes to the fulfilment of climate commitments. Member States must therefore integrate these plans into their national policies and ensure effective coordination between local, regional and European authorities.

On 4 February 2026, the European Court of Auditors published a report on sustainable commuting in urban areas¹³⁹. Since 2024, the TEN-T Regulation has required 431 urban nodes to adopt Sustainable Urban Mobility Plans (SUMPs) by the end of 2027. However, the Court finds that the effectiveness of these plans is only partial, as their objectives are broad and difficult to measure, especially in the absence of harmonised data (which will only become mandatory in 2027).

The audit of six cities (Budapest, Katowice, Lille, Lisbon, Prague and Seville) shows that SUMPs include useful measures to improve accessibility, develop public transport, active and shared mobility, and reduce emissions. Nevertheless, they suffer from major weaknesses:

- Limited geographical scope, usually restricted to city administrative boundaries, excluding up to 64% of commuters from peri-urban areas.
- Insufficient analysis of commuter needs, particularly long-distance home-to-work trips.
- Limited real impact on travel times and modal shift, as measures mainly target city centres.
- Lack of ambition in reducing private car use, with few restrictive measures such as congestion charging or access restrictions.
- Weak monitoring, unclear funding streams and poor coordination between governance levels.

The Court recommends strengthening and simplifying guidance for local authorities to ensure SUMPs cover entire functional urban areas, establishing harmonised monitoring of modal share, and creating a common methodology to assess project impacts on emissions.

The report concludes that future progress will largely depend on the commitment and effectiveness of local authorities.

3.2.3 Considering the social issues inherent in sustainable mobility

Sustainable mobility must not only be decarbonised and healthier, but it must also take social issues into account by being accessible and safe.

The stricter CO₂ emission reduction rules set out in Regulation (EU) 2023/851¹⁴⁰ aim to achieve the targets set for the vehicle fleet in a technologically neutral manner. Zero-emission vehicles currently include battery electric vehicles, fuel cell vehicles and other hydrogen vehicles. In terms of employment, the Regulation emphasises that the revised CO₂ emission performance targets should be accompanied by a Union strategy to address the need to reskill and upskill workers in the sector and to diversify and convert activities economically, while maintaining employment levels in the Union automotive sector.

¹³⁹ European Court of Auditors, Special Report 05/2026: Sustainable mobility of commuters in urban areas.

¹⁴⁰ Regulation (EU) 2023/851 of the European Parliament and of the Council of April 19, 2023, amending Regulation (EU) 2019/631 with regard to strengthening CO₂ emission performance standards for new passenger cars and new light commercial vehicles, in line with the Union's increased climate ambition, OJ L 110, 25.4.2023, pp. 5-20.

In accordance with Regulation (EU) 2019/631, as amended by Regulation (EU) 2023/851, the European Union has established a strengthened framework for reducing CO₂ emissions from light-duty vehicles. This mechanism provides, on the one hand, for the granting of emission credits for innovative technologies in the context of eco-innovations, with a cap reduced to 4 g/km from 2030 onwards. On the other hand, it imposes strict targets with financial penalties, including a fine of 95 euros per gram of excess CO₂ for each registered vehicle. The super-credit mechanism, which favoured low-emission vehicles, will be abolished from 1 January 2030, while exemptions will remain limited to manufacturers producing fewer than 1,000 vehicles per year until 2036. Finally, by 2025, the European Commission will introduce a methodology for assessing emissions over the entire life cycle of vehicles and fuels, which will be voluntary from 2026 onwards.

In the area of state aid, on 9 March 2023, the European Commission approved a targeted amendment to the General Block Exemption Regulation¹⁴¹ to further facilitate, simplify and accelerate support for the green and digital transitions in the EU. The regulation declares specific categories of state aid compatible with the Treaty on the Functioning of the European Union, if they meet certain conditions. The regulation therefore exempts these categories from the obligation of prior notification to the Commission and its approval, allowing Member States to grant aid directly and only inform the Commission ex post. Among other things, the new rules broaden and streamline the scope of aid in the environment and energy sectors to support the deployment of renewable energy, decarbonisation projects, green mobility and investments in renewable hydrogen. They also significantly increase the notification thresholds for environmental aid and aid for research, development and innovation.

Categories of aid relevant to sustainable mobility

- Environmental protection subsidies: charging infrastructure, alternative fuels, emissions reduction.
- Infrastructure subsidies: electric charging stations, hydrogen stations, multimodal hubs.
- Aid for research, development and innovation (RDI): clean vehicles, smart systems.
- Aid for SMEs and training: adoption of clean technologies, training in sustainable mobility.
- Social transport subsidies: accessibility for outlying areas and vulnerable populations.

The link between health and the environment is now well established. The right to live in an environment that respects health is enshrined, for example in France, in the Environmental Charter¹⁴². The phenomenon of greening mobility therefore contributes to the well-being and good health of citizens¹⁴³, through the development of "cleaner and more active" forms of mobility.¹⁴⁴ Active mobility refers to all modes of transport that involve human physical activity to get around, generally without a motor. It mainly includes walking, cycling (and its variants such as cargo bikes) and non-motorised scooters. It contrasts with motorised modes of transport and aims to promote sustainable, healthy and accessible travel by reducing greenhouse gas emissions and improving the quality of life in cities. It is often integrated into sustainable mobility policies to encourage public health, reduce congestion and promote more liveable cities.

¹⁴¹ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty Text with EEA relevance, OJ L 187, 26.6.2014, pp. 1-78.

¹⁴² Constitutional Law No 2005-205 of 1 March 2005 on the Environmental Charter (JORF No 0051 of 2 March 2005, p. 3697)

¹⁴³ Doc. Com. (2020), 789 final, 9 December 2020, "Smart Sustainable Mobility Strategy", pt 20.

¹⁴⁴ *Ibid.*

3.2.4 Innovation and digitalisation¹⁴⁵

The European Strategy for Sustainable and Smart Mobility¹⁴⁶, presented by the Commission on 9 December 2020, is part of the European Green Deal and is a strategic planning tool aimed at transforming the transport sector. This communication sets out the necessary guidelines for achieving climate neutrality by 2050, while ensuring economic competitiveness and social cohesion. It commits the Union to a systemic transition based on sustainability, innovation and inclusion.

The European Commission sets three fundamental objectives. Firstly, it enshrines the principle of climate neutrality, requiring a reduction in greenhouse gas emissions of at least 55% by 2030 and aiming for carbon neutrality by 2050. Secondly, it establishes the objective of smart mobility, which involves integrating digital technologies to improve the efficiency, safety and fluidity of transport systems. Finally, it affirms the principle of resilience and inclusion, guaranteeing a transport system capable of withstanding crises and ensuring a fair transition for workers and citizens.

The strategy enshrines the principle of sustainability, which involves decarbonising transport through the electrification of networks, the use of alternative fuels such as hydrogen and advanced biofuels, and the promotion of active modes of transport, particularly walking and cycling. It establishes the pillar of innovation, providing for the deployment of smart transport systems, the digitalisation of logistics chains and the development of connected and autonomous vehicles to improve the efficiency and safety of travel. Finally, it affirms the principle of accessibility and equity, guaranteeing the inclusion of rural and peripheral areas, accessibility for people with reduced mobility and the maintenance of European economic competitiveness.

The strategy "*Strategy for sustainable and smart mobility: putting European transport on the road to the future*¹⁴⁷" also sets out a roadmap for the digitalisation and development of automation and artificial intelligence (AI) in the transport sector, identifying the deployment of intelligent transport systems (ITS) as a key action for achieving connected and automated multimodal mobility. Delegated Regulation (EU) 2024/490¹⁴⁸ amends the previous Delegated Regulation (EU) 2017/1926, establishing the requirements necessary for multimodal travel information services across the European Union to be accurate and available to end users across national borders. This text seeks to pave the way for greater accessibility and better sharing of multimodal travel information data.

The European rules pursue several objectives:

- Data interoperability and accessibility: obligation for Member States and operators to make dynamic data (traffic, service availability) accessible via open platforms.
- Safety and liability: legal framework for automated systems and autonomous vehicles, particularly about civil liability and cybersecurity.
- Fair digital transition: ensuring that digitalisation does not create territorial or social divides by guaranteeing access to digital services for all users.

Digitalisation in the transport sector refers to the integration of digital technologies to improve traffic management, safety and the efficiency of mobility systems. It includes the collection and analysis of real-

¹⁴⁵ Refer to Appendix 2 for Data legislation.

¹⁴⁶ COM (2020) 789 final, Sustainable and Smart Mobility Strategy – Putting European transport on the road to the future.

¹⁴⁷ COM (2020) 789 final, prec.

¹⁴⁸ Commission Delegated Regulation (EU) 2024/490 of 29 November 2023 amending Delegated Regulation (EU) 2017/1926 supplementing Directive 2010/40/EU of the European Parliament and of the Council about the provision of Union-wide multimodal travel information services, OJ L, 2024/490, 13.2.2024.

time data, the connectivity of infrastructure and vehicles, and the implementation of smart services for users.

Automation and AI are essential components of this transformation, enabling the development of autonomous vehicles, predictive traffic management and smart logistics. Artificial intelligence is integrated into the European strategy to meet three major objectives. It aims to optimise traffic management through predictive systems capable of anticipating traffic flows and reducing congestion. It contributes to improving safety through the deployment of advanced assistance systems and the gradual development of autonomous vehicles, ensuring a reduction in the risk of accidents. Finally, it improves logistics by introducing intelligent solutions for freight transport, thereby promoting supply chain efficiency and cost reduction.

Directive 2010/40/EU¹⁴⁹ establishes a framework for the coordinated and coherent deployment of intelligent transport systems (ITS) in the field of road transport and their interfaces with other modes of transport. Directive (EU) 2023/2661, adopted on 22 November 2023, amends this framework to strengthen digital integration and data interoperability, in line with the objectives of the European Strategy for Sustainable and Smart Mobility. The directive aims to ensure the harmonised implementation of ITS in the European Union, for cross-border services. It applies to ITS services and applications in the field of road transport and their interfaces with other modes of transport, without prejudice to national security or defence requirements. The directive brings about major changes in the field of intelligent transport systems (ITS) within the European Union. Firstly, it imposes mandatory accessibility of dynamic data, requiring Member States to ensure the availability of the data, including information on traffic, safety and infrastructure availability, within strictly defined time limits.

Secondly, the directive strengthens interoperability and multimodal integration by requiring ITS applications to interact seamlessly with other modes of transport, such as rail and active mobility, to facilitate modal shifts and improve the overall efficiency of travel.

It also provides for the mandatory deployment of ITS services throughout the territory, thus ensuring uniform geographical coverage and consistent implementation in all Member States. Finally, the Directive is part of the European strategy aimed at achieving zero deaths by 2050, by improving road safety using intelligent systems and advanced technologies, thereby contributing to safer and more sustainable mobility.

Member States are required to comply with several obligations under Directive (EU) 2023/2661. First, they must transpose the provisions of the Directive into their national law by the deadline set, to ensure its full effectiveness. They are also required to ensure the accessibility of dynamic data and the deployment of intelligent transport systems (ITS) services within the deadlines set out in the annexes, ensuring that information on traffic, safety and infrastructure is available to users and operators. Finally, Member States must ensure that national systems are compatible with European specifications to avoid any obstacles to cross-border mobility and to guarantee smooth interoperability between the different modes of transport within the Union.

Delegated Regulation (EU) 2024/490 amends Delegated Regulation (EU) 2017/1926 on the provision of multimodal travel information services throughout the Union. This text is part of Directive 2010/40/EU on the deployment of intelligent transport systems (ITS) and aims to improve the accessibility, interoperability and quality of data necessary for multimodal mobility. The regulation meets the objectives of the European Strategy for Sustainable and Smart Mobility and the European Green Deal by promoting connected, automated and environmentally friendly mobility. It aims to improve the continuity of multimodal

¹⁴⁹ Directive 2010/40/EU of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport.

information services, support the transition to sustainable modes of transport and ensure better data integration for users and operators.

Delegated Regulation (EU) 2024/490 introduces significant changes to the provision of multimodal travel information services in the European Union. It imposes mandatory accessibility of dynamic data, requiring Member States to ensure the availability of the data sets listed, including information on traffic, safety and infrastructure availability, within strictly defined time limits. This requirement aims to ensure real-time updates and increased reliability of information for multimodal services. The text strengthens interoperability and multimodal integration by stipulating that intelligent transport system (ITS) applications and services must enable seamless interaction with other modes of transport, such as rail and active mobility, to facilitate intermodal travel and improve travel efficiency. The regulation also requires the uniform deployment of ITS services, ensuring geographical coverage to ensure consistent implementation across the European Union.

Finally, it is part of the European strategy aimed at achieving the goal of zero deaths by 2050, by improving road safety using intelligent systems and advanced technologies, thereby contributing to safer and more sustainable mobility.

Member States are required to comply with several obligations under the delegated regulation and the associated directive. First, they must transpose the provisions into their national law by the deadline set, to ensure legal compliance and the effective implementation of the measures provided for. They are also required to ensure the accessibility of dynamic data and the deployment of intelligent transport systems (ITS) services within the specified time frame, ensuring that traffic, safety and infrastructure information is available and up to date. Finally, Member States must ensure that national systems are compatible with European specifications to avoid any obstacles to cross-border mobility and to guarantee the smooth interoperability of services throughout the Union.

Smart mobility relies on the development of innovative technologies such as connected vehicles and multimodality to optimise flows and reduce congestion and emissions. It also aims to improve personal safety by placing transport system safety at the heart of priorities to achieve the ambitious goal of 'zero deaths'¹⁵⁰. This development is accompanied by the gradual automation of means of transport, further increasing the safety and reliability of transport¹⁵¹.

The European Union has established a legal framework to promote the collection, opening and reuse of public and mobility data to support transparency, innovation and sustainable mobility. This framework is based primarily on Directive (EU) 2019/1024 on open data and the reuse of public sector information, as well as specific regulations related to intelligent transport systems (ITS) and multimodal information services. The Open Data Directive establishes the principle that public and publicly funded data must be reusable for commercial or non-commercial purposes, under transparent and non-discriminatory conditions. It requires:

- Real-time access to dynamic data by appropriate technical means.
- The availability of high-value data sets defined by the European Commission.
- Limitation of exclusivity agreements and application of the marginal cost pricing principle for access to data.

In the transport sector, Directive 2010/40/EU and its delegated regulations, in particular Delegated Regulation (EU) 2017/1926 as amended by Regulation (EU) 2024/490, require the opening of data relating to multimodal journeys. Member States must publish static and dynamic data, such as timetables,

¹⁵⁰ Doc. Com. (2020), 789 final, 9 Dec. 2020, 'Smart Sustainable Mobility Strategy', pt 6 and pt 98.

¹⁵¹ *Ibid*, pt.7

infrastructure availability and traffic information, via a National Access Point (NAP). They are also required to ensure the interoperability of systems to prevent barriers to cross-border mobility, while complying with technical specifications concerning data updating and quality. In France, the *transport.data.gouv.fr* platform has been designated as a NAP by decree, illustrating the practical implementation of these obligations. Delegated Regulation (EU) 2024/490 broadens the range of data to be provided to promote multimodal travel, now including modes such as self-service bicycles, scooters, on-demand services and walking. It also requires the provision of enriched data, such as the location of parking spaces, including for people with reduced mobility, and historical data on delays and cancellations.

European regulations on data collection and openness aim to create a harmonised digital ecosystem, ensuring the accessibility, quality and reusability of data to stimulate innovation and improve sustainable mobility. Member States must ensure transposition, technical implementation and compliance with updating and interoperability obligations. However, the EU's, General Data Protection Regulation (GDPR) can have negative side-effects on fighting crime and (gender-related) offences at public transport stops and interchanges: GDPR recommends storing CCTV footage for no longer than 72h, after which it should be erased. If no crime is reported within that timeframe of 72 hours, footage will be erased¹⁵²(UTIP 2025a). This can complicate legal action and negatively affect (the feeling of) safety in transit¹⁵³.

The European Union is establishing itself as a major player in the development of inclusive, sustainable and equitable mobility. The initiatives presented demonstrate a strong commitment to integrating the principles of universal accessibility, territorial cohesion and ecological transition into all transport policies. Legal instruments such as the Accessibility Directive, the Regulation on the Trans-European Transport Network (TEN-T) and the recommendations on transport poverty translate this ambition into concrete obligations for Member States.

Beyond infrastructure, the social and gender dimension is central. The European Parliament's report on women-friendly transport illustrates the need for an approach that is sensitive to the specific needs of users to guarantee safety, equality and autonomy. Combating harassment, promoting female employment and collecting gender-based data are all levers for making mobility fairer.

Finally, the digital and ecological transition, driven by the strategy for sustainable and smart mobility, requires the modernisation of transport systems based on innovation, interoperability and the reduction of emissions. These developments are in line with the Union's climate and social objectives, consistent with the Green Deal and the European Pillar of Social Rights.

In short, the European mobility of tomorrow must be accessible, safe, carbon-free and inclusive, guaranteeing every citizen, regardless of their place of residence or situation, the fundamental right to move freely and safely. The effective implementation of these measures will depend on cooperation between European institutions, Member States and local actors to turn these ambitions into tangible realities for all.

¹⁵² UITP (2025a). *Action Points. Unseen and unreported: Shifting perspectives on gender-based violence in urban mobility* .8p. Retrieved from <https://www.uitp.org/publications/shifting-perspectives-gender-based-violence-urban-mobility/>

¹⁵³ Jelten Baguet, Mpact.

4 Multi-level Legal Analysis of Mobility as a Right at National Level

This section provides a comparative review of the national legislation and constitutional provisions of Member States — with a focus on those studied by GOLIA — that establish or reflect the MaaR. Examples include the French 2020 law on mobility guidance¹⁵⁴, which enshrines the principle that “*mobility is a right for all*”¹⁵⁵, and the Spanish draft law on sustainable mobility¹⁵⁶, which recognises mobility as a social right and requires cooperation at several levels. Other relevant national policies on inclusive transport are also examined. The differences in how countries legislate citizens' mobility rights (e.g. as enforceable rights or policy principles) are also highlighted.

4.1 Belgium

In Belgium, mobility governance is based on shared powers between several levels of government. The Federal State is responsible for road safety, rail transport (via SNCB and Infrabel), aviation, technical standards and the mobility budget. The Regions manage roads, regional public transport (STIB, TEC, De Lijn), mobility plans and infrastructure. The municipalities are involved in local mobility, municipal plans, parking and urban development. This division of responsibilities aims to ensure a consistent approach between national, regional and local policies.

The operators SNCB (Société Nationale des Chemins de fer Belges), STIB (Société des Transports Intercommunaux de Bruxelles), TEC (Transport En Commun – Wallonie) and De Lijn are the main players in public transport in Belgium. They are subject to a complex legal framework. This framework aims to guarantee universal accessibility, personal data protection, transparency of information and the integration of gender issues into mobility policies. These obligations stem from European, federal and regional standards and are part of a policy of inclusive and sustainable mobility¹⁵⁷.

4.1.1 More equitable mobility

4.1.1.1 Promoting the affordability of mobility

In Belgium, the affordability of mobility¹⁵⁸ is based on several legal and regulatory measures at federal, regional and sectoral levels.

The federal government is responsible for the Mobility Budget¹⁵⁹. This budget allows employees who have a company car (or are entitled to one) to convert this benefit into an annual budget to finance sustainable modes of transport (public transport, cycling, shared mobility); a more environmentally friendly car or the unused balance can be paid to the employee at the end of the year. From 2026, this budget will become mandatory for employers offering company cars.

¹⁵⁴ L. n° 2019-1428 du 24 décembre 2019 d'orientation des mobilités.

¹⁵⁵ C. trans., art. **L1111-1 to L1121-2**.

¹⁵⁶ cooperationurban-mobility-observatory.transport.ec.europa.eu

¹⁵⁷ See below.

¹⁵⁸ <https://aide-sociale.be/aides-mobilite/>

¹⁵⁹ [L., 17 March 2019, amended in 2024, concerning the introduction of a mobility budget.](#)

Collective labour agreements No. 19/9 and 19/11¹⁶⁰ require employers to contribute financially to the cost of commuting (train, bus, tram) according to an indexed flat-rate scale (approximately 70% of the price of a rail pass). **Collective Labour Agreement No. 19/9**, concluded within the National Labour Council, establishes the minimum obligation for employers to provide financial contributions toward commuting expenses when workers use public transport. This obligation covers both rail transport organised by the SNCB and all other forms of public transport. The employer's contribution is determined on the basis of a fixed-rate scale linked to the commuting distance. When adopted in 2019, the fixed amounts corresponded to 70% of the price of a standard train season ticket, forming the minimum level of intervention that employers were required to provide. For public transport other than rail, the agreement imposed an obligatory employer contribution, subject to a minimum commuting distance of five kilometres. CCT No. 19/9 has a supplementary character, meaning sectors or companies that have established more favourable rules may deviate from it. The agreement thus aims to harmonise minimum rights relating to mobility and commuting support.

Collective Labour Agreement No. 19/11 modifies CCT No. 19/9 to adjust the employer's financial intervention to reflect the evolution of public transport tariffs, particularly those of the SNCB. This agreement applies as of 1 June 2024. As from that date, the agreement increases the employer's contribution to 71.8% of the price of an SNCB season ticket based on the fare applicable on 1 February 2024. This adjustment aims to correct the discrepancy that had emerged between the real cost of subscriptions and the fixed amounts set under CCT No. 19/9, whose relative value had decreased over successive indexations. The agreement further establishes an automatic adjustment mechanism applicable from 2025 to 2029. On 1 February of each year, the fixed-rate amounts will be revised in accordance with SNCB tariff indexation: the first percentage point of any tariff increase will be fully reflected, while any additional tariff increase will be considered at a rate of 50%, with a maximum annual adjustment of 2.5%. In addition, CCT No. 19/11 abolishes the minimum distance requirement of five kilometres for employer contributions relating to public transport other than rail. When the ticket price is distance-based, the employer's contribution aligns with the scale applicable to rail transport, capped at 75% of the actual ticket price. When the ticket price is fixed, the employer's contribution amounts to 71.8%, limited to the amount corresponding to a 7-kilometre train journey. Finally, the agreement integrates new SNCB subscription formulas, including "Flex" subscriptions, thereby ensuring that the regulatory framework remains consistent with current and future subscription models.

Social tariffs and legal reductions have been introduced:

- BIM status (beneficiary of increased assistance): Significant reductions on season tickets for SNCB, STIB, TEC and De Lijn operators (up to 40% or more).
- Free travel for children (under 12) on most public transport networks; reduced fares for young people, senior citizens and large families (up to 50% to 100% off).
- Large family card: Discounts on SNCB and other operators.
- PRM companion card: Free travel for companions of disabled persons.

At regional level, in Wallonia, Brussels and Flanders, reduced-price season tickets (STIB, TEC, De Lijn¹⁶¹), bicycle incentive programmes and soft mobility assistance, or free or reduced fares for elderly and disabled people have been introduced. In Wallonia, the Passeport Drive scheme enables eligible job seekers to obtain a category B (car) or AM (moped) driving licence free of charge. This initiative aims to improve the mobility and employability of job seekers, thereby facilitating their integration into the labour market.

¹⁶⁰ <https://cnt-nar.be/sites/default/files/documents/fr/cct-19-11.pdf>

¹⁶¹ The Omnipas unlimited travel pass from De Lijn in Flanders and Brussels, for example, or the TEC travel pass in Wallonia.

Other financial assistance is available in Belgium, including:

- Bicycle allowance for commuting between home and work (tax-free amount).
- Bonuses for the purchase of bicycles and green mobility assistance (regions);
- Assistance for people with disabilities¹⁶² and the elderly¹⁶³ : reimbursement of technical aids, transport discount card, parking card.

There are discussions in Belgium about making public transport completely free to combat mobility poverty (currently not widespread in Belgium, unlike in Luxembourg)¹⁶⁴.

4.1.1.2 Ensuring availability

Recognised as a general principle of law in Belgium, **the principle of continuity of public service** requires public services¹⁶⁵, including transport, to operate regularly and continuously to meet the needs of users. This principle is applied to the management of rail, road and urban networks. Its application in the field of mobility is permitted by specific laws such as the law of 29 novembre 2017 and Law of 8 May 2024. The law of 29 November 2017¹⁶⁶ on the continuity of passenger rail transport services in the event of a strike. It imposes a minimum service to guarantee the availability of trains even during strikes but only for SNCB.

The Law of 8 May 2024¹⁶⁷, on accessibility requirements for transport services and the creation of the Federal Transport Regulation Agency. The purpose of this law is to improve the accessibility of transport services for persons with disabilities, in accordance with the principles of equality and non-discrimination. It also aims to partially transpose Directive (EU) 2019/882 on accessibility requirements for products and services, as well as certain provisions of European directives applicable to rail and air transport. To this end, the law establishes the Federal Transport Regulatory Agency, which succeeds the existing Regulatory Serv, and sees its powers extended. It applies to air, rail, bus and waterway transport services, excluding urban, suburban and regional transport, except for those measures expressly referred to. The obligations imposed relate to operators' websites, mobile applications and integrated services, electronic ticketing systems, the dissemination of real-time travel information, and self-service terminals and interactive screens located on Belgian territory. Transport operators are required to ensure that their digital platforms, including websites and applications, are compatible with the assistive technologies used by persons with disabilities. Interactive terminals and self-service devices must be designed in such a way as to enable their use by these persons. Information on transport services must be provided in a clear, accessible and up-to-date manner, in real time. An inspection service has been set up within the FPS Mobility to supervise the application of the legal provisions. In the event of a breach of accessibility obligations, administrative

¹⁶² <https://aide-sociale.be/aides-mobilite/#aioseo-aides-a-la-mobilite-pour-les-personnes-a-mobilite-reduite>

¹⁶³ <https://aide-sociale.be/aides-mobilite/#aioseo-aides-a-la-mobilite-pour-les-personnes-agees>

¹⁶⁴ <https://lavamedia.be/fr/la-gratuite-des-transports-publics-sociale-ecologique-et-realiste/>

¹⁶⁵ De Broux P.O, "La continuité du service public : l'étonnante destinée d'un principe élémentaire" (The continuity of public service : the surprising fate of a basic principle), Journal des tribunaux, 201, online (accessed on 11.2025): https://dial.uclouvain.be/pr/boreal/object/boreal:147094/datastream/PDF_01/view

¹⁶⁶ [Loi du 29 novembre relative à la continuité du service de transport ferroviaire de personnes en cas de grève](#) (Act on the continuity of passenger rail transport services in the event of a strike)

¹⁶⁷ [Law of 8 May 2024 on accessibility requirements for transport services and establishing the Federal Transport Regulatory Agency.](#)

penalties may be imposed. The terms of these penalties and the inspection procedures are defined by regulation.

Federal Transport Regulatory Agency¹⁶⁸ has been established, endowed with functional and hierarchical independence. The agency's mission is to ensure economic regulation and compliance with legal obligations in the rail, air transport and related services sectors. Its functional and hierarchical independence is expressly enshrined in law (Article 36).

The Agency shall perform the following tasks in particular:

- Monitoring compliance with the accessibility obligations imposed by law, including websites, electronic ticketing and interactive terminals.
- Ensuring the economic regulation of transport infrastructure by issuing opinions on charges and monitoring pricing practices.
- Managing complaints lodged by users and operators.
- Imposing administrative penalties in the event of non-compliance.
- Providing advice and opinions to the government on transport policy.

The Agency is composed of members appointed by royal decree, who are required to submit an annual declaration of absence of conflict of interest. It has budgetary autonomy and its own resources to guarantee its independence. Its headquarters are in Brussels, within the FPS Mobility, while retaining functional autonomy.

The Agency may order corrective measures against operators in the event of a breach of legal obligations. It has the power to impose administrative sanctions and may refer serious violations to the competent court.

The management of transport networks and infrastructure is based on a system of shared powers between the federal authority and the federated entities, in accordance with the division of powers provided for in the Constitution and the special laws on institutional reform.

The federal state retains exclusive competence for national and international rail transport, including the management of infrastructure and services provided by SNCB (Société Nationale des Chemins de fer Belges) and Infrabel, the rail network manager. This competence covers:

- The planning and maintenance of railway lines.
- The regulation of passenger and freight transport services.
- Rail safety and coordination with European standards.

The Regions (Wallonia, Brussels-Capital, Flanders) are responsible for road networks and urban and interurban public transport, including trams, metros and buses. Each Region has its own operators: Flanders: De Lijn; Brussels-Capital: STIB; Wallonia: TEC.

These responsibilities include management of regional roads (roads, motorways), the development and maintenance of urban transport infrastructure and the implementation of regional mobility plans aimed at improving the flow and sustainability of travel.

In Wallonia, SPW Mobilité (Wallonia Public Service) and SOFICO (Walloon Society for Complementary Infrastructure Financing) manage and finance the 'missing links' and the structural network, including motorways, national roads and waterways. Their mission is to ensure the availability and modernisation of strategic infrastructure. The Brussels and Flanders regions are implementing regional mobility plans to

¹⁶⁸ Law of 8 May 2024, prev.

maintain and develop urban and interurban networks (tram, metro, bus), in line with the objectives of reducing emissions and improving accessibility.

The coexistence of federal and regional competences requires ongoing coordination between the different levels of government, particularly for:

- Intermodal projects (train-metro-tram links).
- Investment planning.
- Compliance with European safety and accessibility standards.

Level	Text / Provision	Main obligations
Constitutional	Principle of continuity of public service	Obligation to guarantee the regularity and continuity of transport services
Federal	Law of 29 November 2017	Minimum rail service in the event of a strike to ensure the availability of trains
	Law of 8 May 2024	Accessibility and availability of services (ticketing, real-time information, terminals)
European	Directive 2012/34/EU	Non-discriminatory access to rail infrastructure, availability of networks
	Directive 2019/882 (European Accessibility Act)	Accessibility standards to ensure the availability of essential services
Regional	Regional mobility plans (Wallonia, Brussels, Flanders)	Maintenance and development of road, tram, metro and bus networks; ongoing modernisation
	Wallonia: SPW Mobility & SOFICO	Management and financing of 'missing links' and the structural network

Figure6 Summary table of Belgian legislation promoting transport availability, classified by level

The Trans-European Transport Network (TEN-T) is a European programme aimed at connecting the transport infrastructures of Member States to create an integrated, efficient and sustainable area. This network encompasses rail, road, river, sea and air transport. Its main objectives are to remove bottlenecks, reduce network gaps, strengthen cross-border connections and promote multimodality and interoperability. It also aims to reduce environmental impact and improve transport safety.

In Belgium, responsibility for implementation of the lies with the national and regional authorities, with European co-financing provided by the Connecting Europe Facility (CEF). Among the Belgian projects supported by the European Union in 2024 are the modernisation of the Brussels-Luxembourg-Strasbourg link as part of the EuroCap-Rail project, the creation of an intermodal hub at Brussels Airport, and the modernisation of 500 SNCB trains to ensure their compliance with the European ERTMS system.

From a legal standpoint, Regulation (EU) 2024/1679 sets out guidelines for the development of the TEN-T and deadlines for completion (2030, 2040, 2050). Directive (EU) 2021/1187 imposes rationalisation measures to speed up the authorisation procedures for TEN-T-related projects. This directive was transposed into Belgian law by the Walloon Decree of 30 January 2025 and by a decree of the Brussels-Capital Government adopted in October 2025, which define the deadlines, procedures and coordination between competent authorities.

There are many actors involved in the implementation. At the federal level, the FPS Mobility and Transport, Infrabel and the SNCB are involved. The regions are represented by the SPW Mobility for Wallonia, Brussels

Mobility and De Lijn in Flanders. At the European level, the European Commission (DG MOVE) and the CINEA executive agency oversee and finance the projects.

Level	Objectives/Obligations	Key projects/actions	Actors involved
European Union	Development of the TEN-T network (Core Network 2030, Extended 2040, Global 2050) Regulation (EU) 2024/1679 and Directive 2021/1187: standards, deadlines, accelerated procedures	North Mediterranean and Atlantic corridors Co-financing via the Connecting Europe Facility (CEF)	European Commission (DG MOVE), CINEA
Federal (Belgium)	Compliance with EU obligations Planning and implementation of rail and multimodal infrastructure	Modernisation of railway lines (EuroCap-Rail) Deployment of ERTMS on 500 SNCB trains Brussels Airport intermodal hub	FPS Mobility and Transport, Infrabel, SNCB
Regional	Integration of TEN-T projects into regional mobility plans Streamlining of procedures (decrees and orders 2025)	Missing road links (Wallonia) Development of multimodal hubs (Brussels, Flanders)	SPW Mobility, Brussels Mobility, De Lijn
Operators/Partners	Technical implementation and operation of infrastructure	Adaptation of stations, intermodality, connected services	Rail operators, ports (Antwerp, Zeebrugge), airports

Figure7 Level of applicability of the TEN-T in Belgium

The law 17 August 2013¹⁶⁹ is the Belgian framework law on intelligent transport systems (ITS). It was adopted to transpose European Directive 2010/40/EU and establish a legal framework for the coordinated deployment of ITS in the field of road transport and its interfaces with other modes of transport. This law aims to support the deployment and consistent use of intelligent transport systems to improve the safety, efficiency and sustainability of travel. It lays down the general rules necessary to ensure the interoperability and compatibility of systems at national and European level. The law establishes a framework for the collection, exchange and use of real-time data (traffic, incidents, parking availability). It requires systems to be compatible to ensure interoperability between modes of transport. Finally, it provides for royal decrees (notably that of 15 December 2013) to define priority actions and technical standards.

¹⁶⁹ [Law of 17 August 2013](#) establishing the framework for the deployment of intelligent transport systems and amending the Law of 10 April 1990 regulating private and special security (known as the "ITS Framework Law").

4.1.1.3 Ensuring inclusivity

In Belgium, legislation promoting accessible mobility operates at several levels: international, federal and regional.

4.1.1.3.1 People with reduced mobility.

Article 22ter of the Belgian Constitution enshrines the right of persons with disabilities to full inclusion in society, which includes access to mobility and facilities. This principle is reinforced by the United Nations Convention on the Rights of Persons with Disabilities, ratified by Belgium on 2 July 2009. Articles 9 and 20 of this convention require States Parties to ensure the accessibility of transport and personal mobility for persons with disabilities.

The Law of 10 May 2007¹⁷⁰ aimed at combating certain forms of discrimination prohibits any discrimination based on disability and requires reasonable accommodation in public transport and services, except in cases of disproportionate burden.

The law of 8 May 2024¹⁷¹ on accessibility requirements for transport services and establishing the Federal Transport Regulation Agency partially transposes Directive (EU) 2019/882. It requires:

- Accessibility of operators' websites and mobile applications.
- Accessible electronic ticketing.
- The dissemination of real-time information in appropriate formats.
- Accessibility of interactive terminals.

Public operators such as SNCB, STIB, TEC and De Lijn are required to:

- Ensure reasonable access to vehicles and infrastructure (lifts, ramps, visual and audible signage);
- To offer free assistance to persons with reduced mobility when boarding and alighting.
- Provide accessible information (timetables, disruptions) in alternative formats.
- To offer equivalent solutions in the event of technical impossibility.

These obligations arise from the law of 10 May 2007 and applicable European regulations.

In Wallonia, the 2022-2024 Accessibility Plan provides for the adoption of a framework decree on the accessibility of buildings, public spaces, services and events, as well as the appointment of accessibility officers in government departments.

In Brussels, the Strategic Plan for Accessibility of the STIB network includes the installation of lifts and ramps, making stations accessible and developing the TaxiBus service, under the supervision of an Accessibility Task Force.

Level	Text/Regulation	Main obligations
International	UN Convention on the Rights of Persons with Disabilities (ratified in 2009)	Right to personal mobility, accessibility of transport and infrastructure
Constitutional	Article 22ter of the Belgian Constitution	Inclusion of persons with disabilities, reasonable accommodation
Federal	Law of 10 May 2007 (anti-discrimination)	Prohibition of discrimination, obligation to provide reasonable accommodation

¹⁷⁰ [Act of 10 May 2007](#) aimed at combating certain forms of discrimination.

¹⁷¹ [Law of 8 May 2024](#) on accessibility requirements for transport services and establishing the Federal Transport Regulatory Agency.

	Law of 8 May 2024 (transposition of EU Directive 2019/882)	Accessibility of transport services, ticketing, websites, interactive terminals
European	Regulation (EC) No 1371/2007 (rail)	Free assistance, accessible information
	Regulation (EU) 181/2011 (coach/bus)	Rights of passengers with reduced mobility, prohibition of refusal of carriage
	Regulation (EU) 1177/2010 (maritime)	Assistance and tailored information
	Regulation (EC) 1107/2006 (air)	Free assistance, non-discrimination
Regional	Wallonia: Accessibility Plan 2022-2024	Framework decree in preparation, accessibility advisors
	Brussels: STIB Accessibility Plan	Lifts, ramps, accessible stations, TaxiBus service
	Flanders: De Lijn programme	Gradual accessibility improvements to stops and vehicles

Figure8 Levels of legislation promoting mobility accessibility in Belgium.

4.1.1.3.2 The gender dimension.

In Belgium, the gender dimension in mobility is integrated into the broader framework of gender equality policies and gender mainstreaming. Gender mainstreaming consists of systematically incorporating the perspective of gender equality into all public policies, at all levels and in all phases of the decision-making cycle (preparation, implementation, evaluation). This approach aims to prevent the creation or exacerbation of inequalities and to promote their reduction. It applies across the board to areas such as employment, health, mobility, justice and infrastructure.

Belgium does not have a specific law on 'mobility and gender', but the gender dimension is integrated across the board in:

- Federal laws on gender mainstreaming (law of 12 January 2007, royal decree of 26 January 2010).
- Regional decrees (Wallonia, Wallonia-Brussels Federation).
- Strategic plans (Gender Plan, Strategy 2025-2029).
- European obligations relating to equal access to services.

The law of 12 January 2007¹⁷² on monitoring the implementation of the resolutions of the World Conference on Women (Beijing, 1995) requires the systematic integration of the gender dimension into all federal policies. This obligation includes carrying out a 'gender test' when developing public policies, including those relating to mobility and infrastructure.

The Royal Decree of 26 January 2010¹⁷³ establishes the Interdepartmental Coordination Group responsible for ensuring the implementation of gender mainstreaming in federal policies, particularly in the field of transport.

¹⁷² [Law of 12 January 2007](#) aimed at monitoring the implementation of the resolutions of the World Conference on Women held in Beijing in September 1995 and integrating gender mainstreaming into all federal policies.

¹⁷³ [A. Royal of 26 January 2010](#) establishing the composition, the tasks and operating rules of an interdepartmental coordination group and the minimum qualifications of its members, pursuant to Article 8 of the Law of 12 January 2007 on monitoring the implementation of the resolutions of the World Conference on Women held in Beijing in September 1995 and integrating the gender dimension into all federal policies.

In Wallonia, the "gender mainstreaming" decrees adopted in 2014 and 2016 require the integration of the gender dimension into all regional policies, including mobility. The 2020-2024 Gender Plan includes a specific "Mobility" section, which aims to make travel safer and more inclusive for women, by combating harassment in public spaces and adapting infrastructure (lifts, lighting, signage). The Wallonia-Brussels Federation adopted the Decree of 7 January 2016 and the Decree of 27 April 2020, which require gender to be considered in all policies, with a mandatory gender test and gender budgeting.

The Gender and Women's Rights Strategy 2025-2029, adopted by Wallonia and the Wallonia-Brussels Federation, sets cross-cutting objectives, including inclusive mobility and safety in public transport for women. It is accompanied by studies and pilot projects, such as the project "Towards active and inclusive mobility" (IWEPS, 2024), which analyses the obstacles encountered by women when walking and cycling and proposes recommendations for safer infrastructure (lighting, secure bicycle parking, combating harassment).

Level	Text / Provision	Main obligations/objectives	Actors involved
Federal	Act of 12 January 2007	Systematic integration of gender issues into all policies (gender mainstreaming)	FPS Mobility, Institute for the Equality of Women and Men, Interdepartmental Gender Group
	Royal Decree of 26 January 2010	Coordination of gender mainstreaming in policies	Federal Government, Gender Units in administrations
Regional	Gender mainstreaming decrees (Wallonia, 2014 and 2016)	Obligation to integrate gender into regional policies, including mobility	Walloon Government, SPW Mobility, IWEPS, local associations
	Decree of 7 January 2016 & decree of 27 April 2020 (FWB)	Gender testing and gender budgeting	Wallonia-Brussels Federation, sectoral administrations

	Gender Plan 2020-2024 (Wallonia)	"Mobility" focus: safety, combating harassment, adapted infrastructure	SPW Mobility, TEC operators, feminist associations
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Figure9 Legal and strategic texts relating to gender mainstreaming in Belgium

4.1.1.3.3 Safety

Safety in mobility is a major issue in Belgium, addressed through national, regional and local policies. It has two main components: road safety and safety in public transport and urban areas.

Belgium has adopted an ambitious strategy with the inter-federal "All for Zero" Plan¹⁷⁴, which aims to achieve zero road deaths by 2050. The plan, coordinated by the FPS Mobility and Transport, is based on collaboration between the federal government and the regions and the application of the Belgian Highway Code, defined by the Royal Decree of 1 December 1975, amended by the Law of 15 May 2022 to regulate mobility devices.

The inter-federal road safety plan "All for Zero" sets an ambitious target: to reduce the number of deaths and serious injuries on the roads by 50% by 2030, with a view to achieving zero deaths by 2050.

To achieve this goal, several measures have been put in place:

- Stronger penalties for serious offences such as speeding, drink-driving and distracted driving, in accordance with the Belgian Highway Code (Royal Decree of 1 December 1975, as amended).
- Elimination of speed tolerances and widespread use of automated controls to ensure strict enforcement of speed limits.
- Creation of a federal public prosecutor's office dedicated to road safety, responsible for centralising prosecutions for the most serious offences.
- Targeted awareness campaigns, conducted by the VIAS Institute, to prevent risky behaviour and promote responsible driving.

The Regions are supplementing these measures with local actions. In Brussels, since 1 January 2021, the Region has become a 30 km/h zone by default, except on major roads (50 or 70 km/h), in accordance with the Highway Code and regional ordinances. Flanders and Wallonia have introduced widespread 30 km/h zones around schools and in urban centres. Finally, safe cycle paths and infrastructure for soft mobility are being developed to encourage active modes of transport.

The feeling of insecurity in stations remains a major challenge in Belgium, despite the efforts of operators such as STIB, TEC, De Lijn and SNCB. Several measures have been put in place to address this issue.

Firstly, video surveillance is mandatory in stations, in accordance with the Camera Law of 21 March 2007¹⁷⁵, amended in 2018¹⁷⁶. This law requires the devices to be declared to the competent authorities and compliance with the personal data protection rules laid down in the GDPR.

¹⁷⁴ <https://mobilit.belgium.be/fr/publications/plan-interfederal-securite-routiere-all-zero>

¹⁷⁵ [Law of 21 March 2007](#) regulating the installation and use of surveillance cameras.

¹⁷⁶ [Law of 30 July 2018](#) amending the Law of 21 March 2007 regulating the installation and use of surveillance cameras, with a view to improving the consistency of the text and its compliance with the General Data Protection Regulation (GDPR)

Next, coordination between police forces and transport operators has been strengthened, in accordance with the Private Security Act of 2 October 2017¹⁷⁷ and the internal regulations of transport companies. This cooperation aims to improve responsiveness in the event of an incident and to secure sensitive areas. In addition, prevention campaigns against incivility and aggression are regularly conducted, particularly in response to the 5,900 cases of aggression recorded in 2024¹⁷⁸ on public transport. These campaigns aim to raise awareness among passengers and reduce violent behaviour.

Finally, priority security zones have been set up, accompanied by increased patrols in large cities, in order to strengthen deterrence and protect users.

Belgium is taking a comprehensive approach to improving mobility safety, combining legislative measures, strategic plans and local initiatives. While progress is visible, particularly in reducing accidents, challenges remain in terms of crime on public transport and road deaths. The success of the "All for Zero" strategy will depend on continued efforts and cooperation between the different levels of government.

4.1.2 Sustainable mobility.

Sustainable mobility in Belgium is based on a set of federal, regional and European legal provisions aimed at reducing the environmental impact of travel, improving accessibility and promoting alternative modes of transport. These measures are in line with Belgium's international commitments, in particular the United Nations 2030 Agenda and European climate targets.

The Programme Law of 8 April 2003 requires employers with more than 100 employees to carry out a diagnosis of home-to-work travel every three years. The purpose of this diagnosis is to assess the modes of transport used by employees and to identify opportunities for improvement in terms of sustainable mobility. The data collected must be sent to the Federal Public Service Mobility and Transport, in accordance with legal provisions. This obligation is part of a process of planning and monitoring public policies on mobility.

The Royal Decree of 16 May 2003, adopted in implementation of the programme law, lays down the practical arrangements for collecting and transmitting data on commuting. It specifies the content of the assessment, the deadlines for communication and the formats required to ensure harmonisation of information at national level.

The Act of 17 August 2013 establishes the legal framework for the deployment of intelligent transport systems (ITS), in accordance with Directive 2010/40/EU. This law aims to promote the interoperability of systems and intelligent traffic management by integrating information and communication technologies in the field of road transport and its interfaces with other modes of transport. It provides for the establishment of technical standards and procedures to ensure the compatibility of systems at national and European level.

The Royal Decree of 15 December 2013 implements the priority actions defined by the Act of 17 August 2013. It specifies the areas of application of ITS, such as traffic management, real-time information for users, road safety and the interoperability of services. This decree is an essential instrument for achieving the objectives set by the Act.

Finally, the Act of 17 March 2019 on the mobility budget, amended in 2024, introduces a mechanism allowing workers to give up their company car in exchange for a budget to finance sustainable mobility

¹⁷⁷ [Law of 2 October 2017](#) regulating private and personal security.

¹⁷⁸ <https://press.sncb.be/la-sncb-letec-de-lijn-et-la-stib-ensemble-contre-les-agressions-envers-leur-personnel>

solutions. This budget can be used to purchase a bicycle, buy public transport season tickets, carpool or even pay for accommodation close to the workplace. The 2024 reform broadened the scope of the law and indexed the amounts to make the scheme more attractive and encourage the transition to more environmentally friendly modes of transport.

As noted above, powers are shared between the federal government and the regions. In Wallonia, The Decree of 1 April 2004¹⁷⁹ on sustainable mobility and accessibility, amended in particular by the Decree of 24 November 2022, forms the basis of regional policy on sustainable mobility. It defines the fundamental principles aimed at ensuring environmentally friendly mobility that is accessible to all and integrated into a coherent territorial strategy. The decree aims to promote sustainable mobility in Wallonia by reducing dependence on private cars, encouraging active modes of transport (walking, cycling) and improving intramodality. It requires environmental, social and economic issues to be considered in transport planning. It provides for:

- **Mobility plans:** The decree provides for the development of a Regional Mobility Plan and Municipal Mobility Plans to coordinate actions at different levels.
- **Universal accessibility:** It requires the needs of people with reduced mobility to be considered in the design of infrastructure and services.
- **Consultation:** Mobility policies must be implemented in consultation with local stakeholders, transport operators and associations.
- **Funding:** The decree establishes a drawing right allowing municipalities to benefit from funding for projects promoting sustainable mobility (cycle paths, pedestrian facilities, intermodality).

The decree has been amended several times, notably by the decree of 24 November 2022, which strengthens cycling policy by establishing a structuring network and securing long-term funding for municipalities.

In Brussels-Capital, the Order of 13 October 2023¹⁸⁰ establishes a comprehensive legal framework for the planning, implementation and monitoring of mobility and road safety policy in the Brussels-Capital Region. It replaces the previous Order of 2013 to simplify procedures and ensure greater consistency between the various planning instruments. This reform aims to strengthen coordination between the Region and the municipalities, integrate environmental objectives and improve road safety within the framework of mobility policies.

The ordinance introduces several strategic instruments:

- **Regional Mobility Plan (PRM):** a key instrument defining regional mobility and road safety policy. It comprises a strategic section (objectives, action plan, indicators) and a regulatory section (requirements for the quality of mobility networks). The PRM is adopted by the Government for a period of ten years and applies to the entire region.
- **Municipal Mobility Plans (PCM):** local tools that set out the objectives of the RMP, taking into account the specific characteristics of each municipality. They are developed in consultation with the Region and must comply with the requirements of the RMP.
- **Local Mobility Contracts (CLM):** a mechanism for cooperation between the Region and municipalities for the implementation of the actions provided for in the PRM. These contracts strengthen the consistency and coordination of local and regional policies.
- **Complementary plans:** thematic documents targeting specific objectives (active mobility, urban logistics, accessibility for people with reduced mobility, etc.).

¹⁷⁹ [D. of 1 April 2004](#) on sustainable mobility and accessibility

¹⁸⁰ [Ordinance of 13 October 2023](#) establishing a framework for the planning, implementation and monitoring of mobility and road safety policy.

- The Brussels Observatory for Mobility and Road Safety: This Observatory acts in a neutral manner and its members are qualified in data processing, in accordance with the requirements of the GDPR.

The Flemish Decree of 3 April 2019 on basic accessibility¹⁸¹ marks a significant reform of mobility policy in Flanders. It replaces the concept of basic mobility (guaranteeing a minimum public transport service everywhere) with that of basic accessibility, which aims to:

- Move from a supply-driven system to a demand-driven system based on actual travel flows.
- Introduce combimobility: combining several modes of transport (bus, bicycle, train, etc.) to reach a destination.

In accordance with the provisions of the Decree of 3 April 2019 on basic accessibility, an integrated multimodal network has been established, designed to ensure a smooth transition between different modes of transport. This network aims to guarantee continuity of travel and promote combimobility by enabling users to combine several means of transport in a coherent and efficient manner.

The network is structured in several hierarchical levels:

- The rail network, which forms the backbone of the system, is intended to provide long-distance travel and connect the main urban and economic centres.
- The central network, which serves centres of attraction such as employment, education, healthcare and commercial areas, is designed to offer high frequency and optimal accessibility.
- The complementary networks, which cover less densely populated areas, are organised in a flexible manner, using on-demand transport services.

In addition, the decree provides for the involvement of local authorities in the planning and organisation of public transport services, to ensure that supply is matched to the specific needs of the regions. It also encourages the promotion of innovative technologies, through the development of digital applications and the provision of real-time information, with the aim of improving the user experience and the flow of traffic.

The aim of this decree is to make the public transport system more flexible, efficient and adapted to the real needs of users, by integrating different modes of transport into a sustainable and intelligent mobility approach. This reform marks the transition from a supply-driven model to a demand-driven model, thereby promoting better accessibility and optimised use of resources.

A Low Emission Zone (LEZ) is an urban area defined by the competent authority in which the circulation of the most polluting vehicles is prohibited or subject to specific conditions. The aim of establishing an LEZ is to improve air quality and reduce pollutant emissions from motor vehicle traffic. LEZs are currently being implemented in the cities of Antwerp, since 1 February 2017, Brussels, since 1 January 2018, covering all nineteen municipalities and Ghent, since 1 January 2020.

The Regions are responsible for creating and regulating LEZs.

- In the Flemish Region, the legal basis is provided by the Flemish Government Decree on low emission zones of 26 February 2016¹⁸².
- In the Brussels-Capital Region, the decree of the Government of the Brussels-Capital Region of 25 January 2018¹⁸³ on the creation of a low-emission zone sets out the specific details: definition of zones, access rules, exemptions, monitoring and penalties. It has been

¹⁸¹ [D. of 26 April 2019](#) on basic accessibility.

¹⁸² [A. of 26 February 2016](#), of the Flemish Government on low-emission zones.

¹⁸³ [A. of 25 January 2018](#) of the Government of the Brussels-Capital Region on the creation of a low-emission zone.

amended several times to incorporate changes to the timetable and technical criteria (notably in 2020, 2021, 2022 and 2024).

In the Walloon Region, the decree of 17 January 2019 on combating air pollution caused by motor vehicle traffic¹⁸⁴ authorises the creation of municipal or regional LEZs, although no zones are currently active. The aim was to transform the whole of Wallonia into a vast low-emission zone, which would have been the largest LEZ in Europe. This measure was to come into force gradually from 2023 but was never implemented due to a lack of implementing decrees. The government now favours targeted measures in large cities (Liège, Charleroi, Namur, Mons), where air quality remains problematic. A preliminary draft amendment has been announced to allow urban rather than regional LEZs.

Access to LEZ zones is determined based on the Euro standard applicable to the vehicle (Euro 1 to Euro 6). LEZ zones are indicated by regulatory signs F117 (entry) and F118 (exit), in accordance with the provisions of the Highway Code. The restrictions are gradual and aim in particular to ban older diesel and petrol vehicles. For example, in the Brussels Region, Euro 5 diesel vehicles will be banned from 2025, while Euro 2 petrol vehicles will also be banned. Compliance with the rules is monitored by automatic number plate recognition systems (ANPR cameras). Offences will result in administrative fines ranging from €150 to €350, depending on the city. Exemptions may be granted for certain vehicles, in particular vehicles used to transport disabled people, historic vehicles (oldtimers) and priority vehicles. It is also possible to obtain a day pass allowing exceptional access to the zone, limited to twenty-four days per calendar year.

4.2 Italy

4.2.1 More equitable mobility

4.2.1.1 Promoting the affordability of mobility

In Italy, legislation promoting the affordability of mobility is based on several measures and strategic guidelines, mainly related to ecological transition and reducing inequalities in access to transport. Since 2021, the Ministry of Infrastructure and Sustainable Mobility¹⁸⁵ has been responsible for designing and implementing public policies aimed at making mobility more accessible, inclusive and affordable for all citizens. This mission is part of an ecological and social transition, in line with Italy's commitments under European objectives to reduce greenhouse gas emissions, combat air pollution and promote social inclusion.

The guidelines defined by this ministry are based on two main areas:

- Reducing transport costs for vulnerable households: the aim is to ensure equitable access to mobility services by limiting territorial and social inequalities. This measure aims to promote social cohesion and prevent exclusion linked to high travel costs.
- Massive investment in rail and electricity infrastructure: the aim is to reduce dependence on private cars, promote sustainable modes of public transport, and strengthen intermodality. This strategy contributes to the decarbonisation of transport and improved air quality.

¹⁸⁴ [Decree of 17 January 2019](#) on combating air pollution caused by motor vehicle traffic.

¹⁸⁵ <https://www.mit.gov.it/en>.

To this end, the National Recovery Plan¹⁸⁶ is allocating nearly €20 billion to mobility and infrastructure. These investments include the renewal of the public bus fleet and the creation of electric charging stations, with the aim of promoting transport solutions that are less costly in the long term and more environmentally friendly.

To improve affordability, Italy has introduced the Bonus Trasporti. The Bonus Trasporti was introduced by Decree-Law No. 50 of 17 May 2022¹⁸⁷ (*Decreto Aiuti*), converted into Law No. 91 of 15 July 2022¹⁸⁸, to support households facing rising transport costs and encourage the use of public transport. It has a dual purpose:

- Social, by reducing the financial burden on low-income individuals.
- Environmental, by promoting the transition to sustainable mobility and reducing the use of private vehicles.

The bonus consists of a **€60 voucher**¹⁸⁹, which can be used to purchase monthly, multi-monthly or annual passes for public transport services (bus, tram, metro, local, regional or interregional train).

In 2022, the scheme was open to people whose annual income did not exceed €35,000. This first phase aimed to support a wide audience facing rising transport costs.

In 2023, the eligibility threshold was lowered to €20,000, in accordance with the provisions of Decree-Law No. 5 of 14 January 2023¹⁹⁰, converted into Law No. 23 of 10 March 2023. This change refocused the aid on the most vulnerable households to strengthen its social impact.

In 2024, the scheme was not renewed in its original form. Only beneficiaries of the "*Dedicata a te*" social card¹⁹¹, awarded to households with an ISEE (equivalent economic situation index) of less than or equal to €15,000, were eligible for an additional €77.20 top-up, which could be used to purchase public transport passes or fuel.

In addition, certain regions and municipalities, such as Lombardy and Lazio, have introduced additional fare reductions for students, the unemployed and the elderly, thereby contributing to more inclusive mobility.

Since the start of the 2025-2026 academic year, the Campania Region has confirmed its programme of free public transport for students. This scheme is aimed at young people aged 11 to 26 who live in Campania and are enrolled in a recognised school or university. To be eligible, family income must be less than or equal to €35,000 (ISEE). The benefit is valid until 31 July 2026 and takes the form of a digital pass issued via the Campania Unica app, which can be used for weekday journeys between home and school or university. The aim is to reduce family expenditure and promote sustainable mobility in a region where travel between Naples and the provinces is frequent.

The Lazio Region offers a free 30-day pass for young people aged 16 to 25. In addition, discounted annual Atac and regional passes are available to facilitate access to urban and interurban transport. These measures aim to encourage the use of public transport and reduce young people's transport costs.

¹⁸⁶ <https://www.mimit.gov.it/it/pnrr/piano>.

¹⁸⁷ [DECREE-LAW No. 50 of 17 May 2022](#).

¹⁸⁸ [LAW 15 July 2022, No. 91](#).

¹⁸⁹ The word voucher means exchange ticket in French. The Anglo-Saxon expression cash voucher is equivalent to the French "*bon de caisse*". This cash voucher is generally a slip that can be exchanged at the cash desk of an establishment for its cash value. By handing in this voucher at the counter, you obtain the amount indicated on it.

¹⁹⁰ [DECREE-LAW No. 5 of 14 January 2023](#).

¹⁹¹ [INPS Portal - "Dedicata a te" Card 2025: instructions](#).

In cities such as Bologna, Parma and Piacenza, the Emilia-Romagna Region offers significant discounts on travel passes for university students and PhD students. These initiatives support academic mobility and help reduce costs for young adults, thereby promoting access to higher education.

In Lombardy, young people under the age of 27 can benefit from a monthly travel pass in Milan for €22, as well as discounts on metropolitan travel passes under the STIBM fare system. In addition, young people up to the age of 14 can travel for free or at a greatly reduced fare on certain urban and regional lines, facilitating family and school mobility.

The STIBM (*Sistema Tariffario Integrato del Bacino di Mobilità*) is the integrated fare system that applies to the bacino di mobilità, i.e. the mobility zone comprising the City of Milan (the centre of the system), the municipalities of the Città Metropolitana di Milano, as well as the Province of Monza e Brianza and certain neighbouring areas.

This system was introduced to standardise the fares of the various operators (ATM, Trenord, intercity buses) and allow users to use a single ticket for multiple modes of transport: bus, tram, metro and train.

The measures implemented by Italian regions (Campania, Lazio, Emilia-Romagna, Lombardy, etc.) are based on the principle of regional autonomy enshrined in the Italian Constitution (Articles 117 and 118), which grants regions jurisdiction over local public transport and social policy.

These measures are generally adopted by regional laws or resolutions of regional councils, in line with the national objectives defined by:

- The Codice della Strada (Highway Code), which regulates transport safety and organisation. The new Italian Highway Code, which entered into force in December 2024, significantly strengthens road safety rules. It introduces stricter zero-tolerance measures for alcohol and for drug-driving. Repeat offenders may be required to install an alcohol ignition interlock (alcolock). Mobile phone use while driving is heavily penalised, with immediate licence suspension. Repeated speeding offences lead to higher fines and rapid licence suspensions. Electric scooters are more strictly regulated (helmets, insurance, speed limits). The Code enhances the protection of vulnerable road users, especially cyclists.
- Sanctions are faster and more visible, with short but immediate licence withdrawals. Specific rules also target novice drivers and particularly dangerous behaviours. The overall objective is to reduce serious accidents and sustainably change risky driving behaviours.
- The PNRR ([Piano Nazionale di Ripresa e Resilienza](#)), which promotes sustainable and inclusive mobility.
- European directives, in particular Directive (EU) 2019/882 on accessibility and the European Strategy for Sustainable and Smart Mobility (2020).

4.2.1.2 Ensuring availability

Italy has a specific legal framework to ensure the continuity of public services, particularly in the transport and mobility sector, reconciling this principle with the right to strike. The principle of continuity of public service is recognised in Italy as a fundamental principle of administrative law, derived from the Constitution (Articles 97 and 118) and applied to all essential services, including transport.

Regarding public transport services, the main reference is Law No. 146 of 12 June 1990¹⁹², amended by Law No. 83/2000, which regulates the exercise of the right to strike in essential public services (*servizi pubblici essenziali*), including mobility.

- This law imposes proportionate restrictions on the right to strike to guarantee a minimum level of service for users (e.g. from 6 a.m. to 9 a.m. and from 6 p.m. to 9 p.m. for rail transport).
- It provides for sectoral agreements defining the terms and conditions for continuity (timetables, frequencies, notice periods).
- It prohibits strikes during certain critical periods (holidays, public holidays, elections) to avoid massive disruption.

The Italian legal framework for strikes in public services, particularly transport, is based on the reconciliation of two constitutional rights: the right to strike, guaranteed by Article 40 of the Italian Constitution, and the right of citizens to freedom of movement and access to essential services, which derives from the principles of continuity of public service.

To achieve this balance, the law imposes several obligations:

- **Mandatory minimum service:** during a strike, operators must ensure a minimum percentage of journeys, particularly during peak hours, to maintain essential mobility.
- **Mandatory notice:** trade unions must announce the strike at least 10 days in advance, allowing authorities and companies to organise continuity of service.
- **Penalties:** in the event of non-compliance with the rules, administrative and financial penalties may be imposed on the unions or companies responsible.

This legal framework aims to protect everyday mobility, particularly for travelling to work, school or healthcare facilities; to avoid total blockages of the rail network, whether urban or interurban, which would have major economic and social consequences; and to maintain a balance between the right to strike and the continuity of public service, in accordance with the European principles of proportionality and user protection.

Obligation	Description	Legal reference
Mandatory notice	Strikes must be announced at least 10 days in advance by the trade unions.	Law No. 146/1990, Art. 2
Notification to the authorities	Notification to the company, the Commissione di Garanzia and the competent authorities.	Law No. 146/1990, Art. 2

¹⁹² [LAW 12 June 1990, no. 146](#)

Mandatory minimum service	Maintenance of a minimum percentage of journeys, particularly during peak hours (e.g. 6 a.m. to 9 a.m. and 6 p.m. to 9 p.m.).	Law No. 146/1990, Articles 1 and 2
Limited duration of strikes	Prohibition of unlimited strikes; maximum duration set by sectoral agreement.	Law No. 146/1990, Art. 2
Interval between strikes	Obligation to observe a minimum interval between two strikes in the same sector.	Law No. 146/1990, Art. 2
Penalties for non-compliance	Administrative and financial fines for trade unions and companies; possibility of suspension of trade union rights.	Law No. 146/1990, Art. 4 and Circular 159/1995

Figure10 Legal obligations in the event of a strike in public transport.

The Autorità di Regolazione dei Trasporti (ART)¹⁹³ is an independent administrative authority, established by Decree-Law No. 201 of 6 December 2011 (known as *Salva Italia*)¹⁹⁴, converted into Law No. 214 of 22 December 2011, in accordance with Law No. 481/1995 on the regulation of essential public services. This independence is reflected in:

- Organisational and financial autonomy: the ART has its own budget, financed in part by contributions from regulated operators, and is not subject to government directives in its decisions.
- Appointment of executives: the President and the two Commissioners are appointed by decree of the President of the Republic, after consultation with parliamentary committees, for a single non-renewable term of seven years, which limits the risk of political pressure.
- Incompatibilities and prohibitions: members may not hold other public or private positions that could create conflicts of interest.

This structure meets European requirements for independent regulation, in particular Directive 2012/34/EU for the railway sector and Directive 2009/12/EC for airport charges.

The ART has coercive powers and administrative sanctions, as provided for by Law No. 481/1995¹⁹⁵ and its implementing texts:

- Financial penalties: in the event of a breach of regulatory obligations (e.g. failure to comply with infrastructure access conditions, anti-competitive practices), the ART may impose fines proportional to the seriousness of the infringement and the operator's turnover.
- Power of injunction: the Authority may order the cessation of unlawful conduct and impose corrective measures.
- Suspension or revocation of concessions: in the event of serious breaches, it may propose to the government the suspension or revocation of motorway, railway or port concessions.
- Publication of sanctions: decisions are made public, in accordance with the principle of transparency.

¹⁹³ Transport organising authorities (TOAs)

¹⁹⁴ [DECREE-LAW No. 201 of 6 December 2011.](#)

¹⁹⁵ [Law 14 nov. 1995, no. 481.](#)

These powers are governed by procedural safeguards (right of defence, judicial review before the TAR – Tribunale Amministrativo Regionale), ensuring compliance with constitutional and European principles.

The independence and sanctioning powers of the ART aim to ensure neutrality and transparency in the regulation of transport markets; protect users' rights and guarantee fair access to infrastructure; prevent abuse of dominant positions and promote fair competition; and align Italian regulation with European standards, strengthening the credibility of the system vis-à-vis international investors and operators.

The Ministry of Infrastructure and Sustainable Mobility (MIMS) is responsible for managing road, rail, port and airport networks, as well as for general transport and logistics planning. The Autorità di Regolazione dei Trasporti (ART) is an independent regulator that oversees access to infrastructure, user rights, motorway and airport charges, and compliance with European standards.

Italy has a particularly dense and strategic road network, which plays an essential role in the mobility of people and goods. It covers approximately 837,000 km, including national, regional and local roads. This network is essential for connecting urban, industrial and tourist areas, but also for serving mountainous and island regions.

Of these roads, 6,966 km are motorways, known as Autostrade, which form the backbone of long-distance road transport. These infrastructures are designed to handle high traffic volumes and allow for higher speeds, promoting connectivity between major cities such as Milan, Rome, Naples and Turin, as well as European corridors.

Motorways are managed by ANAS (Azienda Nazionale Autonoma delle Strade), a public company responsible for national roads and major routes, as well as by private concessionaires. The latter operate sections under contract, financed by tolls, which allows infrastructure to be maintained and modernised without relying solely on the public budget.

Electronic toll systems, such as Telepass, are widely used on Italian motorways to ease traffic flow and avoid queues at barriers. Monitoring and maintenance rely on advanced technologies: for example, the Autostrada A1 (Milan-Naples) is equipped with sensors and cameras to detect incidents in real time. In mountainous areas, complex infrastructure such as the Mont Blanc Tunnel and the Polcevera Viaduct (San Giorgio Bridge in Genoa) illustrate the high costs and complexity of the work involved. The ecological transition is taking shape with the installation of electric charging stations on the A22 (Brenner Motorway) and projects aimed at reducing emissions from heavy goods vehicles in the Alps.

The ageing of infrastructure is illustrated by the collapse of the Morandi Bridge in Genoa in 2018, which highlighted the need for regular renovations. Congestion is particularly problematic around Rome and Milan, as well as on the A4 Turin-Trieste motorway, which is heavily used by tourist and commercial traffic. Finally, climate adaptation is crucial in areas such as the Dolomites, where roads need to be protected against avalanches and landslides, particularly on the SS51 Alemagna.

The Italian rail network is one of the most extensive in Europe, with nearly 24,564 kilometres of lines, including 13,627 kilometres of electrified lines, promoting more sustainable and efficient mobility. The infrastructure is managed by Rete Ferroviaria Italiana (RFI), which is responsible for the maintenance, modernisation and safety of the tracks. Passenger services are mainly operated by Trenitalia, the national company, which offers regional, intercity and high-speed connections.

The high-speed network (LGV) is a major asset for the country's connectivity. It connects Italy's major cities, including Naples, Rome, Milan and Turin, enabling fast and comfortable journeys. These high-speed lines have helped to significantly reduce journey times, strengthen the competitiveness of rail compared to air travel over medium distances and support the transition to more environmentally friendly modes of transport.

The complex terrain, with 80% of the country being mountainous or hilly, increases the cost of building and maintaining infrastructure, particularly tunnels (70% of European road tunnels longer than 500 metres are in Italy). The ageing infrastructure requires major renovations, as demonstrated by the collapse of the

Genoa bridge in 2018. Finally, the energy and digital transition require the electrification of networks, the development of railroad intermodality and the integration of intelligent traffic management systems.

The TEN-T is a European policy aimed at creating a coherent, multimodal and sustainable transport network across the EU. It connects roads, railways, waterways, ports and airports to facilitate the movement of people and goods, reduce bottlenecks and strengthen economic and territorial cohesion. The latest revision (2024) focuses on reducing emissions, climate resilience and the digitalisation of infrastructure. The implementation of the Trans-European Transport Network (TEN-T) in Italy is mainly the responsibility of the Ministry of Infrastructure and Sustainable Mobility (MIMS), which plans, coordinates and implements projects in line with European objectives. This ministry works closely with infrastructure managers such as Rete Ferroviaria Italiana (RFI) for the rail network and ANAS for road infrastructure, as well as with port and airport authorities for multimodal connections. At European level, the Commission oversees compliance with standards and deadlines through the TEN-T corridor coordinators, who facilitate cross-border cooperation and ensure interoperability. Italy is involved in four strategic corridors – Scandinavian-Mediterranean, Baltic-Adriatic, Rhine-Alpine and Mediterranean – whose completion is essential to strengthen the connectivity, sustainability and competitiveness of the national transport system.

From a legal standpoint, Regulation (EU) 2024/1679 sets out guidelines for the development of the TEN-T and deadlines for completion (2030, 2040, 2050). Directive (EU) 2021/1187 imposes rationalisation measures to speed up the authorisation procedures for TEN-T-related projects. This directive was transposed in Italy by Legislative Decree No 101 of 10 July 2023¹⁹⁶. This decree establishes:

- Those projects falling within the TEN-T core network (cross-border links and missing sections) benefit from an accelerated procedure.
- That all authorisations must be issued within four years of notification.
- That the Ministry of Infrastructure and Transport is the competent authority for coordination, in conjunction with the European corridor coordinators designated by the European Commission.

These provisions aim to reduce delays and cost overruns that hinder the implementation of strategic projects, particularly those included in the European TEN-T corridors crossing Italy (Scandinavian-Mediterranean, Baltic-Adriatic, Rhine-Alpine and Mediterranean).

European Directive 2010/40/EU, which establishes the framework for the deployment of intelligent transport systems (ITS) in the field of road transport and its interfaces with other modes, has been transposed into Italian law by several legislative acts. Italy has incorporated the directive into its national law mainly through Decree-Law No. 179 of 18 October 2012¹⁹⁷, supplemented by the Decree of 1 February 2013. The main objective is to create a national framework for the deployment of intelligent systems in road transport to improve infrastructure management and efficiency. It also aims to ensure compatibility with European standards, enabling the cross-border flow of data and services, which promotes interoperability and continuity of operations. Finally, the transposition aims to promote sustainable mobility and road safety by integrating information and communication technologies into traffic and infrastructure management.

Implementation is coordinated by the Ministry of Infrastructure and Sustainable Mobility (MIMS), which defines strategic guidelines and supervises projects. The Autorità di Regolazione dei Trasporti (ART) plays a key role in ensuring regulatory compliance and guaranteeing fair access to services for all operators.

¹⁹⁶ [Legislative decree no. 101 of 10 July 2023.](#)

¹⁹⁷ [Decree-law no. 179 of 18 October 2012.](#)

Intelligent transport systems (ITS) apply digital technologies (sensors, IoT, AI, big data, 5G) to improve safety, traffic flow, sustainability and efficiency in transport networks. They enable:

- Real-time management of road and rail traffic.
- Optimisation of traffic flows to reduce congestion and emissions.
- The integration of multimodal services (bus, train, bicycle, car sharing) into a MaaS (Mobility as a Service) approach.

One example is the STIBM (Sistema Tariffario Integrato del Bacino di Mobilità), the integrated fare system set up in the Milan region and its surroundings to simplify access to public transport and promote sustainable mobility. The STIBM is designed to unify the fares of different modes of transport (bus, tram, metro, regional trains) in a vast mobility basin that includes the City of Milan, the Città Metropolitana di Milano, the Province of Monza and Brianza, and certain municipalities in the provinces of Lodi and Pavia.

Under the STIBM, the territory is divided into concentric zones around Milan, identified by codes MI1 to MI9. The price of the ticket depends on the number of zones crossed, not the type of transport or the number of connections. With a single ticket, it is possible to travel freely within the zones purchased, on all means of public transport (bus, tram, metro, Trenord and Trenitalia trains).

For example, an MI1-MI3 ticket covers Milan and the municipalities in the inner suburbs and is valid for 90 minutes from the time of validation.

The aim of fare integration is to establish a single system for all operators, allowing users to access different modes of transport with a single ticket. This measure helps to facilitate travel by reducing administrative barriers and simplifying the passenger experience, particularly in intermodal areas. Finally, it promotes the reduction of congestion and environmental impact by encouraging citizens to favour public transport over private cars, which contributes to the transition to more sustainable mobility.

4.2.1.3 Ensuring inclusivity

4.2.1.4 Persons with disabilities or reduced mobility

Persons with reduced mobility. In Italy, several pieces of legislation define the rights and obligations regarding accessibility for persons with reduced mobility. Law No. 104/1992¹⁹⁸ is a framework law that establishes the right to accessibility in transport, public buildings and services, to guarantee the social inclusion of persons with disabilities.

Legislative Decree No. 285/1992¹⁹⁹, known as *the Codice della Strada* (Highway Code), contains specific provisions for parking spaces reserved for persons with disabilities and requires the adaptation of road infrastructure to facilitate their mobility. Law 104/1992 is a framework law that defines the fundamental principles for guaranteeing the rights, assistance and social integration of persons with disabilities in Italy. It aims to ensure respect for human dignity, equal rights and full participation in social life (it provides for measures to eliminate disabling conditions and promote social participation), education and work.

Presidential Decree No. 503/1996²⁰⁰ sets standards for the elimination of architectural barriers in public buildings and urban spaces to make infrastructure accessible to all.

¹⁹⁸ [Law No. 104/1992](#).

¹⁹⁹ [Legislative Decree No. 285/1992](#).

²⁰⁰ [Decree of the President of the Republic No. 503/1996](#).

The Stanca Law No. 4/2004²⁰¹, initially focused on digital accessibility, has been extended to public services, including mobility information, to guarantee access to digital content for persons with disabilities. Its main objective is to guarantee all persons, particularly those with disabilities, the right to access online information and services, in accordance with the principle of equality enshrined in the Italian Constitution. The Stanca Law is the cornerstone of digital accessibility in Italy. It guarantees the right of access to online services for all, imposes strict technical standards and provides for penalties in the event of non-compliance. It is part of a European drive to make digital technology inclusive.

Finally, Legislative Decree No. 82/2022²⁰² transposes the European Accessibility Act (EAA) into Italian law, including obligations for transport services and online ticketing systems to make them accessible. The decree defines compliance obligations for products and services placed on the market from 28 June 2025. It concerns in particular:

- E-commerce platforms,
- IT systems and terminals (computers, smartphones, e-book readers),
- Vending machines and electronic ticketing systems,
- Banking services,
- Electronic and audiovisual communication services,
- As well as information and booking systems for public transport.

Transport operators must install ramps, lifts and tactile and visual signage at stations and stops. They must also provide information in a variety of formats (audio, visual, Braille), provide reserved spaces in vehicles (buses, trams, trains) and comply with European standards, particularly EN 301 549 for digital accessibility. The decree also requires the CE mark to certify that products comply with accessibility requirements and provides for control mechanisms and penalties in the event of non-compliance. Guidelines from the Agency for Digital Italy (AgID) will specify the technical details of implementation.

Italy applies a legislative framework combining national laws (such as Law 104/1992 and DPR 503/1996), technical standards and European regulations to ensure the accessibility of public transport and infrastructure for people with reduced mobility. The ratification of the United Nations Convention on the Rights of Persons with Disabilities reinforces the obligation of universal accessibility.

4.2.1.4.1 The gender dimension

In Italy, the gender dimension in mobility is increasingly being integrated into urban policies and transport plans. However, it remains a key issue in ensuring equality and inclusion.

Mobility systems are not neutral: they reflect existing social inequalities. Women, older people, people with disabilities and gender minorities face specific obstacles. These obstacles include safety issues, such as harassment or feeling unsafe at night, limited accessibility due to a lack of ramps, adapted pavements or inclusive signage, as well as constraints related to social roles. These constraints result in shorter but more frequent journeys, often related to caregiving or childcare. These factors lead to restricted mobility and additional costs for these groups.

Introduced in Italy in 2017, SUMP are mandatory for cities with more than 100,000 inhabitants. They aim

²⁰¹ [Stanca Law No. 4/2004.](#)

²⁰² [Legislative Decree No. 82/2022.](#)

to achieve sustainable, inclusive and multimodal mobility through a participatory approach. National guidelines require:

- The collection of gender-disaggregated data to analyse specific needs.
- Targeted measures: public lighting, accessible infrastructure, enhanced safety.

Sustainable Urban Mobility Plans (SUMP) recommend integrating the gender dimension at every stage: diagnosis, planning and monitoring. This involves collecting gender-disaggregated data, analysing specific needs and implementing targeted measures, such as better lighting and safe, adapted infrastructure.

In Bologna²⁰³, the city has adopted an inclusive approach by analysing mobility habits from a gender perspective. It has invested in improving lighting in public spaces, making pedestrian crossings safer, developing suitable cycle networks and creating childcare facilities close to employment areas. Some Italian municipalities also carry out gender assessments to evaluate the impact of public policies on women and men, particularly in terms of transport and access to services.

Although it does not contain explicit provisions on gender, the new Italian Highway Code²⁰⁴ is supplemented by local policies that integrate the safety of vulnerable users (pedestrians, cyclists, people with reduced mobility).

In Italy, gender mainstreaming in mobility is progressing thanks to local initiatives and European and international recommendations. However, challenges remain, particularly in terms of safety, accessibility and the collection of gender-disaggregated data to guide policy. Italy is bound by several international instruments that require the integration of gender considerations into public policy, including in the field of mobility. These commitments are not mere recommendations: they create binding legal obligations:

- **CEDAW Convention²⁰⁵**

Ratified by Italy in 1985, this convention aims to eliminate all discrimination against women in all areas of public and private life. Article 2 requires States Parties to "take all appropriate measures to eliminate discrimination against women by all appropriate means", while Article 3 provides for the obligation to ensure "the full development and advancement of women" in all sectors.

Mobility plays a key role in access to employment, education and services. Transport policies must therefore be designed to ensure real equality, considering the specific needs of women, particularly in terms of safety, accessibility and suitable timetables.

In Italy, these principles are reflected in the integration of gender mainstreaming into Sustainable Urban Mobility Plans (SUMP), the collection of gender-disaggregated data to analyse travel habits, and the implementation of targeted measures such as improved lighting, accessible infrastructure and inclusive signage.

- **Istanbul Convention²⁰⁶**

Ratified by Italy in 2013, this convention aims to prevent violence against women, protect victims and prosecute perpetrators.

Article 18 requires States to "take legislative or other measures to protect victims in all public spaces", while Article 12 commits them to "promoting changes in societal attitudes to eliminate prejudices and stereotypes".

²⁰³ <https://urbact.eu/articles/etre-reconnues-inclure-la-dimension-genree-aux-solutions-de-mobilite-urbaine>

²⁰⁴ [Law No. 177 of 25 November 2024](#)

²⁰⁵ [Convention on the Elimination of All Forms of Discrimination against Women](#) of 18 December 1979.

²⁰⁶ [Council of Europe Convention on preventing and combating violence against women](#) and domestic violence, 7 April 2011.

In the field of mobility, this means that public transport and urban spaces must be made safe to prevent harassment and assault. Mobility policies must include protective measures such as improved public lighting, video surveillance in stations and vehicles, and training for transport staff to intervene in cases of violence.

In Italy, concrete initiatives have been implemented, such as in Bologna, where the city has improved lighting in high-risk areas, made pedestrian crossings safer and created safe cycle networks. Local campaigns against harassment on public transport complement these measures.

In accordance with the hierarchy of norms, these conventions require Italy to:

- Systematically integrate gender considerations into mobility policies.
- Collecting and analysing gender-specific data to inform decision-making.
- Implement concrete safety measures to protect women in public spaces and on public transport.
- An intersectional approach that includes older women, women with disabilities and women from minority groups.

Studies show that barriers to mobility are amplified by intersecting factors such as gender, age, disability, and social background. An intersectional approach is therefore essential to designing inclusive solutions, for example by offering social pricing, improving safety, and developing universal infrastructure.

4.2.1.4.2 Safety

Safety in mobility is a priority in Italy, both for road users and public transport users. It is based on three pillars: the Italian Highway Code (Codice della Strada)²⁰⁷, reformed in 2024 and implemented in 2025; Sustainable Urban Mobility Plans (SUMP), which include safety as a strategic objective.

The Codice della Strada forms the legal basis for road safety in Italy. The reform, which came into force on 14 December 2024, introduced major measures to reduce accidents and protect vulnerable users such as pedestrians, cyclists and scooter users. Key provisions include:

- Articles 186 and 187: zero tolerance for driving under the influence of alcohol or drugs, with penalties of up to €6,000, a licence suspension of up to two years and prison sentences for blood alcohol levels above 1.5 g/l.
- Article 173: strict ban on using a handheld phone, with fines ranging from €250 to €1,000 and immediate licence suspension for repeat offences.
- Article 148: obligation to maintain a minimum distance of 1.5 metres when overtaking a cyclist.
- Articles 182 and 190: protection of pedestrians and cyclists, with an obligation to secure pedestrian crossings and cycle paths.
- New rules for scooters: registration, helmet and insurance compulsory.

Seven months after the reform, deaths have fallen by 10.6%, fatal accidents by 8.4% and alcohol-related offences by 21.6%.

PUMS, mandatory for cities with more than 100,000 inhabitants since 2017, incorporate safety as a strategic objective. They aim to reduce accidents, make pedestrian areas safer, develop protected cycle paths and improve public lighting. For example, Bologna has improved lighting in high-risk areas, made pedestrian crossings safer and developed safe cycle networks.

Italy is in line with European objectives:

- European Road Safety Directive (Vision Zero 2050), which aims for zero deaths by 2050.

²⁰⁷ [Highway Code](#).

- Action Plan 2021-2030, focused on protecting vulnerable road users.
- Regulation (EU) No 1370/2007, imposing universal service obligations for safety in public transport. Italy implements the European regulation through public service contracts concluded between organising authorities, such as regions and municipalities, and rail and road transport operators. The Autorità di Regolazione dei Trasporti (ART) plays a central role in publishing guidelines to ensure that these contracts comply with the European regulation, particularly in terms of safety and quality of service. These contracts include specific clauses that impose:
 - Passenger safety, with measures such as video surveillance, enhanced lighting and warning systems.
 - Staff training in emergency and violence management.
 - Accessibility and protection for vulnerable users, particularly the elderly and people with disabilities.

Three major challenges currently exist: harmonising safety standards across different Italian regions; monitoring operators' compliance with contractual obligations; and integrating new technologies, such as algorithmic video surveillance and alert systems, into public service obligations (PSOs).

Mobility safety in Italy is based on a strengthened legislative framework, local strategic plans that include the protection of vulnerable users, and European commitments to drastically reduce road deaths and make public transport safer.

4.2.2 Sustainable mobility

Since 2021, Italy has had a Ministry of Infrastructure and Sustainable Mobility, responsible for steering the ecological transition in the transport sector, in line with the European objectives of the European Green Deal and Regulation (EU) 2019/631 on reducing vehicle emissions. The National Recovery and Resilience Plan (PNRR) allocate nearly €40 billion to the ecological transition, including €20 billion for mobility and infrastructure. These investments are aimed at:

- The renewal of the vehicle fleet (cars, heavy goods vehicles, buses) in accordance with Euro 6 and Euro 7 standards.
- The installation of 5,600 additional electric charging stations by 2026, in accordance with Directive (EU) 2014/94 on alternative fuels infrastructure.
- Developing the North-South and East-West rail corridors, including the Lyon-Turin project and the Brenner Tunnel, scheduled for 2025, in accordance with Regulation (EU) 1315/2013 on the Trans-European Transport Network (TEN-T).

Italy does not have uniform national regulations for Low Emission Zones (LEZ), but applies local restrictions based on the Italian Highway Code (Codice della Strada, Art. 7) and European directives on air quality (Directive 2008/50/EC).

- ZTL (Zona Traffico Limitato) present in the historic centres of cities such as Rome, Milan, Turin, Florence and Bologna.
 - Access is restricted to authorised vehicles (residents, taxis, priority vehicles).
 - Monitored by ANPR cameras and subject to administrative penalties under Codice della Strada, art. 201.
- Urban toll in Milan (Area C):
 - Ecopass required to enter the centre.

- Total ban on certain polluting vehicles, in accordance with Euro standards.
- Seasonal low-emission zones:
 - In Emilia-Romagna and certain cities in the north, Euro 5 diesel vehicles will be banned from October 2025 in municipalities with more than 30,000 inhabitants during the winter (1 October – 31 March), in accordance with regional air quality plans.

In Turin, the city has embarked on an ambitious sustainable mobility policy with the extension of cycle paths, the creation of low-emission zones in the centre and the strengthening of public transport with new tram and bus lines. These actions are part of the Sustainable Urban Mobility Plans (SUMP), made mandatory by Legislative Decree No. 257/2017²⁰⁸.

Milan stands out as a pioneer with its Area C system, which combines a low-emission zone (LEZ) and a congestion charge to limit the circulation of polluting vehicles in the historic centre.

More broadly, Italy has more than 400 restricted traffic zones (ZTL), mainly located in the historic centres of large cities. These measures are implemented in accordance with municipal powers provided for in the Codice della Strada.

Italy faces significant geographical constraints: nearly 80% of its territory is mountainous or hilly, making infrastructure development particularly costly. For example, 70% of European road tunnels longer than 500 metres are in Italy, illustrating the complexity of the country's road network.

On the environmental front, Italy must meet European targets for reducing CO₂ emissions in the transport sector, in accordance with Regulation (EU) 2019/631. However, the country lags France, Spain and Germany in terms of the roll-out of zero-emission zones.

Field	Text/Reference	Subject / Content
Road safety	Codice della Strada (Italian Highway Code)	General traffic regulations, user safety, penalties.
	2024-2025 reform	Zero tolerance for alcohol/drugs, ban on mobile phones, protection of cyclists.
Sustainable mobility	Legislative Decree No. 257/2017	Mandatory Sustainable Urban Mobility Plans (SUMP) for cities with >100,000 inhabitants.
Low-emission zones	Codice della Strada, Articles 7 and 201	Authorisation of ZTLs (limited traffic zones) and monitoring by ANPR cameras.
	Regional air quality plans	Seasonal restrictions (e.g. ban on Euro 5 diesel in winter).
Ecological transition	National Recovery and Resilience Plan (PNRR)	Investments in infrastructure, electric charging, rail corridors.
Transport safety	Law No. 2025-379 of 28 April 2025	Enhanced security in public transport (video surveillance, penalties).

²⁰⁸ [Legislative Decree No. 257/2017](#).

European standards	Regulation (EU) No. 1370/2007	Public service obligations for transport safety and quality.
	Directive (EU) 2008/50/EC	Air quality and reduction of pollutant emissions.
	Regulation (EU) 2019/631	Reduction of CO ₂ emissions from vehicles.
	Regulation (EU) 1315/2013	Development of the trans-European transport network (TEN-T).

Figure11 Summaries of applicable legislation

4.3 The Czech Republic

4.3.1 More equitable mobility

In the Czech Republic, financial measures to support accessibility to mobility are based mainly on public and European investment rather than on universal direct aid.

The Czech government has decided to significantly increase the budget allocated to the Ministry of Transport, which now stands at €4.6 billion. This budget increase is intended to support strategic projects in the field of transport infrastructure, which are considered essential for the country's competitiveness and mobility. A significant portion of this budget will be allocated to the State Fund for Transport Infrastructure (SFDI)²⁰⁹, an organisation responsible for financing the modernisation and maintenance of road and rail networks. This fund plays a key role in the implementation of major infrastructure projects, such as:

- The renovation and widening of motorways and national roads to improve traffic safety and flow.
- The modernisation of the rail network, with investments in high-speed lines, signalling and electrification, to promote sustainable transport and reduce emissions.

The development of intermodal infrastructure, facilitating connections between different modes of transport.

This increase in funding comes at a particular time: the recent abolition of the road tax (previously applied to vehicles) has led to a decline in revenue dedicated to infrastructure maintenance. To compensate for this shortfall, the government has chosen to strengthen the role of the SFDI by allocating it a larger share of the national budget, thus ensuring the continuity of projects and the quality of infrastructure.

The benefits for users of the increased budget and infrastructure modernisation in the Czech Republic are numerous. First, road safety will be improved thanks to renovated and better maintained roads, which will reduce the risk of accidents. The modernisation of signalling systems and safety equipment will also contribute to safer travel. Second, journey times will be reduced. The widening of motorways and the removal of congestion points will allow for smoother traffic flow, while the development of high-speed rail lines will offer more efficient travel. Comfort and quality of service will also be improved. Roads in better condition will limit potholes and damage, and modernised trains will offer greater comfort and punctuality.

Accessibility will be increased, with better connections between regions facilitating daily mobility. The development of intermodal infrastructure, combining trains, buses and bicycles, will simplify multimodal travel. Economically, users will benefit from indirect advantages. High-quality roads will reduce vehicle wear and tear costs, and time savings will translate into greater productivity for professionals.

²⁰⁹ <https://sfdi.gov.cz/>

Finally, transport will become more sustainable. The modernisation of rail infrastructure will help reduce emissions, and improved services will encourage the use of more environmentally friendly modes of public transport.

The Czech Republic has put in place several legislative and strategic measures to ensure affordable and inclusive mobility. These measures are part of the National Transport Strategy 2035²¹⁰, which aims to develop sustainable mobility while maintaining affordable fares, through massive investments in rail and intermodal infrastructure financed by the State Transport Infrastructure Fund and European subsidies. This new strategy was adopted in December 2023. It updates the previous strategy (2017–2023) and is part of the Dopravní politika ČR 2021–2027 with a vision until 2050. It responds to new European requirements, in particular the Package for efficient and green mobility and the Commission's communication on the decarbonisation of freight transport.

The main objective is to ensure economic competitiveness while reducing environmental impacts and dependence on fossil fuels. The strategy aims to create an environment conducive to efficient, sustainable and economically viable logistics services.

The Koncepce nákladní dopravy 2024–2035, adopted by the Czech government (Usnesení vlády ČR No. 1006/2023), sets out an ambitious strategy to make freight transport more sustainable, competitive and in line with European climate objectives. It builds on previous legal bases, notably Government Resolutions No. 57/2017 and No. 259/2021, and on the Dopravní politika ČR 2021–2027 with a vision for 2050. Among the key measures, the reduction of environmental impacts is reflected in the transition to alternative fuels and the electrification of infrastructure, supported by European funding and the State Fund for Transport Infrastructure. Specifically, the European Investment Bank has granted €470 million to modernise the rail network, install the European Rail Traffic Management System (ERTMS) and secure level crossings. The optimisation of modal distribution is being achieved through projects such as the modernisation of the Brno–Přerov corridor, including a high-speed line and the renovation of strategic stations, at a cost of €982 million, co-financed by the EU. Digitalisation and innovation are also at the heart of the strategy, with the integration of the ETCS system on 622 km of lines and the development of intermodal platforms to improve traceability and flow planning. Finally, the long-term vision is aligned with carbon neutrality by 2050, promoting modal shift to rail and inland waterways, in line with the revised European directives on transport combination (92/106/EEC) and rail capacity management (2012/34/EU). These actions illustrate the Czech government's desire to reconcile economic competitiveness, sustainability and regulatory compliance, while reducing the societal costs associated with road transport.

Strategic focus	Concrete measures	Funding	Legal references
Reducing environmental impacts	Transition to alternative fuels, electrification of infrastructure	State infrastructure funds, EU subsidies	Usnesení vlády ČR No. 1006/2023; Dopravní politika 2021–2027
Optimisation of modal split	Modernisation of the Brno–Přerov corridor, development of intermodal platforms	€982 million co-financed by the EU	Directive 92/106/EEC (combined transport)
Digitalisation and innovation	Installation of ETCS system over 622 km, ERTMS integration, intelligent systems	€470 million EIB loan	Directive 2012/34/EU (railway capacity management)

²¹⁰ Koncepce nákladní dopravy 2024–2035 : [National Transport Strategy 2035](#).

Infrastructure and financing	Modernisation of rail corridors, renovation of strategic stations	State funds + European funding (CEF, EIB)	Czech Government Resolutions No. 57/2017, 259/2021
Long-term vision	Carbon neutrality by 2050, modal shift to rail and inland waterways	Public and private investment	Alignment with EU climate targets

Figure 12 Summary table

Road safety in the Czech Republic is primarily governed by Act No. 361/2000 Coll. on Road Traffic²¹¹, supplemented by Act No. 13/1997 Coll. on Roads²¹² and by implementing decrees. This legal framework sets out rules of conduct for road users, speed limits, vehicle equipment requirements, and the enforcement and sanctioning powers of the police. Czech road safety rules are largely harmonised with European Union law, particularly about seat belt use, child safety, and cross-border enforcement of traffic offences.

Speed limits are a central element of Czech road safety policy. The general maximum speed is 50 km/h in built-up areas, 90 km/h outside built-up areas, and 130 km/h on motorways, with specific lower limits applying in certain zones such as residential areas, works zones, or under adverse weather conditions. In residential and pedestrian zones, speed is generally limited to 20 km/h, and drivers must give special consideration and priority to pedestrians.

The Czech Republic applies a zero-tolerance policy on drink driving. The legal blood alcohol limit is 0.0 g/l, with no exemptions for experienced drivers. Driving under the influence of drugs or other psychoactive substances is also strictly prohibited. Penalties may include substantial fines, penalty points, suspension of the driving licence and, in serious cases, criminal prosecution.

The use of seat belts is mandatory for all vehicle occupants, both front and rear, and appropriate child restraint systems are required depending on the child's age and height. The use of mobile phones while driving is prohibited unless a hands-free system is used. Daytime running lights or dipped headlights must be always switched on, including during daylight hours, to improve visibility and reduce accident risk.

4.3.1.1 Promoting the affordability of mobility

The Public Transport Act²¹³ establishes the legal framework for the organisation and financing of public passenger transport services. It aims to guarantee fair and affordable access to transport, particularly for vulnerable groups, while ensuring continuity of services throughout the country. This Act constitutes the legal basis for guaranteeing affordable mobility in the Czech Republic. It imposes a public service obligation on regional and local authorities to ensure the availability of transport for all, including in rural areas and for vulnerable groups. To achieve this objective, the law provides for public service contracts between local authorities and operators, with financial compensation to cover the costs of reduced fares and partial free travel. In practical terms, these provisions allow for preferential fares for students, senior citizens and people with disabilities, as well as free travel for certain categories, such as children under 15 and people over 65 in cities such as Prague and Brno. This mechanism is governed by strict transparency rules and is in line with European Regulation (EC) No 1370/2007, ensuring the

²¹¹ <https://www.zakonyprolidi.cz/cs/2000-361>

²¹² <https://www.e-sbirka.cz/sb/1997/13/1998-01-01?založka=text>

²¹³ [L. No. 194/2010 Coll., June 2010](#), *Zákon o veřejných službách v přepravě cestujících a o změně dalších zákonů*.

economic viability of operators while preserving social equity. In addition, funding comes from the national budget, local authorities and European funds, which helps to keep fares affordable and reduce regional inequalities. This approach illustrates the Czech government's desire to reconcile inclusive mobility, social cohesion and economic sustainability, in line with European objectives to reduce disparities.

Scheme	Beneficiaries	Legal basis	Funding
Reduced fares	Students, senior citizens (60+), persons with disabilities	Act No. 194/2010 Sb.; Regulation (EC) No. 1370/2007	National budget + local authorities
Partial free access	Children <15, seniors >65 (e.g. Prague, Brno)	municipal decisions	Local authorities + regional subsidies
Compensation for operators	Public transport companies	Act No. 194/2010 Sb.; public service contracts	State infrastructure fund + national budget
Subsidies for rural areas	Users in low-density areas	Act No. 194/2010 Sb.; regional policies	European funds (ESF+, CEF) + regional budget

Figure13 Summary table of financial mechanisms and their beneficiaries

The National Social Inclusion Strategy 2021-2030²¹⁴, adopted by the Czech government, is the national framework for combating poverty and social exclusion. It targets socially excluded or at-risk individuals (minorities, persons with disabilities, vulnerable families, homeless persons) and is based on the principles of equal opportunities, social cohesion and mainstreaming of inclusion. The strategy recognises that access to mobility is essential for social inclusion, as it determines access to employment, education, healthcare and public services. Measures include:

- Removal of physical and architectural barriers in public transport, in accordance with the National Plan for Equal Opportunities for People with Disabilities. This involves accessible infrastructure (ramps, lifts, adapted signage) and low-floor vehicles for buses and trams²¹⁵.
- Reduced fares for persons with disabilities and their careers, based on an official classification which entitles them to specific cards for discounts on urban and regional transport²¹⁶.
- Local and regional coordination to ensure mobility solutions in socially excluded areas, through the development of on-demand transport services and cooperation with municipalities²¹⁷.
- Link with housing and employment policy: the strategy provides for mobility to be integrated into local plans to facilitate access for vulnerable families to employment areas and social services.²¹⁸

²¹⁴ [Resolution of the Government of the Czech Republic No. 55/2020](#), updated in 2023.

²¹⁵ Rachel Thomas, Nicolas Rémy, Isabelle Léothaud. The accessibility of public transport networks in Europe: an overview of best practices. [Research report] 68, Cresson. 2007, pp.155. (accessed online on 11.2025).

²¹⁶ *Ibid.*

²¹⁷ [Social Inclusion Strategy 2021–2030](#).

²¹⁸ <https://www.mpsv.cz/strategie-socialniho-zaclenovani-2021-2030>.

Finally, specific initiatives, such as fare reductions for police officers and security forces on trains²¹⁹, demonstrate the Czech government's commitment to an integrated approach that combines affordability, passenger safety and social cohesion. This measure aims to encourage increased police presence on public transport, thereby strengthening crime prevention and users' sense of security²²⁰. It is part of a broader public service approach, where mobility is not limited to simple travel, but becomes a vector of protection and trust²²¹. At the same time, these measures complement existing social policies that promote access to transport for vulnerable groups (students, senior citizens, people with disabilities) and contribute to the achievement of the Sustainable Development Goals, in particular SDG 16 on peace, justice and effective institutions. This synergy between social pricing, proactive safety and public responsibility illustrates the Czech Republic's strategy to make mobility not only affordable, but also safe and inclusive.

4.3.1.2 Ensuring availability

Act No. 194/2010 Sb. on public services in passenger transport²²² constitutes the fundamental legal framework guaranteeing the continuity and affordability of public transport in the Czech Republic. It imposes a service obligation on national, regional and local authorities to meet the essential needs of citizens, such as access to employment, education, healthcare and administrative services.

To fulfil this mission, the Act provides for the conclusion of public service contracts between local authorities and operators, in accordance with Regulation (EC) No 1370/2007²²³, which regulates financial compensation and exclusive rights. This compensation makes it possible to maintain social tariffs for students, senior citizens and people with disabilities, as well as partial free travel for certain categories, such as children and the elderly in several large cities. The law also guarantees transparency and competition between operators to preserve the balance between economic viability and the general interest. In addition, it authorises cross-border agreements to ensure continuity of service in border areas. This measure illustrates the Czech government's desire to reconcile inclusive mobility, territorial cohesion and economic sustainability, in line with European objectives of services of general interest and the reduction of inequalities.

In the Czech Republic, transport regulation is based on a centralised structure and specialised bodies, ensuring regulatory compliance and safety for the various modes of transport. The central authority is the Ministry of Transport²²⁴, which defines national policy and oversees the implementation of laws, in particular Act No. 194/2010 Sb. on public services in passenger transport²²⁵ and Act No. 266/1994 Sb. on railways²²⁶. For the rail sector, infrastructure management and capacity allocation are handled by Správa železnic, while Drážní úřad issues licences and monitors technical compliance, and Drážní inspekce

²¹⁹In March 2023, Czech Railways (České dráhy) launched a programme allowing police officers to purchase tickets at half price via a mobile app in exchange for their availability to intervene in the event of an incident. This initiative aims to enhance safety and speed up the resolution of conflicts on board trains. [Radio Prague](#).

²²⁰<https://fr.railmarket.com/news/business/4716-czech-railways-reduced-fares-for-cops-who-intervene>

²²¹<https://www.ceskedrahy.cz/en/press-center/press-releases/already-more-1100-members-police-czech-republic-benefiting-discounted>.

²²²[Act on public passenger transport services](#).

²²³[Regulation \(EC\) No 1370/2007 of 23 October 2007](#) on public passenger transport services by rail and by road, *OJ L 315*, 3.12.2007, pp. 1–13.

²²⁴[Ministry of Transport](#).

²²⁵Prev.

²²⁶[Act No 266/1994 Coll.](#)

investigates accidents and ensures safety. In the road sector, the Ministry is responsible for regulation, supplemented since 2025 by the Road Transport Inspectorate (INSID), which is responsible for monitoring technical standards and compliance with driving times. Civil aviation is regulated by the Civil Aviation Authority (CAA), also under the supervision of the Ministry. This organisation illustrates an integrated approach, in line with European standards, aimed at ensuring the continuity of public services, user safety and market transparency, while promoting infrastructure modernisation and sustainable mobility.

The implementation of the Trans-European Transport Network (TEN-T) in the Czech Republic falls within the scope of Regulation (EU) 2024/1679²²⁷, which sets out guidelines for the development of an integrated and sustainable multimodal network by 2030, 2040 and 2050.

The Czech Republic is crossed by several strategic corridors of the core network, including the Baltic–Adriatic, East–Mediterranean and North Sea–Baltic corridors, which are essential for European connectivity. In line with these objectives, the country is implementing major projects such as the modernisation of priority rail corridors, the installation of the European ERTMS/ETCS signalling system on more than 600 km of lines, and the development of high-speed lines (Berlin–Prague–Vienna, Brno–Přerov) to reduce journey times and enhance interoperability. These investments, supported by the Connecting Europe Facility (CEF) and loans from the European Investment Bank (nearly €1.9 billion in 2023)²²⁸, aim to promote a modal shift to rail, reduce emissions and improve infrastructure safety. At the same time, road projects such as the Prague East Ring Road are helping to ease traffic congestion and complete the multimodal network²²⁹. This strategy illustrates the Czech government's desire to reconcile sustainable mobility, territorial cohesion and economic competitiveness, while respecting European commitments on carbon neutrality and the rationalisation of cross-border projects.

TEN-T Corridor	Project	Objective	Deadline	Funding
Baltic–Adriatic	Modernisation of the Brno–Přerov railway corridor	Increase capacity and speed (200 km/h)	2030	CEF + EIB (≈ €982 million)
Orient–Eastern Mediterranean	Berlin–Prague–Vienna high-speed line	Reduce international journey times	2030	CEF + Czech State Fund
North Sea – Baltic Sea	Deployment of ERTMS/ETCS on 622 km of lines	Interoperability and railway safety	2027	EIB (€466 million) + national budget
TEN-T network core	Modernisation of strategic stations (e.g. Česká Třebová)	Improving the quality of passenger services	2030	European funds + national budget
TEN-T network road	Prague Eastern Bypass	Improving traffic flow and reducing congestion	2030	CEF + national budget

Figure14 Summary table of projects related to the implementation of the TEN-T

²²⁷ [Regulation \(EU\) 2024/1679](#) of the European Parliament and of the Council of 13 June 2024 on guidelines for the development of the trans-European transport network (TEN-T).

²²⁸ <https://francais.radio.cz/modernisation-du-reseau-ferroviaire-tcheque-la-bei-va-preter-470-millions-deuros-8842080>

²²⁹ <https://www.hebdoconstruction.com/2025/05/28/skanska-i-12/>

In the Czech Republic, the accessibility of passenger information in transport is based on a strengthened European legal framework structured around two complementary instruments. The first is Regulation (EU) 2024/1679 of the European Parliament and of the Council of 13 June 2024, establishing Union guidelines for the development of the trans-European transport network (TEN-T), which has been directly applicable in all Member States since 18 July 2024. This Regulation requires the TEN-T network to ensure efficient, safe, seamless and accessible transport infrastructure and services, explicitly integrating the needs of persons with disabilities and persons with reduced mobility, particularly in stations, urban nodes and European transport corridors (Articles 4, 5 and 47 of the TEN-T Regulation)²³⁰. The second pillar is Directive (EU) 2019/882 of 17 April 2019 on the accessibility requirements for products and services, known as the *European Accessibility Act (EAA)*. This Directive has been transposed into [Czech law by Act No. 424/2023 Coll.](#), on the accessibility requirements for certain products and services, adopted on 29 November 2023 and applicable since 28 June 2025. This Act makes accessibility requirements legally binding for certain products and services, including transport services, in accordance with Articles 1 and 2 of the Directive and Sections 1 and 2 of the Czech Act²³¹.

These two legal instruments pursue distinct but closely interconnected objectives. The TEN-T Regulation defines the expected level of quality of the European transport network, treating accessibility and passenger information as integral components of overall network performance. Directive 2019/882, as transposed into Czech law, transforms these objectives into legally enforceable obligations imposed on economic operators, particularly for all interfaces between transport services and users. As a result, the accessibility of passenger information is no longer merely a matter of infrastructure planning, but a binding legal requirement subject to supervision and sanctions.

Regarding transport, Act No. 424/2023 Coll. applies to rail, air, long-distance road and inland waterway transport services. Pursuant to Section 2(2)(f) of the Act, it specifically covers certain elements of transport services, namely websites, mobile device services, electronic transport tickets, booking and ticketing systems, passenger information – including real-time information – as well as self-service terminals and ticketing or information kiosks. While urban and regional transport services are excluded from the scope of services, self-service terminals used in such contexts remain subject to accessibility requirements when they fall within the product categories covered by the Act.

Passenger information provided through these services must comply with the general accessibility principles set out in Annex I to Directive 2019/882 and reflected in the Czech Act. Information must be perceptible, understandable, operable and robust, so that it can be used by persons with disabilities or functional limitations. These requirements apply both to static information, such as timetables, and to dynamic information, such as delays, traffic disruptions or connections. To demonstrate technical compliance, the legislation refers to European harmonised standards, particularly EN 301 549, which constitutes the central technical reference for the accessibility of information and communication technologies, including digital passenger information systems.

The TEN-T Regulation further reinforces this approach by requiring, in stations and urban nodes of the network, multimodal and seamless passenger information, enabling users to complete their journeys without functional discontinuities. Article 47 of the Regulation provides that transport infrastructure, and related services must consider the needs of persons with disabilities and persons with reduced mobility, notably through accessible and appropriate information. Although the Regulation primarily targets

²³⁰ <https://md.gov.cz/Dokumenty/Evropska-unie/Programy/Program-TEN-T>

²³¹ <https://reciteme.com/news/european-accessibility-act-in-the-czech-republic/>

infrastructure, information systems located in stations and urban nodes become, in practice, a decisive element of overall TEN-T compliance.

The example of Plzeň (Pilsen) illustrates the practical application of this legal framework. Although Plzeň is not a major European hub comparable to Prague, it constitutes an important regional rail node, connected to routes linking Prague with Germany and thus indirectly participating in TEN-T itineraries. In this context, the main railway station in Plzeň must provide passenger information that complies with TEN-T requirements, particularly in terms of readability, continuity and consideration of vulnerable users. Moreover, ticket vending machines and passenger information kiosks installed in the station fall directly under Act No. 424/2023 Coll. as self-service terminals and must therefore meet accessibility requirements, regardless of the legal status of the infrastructure manager.

Similarly, digital services used by passengers travelling to or from Plzeň, especially for long-distance rail connections to Prague or Germany, must offer accessible timetables, electronic ticketing usable by all, and real-time information that complies with accessibility requirements. The TEN-T Regulation requires that the travel chain be understandable and usable from the passenger's perspective, while the European Accessibility Act ensures that this information is effectively usable by persons with disabilities or functional limitations. Consequently, even a regional station such as Plzeň is fully subject to these obligations insofar as it forms part of a journey within the trans-European transport network.

In conclusion, the accessibility of passenger information in transport in the Czech Republic is now governed by a coherent and binding legal framework. The TEN-T Regulation sets out the structural requirements for quality, continuity and accessibility of the European transport network, while Directive 2019/882, as transposed by Czech Act No. 424/2023 Coll., ensures the effective implementation of these requirements in transport services and digital interfaces. Since 28 June 2025, all passenger information related to long-distance transport must be accessible, including in intermediate cities such as Plzeň, marking a lasting shift in the design and management of transport services within the TEN-T network.

In the Czech Republic, the ITS Directive has not been transposed by a single stand-alone law. It has been integrated in a **functional and sectoral** manner, mainly through:

- Act No. 13/1997 Sb., on roads (zákon o pozemních komunikacích), which provides the legal basis for traffic management, the collection and dissemination of road data and the operation of ITS systems.
- government resolutions and strategic documents adopted by the Czech government, the 'Action Plan for the Development of Intelligent Transport Systems in the Czech Republic to 2020 (with an outlook to 2050)', followed by the 'Strategic Plan for the Development of ITS 2021–2027 with an outlook to 2050', prepared under the authority of the Ministry of Transport (Ministerstvo dopravy).

This approach is in line with Article 5 of Directive 2010/40/EU, which gives Member States flexibility in the legal and organisational instruments used for the deployment of ITS. Directive 2010/40/EU is transposed in the Czech Republic in a decentralised and strategic manner, without a single dedicated law, but through existing road traffic legislation, national ITS strategies and the direct application of European delegated regulations. The Ministry of Transport plays a central coordinating role, while cities and regions, including Plzeň, ensure operational implementation on the ground.

The National ITS Plan, included in the 2035 Transport Strategy²³², provides for several concrete measures: the deployment of dynamic traffic management systems on the D1 and D11 motorways, the dissemination of real-time passenger information via variable message signs and mobile applications, and the widespread use of intelligent electronic toll systems. In the rail sector, the Czech Republic's railway s

²³² Preceding.

applying European standards by installing the ETCS/ERTMS system on more than 600 km of lines to improve safety and interoperability²³³.

In urban areas, projects such as Prague Smart City²³⁴ are introducing adaptive traffic lights, connected car parks and digital ticketing for public transport. These initiatives are financed by the State Infrastructure Fund, the Connecting Europe Facility (CEF) and loans from the European Investment Bank, including £466 million for railway digitalisation and cybersecurity.

This legislation aims to ensure smoother, safer and more sustainable mobility, in line with European targets for emissions reduction and system interoperability. It also imposes cybersecurity and data protection requirements to ensure the reliability of smart services by 2030.

4.3.1.3 Ensuring inclusivity

4.3.1.3.1 Persons with disabilities or reduced mobility

The Czech Republic relies on the United Nations Convention on the Rights of Persons with Disabilities, which it has ratified, and on successive national plans for equal opportunities. The National Plan for the Creation of Equal Opportunities for Persons with Disabilities sets specific objectives for the removal of architectural and mobility barriers. It affirms that barrier-free access to buildings and public transport is a fundamental freedom for all citizens, including persons with disabilities²³⁵.

The National Plan for Equal Opportunities, which has been regularly revised since 1992, is the strategic reference document for policy on persons with disabilities. It provides for measures to make transport accessible, ensure personal mobility and promote independent living for persons with disabilities.

The Civil Code, revised in 2014, includes specific provisions to support persons with limited legal capacity. These provisions aim to strengthen their autonomy and facilitate their access to essential services, including transport.

Finally, sectoral programmes, such as the National Mobility Development Programme for All (*Narodni rozvojovy program mobility pro vsechny*), aim to improve the accessibility of urban and interurban public transport. They provide for the adaptation of vehicles and infrastructure to meet the needs of persons with disabilities or reduced mobility. The main objective of the Národní rozvojový program mobility pro všechny (National Mobility Development Programme for All)²³⁶ is to support the creation of barrier-free routes in towns and municipalities in the Czech Republic. It aims to ensure accessibility for people with disabilities or reduced mobility by removing physical barriers in public spaces and transport infrastructure. The programme is based on a philosophy of inclusion and respect for fundamental rights, in line with international commitments and national policies promoting equal opportunities²³⁷.

The actions funded by the programme cover two key areas:

²³³ <https://www.visahq.com/fr/news/2025-11-22/cz/uk-czech-transport-dialogue-signed-in-london-to-accelerate-smart-green-mobility/>

²³⁴ <https://www.blue-europe.eu/fr/fr-analysis/analyse-courtes/prague-smart-city-la-ville-intelligente-de-prague-un-pole-tcheque-pour-le-developpement-regional/>

²³⁵ Rachel Thomas, Nicolas Rémy, Isabelle Léothaud. Accessibility of public transport networks in Europe: overview of best practices. [Research report] 68, Cresson. 2007, pp.155. (accessed online on 11.2025).

²³⁶ <https://vlada.gov.cz/cz/ppov/vvozp/dokumenty/narodni-rozvojovy-program-mobility-pro-vsechny-2016-2025-217950/>

²³⁷ <https://www.databaze-strategie.cz/cz/urad-vlady/strategie/narodni-rozvojovy-program-mobility-pro-vsechny>

- The removal of barriers in public buildings (administrative offices, schools, cultural, sports, health and social facilities). This includes the construction of lifts, ramps and platform lifts, and the adaptation of toilets.
- Accessibility of transport infrastructure and urban spaces, including the creation or renovation of barrier-free pavements, the development of bus and tram stops, and the installation of devices to facilitate the mobility of people with reduced mobility²³⁸. In 2023, several projects were funded in cities such as Děčín, Kralovice and Radnice to create barrier-free routes connecting public buildings to transport stops²³⁹.

The programme is funded by the Government Financing Plan for the period 2016-2025, adopted by Government Resolution No. 568 of 14 July 2014²⁴⁰. This plan extends the initial scheme implemented between 2005 and 2015. Funding comes from the state budget and several ministries (Transport, Regional Development, Labour and Social Affairs, Education, Health, Culture), as well as the National Transport Infrastructure Fund. Municipalities and other public entities can submit projects to obtain grants. Projects must generally be part of a comprehensive barrier-free framework and not be limited to isolated interventions.

From 2026, the programme will be extended by the Národní program přístupnosti pro všechny (National Accessibility Programme for All), which will broaden the objectives to include all public services and urban infrastructure.

Since the 1990s, Czech legislation has required the needs of persons with disabilities to be considered in the design of transport networks. Measures include²⁴¹:

- Equipping trams, buses and metros with low floors and ramps.
- The installation of lifts and tactile devices in underground stations.
- Reserving seats for disabled people on public transport vehicles. These obligations are reinforced by public funding and local directives, particularly in Prague, where the network is gradually being adapted to ensure comfort, safety and accessible information.

Concrete examples

- In Prague, several metro stations are equipped with lifts and tactile paving for visually impaired people. Low-floor trams and buses are widespread, with ramps for wheelchairs.
- The main railway stations (Prague, Brno, Ostrava) have been renovated to remove architectural barriers and integrate assistance devices.
- Discounted fares are available to holders of ZTP (severe disability) and ZTP/P (severe disability with companion) cards, in accordance with the official classification of disabilities²⁴².

²³⁸ <https://narodnidotace.cz/narodni-rozvojovy-program-mobility-pro-vsechny/>

²³⁹ <https://zpravy.kurzy.cz/723336-vysledky-i-kola-vyzvy-narodniho-rozvojoveho-programu-mobility-pro-vsechny-pro-rok-2024/>

²⁴⁰ [Government Resolution No. 568 of 14 July 2014.](#)

²⁴¹ Rachel Thomas, Nicolas Rémy, Isabelle Léothaud. Accessibility of public transport networks in Europe: overview of best practices. [Research report] 68, Cresson. 2007, pp.155. (accessed online on 11.2025).

²⁴² Rachel Thomas, Nicolas Rémy, Isabelle Léothaud. Accessibility of public transport networks in Europe: overview of best practices. [Research report] 68, Cresson. 2007, pp.155. (accessed online on 11.2025).

4.3.1.3.2

The Czech Republic is gradually integrating the gender perspective into its public policies, in accordance with the Government Strategy for Gender Equality 2021–2030. This strategy aims to reduce inequalities in access to services, including mobility, by applying the principle of gender mainstreaming in transport and urban infrastructure planning.

The gendered approach to mobility has several objectives:

- Analysing the different travel needs of women and men, considering constraints related to work, family responsibilities and safety.
- To reduce barriers to mobility for women, who use public transport and walking more, but are more exposed to safety risks.
- To promote women's participation in transport governance and the design of sustainable urban mobility plans (SUMP).

This translates, for example, into the installation of improved lighting and cameras at tram stops to improve women's safety at night in the city of Brno; the integration of gender-disaggregated data into mobility studies to adapt public transport timetables to the needs of parents travelling with children in Prague Smart City; and awareness campaigns against harassment on public transport, with posters and emergency numbers displayed in buses and trams.

The Government Strategy for Gender Equality 2021–2030²⁴³, adopted by the Czech Government, provides the national framework for promoting gender equality. It is aligned with the European Strategy for Gender Equality 2020–2025²⁴⁴ and the United Nations Sustainable Development Goals. This document sets out 26 strategic objectives and more than 200 concrete measures, divided into eight priority areas, including work, decision-making, security, health and society.

The strategy does not include a separate chapter on mobility, but it does integrate the gender dimension into transport and urban planning policies. It emphasises the need to improve women's safety on public transport, through better lighting, surveillance of stops and the introduction of incident reporting systems. It also encourages the adaptation of infrastructure to meet the needs of parents, the elderly and people with disabilities.

The strategy requires the collection and analysis of gender-disaggregated data to guide sustainable urban mobility plans. This data provides a better understanding of different behaviours: women use public transport and walking more, while men prefer cars. This analysis is essential for designing inclusive solutions.

It also recommends integrating gender mainstreaming into mobility infrastructure planning, ensuring the accessibility of stops, adapting timetables and promoting intermodality. The participation of women in the governance of transport projects is considered a strategic lever for ensuring inclusive policies.

Finally, the strategy links gender to the digital and sustainable transition. It encourages the development of multimodal solutions and inclusive digital services, while reducing inequalities in access to smart mobility technologies.

For example, in Prague, the Smart City programme incorporates gender-based data into its studies to adjust public transport timetables to the needs of families. In Brno, measures have been put in place to improve women's safety on public transport, including the installation of improved lighting and cameras

²⁴³ [Government strategy for gender equality for the period 2021–2030](#)

²⁴⁴ https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_fr

at tram stops. The Transport Research Centre (CDV)²⁴⁵ is conducting pilot projects to collect data on differentiated mobility behaviours and propose appropriate solutions.

4.3.1.3.3 Safety

Mobility safety is a priority in the Czech Republic and is integrated into the National Security Strategy and transport policies. Although the National Security Strategy does not include a chapter devoted exclusively to mobility, it does incorporate several essential measures to ensure the safety of transport infrastructure and the resilience of mobility systems. Firstly, it provides for the protection of critical infrastructure, such as roads, railways, communication networks and intelligent transport systems (ITS), which must be secured against cyber-attacks and acts of sabotage²⁴⁶. Secondly, the strategy emphasises railway modernisation²⁴⁷, through the deployment of the European ERTMS system. This system aims to reduce the risk of accidents and enhance the security of strategic corridors by improving signalling and rail traffic management. It also includes continuity plans to ensure mobility in the event of a crisis, whether it be a natural disaster, armed conflict or cyberattack. Finally, the strategy emphasises coordination with security and emergency services to ensure transport accessibility and smooth travel in emergency situations.

The Czech Republic applies strict rules to reduce accidents²⁴⁸:

- Zero tolerance for drink-driving and a ban on using mobile phones without a hands-free kit.
- Seat belts must be worn in the front and rear, and child seats must be used.
- Frequent checks and severe penalties for speeding and dangerous driving.
- Mandatory use of winter tyres between November and March to prevent accidents in winter conditions.

Public transport is generally safe, but specific measures are in place to reduce risks:

- Increased surveillance in train and metro stations, particularly in Prague.
- Campaigns against harassment and theft on trams and night trains.
- Installation of cameras and improved lighting at stops to enhance user safety, particularly for women.

Area	Main measures	Specific examples	Responsible actors
Road safety	Zero tolerance for alcohol, compulsory seat belt use, winter tyres, speeding penalties	Smart speed cameras on motorways, increased checks	Ministry of Transport, National Police
Public transport	Surveillance, enhanced lighting, anti-harassment campaigns	Cameras in trams, secure stops in Prague and Brno	Transport operators, municipalities

²⁴⁵ <https://www.cdv.cz/>

²⁴⁶ NÚKIB

²⁴⁷ <https://www.eib.org/fr/press/all/2025-409-czech-republic-to-upgrade-railways-with-eur200-million-eib-loan-bolstering-transport-safety-and-sustainability>

²⁴⁸ https://www.autoklub.cz/wp-content/uploads/2019/08/pravidla_provozu_eng.pdf

ITS (Intelligent Transport Systems)	Incident detection, dynamic regulation, system cybersecurity	Sensors on the D1/D11 motorways, message signs	Ministry of Transport, CDV
Urban mobility	Street lighting, safe infrastructure for pedestrians and cyclists	CYKLOVIZE 2030 project, adaptive traffic lights in Prague	Municipalities, Ministry of Regional Development
Rail	Signalling modernisation, ETCS system to prevent collisions	ETCS installation on main lines	České dráhy (CD), Ministry of Transport

Figure15 Safety measures in mobility by area

Traveller safety in the Czech Republic is built on a coherent body of sector-specific national laws, complemented by European Union law. This framework aims to protect people throughout their journeys, whether by road, collective land transport, or air. It covers the behaviour of users, infrastructure safety, obligations of transport operators, and the powers of public authorities regarding control and intervention.

The cornerstone of road-travel safety is Act No. 361/2000 Coll. on Road Traffic. This law applies to all road users, including foreign travellers, whether they are drivers, passengers, pedestrians, or cyclists. It sets traffic rules, speed limits, priority rules, and essential safety obligations such as wearing seat belts, using child restraint systems, keeping daytime running lights on, and maintaining zero tolerance for alcohol and drugs. It also grants the police broad powers of checks and sanctions, ensuring a uniform and predictable safety framework for journeys across the country.

Act No. 13/1997 Coll. on Roads complements this system by regulating the safety of the road infrastructure itself. It defines road categories, rules for construction, maintenance, and operation, and the responsibilities of infrastructure managers. The purpose is to ensure that the roads used by travellers meet minimum safety standards, notably in terms of signage, safety equipment, and—more recently—the integration of intelligent transport systems. It thus guarantees the structural safety of journeys, independent of individual user behaviour.

The safety of travellers using collective road transport, such as intercity buses, scheduled lines, or taxis, is primarily governed by Act No. 111/1994 Coll. on Road Transport. This text sets out operating conditions for passenger transport services, the obligations of operators, driver qualification requirements, and rules applicable to international transport. It establishes a licensing and administrative-oversight regime for carriers, assuring travellers that services are provided by authorised operators subject to strict safety and professional obligations.

For rail and guided transport, Act No. 266/1994 Coll. on Railways forms the central safety framework. It applies not only to national and regional railways, but also to tramways, trolleybuses, and funiculars. The law regulates the construction and operation of infrastructure, the technical safety of vehicles, service-operation conditions, and state supervision. It imposes high requirements for maintenance, technical inspection, and operational safety, ensuring travellers benefit from a high level of protection in guided transport.

Air-traveller safety is governed by Act No. 49/1997 Coll. on Civil Aviation, which transposes and complements European aviation-safety rules. This law covers the certification and operation of aircraft and airports, airspace management, crew qualification, and the protection of civil aviation against unlawful acts. It grants the Czech Civil Aviation Authority extensive supervisory and sanctioning powers, ensuring travellers benefit from safety standards consistent with European and international requirements.

4.3.2 Sustainable mobility

The Czech Republic is actively committed to the transition to sustainable mobility, in line with European climate targets and its National Transport Strategy 2035²⁴⁹. This policy aims to reduce greenhouse gas emissions, improve air quality and promote environmentally friendly modes of transport. It is based on three pillars: infrastructure modernisation, transport electrification and the promotion of active mobility.

The National Transport Strategy 2035, adopted by the Czech government in December 2023, is an update of the previous strategy covering the period 2017–2023. It is in line with European sustainable mobility policies and the Green Deal, the "Efficient and Green Mobility Package" and the European Commission's communication on the greening of freight transport.

Its main objective is to maintain economic competitiveness while reducing the environmental impact of freight transport, decreasing dependence on fossil fuels and promoting efficient and sustainable logistics.

The strategy is based on five main areas:

1. Decarbonisation and energy efficiency: It provides for a gradual reduction in dependence on fossil fuels, the integration of the objectives of the National Energy and Climate Plan and preparation for the inclusion of freight transport in the European Emissions Trading System (EU ETS).
2. Multimodality and balanced distribution of transport modes: The focus is on promoting rail and waterways to reduce the share of road transport. The strategy encourages the development of multimodal terminals and solutions for the "first and last mile", as well as support for sustainable urban logistics.²⁵⁰
3. Infrastructure modernisation and digitalisation: Investments are planned in rail corridors and inland ports. The deployment of intelligent transport systems (ITS) for traffic management and goods traceability, as well as the use of digital technologies to optimise the logistics chain, are priorities.
4. Innovation and energy transition: The strategy encourages the development of alternative propulsion systems (electric, hydrogen, biofuels) and supports research and training in the logistics sector.
5. Reducing societal and environmental impacts: It aims to reduce greenhouse gas emissions and energy consumption, while limiting noise and congestion pollution.

4.4 Other countries

4.4.1 Switzerland

Swiss law guarantees the right to free movement, including the use of public transport²⁵¹. This is essential for both residents and visitors. Public transport must be accessible to all, including individuals with disabilities. This is mandated by federal regulations. One key innovation that supports accessibility is the Swiss national public transport integrated ticketing system, which allows seamless travel across different modes of transport and across the entire country.

Switzerland boasts one of the densest public transport networks globally, including trains, buses and boats. Despite spanning across different municipalities and functional urban areas with multiple operators, the system is designed for ease of use, with clear schedules and connections, making it convenient for users. What's more, the recent laws also focus on sustainability, promoting public transport as a greener alternative to private vehicles and advocating its role in promoting healthier lifestyles.

²⁴⁹ [National Transport Strategy 2035](#).

²⁵⁰ [Planning sustainable mobility \(PIARC Prague 2023 Congress\)](#), CDV.

²⁵¹ The Federal Assembly of the Swiss Confederation 2022, art. 10

The [Disability Equality Act from 2004](#) mandates among others that public transportation should be adapted to the needs of persons with disabilities so that they can use public transport independently. The responsibilities for implementing this act are scattered among various entities²⁵². As Egger²⁵³ explains in her Ph.D., the public transportation companies are responsible for the implementation of the Act, except for the adjustments to bus stops, which are the responsibility of cantons and municipalities.

The obligation to make public transport accessible for public transport does not extend to paratransit, an essential service for people with disabilities. Paratransit is the responsibility of the cantons, which results in different legal and financing frameworks, which in some cases are only valid until the cantonal border. There are no regulations that make it mandatory to provide a certain number of paratransit services. Adding to the complexity, many paratransit services are run by volunteers, hence limiting capacity²⁵⁴. She therefore concludes that *“the absence of a robust legal foundation [for paratransit in Switzerland] restrict the usability and availability [...] but also pose a risk of exacerbating transport-related social exclusion and undermining the fundamental rights of persons with disabilities²⁵⁵”*.

4.4.2 Australia

In Australia, the Disability Standards for Accessible Public Transport 2022 (in short: Transport Standards) guarantees people with disabilities' access to train, tram, bus and coach, ferry, taxi and aviation services. It is characterised by a broad and detailed approach that includes regulations on access paths, manoeuvring areas, resting points, toilets, signposting, and more²⁵⁶. All public transport must be compliant by the end of 2022, except for trains and trams, which have until the end of 2032²⁵⁷. Hands-on guides have been developed to assist operators in making their networks accessible for people with disabilities and to comply with national regulations, like the *The Whole Journey*, which wants to make the whole chained, multimodal transport journey as seamless and accessible as possible²⁵⁸.

Financial barriers for people with disabilities are taken away or lowered via NDIS (National Disability Insurance Scheme) funding for transport services, providing support for:

- General Transport – a Core Support which “allows a participant to pay a provider to transport them to an activity that is not itself a support.”
- Specialised Transport – a Core Support which “provides for specialised transport services for a participant to a school, educational facility, employment, or the community.”
- Activity Based Transport – a subsidiary support, whose costs can be claimed in association with another support service (e.g., Participation in Community, Social and Civic activities²⁵⁹).

Automated vehicles are not yet covered by the Transport Standards legal framework. Yet, in collaboration with the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts,

²⁵² The Federal Assembly of the Swiss Confederation 2022

²⁵³ Egger, S. (2024). With Paratransit Services to Participation in Daily Activities: The Experiences of Persons with Disabilities in Switzerland. Ph.D. in Health Sciences at the Faculty of Health Sciences and Medicine, University of Lucerne, 42p. Retrieved from: <https://zenodo.org/records/10814269>.

²⁵⁴ Egger, S. (2024). Prev.

²⁵⁵ *Ibid.*

²⁵⁶ Australian Government – Federal Register of Legislation 2011.

²⁵⁷ Australian Government – Department of Infrastructure s.d.

²⁵⁸ Australian Government – department of Infrastructure and Regional Development 2017.

²⁵⁹ See Institute for Public Policy and Governance 2022:81-85 for more information.

Accessibility guidelines for connected and automated vehicles in public transport have been developed. These cover the whole user journey, from pre-journey planning to in-vehicle interactions and exiting the vehicle at the drop-off location and want to ensure that connected and automated vehicles are inclusive and not discriminatory²⁶⁰. Also, regarding new technologies (like AI in Transport) which are not (yet) regulated by law, several sets of guidelines were developed recently to maintain the inclusive character of Australia's transport system and guide government policy in this matter²⁶¹.

4.4.3 USA

In the United States, the rights of people with disabilities are protected by the federal Americans with Disabilities Act (in short: ADA). It prohibits the discrimination of people with a disability in daily life activities, including public and private transit (in Title II Subtitle B of the ADA). The general principle regarding transportation is that transit systems must provide people with disabilities an equal opportunity to benefit from their services. Concretely, this boils down to the following requirements (non-exhaustive overview):

- Vehicles on fixed-route and demand-responsive services should be readily accessible and usable by people with a disability, including wheelchair users (Subchapter II, section 12142 and 12144; Subchapter III, section 12182).
- The service level offered to people with a disability should be comparable to the service level provided to people without disabilities (Subchapter II, section 12143; Subchapter III, section 12182).
- Public and private entities operating fixed route system should provide paratransit to any individual with a disability who is unable to board, ride, or disembark from any vehicle on the system which is readily accessible to and usable by individuals with disabilities (Subchapter II, section 12143; Subchapter II section 12182).
- Newly constructed facilities designated to public transportation services should be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs (Subchapter II, section 12146, 12162); Alterations to existing facilities should be done in such a manner that the altered portions of the facility become, to the maximum extent feasible, readily accessible and usable by individuals with disabilities, including individuals who use wheelchairs (Subchapter II, section 12147, 12162).
- All key rapid rail and light rail stations should be readily accessible and usable by individuals with disabilities, including wheelchair users (Subchapter II, section 12147).
- The 'one car per train rule' stipulates that at least one vehicle per train (old or newly purchased) should be accessible for individuals with disabilities, including wheelchair users (Subchapter II, section 12148, 12162).

Train coaches must be accessible by wheelchair users, have space to park, fold and secure a wheelchair, have a dedicated seat, and have a restroom used by wheelchair users (Subchapter II, section 12162).

²⁶⁰ Boyle, M., et al. (2025). Accessibility Guidelines for Connected and Automated Vehicles in Public Transport. 62p., Retrieved from <https://imoveaustralia.com/wp-content/uploads/2025/08/Accessibility-Guidelines-for-Connected-and-Autonomous-Vehicles-FINAL-09-07.pdf>

²⁶¹ Campbell, H., Mammoliti, L., Van Vulpen E. (2024). Improving the Accessibility and Inclusivity of Public Transport through New and Emerging Transport Technologies. Best Practice Guidance for Policy Makers. 46p. Retrieved from: <https://imoveaustralia.com/wp-content/uploads/2024/09/Improving-the-accessibility-and-inclusivity-of-public-transport-through-new-and-emerging-transport-technologies.pdf>

5 Multi-level Legal Analysis of Mobility as a Right at Local/City-Level

Investigation of how cities and regions interpret MaaR in practice. Includes examples from project partner cities (Florence, Pilsen, Antwerp) and other pioneers – e.g. Oslo and Lisbon referencing Mobility as a Right in their urban mobility plans Describes local charters, city council motions, or mobility master plans that explicitly aim for equitable and universal mobility access. Discusses the role of local governments in guaranteeing MaaR (such as providing affordable public transport, reducing spatial mobility gaps, and addressing the needs of vulnerable groups).

Although much of the mobility policy and legislation is crafted on a European and national level, cities and local governments can play a role in developing equitable mobility ecosystems. As is argued in a UITP Report, *“Cities play a critical role in several aspects of effective and sustainable mobility. These range from the provision of safe, affordable, accessible and sustainable transport systems for all to improving and guaranteeing road safety. Lack of access to transportation, especially in peripheral urban areas in developed countries and marginalized neighbourhoods in developing ones, frequently aggravates economic and social isolation and segregation. However, with sufficient support, cities can promote inclusive and integrated urban planning and transport policies and transform their transport systems²⁶²”*.

Cities therefore often must find a balance between ecological objectives (less emissions, reduced noise pollution, more green spaces) and accessibility of the city, for deliveries, but also for users with limited physical abilities. UVARs – Urban Vehicle Access Regulations – can for instance contribute to reaching climate-neutrality goals through interventions like LEZ’s, parking reallocation, pedestrian-only zones. Yet even though these measures undoubtedly have positive effects – also for more vulnerable citizens who tend to live in more polluted areas of our cities – they can also inadvertently cause exclusion and disruption to the population. Consider for instance of an older person who can no longer reach the city centre by taxi because it has become a pedestrian zone. It is therefore recommended to introduce equity-based mitigation measures like exemptions for certain groups or discounts for low-income commuters, essential workers, and individuals with mobility impairments²⁶³.

5.1 Antwerp

The city of Antwerp is setting an example in terms of sustainable and inclusive mobility. Faced with challenges related to urban congestion, unequal access and environmental imperatives, local and regional authorities have implemented a series of ambitious measures. These actions are part of European and Flemish policies aimed at ensuring accessible, interconnected mobility that respects the principles of equality.

The objective is threefold:

- To improve affordability so that everyone can travel without financial constraints.
- Strengthen intermodality to streamline journeys and reduce dependence on private cars.

²⁶² UITP (2019). *Report. Mobility and the SDGs: A safe, affordable, accessible and sustainable transport system for all*. 8p. Retrieved from <https://www.uitp.org/publications/mobility-and-the-sdgs-a-safe-affordable-accessible-and-sustainable-transport-system-for-all/>

²⁶³ UITP (2025b). Net zero mobility; Social considerations for limiting private vehicle access: <https://www.uitp.org/publications/net-zero-mobility-social-considerations-limiting-private-vehicle-access/>

- Combat discrimination by guaranteeing universal accessibility and integrating the needs of vulnerable groups.

These initiatives, supported by legislation and strategic partnerships, illustrate Antwerp's commitment to building modern, inclusive and sustainable mobility. The city of Antwerp is subject to the decree of 3 April 2019 on basic accessibility²⁶⁴, which is the cornerstone of Flemish mobility policy. In conjunction with the new Flemish Highway Code²⁶⁵, the decree aims to shift from car-centric mobility to sustainable, multimodal mobility by promoting walking, cycling, public transport and shared solutions, as well as on-demand transport solutions for rural or underserved areas.

The Flemish 'Basisbereikbaarheid' decree²⁶⁶

Adopted in 2019, it introduces a major reform of mobility policy in Flanders. It replaces the concept of 'basic mobility' with that of basic accessibility, moving from a supply-centred system (fixed stops for all) to a model geared towards actual travel demand. This decree is based on combimobility²⁶⁷, i.e. the possibility of combining several modes of transport (train, tram, bus, shared bicycle, shared car) for the same journey. It provides for the creation of a four-tier network: rail as the backbone, a main network connecting major hubs, a complementary network for less densely populated areas, and tailor-made transport solutions (minibuses, taxis, on-demand services) for specific areas. To facilitate these connections, Hoppin-points – multimodal hubs – are being deployed, integrating park-and-ride facilities, charging stations and digital services. This reform is accompanied by decentralised governance with 15 transport regions and regional councils, to adapt the offer to local needs. The Antwerp transport region consists of the city and its hinterland. The objective is clear: to promote sustainable mobility, reduce car dependency and ensure universal accessibility, while using digital tools to simplify booking and journey planning²⁶⁸.

5.1.1 More equitable mobility

5.1.1.1 Promoting the affordability of mobility

Antwerp is focusing on transparent pricing and on-demand solutions to ensure affordability. This approach is in line with the Flemish Decree on Basic Accessibility, which requires clear and non-discriminatory fares for public transport. Local authorities are working to simplify the fare structure so that every user can understand and anticipate their travel costs.

In addition, on-demand transport services are being rolled out in less well-served areas, thereby reducing regional inequalities. Solutions such as the Hoppin system allow residents of outlying municipalities to book a minibus via an app or by telephone, ensuring flexible and affordable mobility.

²⁶⁴ [D. of 26 April 2019](#) on basic accessibility.

²⁶⁵ [A. of 19 July 2024](#), of the Flemish Government establishing the Flemish Highway Code.

²⁶⁶ <https://www.vlaanderen.be/vlaamse-regering/beslissingen-van-de-vlaamse-regering/vlaamse-strategie-duurzame-ontwikkeling-iv-0>

²⁶⁷ Combimobility (or *combi-mobiliteit* in Dutch) refers to multimodal travel behaviour, where a user combines several modes of transport to complete a journey.

²⁶⁸ <https://www.slimnaarantwerpen.be/en/about-us/antwerp-transport-region-2030-roadmap>

5.1.1.2 Ensuring availability

The 2030 roadmap for Antwerp²⁶⁹ is based on the Regional Mobility Plan²⁷⁰ and has an ambitious goal: to achieve a 50/50 modal shift, in line with the Flemish Strategy for Sustainable Mobility. This means that by 2030, the share of journeys made by car must be reduced to 50%, with the remaining 50% being covered by alternative modes such as public transport, cycling, walking and shared solutions. This approach responds to the need to limit congestion, reduce CO₂ emissions and improve the quality of life in the city.

The Hoppin system is a pillar of the Flemish "Basisbereikbaarheid" strategy, which aims to make mobility more flexible and inclusive. This digital platform allows users to plan multimodal journeys (train, tram, bus, shared bike, shared car) and book on-demand transport services for less well-served areas. Accessible via an app or call centre, Hoppin promotes combimobility by connecting different modes of transport through Hoppin points, which are multimodal hubs equipped with park-and-ride facilities, charging stations and real-time information. This system helps to reduce territorial and financial inequalities by offering affordable and practical solutions, while supporting the transition to sustainable mobility.

The Grote Verbinding (Great Connection) project²⁷¹ plays a central role in bringing about this transition. It involves the creation of strategically located multimodal hubs, combining train, tram, bus, bike sharing and car sharing. These infrastructures facilitate initial and final journeys, making connections smooth and attractive for users. They are designed to integrate park-and-ride facilities, electric charging stations and digital services for planning and booking journeys.

The success of this strategy depends on close coordination between key players: the City of Antwerp, the Flemish Region, De Lijn (bus and tram network), SNCB (railways), Infrabel s (rail infrastructure management) and the Port of Antwerp. This cooperation is governed by the Intermodal Cooperation Decree (2018), which requires coordinated planning and guarantees a consistent service, particularly during major works. For example, during the works on the Antwerp Ring Road, park-and-ride facilities were set up on the outskirts and free shuttles were provided to keep traffic flowing smoothly. These measures illustrate the desire to anticipate disruptions and offer effective alternatives, while encouraging users to adopt more sustainable modes of transport.

Adopted in Flanders on 21 December 2018, a decree²⁷² provides an essential legal framework for developing integrated and sustainable mobility. It defines the concept of combimobility, which consists of combining several modes of transport (train, tram, bus, bicycle, car sharing) within a single journey. It requires mandatory coordination between public and private actors – in particular the Flemish Region, transport operators (De Lijn, SNCB, Infrabel) and local authorities – to guarantee a coherent offer and appropriate infrastructure. The decree also provides for the harmonisation of policies for the creation of multimodal hubs, park-and-ride facilities and shared services, in line with the Regional Mobility Plan and the 'Basisbereikbaarheid' reform. Its objective is clear: to facilitate the transition to sustainable

²⁶⁹ *Ibid.*

²⁷⁰ <https://www.slimnaarantwerpen.be/fr/qui-sommes-nous/region-des-transports-de-la-ville-danvers-plan-mobilite-2030>

²⁷¹ <https://degroteverbinding.be/nl>

²⁷² [Decree of 21 December 2018](#) Decree amending the Decree of 2 March 1999 on the policy and management of seaports, the Decree of 7 May 2004 on the Sociaal-Economische Raad van Vlaanderen (Socio-Economic Council of Flanders) and the Decree of 7 July 2006 establishing the Mobility Council of Flanders.

mobility by making connections smooth and attractive for users, while reducing dependence on private cars.

5.1.1.3 Ensuring inclusivity

5.1.1.3.1 Persons with disabilities or reduced mobility

Antwerp incorporates an inclusive approach into its mobility policy, in accordance with the Belgian Law of 10 May 2007 on combating discrimination²⁷³ and the United Nations Convention on the Rights of Persons with Disabilities. The aim is to ensure that every citizen, regardless of age, income or physical ability, has access to transport services on equal terms.

In practical terms, this means putting reasonable accommodations in place: assistance at stations for people with reduced mobility, access ramps, adapted lifts, Braille signage and voice applications for the visually impaired. Digital platforms, such as Hoppin, are designed to be accessible to seniors and people with disabilities, with simplified interfaces and telephone booking options. Antwerp promotes inclusive mobility by developing accessible multimodal hubs, real-time information in various formats and digital integration of services to simplify the user experience. This strategy is part of the [Smart Ways to Antwerp](#) programme, which aims to encourage modal shift and make sustainable mobility attractive to all. Multimodal hubs, such as Hoppin points, bring together different modes of transport (train, tram, bus, bike sharing, car sharing) and offer complementary services such as charging stations, waiting areas and real-time information panels. These infrastructures are designed to be clear, accessible and comfortable, with facilities adapted for people with reduced mobility and inclusive digital interfaces²⁷⁴.

Digital integration plays a key role: thanks to platforms such as Hoppin and the [Smart Ways to Antwerp](#) route planner, users can plan, combine and book their journeys via a single application, with options adapted to senior citizens and people with disabilities (telephone booking, simplified interface). In addition, the city is implementing solutions for information accessibility, including visual and audio formats, to ensure that announcements and mobility data are understandable to everyone, including the visually and hearing impaired.

This approach meets a dual imperative: ensuring social inclusion and promoting ecological transition. By making mobility services universally accessible, Antwerp is demonstrating that transport modernisation should not create new divides but rather reinforce equal opportunities and quality of urban life.

5.1.1.3.2 The gender dimension and safety

The city of Antwerp places safety at the heart of its mobility policy to protect the most vulnerable users and reduce serious accidents. The most emblematic measure is the widespread introduction of 30 km/h zones throughout almost the entire city²⁷⁵, which reduces the severity of collisions and improves coexistence between pedestrians, cyclists and motorists. At the same time, safe facilities for cyclists and pedestrians have been rolled out²⁷⁶: separate cycle lanes, wider pedestrian areas and improved signage for electric bikes and scooters. The city is also focusing on prevention and information, using digital tools such as Smart Ways to Antwerp, which suggest safe routes and consider school zones and roadworks. During major

²⁷³ [Law of 10 May 2007](#) aimed at combating certain forms of discrimination. See 6.2.1.3.

²⁷⁴ https://its.be/sites/default/files/slimmeschakels_itsbe.pdf

²⁷⁵ <https://www.slimnaarantwerpen.be/fr/nouvelles/30-c-est-le-max-a-anvers>

²⁷⁶ <https://www.slimnaarantwerpen.be/fr/velo/velo-ou-velomoteur-en-toute-securite-a-anvers>

construction projects, such as the Grote Verbinding project, specific measures are put in place to maintain traffic flow and avoid risks: park-and-ride facilities, free shuttles and dynamic traffic management. Finally, awareness campaigns remind people of the essential rules (safe distance when overtaking a cyclist, no smartphones while driving), contributing to a shared culture of safety. These combined actions illustrate Antwerp's commitment to making sustainable mobility safe mobility by integrating infrastructure, technology and responsible behaviour²⁷⁷.

The city of Antwerp is committed to **improving the safety of women** in transport and public spaces by implementing concrete measures to prevent harassment and assault. This approach is based primarily on safe urban design, such as improved lighting at stops and multimodal hubs, the removal of high-risk areas and clear signage to reduce situations of isolation. In public transport, specific measures such as on-demand drop-off points in the evening allow female users to get closer to their destination, thus limiting the need to walk through unsafe areas. The city also relies on human presence and surveillance, with targeted patrols and exploratory walks conducted with women to identify places that generate insecurity. At the same time, digital tools – such as reporting and alert applications – are integrated into mobility platforms such as Hoppin, offering safe routes and booking options to avoid waiting in isolated areas. Finally, awareness campaigns against gender-based harassment and staff training in victim care complete this package²⁷⁸. These combined measures reflect a strong commitment to ensuring that sustainable mobility is also safe and inclusive, where every woman can move freely and without fear.

There is not yet an explicit 'women and mobility' programme in Antwerp, as there is in some cities (e.g. UN Women – Safe Cities), but digital and cycling projects indirectly promote women's safety and autonomy.

The City of Antwerp has been recognised by the Smart Mobility Awards for its innovative projects aimed at safer and multimodal mobility. These projects include digital solutions to reduce the risks associated with urban travel and improve user safety²⁷⁹.

5.1.2 Sustainable mobility

Low Emission Zones (LEZ)²⁸⁰, introduced to reduce pollution, are subject to a **social impact assessment** to avoid disproportionate effects on vulnerable populations. Compensatory measures are planned, such as **subsidies for the purchase of clean vehicles, reduced-price public transport passes** and alternative solutions for low-income households²⁸¹.

The Low Emission Zones (LEZ)²⁸² set up in Antwerp illustrate the desire to reconcile environmental imperatives with social equity. Introduced in 2017, they aim to improve air quality by gradually banning the most polluting vehicles, in line with Euro standards and European climate targets. This measure helps to reduce emissions of fine particles and CO₂, thereby improving public health and quality of life in urban areas. However, the city recognises that these restrictions can have a disproportionate impact on vulnerable households, particularly those who cannot afford to replace

²⁷⁷ <https://mobilit.belgium.be/fr/news/smart-mobility-awards-le-spf-mobilite-met-en-avant-quatre-projets-prometteurs-en-matiere-de>

²⁷⁸ <https://www.bruxelvestoday.be/mobilite/stib-campagne-harcelement-sexiste.html>
Brussels measure applicable in Antwerp.

²⁷⁹ <https://mobilit.belgium.be/fr/news/smart-mobility-awards-le-spf-mobilite-met-en-avant-quatre-projets-prometteurs-en-matiere-de>

²⁸⁰ <https://www.slimnaarantwerpen.be/fr/lez>

²⁸¹ <https://www.moniteurautomobile.be/actu-auto/mobilite/anvers-gand-assouplissent-regles-zones-faibles-emissions.html>

²⁸² <https://www.lez-belgium.be/fr/zones-a-faibles-emissions/anvers>

their vehicles. To avoid discrimination, Antwerp has put in place compensatory measures: day tickets for non-compliant vehicles, temporary permits, social tariffs and specific exemptions for people with disabilities, informal carers and low-income families. These measures ensure that the ecological transition does not come at the expense of fundamental rights, while maintaining the strategic objective of sustainable and inclusive mobility. Ultimately, the LEZ is part of an ambitious vision: by 2035, only zero-emission vehicles will be allowed, reinforcing Antwerp's role as a pioneer in clean mobility.

5.2 Florence

Mobility in Florence is based on two main principles: strict regulation of car traffic in the historic centre and an efficient public transport network.

Florence is a city designed for soft mobility: the historic centre is largely pedestrianised and listed as a UNESCO World Heritage Site. Most tourist travel is on foot. The historic centre is subject to a Zona a Traffico Limitato (ZTL), prohibiting access to unauthorised vehicles (except residents, taxis and buses) and monitored by cameras. The Heritage Code provides a framework for the preservation of landscapes and the historic centre, justifying the establishment of pedestrian zones and the ZTL (Zona a Traffico Limitato) to reconcile mobility and cultural protection.

The Cultural Heritage and Landscape Code²⁸³, drawn up in accordance with Article 9 of the Italian Constitution, provides the legal basis for the protection of historic centres and landscapes in Italy. This text requires the preservation of cultural and landscape heritage, defined as "buildings and areas that express the historical, cultural, natural, morphological and aesthetic values of the territory" (Art. 2). Article 136 specifies that groups of buildings of aesthetic and traditional value, including historic centres, are landscape assets subject to specific constraints. These provisions justify the implementation of traffic restriction measures, such as Limited Traffic Zones (ZTL), to reconcile mobility with cultural protection. The Code also sets out obligations for local authorities and private owners to ensure the conservation and enhancement of cultural assets (Articles 1 and 3), in line with constitutional principles and European directives on sustainability. Thus, the creation of pedestrian zones and ZTLs in historic centres is part of a heritage protection approach aimed at reducing pollution, preserving the integrity of monuments and improving the quality of life of residents, in accordance with Articles 131 to 159 relating to the protection of landscape assets.

This measure aims to reduce traffic and pollution in a UNESCO-listed area. It is accompanied by environmental restrictions (ban on Euro 0–4 vehicles) and a **park-and-ride** system to encourage modal shift. The PUMS also provides for a **Green Shield**, strengthening restrictions on polluting vehicles and encouraging the use of active and electric modes of transport.

5.2.1 More equitable mobility

5.2.1.1 Promoting the affordability

The City of Florence has introduced an innovative social fare scheme for urban public transport (bus, tramway and urban rail) called "*Ti porta Firenze*". Its aim is to drastically reduce the cost of season

²⁸³ [Legislative Decree No. 42 of 22 January 2004](#)

tickets for residents, while encouraging regular use of public transport. Subscriptions are offered at 5, 10, 20 euros per month. Rates vary according to the user's status (student, new subscriber, long-term subscriber), household income (ISEE), and frequency of public transport use. These prices represent discounts of 60% to 80% compared with standard fares. Beneficiaries of the Bonus TPL are also entitled to free or strongly discounted access to the bike-sharing system (standard and electric bicycles), currently valid until the end of 2025. This strengthens bus–tram–bike intermodality and improves last-mile accessibility at no extra cost.

The municipality has implemented annual subscription split into instalments. Instead of requiring a single annual payment, Florence has chosen to split the annual subscription into four quarterly instalments, and remove the up-front financial barrier, which is often a deterrent for low-income households.

Florence's municipal policy is coordinated with regional measures, including the Tuscany ISEE-based public transport tariff, student subscriptions subsidised through universities (notably the University of Florence).

This approach avoids threshold effects, ensures fare continuity between city and region. According to the municipal authorities, these measures aim to:

- reduce car dependency, especially among lower-income households,
- combat transport poverty,
- cut congestion and air pollution,
- progressively move towards conditional, targeted free public transport.

City officials explicitly present “*Ti porta Firenze*” as a step towards selective public transport fare-free access.

5.2.1.2 Ensuring availability

Florence has embarked on a profound transformation of its transport system to promote multimodal and sustainable mobility, in line with European objectives to reduce emissions and improve the quality of urban life. This strategy is based on several complementary levers.

Firstly, the development of public transport is a major focus, with the gradual extension of the tram network (lines T1 to T6), the strengthening of the metropolitan rail network and the establishment of protected bus corridors to ensure speed and reliability.

At the same time, the city is promoting soft mobility through the creation of more than 400,000 m² of pedestrian areas, the widespread introduction of 30 km/h zones to make travel safer, and the implementation of the Biciplan, which provides for 95 km of new cycle paths connected to the main urban centres. Florence is also focusing on shared and electric mobility, with a car-sharing service comprising around 600 vehicles, a bike-sharing system with 225,000 users, and a fleet of hybrid and electric buses. This energy transition is reinforced by the presence of nearly 4,000 private electric vehicles and 370 charging stations throughout the city.

Finally, the city is committed to developing sustainable urban logistics by encouraging deliveries by electric vehicles and deploying intelligent transport systems (ITS) to optimise traffic flow management and reduce congestion. All these actions, which are part of the Piano Urbano della Mobilità Sostenibile (PUMS), illustrate Florence's desire to reconcile accessibility, innovation and respect for the environment.

Florence is focusing on developing intermodal hubs to facilitate connections between different modes of transport – train, tram, bus, bicycle and walking – and thus encourage modal shift. Bicycle parking facilities at tram stops and the possibility of taking bicycles on public transport reinforce this approach. These hubs are strategic points where urban and rail networks converge, offering physical and functional integration of services. The aim is to simplify the user experience through fare integration between different operators, complemented by innovative digital solutions such as electronic payment and multi-channel ITS (Intelligent Transport Systems) platforms, enabling real-time information and

optimised flow management. This approach is part of a fluid and connected mobility strategy, where infrastructure is designed to meet first and last mile needs: secure bicycle parking facilities are installed at tram stops, and the possibility of taking bicycles on public transport enhances travel continuity. These hubs are not limited to a transit function; they are becoming integrated spaces, promoting accessibility, reducing congestion and encouraging the transition to low-emission modes of transport, in line with the principles of sustainable mobility defined by the SUMP and European recommendations.

Florence exemplifies an exemplary approach to sustainable mobility, based on limiting car traffic, developing public transport and active modes of transport, and integrating technology and pricing to promote intermodality. This model, focused on quality of life and heritage protection, could inspire other cities facing similar challenges.

5.2.1.3 Ensuring inclusivity

5.2.1.3.1 Persons with disabilities and reduced mobility

Florence has undertaken an ambitious policy over several years to promote inclusive mobility, focusing on improving the accessibility of public transport, urban spaces, and cultural sites. The city has notably upgraded its ATAF bus network by deploying low-floor vehicles equipped with access ramps, thereby facilitating travel for people with reduced mobility. Railway stations also play an essential role, particularly Santa Maria Novella, where the Sala Blu service provides free personalized assistance for boarding, lighting, and moving around the station for passengers with disabilities. In addition, Florence has developed accessible private transfer services such as “Florence Without Barriers,” offering minivans equipped with lifting platforms to ensure barrier-free access to the historic city center²⁸⁴. The city’s commitment is also reflected in the progressive accessibility of its major museums: the Uffizi Gallery is equipped with ramps, elevators, adapted restrooms, and even tactile paths with Braille descriptions, complemented by video guides in sign language to promote universal access. This comprehensive approach, recognized by the European Access City Award in 2021, confirms Florence’s ambition to become a leading example of inclusion and accessible mobility for all. Thus, all these measures illustrate a coherent and sustainable strategy aimed at reducing mobility barriers, strengthening the autonomy of people with disabilities, and making Florence a truly welcoming and accessible city for everyone.

5.2.1.3.2 The gender dimension

Florence implements a Sustainable Urban Mobility Plan (SUMP) aimed at improving safety, accessibility, and sustainability, but without gender specific components. The SUMP includes development of active mobility, improvements in street lighting and public space safety and enhanced surveillance and real time management through the Smart City Control Room. But none of these measures are described as specifically focused on women’s safety

Florence does not appear to have a formal, dedicated policy focusing specifically on women’s protection in mobility. Instead, the city operates through a broader strategy of accessibility, sustainability, and public safety, framed within wider European initiatives that recognize the importance of integrating gender considerations into transport systems.

²⁸⁴ <https://www.ciaoflorence.it/en/page/388>

5.2.1.3.3 Safety

The City of Florence has developed a comprehensive road-safety strategy aimed at reducing traffic accidents and protecting the most vulnerable road users.

At the core of this strategy is speed reduction, considered the most effective way to lower both the number and severity of crashes.

Florence has progressively introduced “Zone 30” areas, where the maximum speed limit is reduced to 30 km/h. Today, these zones cover nearly half of the urban area, especially in residential neighbourhoods, near schools, hospitals and local shopping streets. For example, areas such as Coverciano, Campo di Marte and Soffiano have been converted into Zone 30 districts to improve safety for residents, children and elderly pedestrians.

Speed limits are supported by physical street redesign, not just signs. In many streets, roadways have been narrowed, sidewalks widened, and pedestrian crossings moved forward, making drivers slow down naturally. At dangerous intersections, visibility has been improved, and turning movements simplified to reduce collision risks.

Florence places strong emphasis on the protection of pedestrians and cyclists. The city has expanded cycle lanes, particularly along the Arno River and near tramway corridors, where cycling infrastructure is physically separated from car traffic. Pedestrian crossings have been upgraded with better lighting and clearer markings, especially in high-footfall tourist areas.

The historic city centre is protected by a strict Limited Traffic Zone (ZTL) controlled by electronic gates. Only authorised vehicles can enter, which drastically reduces car traffic in narrow streets used intensively by pedestrians and tourists. This measure significantly lowers accident risk in areas such as the Duomo and Santa Croce districts.

Infrastructure measures are reinforced by strong enforcement. The municipal police carry out frequent checks on speeding, mobile phone use, drink-driving, and drug-driving. These controls combine prevention and sanctions to discourage dangerous behaviour and reinforce respect for traffic rules.

Florence also relies on smart traffic management tools. A central urban Control Room uses cameras and sensors to monitor traffic in real time, detect incidents quickly, and coordinate emergency responses. This system allows the city to identify high-risk locations and adjust traffic lights or signage before serious accidents occur.

These combined measures have delivered measurable results. In recent years, Florence has recorded a significant reduction in traffic accidents and a sharp drop in road fatalities, demonstrating the effectiveness of its integrated approach.

Overall, Florence’s road-safety policy reflects a long-term Vision Zero approach, based on lower speeds, safer street design, controlled car access, strict enforcement and public awareness, with the goal of making serious road injuries and deaths increasingly rare.

Public transport security in Florence is based on a combination of visible human presence, technological surveillance, clear rules of conduct for passengers, and close cooperation between the municipality, transport operators and law-enforcement authorities. These measures aim to protect passengers, staff and infrastructure, while maintaining public confidence in buses and tramways as safe modes of transport.

A central element of Florence’s approach is the reinforced presence of the municipal police on public transport. Since 2024–2025, the city has implemented the programme “Viaggiare più sicuri” (“Travelling more safely”), which deploys a dedicated unit of around 20 municipal police officers patrolling buses, tramways and key stops daily. Officers operate both on board vehicles and at stations, with additional evening and weekend shifts. Patrols focus on high-traffic and sensitive areas such as Santa Maria Novella

station, the Fortezza area and major tram lines, combining deterrence, rapid intervention and reassurance for passengers.

Security is further strengthened through video surveillance and monitoring systems. Most tramways and many buses are equipped with on-board CCTV cameras, which help deter antisocial behaviour, document incidents and support investigations. Vehicles are also fitted with geolocation systems, allowing control centres to track movements and respond quickly in emergencies. In addition to public police patrols, private security guards may be deployed on certain tram services and at specific times, especially during peak hours or in areas identified as problematic.

Protecting transport staff is a key priority. Following an increase in verbal and physical assaults on drivers and ticket inspectors, the City of Florence, together with transport operators Autolinee Toscane (buses) and GEST (tramway), has introduced targeted protective measures. These include closed driver cabins, emergency call buttons directly linked to control rooms, and specialised training for staff on conflict management and de-escalation techniques. A formal security protocol signed with trade unions and authorities also the possible use of body cameras for inspectors and continuous monitoring of high-risk routes.

Passengers using public transport in Florence are subject to strict behavioural rules designed to preserve order and safety. Any form of violence, verbal abuse, threats, vandalism or obstruction of service is prohibited. Passengers must comply with staff instructions and cooperate with ticket inspections. Violations can result in administrative fines, removal from the vehicle, exclusion from services, and in serious cases, criminal prosecution. These rules apply equally to residents and visitors and are enforced as part of the city's broader public-order strategy.

Security measures extend beyond vehicles to stations, stops and interchange areas. The municipality reinforces police presence and surveillance around major tram stops, park-and-ride facilities and transport hubs, especially during evening hours. This ensures continuity of security throughout the passenger journey and reduces risks linked to loitering, petty crime or disorder near transport infrastructure.

Finally, Florence's Limited Traffic Zone (ZTL) in the historic centre indirectly supports transport security. By restricting private car access and prioritising public transport, pedestrians and cyclists, the ZTL reduces congestion, limits conflicts between vehicles and people, and makes public spaces easier to monitor. This controlled urban environment improves overall safety around tram and bus corridors in the most crowded parts of the city.

In summary, public transport security in Florence relies on clear rules of conduct, a strong and visible security presence, advanced monitoring technologies, and coordinated action between the city, operators and police forces. This integrated approach aims to ensure that buses and tramways remain safe, reliable and attractive for everyday mobility.

5.2.1.4 Sustainable mobility

As part of its sustainable mobility plan, Florence has introduced the **Green Shield** (*Scudo Verde*), an environmental measure aimed at reducing air pollution and improving urban quality of life. Implemented in April 2025, this scheme consists of an expanded restricted traffic zone covering an area of approximately 50 km around the historic centre. Access is strictly regulated: the most polluting vehicles, particularly those classified as Euro 0 and Euro 1, as well as tourist coaches, are banned from the zone 24 hours a day, 7 days a week. Enforcement is carried out by a network of nearly 80 electronic terminals equipped with cameras, enabling automatic number plate recognition. Each offence incurs a fixed fine of €168, with no upper limit on the number of fines that can be issued. Exceptions are made for priority vehicles, people with reduced mobility (after registration), and access to strategic areas such as Careggi Hospital, Amerigo Vespucci Airport and tram terminals. This initiative is part of the PUMS (Piano Urbano della Mobilità Sostenibile) and

illustrates Florence's desire to strengthen the ecological transition by limiting polluting traffic and promoting more environmentally friendly modes of transport.

Italian legislation governing Limited Traffic Zones (ZTL) is based on the Codice della Strada²⁸⁵ and on municipal resolutions that adapt the rules to local specificities.

This legal framework authorises municipalities to establish restricted traffic zones for reasons of road safety, pollution reduction and protection of historical heritage, in line with European directives on sustainable mobility. In practical terms, access to these zones is limited to residents, emergency vehicles, taxis, public transport and, in some cases, electric or hybrid vehicles, subject to prior registration.

The regulations require clear signage, with signs indicating "Zona Traffico Limitato" and the hours of operation, as well as electronic monitoring by cameras that trigger automatic fines ranging from €100 to €350 for each unauthorised entry. The times vary from city to city, generally during the day and sometimes at night to regulate nightlife, as in Rome or Florence. Exemptions exist for clean vehicles, while one-off authorisations can be granted via hotels or garages located in the ZTL, thanks to the registration of number plates on a "whitelist". These measures have clear objectives: to reduce congestion and pollution, preserve architectural heritage and promote sustainable modes of transport such as walking, cycling and public transport, thereby helping to improve the quality of life in Italy's historic centres.

Mobility is part of an overall strategy defined by the Sustainable Urban Mobility Plan (SUMP), which aims to reconcile heritage preservation, reduction of environmental impacts and improved accessibility. This plan, developed over a ten-year horizon, is based on a participatory and integrated approach, aligned with the Metropolitan Strategic Plan²⁸⁶.

The SUMP sets ambitious objectives: to reduce congestion and pollution, promote intermodality (train, tram, bus, bicycle, pedestrian), improve road safety and ensure socio-economic sustainability. These guidelines respond to a worrying diagnosis: in 2018, cars accounted for 83% of journeys, compared with a minority share for public transport, in a context of high motorisation and tourist pressure (+5.3 million arrivals per year).

5.3 Plzeň

The city of Pilsen is developing a particularly comprehensive mobility policy, combining physical accessibility, technological innovation, fare equity and consideration for the needs of vulnerable groups, particularly women. This multidimensional approach aims to ensure inclusive, safe and sustainable mobility for all residents.

5.3.1 More equitable mobility

5.3.1.1 Promoting affordability

Pilsen's fare policy significantly reinforces its ambition for equity by reducing the financial barriers that can limit access to mobility. In particular, the city offers free travel to children under 6, children up to

²⁸⁵ [Legislative Decree No. 285 of 30 April 1992](#), updated in 2025.

²⁸⁶ <https://www.cittametropolitana.fi.it/piano-strategico-indice/>

15 and people over 70 with an activated Pilsen Card. It also offers substantial discounts for young people, students up to the age of 26 and senior citizens aged 65 and over, which significantly reduces the cost of travel for low-income households or for people whose daily mobility is essential for access to education, training or health services. This system is complemented by flexible zone-based pricing that allows the cost of the journey to be adjusted according to the distance travelled, as well as administrative simplification made possible by the dematerialization of tickets via the Pilsen Card. All these measures help to ensure accessible, affordable and inclusive mobility for all categories of users.

5.3.1.2 Availability

Plzeň is seeking to improve the external accessibility of the conurbation and to establish a sustainable and integrated transport system, including smart solutions and the electrification of networks. The Plzeň metropolitan area, the fourth largest city in the Czech Republic, has embarked on an ambitious project to complete its integrated transport system to meet the challenges of sustainable mobility and urban quality. This project is based on several strategic areas.

Firstly, the modernisation and electrification of infrastructure is a priority, with the renovation of existing lines, the reconstruction of depots and the modernisation of power supply systems. At the same time, a major effort is being made to renew rolling stock, through the acquisition of new trams and trolleybuses to replace obsolete vehicles, improving comfort and reducing noise pollution. Plzeň has invested in a fleet of new Škoda ForCity Smart 40T trams, which are fully low-floor, 29 meters long and bidirectional. These vehicles offer a capacity of 185 passengers, including 64 seated, and are equipped with five double doors to facilitate boarding and reduce stopping times. An order for 22 trams is currently in progress, with 10 to be delivered between 2023 and early 2024, and another 10 from late 2024 onwards²⁸⁷.

The integration of different modes of transport is at the heart of the approach: the creation of a combined system links public transport (trams, buses), active modes (cycling, walking) and park-and-ride facilities (P+R), thus promoting smooth, intermodal mobility.

Additional measures aim to moderate traffic in the city centre by redeveloping public spaces and limiting car traffic, as well as reducing freight transport in urban areas through appropriate logistics solutions.

Finally, the project tackles congestion problems on exposed road corridors by optimising flow management and developing intelligent traffic control systems. This programme receives European financial support, notably through the European Investment Bank (EIB), which has granted a £45 million loan to support the transition to more attractive and environmentally friendly public transport.

ITS and smart mobility in Plzeň

Plzeň is deploying intelligent transport systems (ITS) to optimise traffic flow management, reduce congestion and improve the punctuality of public transport. These systems are based on cutting-edge technologies, including 5G and the Internet of Things, which enable real-time communication between vehicles, infrastructure and users. Among the flagship measures, the city is implementing traffic light priority systems for trams and buses, based on geolocation and radio communication, to reduce waiting times and increase the commercial speed of the lines. At the same time, digital platforms such as Bustime provide passengers with real-time information on the location of buses, trolleybuses and trams, making it easier to plan journeys. Plzeň also stands out for its innovative

²⁸⁷ <https://www.urban-transport-magazine.com/en/plzen-more-new-skoda-trams-and-trolleybuses-in-service/>

5G-connected tram project, developed with Škoda Transportation²⁸⁸ and the University of West Bohemia, which is transforming the city into a veritable smart mobility laboratory thanks to connected intersections and stops. Finally, dynamic traffic management uses sensors and predictive algorithms to adjust traffic lights according to conditions, give priority to public transport and anticipate traffic jams. These initiatives make Plzeň a European model for smart mobility, combining intermodality, digitalisation and sustainability to improve quality of life and reduce environmental impact.

In the field of technology, the city has an advanced ecosystem thanks to its municipal operator SITMP, which develops smart mobility solutions designed to optimise traffic flows and enhance equal access for all. Dynamic traffic management systems, sensors connected via the 5G network and a laboratory dedicated to autonomous mobility enable emerging technologies to be tested, traffic conditions to be adapted in real time and the reliability of the network to be improved. These innovations directly contribute to reducing regional inequalities, by ensuring more regular transport services in outlying or densely trafficked areas and minimising delays that particularly affect public transport users, among whom women and low-income groups are often in the majority. They also help to improve travel safety, a crucial issue for women, by improving lighting, visibility, traffic flow and the quality of information available for planning journeys.

Pilsen's efforts also extend to directly improving its public transport network. The city has introduced priority measures for trolleybuses at intersections, dedicated lanes and optimised multimodal connections. These measures have increased the reliability of the busiest lines, reduced waiting times and improved the feeling of safety during daily journeys. Reducing delays and improving the flow of the network are particularly crucial for users who depend on public transport, such as women working fixed hours or people without private vehicles. These optimisations are therefore an essential aspect of equity: they make the system more predictable and therefore more usable, particularly for those whose mobility relies on complex journeys combining several modes of transport.

5.3.1.3 Inclusivity

The city of Pilsen is implementing a particularly comprehensive and ambitious strategy for equitable, inclusive and safe mobility, based on a coherent combination of accessible urban development, technological innovations, solidarity-based fare policies and a strong focus on vulnerable groups, including women.

In terms of physical infrastructure, Pilsen has been undergoing a profound transformation of its network of pedestrian and cycle paths for several years, making it possible to move around almost entirely without obstacles in the historic centre and in many modernised neighbourhoods. This approach has resulted in particular in the widespread installation of kerb ramps at pedestrian crossings, enabling safe crossing for people with reduced mobility, wheelchair users, senior citizens and families with pushchairs. It also covers the main routes connecting shopping centres, universities and residential areas, ensuring an accessible network across the metropolitan area. All of these improvements help to ease daily travel and reduce situations of inaccessibility, which often constitute a major obstacle to the independence of the most vulnerable members of the public.

²⁸⁸ <https://www.urban-transport-magazine.com/en/plzen-and-skoda-to-develop-autonomous-5g-tram/>

This accessibility policy is reinforced by a highly original inclusive cycle network consisting of "mixed routes" running alongside waterways and connecting different neighbourhoods to the centre. These routes are specially designed to accommodate cyclists, pedestrians, wheelchair users, handbikers and families, thanks to continuous asphalt surfaces, controlled gradients and multiple connection points with urban areas. This network offers a safe and comfortable alternative to motorised travel, allowing users with physical limitations or an aversion to heavy road traffic to enjoy high-quality active mobility. The importance of these routes goes beyond the sporting dimension: they are a reliable means of connecting residential areas, service centres and natural spaces for all types of residents.

Pilsen also places equity at the heart of its planning through its participation in the European GOLIA project, which enables it to formally integrate the concept of inclusion into its strategic mobility decisions. Thanks to this innovative system, the city can anticipate the impact of each measure on a variety of social groups, including people with disabilities, senior citizens, women, minorities and users with specific mobility constraints. GOLIA provides advanced modelling tools based on artificial intelligence, enabling the identification of risks of exclusion and the adjustment of mobility interventions to ensure that no category of users is disadvantaged by poorly calibrated measures. This approach is a fundamental lever for enhancing the safety and protection of women in mobility, as they are often over-represented among users who depend on public transport or active modes of transport, and are more likely to experience constraints related to safety or transport timetables. By integrating these variables into the design of public policies, Pilsen is ensuring that the specific needs of women are better considered and that travel conditions in public spaces are improved.

5.3.2 Sustainable Mobility

The city is promoting sustainable urban development by revitalising public spaces, enhancing cultural heritage and promoting responsible tourism. These developments foster conviviality, social diversity and the creation of attractive pedestrian areas, thereby helping to reduce car traffic in the city centre. In addition, Plzeň encourages projects that include the redevelopment of residential neighbourhoods to provide a healthier living environment, the integration of green spaces in densely populated areas, and the creation of places that encourage active mobility (walking, cycling). This approach is part of a holistic vision of sustainable urban development, which combines environmental, social and economic dimensions to build an inclusive, resilient and attractive city.

To achieve these objectives, the strategy proposes four integrated solutions: the blue-green agglomeration, focused on sustainable water management and ecological infrastructure; the circular agglomeration, focused on waste recovery and energy transition; the social agglomeration, focused on health, education and inclusion; and the attractive agglomeration, focused on smart mobility, innovation and the quality of public spaces.

Plzeň is establishing itself as a pioneer in smart mobility, integrating cutting-edge technologies to improve quality of life, reduce environmental impact and enhance its economic attractiveness. This strategy is based on concrete projects and a solid legal framework that ensures compliance and protects citizens.

- ITS (Intelligent Transport Systems): Plzeň is deploying intelligent systems to optimise traffic flow and public transport punctuality. This includes traffic light priority for trams and buses, dynamic traffic management and multi-channel digital platforms such as Bustime, which provide real-time information to passengers.
- 5G-connected tram: In partnership with Škoda Transportation and the University of West Bohemia, Plzeň is currently testing a connected autonomous tram, using 5G and IoT to improve traffic flow and safety. This project is transforming the city into a living laboratory for smart mobility.
- Intermodality and electrification: the city is modernising its infrastructure with Škoda ForCity Smart 40T trams and Škoda 26 Tr trolleybuses, while developing intermodal hubs integrating

trams, buses, bicycles and park-and-ride facilities (P+R). These hubs promote modal shift and reduce emissions.

The implementation of the strategy is based on participatory governance involving local authorities, economic actors, universities and non-governmental organisations. A steering committee and thematic working groups coordinate and monitor the action. Strategic projects are financed by European funds, national programmes and public-private partnerships.

In summary, this strategy provides a comprehensive framework for addressing the economic, social and environmental challenges facing the Plzeň conurbation by promoting innovation, sustainability and quality of life for residents.

The analyses conducted show that Pilsen, Florence and Antwerp are each developing distinct but complementary approaches to inclusive mobility. Pilsen stands out for its highly advanced strategy of physical accessibility and social justice, based on barrier-free urban pathways and an inclusive cycling network, as well as the use of innovative technological tools, notably through the European GOLIA project, which ensures that the impact of mobility policies on all social groups, including women and vulnerable groups, is assessed. Florence, for its part, focuses primarily on developing accessible public transport – low-floor buses, adapted taxis – and improving the accessibility of its major cultural sites, while also participating in GOLIA to better understand and manage the challenges associated with high tourist traffic. Antwerp is taking a social equity-focused approach by explicitly integrating the needs of women, minorities and vulnerable people into mobility planning, using the predictive and inclusive analysis tools offered by GOLIA, which identify groups often overlooked by traditional policies. Thus, while Pilsen stands out for its infrastructure and digital innovation, Florence for its cultural accessibility and transport, and Antwerp for its strong focus on social justice, all three cities share a common desire to place equity at the heart of their mobility strategies.

5.4 Other cities

Geneva, Switzerland. The transport law²⁸⁹ establishes both comprehensive network goals and specific minimum performance standards designed to ensure a complete and efficient basic transport offer throughout the canton. The primary comprehensive goal is that all collective and semi-collective transport modes must be organized to offer a complete network serving the movement of people within the canton and with neighbouring regions. This organization requires a complementary perspective when conceived alongside individual transport modes. To manage this evolution, the Council of State must establish a multi-year action plan for the collective transport network, which integrates the need for an efficient public taxi service coordinated complementarily with the public transport offer. Crucially, the public transport network must be reinforced by 2030 to improve urban, regional, and cross-border service and to significantly increase reception capacity during peak hours. To facilitate use, schedules, tariffs, and transport tickets must be harmonized, and operators are required to group together to form a comprehensive tariff community (*Communauté tarifaire intégrale*).

²⁸⁹ [Loi sur le réseau des transports publics – LRTP](#) du 17 mars 1988.

The law also mandates minimum performance standards for the basic offer, to be achieved through the action plan. These standards cover speed, capacity, access, and frequency:

1. Commercial Speed: Lines using the road network must achieve speeds superior to 18 km/h, while lines on fully dedicated sites must be superior to 30 km/h.
2. Capacity: Outside peak hours, passengers must in principle have a seat; during peak hours, it must not be necessary to refuse passengers.
3. Operating Hours and Frequency: All regular lines must be served every day between 6 a.m. and midnight (24 h). On important lines, the maximum interval must not exceed 6 minutes between 7 a.m. and 7:30 p.m. (19 h 30) from Monday to Friday. On other lines, intervals must not exceed 30 minutes during early morning, mid-day, and late afternoon, or 60 minutes outside these hours.
4. Travel Time and Access: In the urban agglomeration, all regular lines are operated every day between 06:00 and 24:00; on major network lines, the maximum headway does not exceed 6 minutes between 07:00 and 19:30 from Monday to Friday; on other lines, the maximum headway does not exceed 30 minutes in the early morning, at midday and in the late afternoon, and 60 minutes outside these hours. Access distance to the nearest stop must not exceed 300 meters or 5 minutes on foot in the urban agglomeration, or 500 meters or 10 minutes on foot in the rest of the inhabited zones.

In the **United States**, different cities make cycling and shared mobility more equitably accessible through target-group oriented measures through urban ordinances, permits, pilots, and tenders. Below follows a non-exhaustive overview.

Atlanta (Georgia) integrated equity-principles in its Code of Ordinances to regulate shareable dockless mobility devices in 2018. Currently, it stipulates that permitted operators shall (a) *“have payment options which do not require the rider to have access to credit cards to use a shareable dockless mobility device”*, (b) *“adhere to equitable distribution requirements” throughout the city* and (c) *“provide an equity plan [...] as part of the permit application. The equity plan shall include discounted price options and may include such elements as cash-based payment systems and non-smartphone reservation systems”*²⁹⁰.

Austin (Texas) issued rules for the deployment of shared small vehicles in 2018. It stipulates that *“Licensee shall be responsible for implementing and submitting [...] a marketing and outreach plan [...] to promote the use of dockless mobility in neighborhoods currently underserved by dockless mobility options, [...] including offering an affordable option that does not require the user to access the service via a smartphone application for any customer with an income level at or below 200% of the federal poverty guidelines”*²⁹¹ (City of Austin 2018: sec. F).

Chicago (Illinois) has an established track record in making cycling and shared micro mobility more equitable. In 2015 the city lowered first-year membership fees for Divvy bike sharing from \$99 to \$5 for people below an income threshold. A collaboration was set up with the non-profit ‘Motivate’, which, among other things, operated a call centre that handled income-contingent membership discounts and cash

²⁹⁰ City of Atlanta (2025). Code of Ordinances. Chapter 150 – Traffic and Vehicles. Article X – Shareable Dockless Mobility Devices. https://library.municode.com/ga/atlanta/codes/code_of_ordinances?nodeId=COORATGEVOII_CH150TRVE_ARTXSHD_OMODE (accessed on 12.12.2025)

²⁹¹ City of Austin (2018). Austin City Code 14-9. Director Rules for deployment and Operation of Shared Small Vehicle Mobility Services. Retrieved on 12.12.2025 from <https://www.austintexas.gov/page/shared-mobility-regulations-and-license-application>

payments²⁹² (Shared-Use Mobility Center 2019: 21). The 2023 ‘*Chicago Cycling Strategy*’ reaffirms the city’s commitment to accessible cycling schemes as it reaffirms the \$5 membership for qualifying residents and cash payment systems for the unbanked (Chicago Department of Transportation 2023: 23).

In 2018, the city defined the compliance criteria for a bike sharing pilot. In terms equitable access to the pilot, the requirements stipulated among other things that the operators must be committed to “*expand mobility to people facing financial and technological barriers*”, “*must provide cash payment options for the unbanked community, and provide locating and locking capabilities without the use of smartphones for customers with limited technology access*”, “*must create and distribute print publications and a webpage explaining their cash payment options [...].*” Moreover, the vendors were encouraged to identify, train, and employ local’s residents that have been historically disadvantaged in participating in the local economy” (City of Chicago 2018)²⁹³.

Similarly, the requirements for a 2019 e-scooter sharing pilot stipulate, among others, that “*Vendors must be committed to addressing equity issues and utilizing their scooter service to expand mobility to people facing financial and technological barriers [...] including providing cash payment options for the unbanked community [and to] create and distribute print publications and a webpage explaining their cash payment options, phone access, program qualifications (if any), and how residents can access scooters via these methods.*”. The section regarding the workforce encourages the operators to “*identify, train, and employ local residents that have been historically disadvantaged in participating in the local economy*” and an encouragement to have specific contracting goals for minority and women-owned businesses [...]²⁹⁴”

In 2022, the Chicago Department of Transportation (CDOT) launched the ‘Bike Chicago’ plan, to distribute 5,000 single-speed pedal bikes by 2026. The target group consisted of people with less-than-average incomes and who are more prone to mobility poverty: Applicant had to be at least 14 years old, not own a bike yet, live in a family with a household income at or below the Area Median Income for Chicago, and must face higher mobility hardship than average (for which the city has developed an index) or have participated in previous City-supported mobility programs²⁹⁵.

Denver (Colorado) launched one of the largest bike incentive programs in the States: in April 2022, the city started distributing over 6,000 e-bike vouchers to income-eligible residents. The vouchers gave a \$400 to \$1,200 reduction at pre-selected shops. Additional funds were available for cargo e-bike purchases²⁹⁶.

Milwaukee (Wisconsin) launched a permanent dockless e-scooter sharing program in 2024. Equity principles are part of the City’s Terms and Conditions to operate e-scooters, including operating a multilingual website, a call centre, and a mobile application customer interface, and participating in outreach and safety events. At least 5% of the operator’s fleet must consist of seated dockless scooters.

²⁹² City of Chicago (2019). City of Chicago Requirements for Scooter Sharing Emerging Business Permit Pilot Program. Retrieved on 12.12.2025 from https://www.chicago.gov/content/dam/city/depts/cdot/Misc/EScooters/EScootersPilotProgramTerms_06-07-19.pdf

²⁹³ City of Chicago (2018). City of Chicago Permit Requirements – For Dockless bikeshare vendors only 2018. Retrieved on 12.12.2025 from https://www.chicago.gov/content/dam/city/depts/cdot/bike/general/Chicago_DoBi_Pilot_Program_Updated_06.29.18.pdf

²⁹⁴ City of Chicago (2019), prev.

²⁹⁵ Shared-Use Mobility Center (2024). Bike Chicago Evaluation Report, p.9-10. from https://sharedusemobilitycenter.org/wp-content/uploads/2024/06/SUMC-Bike-Chicago-Evaluation-Report_final_updated.pdf

²⁹⁶ *Ibid.*

To serve all parts of Milwaukee equally, the city has been divided into 6 zones; for each zone, the contract stipulates which minimal share of the fleet must be deployed - with a minimal daily average of 5% of the fleet²⁹⁷.

New York City (New York) launched a Greenway Plan in 2025 to further develop its network of corridors for walking, biking, and recreation. Two of the five goals of the plan are relevant to MaaR: *‘promoting social equity and accessibility’* and *‘supporting health and wellness.’* The plan wants to ensure that the greenway and bicycle network is accessible to all New Yorkers, prioritises to underserved communities, and aims to remove barriers to cycling and walking. It also wants to improve physical and mental health by expanding and promoting active transportation and outdoor recreation.²⁹⁸

Oakland (California) began developing policies and ordinances for one-way carsharing in 2015. The city developed a zonal parking system: the ‘Free-Floating Zone Parking Permit’ allows carshare vehicles to be parked in two-hour metered parking for up to 72 hours, after submitting a map of the Free-Floating Zone Area for approval. Of this zone area, twenty percent must encompass designated ‘Communities of Concern’, which are defined by a combination of low-income, racial, or ethnic minority populations, or other disadvantages²⁹⁹.

San Francisco (California) included several ‘Equitable Service Requirements’ in its 2025-2026 ‘Powered Scooter Share Program Permit’, among which the obligation to maintain a multilingual website, a call centre, and a mobile application customer interface, and developing outreach materials in multiple languages; to make mobile apps and other customer interface technology fully accessible to persons with disabilities; to offer a one-year low-income customer plan that waives any applicable scooter deposit and offers a minimum 50% discount off rental fees, or a plan that offers unlimited trips under 30 minutes, to any customer with an income level at or below 200% of the federal poverty guidelines, subject to annual renewal. Also, the operator must communicate about this low-income plan towards the targeted end-users and provide cash-payment options. Regarding the fleet, the operator must incorporate at least one seated scooter device type in its fleet; these seated scooters make up at least 5% of the fleet.³⁰⁰

Santa Monica (California) ran a shared micromobility pilot in 2019. The urban ordinance regulating this pilot stated that the providers of the piloted dockless shared e-scooters and e-bikes had to establish and promote low-income rates. The 2025 ‘Second Shared Mobility Device Program Administrative Regulations’ contain a dedicated chapter on ‘Engagement, Outreach, and Education’, listing obligations like educating users about safety and riding rules; deploying ambassadors and/or street teams to inform users on safety and appropriate device use; participating in or hosting community events and meetings; hosting ‘learn to ride’ sessions; establishing and promoting low-income qualified rates; providing non-smartphone unlock

²⁹⁷ City of Milwaukee Department of Public Works (2024). Dockless Scooter Rental Services Agreement Terms and Conditions. 19p. Retrieved on 12.12.2025 from <https://city.milwaukee.gov/ImageLibrary/Groups/cityBikePed/Dockless-Scooters/Dockless-Scooter-Permit-Terms-Conditions1.pdf>

²⁹⁸ New York City Department of Transportation (2025). *Greater Greenways. NYC Greenway Plan*. 90 p.; p.43-45.

Retrieved from <https://www.nyc.gov/html/dot/downloads/pdf/greater-greenways.pdf>

²⁹⁹ Shared-Use Mobility Center (2019). *Equity and Shared Mobility Services Working with the Private Sector to Meet Equity Objectives*. 52p., p.27.

Retrieved from <https://sharedusemobilitycenter.org/wp-content/uploads/2021/06/EquitySharedMobilityServices-FINAL.pdf>

³⁰⁰ San Francisco Municipal Transportation Agency (2025). *2025-2026 Powered Scooter Share Program Permit*. 45p., p.5-6.

Retrieved on 11.12.2025 from <https://www.sfmta.com/media/40530/download?inline>

option and payment options for the unbanked community; and offering affordable pay-per-minute rates that are less expensive than taxi or ride hailing.³⁰¹

Seattle (Washington) developed, in 2018-2019, innovative permit conditions stipulating that no less than 10 percent of shared bikes had to be deployed in 'Equity Focus Areas' defined by the city; to offer certain customer communications in eight languages selected by the city; to establish a reduced-fare program for low-income persons; to provide at least one method for renting a bicycle for customers without a smartphone, bank account, and credit card. When applying for the permit, providers had to submit an equity plan, which was scored as part of the permit evaluation. These requirements are still included in the 2025 updated '*Free-Floating Shared Micromobility Permit Requirements*'.

Washington DC manages free-floating bike and scooter sharing via a permit system, which stipulates requirements regarding equity, including offering a cash payment option; locating and unlocking a bicycle without a smartphone; and inquires the applying shared mobility providers about equitable distribution and access in all of the city's wards; reduced fee plans; the availability of information in multiple languages, and plans for adaptive vehicles. Two of the 11 performance criteria include "*trips originating or terminating in Equity Emphasis Areas*," which are defined by the district, and adaptive vehicles in operation³⁰².

Next to their legal obligations, some Public Transport Authorities take additional steps to increase equitable access to the transport system. The Metro de Madrid launched an '*accessibility and inclusion plan*' (2016-2028) that aimed to enable full autonomy for people with reduced mobility and/or sensory or cognitive difficulties by installing lifts. In Kayseri, Turkey, local PTA Kayseri Ulasim Inc launched the 'Unhindered Access Project' in 2017. A network of assistants helped passengers during boarding and alighting the vehicles in the busiest stations. The station where they boarded or got off the vehicle are notified by the control centre. In Los Angeles, the Metro on Demand pilot (2019-2023) tested on-demand ridesharing connecting travellers to major, fixed-route transit stations. The project aimed to ensure equal access for all, including people in wheelchairs³⁰³. Also in Los Angeles, LA Metro launched the 'Respect the Ride' pilot in 2022. The program aimed at improving safety and the customer experience by deploying staff to help riders navigate the Metro system or to use the Transit app, ensure safety by adding security staff, and connecting to unhoused riders³⁰⁴.

³⁰¹ City of Santa Monica (2025). City of Santa Monica Second Shared Mobility Device Program Administrative Regulations, p.14-16. Retrieved on 11.12.2025 from https://www.santamonica.gov/media/SM-AdminGuidelines_Fall2025Update.pdf

³⁰² Shared-Use Mobility Center (2019). Equity and Shared Mobility Services Working with the Private Sector to Meet Equity Objectives. 52p., p.24. Retrieved from <https://sharedusemobilitycenter.org/wp-content/uploads/2021/06/EquitySharedMobilityServices-FINAL.pdf>

³⁰³ UITP (2022a). *Report: Rail Success Stories*. 76p., p.36,57,67.

Retrieved from <https://www.uitp.org/publications/rail-success-stories/>

³⁰⁴ UITP (2023a). *Report. How to make stations lively hubs for citizens and public transport users: solutions*. 56p., p.53.

Retrieved from <https://www.uitp.org/wp-content/uploads/sites/7/2025/05/SoF-How-to-make-stations-lively-hubs-for-citizens-and-public-transport-users-Solutions.pdf>

6 Societal, Ecological, Economic, and Political Implications of MaaR

This next Chapter explores how the consequences of legally and institutionally adopting MaaR impacts key societal dimensions: social equity, environmental sustainability, economic viability, and political governance. By reframing the ability to move as an inherent human entitlement, this chapter investigates the practical and systemic implications of MaaR for citizens, authorities, and operators in modernising and regulating transport systems in such a way outlines in the previous Chapters. This approach addresses the potential for MaaR to drive inclusive, resilient, and climate-friendly mobility systems that serve the public good.

6.1 Social Equity Implications

Embracing the principle of ‘Mobility as a Right’ will lead to a more equitable mobility system. In this section, we look at which user groups have less equitable access to the mobility ecosystem, and how MaaR can mitigate this. The Cambridge Dictionary defines (social) equity as *“the situation in which everyone is treated fairly according to their needs and no group of people is given special treatment”*. In transportation, equity is defined by the Harvard J.F.K. School of Government as *“the goal of ensuring that all community members have their needs met by the transportation systems available to them.”*

In what follows, we will focus on three groups of mobility consumers, as they are the ones who will benefit the most from MaaR: ‘Active and Conventional Commuters’ (in which we will focus on children and teenagers; women; peri-urban and rural residents), ‘Digital Mobility Service Users’, ‘Community, Equity and Accessibility Residents’ (in which we will focus on elderly travellers; people with disabilities; migrants and tourists). Other categorisations³⁰⁵ are possible, of course. user groups identified.

On the next pages, we will describe the potential barriers faced by these three sets of user groups, and how MaaR can enhance their use of the mobility system. Unless otherwise indicated, the work of Martinez et al. will support this section of the report³⁰⁶.

6.1.1 Active and Conventional Commuters

MaaR will have social equity implications for able-bodied travellers who are familiar with the transport ecosystem, including but not limited to university students, white collar workers or factory commuting from the suburbs; people using bike, public transport or a (shared) car for short (<5 km)³⁰⁷ trips; or people that are open to testing new modes, like (shared) e-bikes. Despite its diversity, this group will benefit from comfortable, safe infrastructure for walking & cycling, efficient multimodal journeys,

³⁰⁵ Martinez, L., et al. (2022). *Needs of users and digitally excluded citizens*. SmartHubs project deliverable 3.2., 77p.

https://www.smartmobilityhubs.eu/files/ugd/c54b12_e1c66f737c2a46ef85f64edb5f60f8d1.pdf

³⁰⁶ *Ibid.*

³⁰⁷ <https://www.insee.fr/en/statistiques/5019715>

integrated tickets, predictable transfers, simple information, secure bike and park-and-ride offers and weather- and terrain-resilient infrastructure. In practice, this means among others investing in dedicated footpaths and cycle lanes, avoiding conflicts between the different modes of travel, developing mobility hubs that allow for smooth, conflict-free transfers between modes, public MaaS, information provision through digital and analogue carriers, a diversified shared mobility offer which, in more remote areas, can be subsidised.

The following groups of active and conventional commuters might face additional barriers in the current transport ecosystem: children and teenagers, peri-urban and rural residents, and women. In comparison to other groups, they are likely to benefit more from MaaS.

6.1.1.1 Children and teenagers

The travel purposes of children and teenagers are related to going to school and leisure activities like hobbies, outings with friends and family³⁰⁸. For most of their travels, children and teenagers depend on transport provided by their parents. When traveling alone, they use public transport or cycle. Public transport should be as affordable as possible for children and teenagers.

In Belgium, there are several fare schemes designed to make it easier for children and young people to travel. While general transport subsidies are often linked to disability status, some operators offer age-based benefits. For instance, TEC provides age-specific discounts, particularly for young people aged 12 to 17, who can take advantage of preferential fares on season tickets under its 'Advantages for every age' policy. Other operators (SNCB, STIB and De Lijn) mainly offer discounts for people with disabilities or in specific situations. However, the existence of benefits for young people depends on the internal policy of each operator.

In Italy, some regions offer student discounts.

In the Czech Republic, some regions have specific fares; for instance, in Prague and the Central Bohemia region, children aged 6 to 15 can travel for free or at a reduced fare depending on proof of age and the type of transport used.

Compared to adults, children and teenagers have less access to shared mobility, like e-bikes and e-scooters: the bikes are not tailored to their size³⁰⁹, minors do not have access to credit cards, shared mobility is too expensive, or age limits are imposed for safety reasons. Therefore, youngsters cannot always use shared mobility as a complement to public transport (first/last mile) or as an alternative to it (underserved areas, traffic disruptions). Moreover, parents can restrict their children from cycling due to safety concerns³¹⁰. Therefore, initiatives that provide cycling training are good practices from a MaaS perspective. A concrete example of successful bike training courses stems from England, where the Bikeability program - the UK government's national cycle training programme trains children with the practical skills required to cycle on today's roads. Initiatives like these are highly relevant: data from the

³⁰⁸ Köse, E. et al. (2023). SMALL Insights 1: How can people with reduced mobility become an important driver of shared mobility? Paper from the Interreg North Sea Programme SMALL project), 28p. Retrieved from https://www.interregnorthsea.eu/sites/default/files/2025-03/SMALL%20Insight%20Paper%20%231_0.pdf

³⁰⁹ *Ibid.*

³¹⁰ *Ibid.*

Bikeability Trust show that 27% of riders had never cycled on the road before taking part in the training.³¹¹ Training like these therefore enhances safety, reassures parents, and increases children's and teenagers' ability to move around freely.

MaaR can provide children and teenagers with the ability to access amenities that are essential for them – education, hobbies, or friends. This increases their independence and personal development. A lack of economic resources – not having access to a credit card or revenue – might not result in mobility poverty for them. Initiatives like free or reduced public transport pricing can be considered as best practices.

6.1.1.2 Women

A second group that has less equitable access to the mobility ecosystem, are women.

MaaR approach recognizes mobility as a fundamental right, which has significant implications for women. Their mobility needs and travel patterns often differ from those of men: women are less likely to own a car, rely more heavily on public transport, and carry out many trips related to domestic and caregiving responsibilities, making them especially sensitive to the quality, frequency, and accessibility of mobility services. MaaR also seeks to reduce persistent inequalities by improving safety in transport systems, a crucial issue for women who face a heightened risk of harassment. It promotes the systematic integration of gender perspectives into transport policies—an aspect still largely insufficient today—to help design infrastructures and services better suited to women's needs. Finally, MaaR contributes to greater social inclusion by addressing mobility-related precarity, which particularly affects women with low incomes or those living in rural areas, and it supports their participation in the transport sector as professionals³¹².

A literature study done Baguet³¹³ identifies four barriers that are more outspoken to women than to men when travelling:

1. Public transport networks were developed in a radial, home-work-home, fashion. This design caters more for male than female travel patterns: Due to social constructs, women are more likely to work part-time and have household and caregiving responsibilities than men. This results in shorter, 'chained' travel patterns, for instance from home to kindergarten, then to work, then to the supermarket, then to kindergarten again, and then back home. The radial public transport networks do not accommodate for the chained journeys that are made more frequently by women, but for linear journeys made more often by men³¹⁴. Shared mobility does not always provide an

³¹¹The Bikeability Trust (2025). Monitoring and Evaluation Report. 16p., https://www.bikeability.org.uk/wp-content/uploads/2025/07/250610_ME-Report_June-PDF-Final-1.pdf,

³¹²

https://www.europarl.europa.eu/RegData/etudes/STUD/2021/701004/IPOL_STU%282021%29701004%28SUM01%29_FR.pdf

³¹³ Baguet, J. (2023). Shared Mobility Equity Principles - Deliverable 1: Literature Study and Survey Results. Paper written by Mpact during the SMEP-project financed by the Belgian Federal Public Service for Mobility and Transport, 87p. https://www.mpact.be/wp-content/uploads/2023/12/smep_literature_study__survey_with_annex.pdf

³¹⁴ Duchène, C. (2011). *Gender and Mobility*. ITF Discussion Paper. 17p., p.7. Retrieved from <https://www.itf-oecd.org/sites/default/files/docs/dp201111.pdf> ; Malandrino, C. & Berman, L. (2020). *Towards inclusive mobility: Women's needs and behaviours in the Paris Region*. Transport Innovation Gender Observatory, 55p. Retrieved from <https://transportgenderobservatory.eu/wp-content/uploads/2020/12/TINNGO-French-Hub-Report-1-Final.pdf> ; Ng, W.-S. &

alternative for these (care-related) trips. For instance, shared cars or bikes, which can perfectly cover the need for local, chained trips, rarely offer child seats, thus excluding them as a suitable alternative³¹⁵.

2. Insecurity and sexual harassment disproportionately affect women. Public transport is frequently cited by women as an unsafe environment³¹⁶. In the broader Parisian Region (Île de France) for instance, a staggering 39% of all reported incidents of sexual aggression against women in public spaces occur on public transport³¹⁷. A study conducted in France found that 87% of female public transport users reported being victims of sexual harassment, with 95% of these cases involving male perpetrators. A significant majority (84%) of these harassment incidents occur within the confines of the vehicles³¹⁸. By consequence, women adapt or restrict their travel behaviour: avoiding travelling at night, empty or overcrowded stations and carriages, traveling alone, and or changing attire and privileging ride-sharing platforms over public transport.³¹⁹

Acker, A. (2018). Understanding Urban Travel Behaviour by Gender for Efficient and Equitable Transport Policies. ITF Discussion Paper, 20p. <https://www.itf-oecd.org/understanding-urban-travel-behaviour-gender-efficient-and-equitable-transport-policies> ; Sansonetti, S. & Davern, E. (2021). *Women and Transport*. Study commissioned by the Policy Department for Citizens' Rights and Constitutional Affairs Directorate-General for Internal Policies, 66p. Retrieved from [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/701004/IPOL_STU\(2021\)701004_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/701004/IPOL_STU(2021)701004_EN.pdf) ;

Shared-Use Mobility Center & Living Cities and Communities (2025). *A conceptual design framework for women-centered mobility hubs: project report*. 33p. <https://sharedusemobilitycenter.org/wp-content/uploads/2025/01/Final-Report-Design-Framework-for-Women-and-Caregiver-Centered-Mobility-Hubs.pdf>, UITP (2024c). *Knowledge Brief. Gender best practices in public transport*. 12p. Retrieved from <https://www.uitp.org/publications/gender-best-practices-in-public-transport/>.

³¹⁵ Haddad, D. et al. (2022). Shared e-scooters and gender equity. Learning from women's perceptions and experiences. Study for VOI, 33p. https://www.voi.com/wp-content/uploads/2022/05/Voi_WIT_Gender-Equity-Report_2022.pdf; Malandrino, C. & Berman, L. (2020). Towards inclusive mobility: Women's needs and behaviours in the Paris Region. Transport Innovation Gender Observatory, 55p. <https://transportgenderobservatory.eu/wp-content/uploads/2020/12/TINNGO-French-Hub-Report-1-Final.pdf>.

³¹⁶ Malandrino & Berman, 2020, prév.

³¹⁷ Badré, M.P. & Daulny, P. (2018). Femmes et espaces publics. Pour l'égalité entre les femmes et les hommes dans la rue, les transports et les espaces loisirs. Rapport du Centre Hubertine Auclert, 100p. Retrieved from <https://www.centre-hubertine-auclert.fr/sites/default/files/medias/egalitheque/documents/rapport-femmes-espaces-publics-fev2018-hyperliens.pdf>

³¹⁸ Debrincat, M. et al. (2016). Etude sur le harcèlement sexiste et les violences sexuelles faites aux femmes dans les transports publics. Fédération Nationale des Associations des Utilisateurs des Transports, 50p., p.14. Retrieved from <https://www.fnaut.fr/uploads/2016/06/db16reht.pdf>

³¹⁹ Alessandrin, A. et al. (2016). Femmes et déplacement. Study for Keolis and the Region of Bordeaux, 84p.; DG MOVE - Directorate-General for Mobility and Transport of the European Commission (2014). *She moves. Women's issues in transportation*. 28p. Retrieved from <https://op.europa.eu/en/publication-detail/-/publication/c923ddff-636c-4ba8-87c2-07d2f06cd709/language-en> ; Transport for London (2015). *Travel in London: Understanding our diverse communities*. 330p. Retrieved from <https://www.yumpu.com/en/document/view/54658113/travel-in-london-understanding-our-diverse-communities> ; UITP (2025a). *Action Points. Unseen and unreported: Shifting perspectives on gender-based violence in urban mobility*. 8p. Retrieved from <https://www.uitp.org/publications/shifting-perspectives-gender-based-violence-urban-mobility/>

3. Research for The Netherlands has shown that women are overrepresented among people with limited digital skills³²⁰. A literature review conducted by Durand et al.³²¹ indicates that women, especially older women or with a migration background, are more likely to be affected by the increased reliance on digital platforms in transportation services. Unsurprisingly, 'gender-based digital exclusion' has emerged as a new challenge that must be addressed.³²²
4. The workforce in the mobility sector is predominantly male. As women are rarely involved in developing public transport networks and shared mobility services, their needs are often overlooked, resulting in a transport ecosystem that is better tailored to male than female travel patterns.³²³

To ensure more equitable access to the transportation system for women, an integrated approach will be required. It will consist of a manifold of interventions, including but not limited to rethinking the public transport system, adding more local, neighbourhood-based routes to the radial network structure; ensuring sufficiently high frequency in off-peak times; making sure that trams, busses and trains are easily accessible when travelling with children and/or goods; providing children seats in at least a part of the bike and car sharing fleets for a discussion on how some providers tackle this); cameras and alarm buttons in stations and public transport carriages; avoiding dark corners and alleys in stations and on streets; physical presence of staff; organising training sessions for the less digitally skilled; and involving women in urban and mobility system – a world traditionally dominated and conceived by men.^{324 325}

Example of rules implemented in Belgium³²⁶

The Royal Decree of 26 January 2010³²⁷ establishes the Interdepartmental Coordination Group responsible for ensuring the implementation of gender mainstreaming in federal policies, particularly in the field of transport.

³²⁰ Goudappel (2024). *Kwantitatieve analyse doelgroepen inclusieve deelmobiliteit*. Study for the Dutch Ministry of Infrastructure and Water Management, 42p., p. 8-9.

Retrieved from https://www.eerstekamer.nl/overig/20250204/inclusieve_deelmobiliteit/document

³²¹ Durand, A. et al. (2021). Access denied? Digital inequality in transport services. *Transport Reviews* 42 (1), pp. 32-57. Retrieved from <https://doi.org/10.1080/01441647.2021.1923584>

³²² Malandrino, C. & Berman, L. (2020). Towards inclusive mobility: Women's needs and behaviours in the Paris Region. *Transport Innovation Gender Observatory*, 55p.

Retrieved from <https://transportgenderobservatory.eu/wp-content/uploads/2020/12/TINNGO-French-Hub-Report-1-Final.pdf>

³²³ Baguet, J. (2023). *Shared Mobility Equity Principles - Deliverable 1: Literature Study and Survey Results*. Paper written by Mpact during the SMEP-project financed by the Belgian Federal Public Service for Mobility and Transport, 87p., p.28-31. Retrieved from: https://www.mpact.be/wp-content/uploads/2023/12/smep_literature_study_survey_with_annex.pdf ;

UITP (2024c). Knowledge Brief. Gender best practices in public transport. 12p. Retrieved from <https://www.uitp.org/publications/gender-best-practices-in-public-transport/>

³²⁴ Baguet, J. (2023). Prev. p.24-27.

³²⁵ UITP 2024c, prev.

³²⁶ See Chapter 5 for rules concerning Italy and the Czech Republic.

³²⁷ [A. Royal of 26 January 2010](#) establishing the composition, the tasks and operating rules of an interdepartmental coordination group and the minimum qualifications of its members, pursuant to Article 8 of the Law of 12 January 2007 on monitoring the implementation

In Wallonia, the "gender mainstreaming" decrees adopted in 2014 and 2016 require the integration of the gender dimension into all regional policies, including mobility. The 2020-2024 Gender Plan includes a specific "Mobility" section, which aims to make travel safer and more inclusive for women, by combating harassment in public spaces and adapting infrastructure (lifts, lighting, signage). The Wallonia-Brussels Federation adopted the Decree of 7 January 2016 and the Decree of 27 April 2020, which require gender to be considered in all policies, with a mandatory gender test and gender budgeting.

The Gender and Women's Rights Strategy 2025-2029, adopted by Wallonia and the Wallonia-Brussels Federation, sets cross-cutting objectives, including inclusive mobility and safety in public transport for women. It is accompanied by studies and pilot projects, such as the project "Towards active and inclusive mobility" (IWEPS, 2024), which analyses the obstacles encountered by women when walking and cycling and proposes recommendations for safer infrastructure (lighting, secure bicycle parking, combating harassment).

6.1.1.3 Peri-urban and rural residents

People living in **peri-urban or rural areas** are more prone to transport poverty.³²⁸ Due to under-developed or inexistant public transport and shared mobility offers, car ownership is higher. MaaS will have the most significant social equity implications among people who cannot afford a car, do not want to own a car, or can no longer drive, or have limited alternatives to travel. The risk of mobility poverty can be decreased by government-initiated initiatives to subsidise shared mobility, or by developing on-demand transport systems. An interesting case-in-point is the '[Hoppin Strategy](#)' in the Flemish Region: this northern half of Belgium has been divided into 15 Transport Regions. Each region has a budget to deploy flexible mobility solutions: bike sharing, car sharing and Demand-Responsive bus transport ('Hoppin Flex') in regions where demand is too low for fixed, regular bus connections. Because of this policy, most Flemish cities and towns can provide a subsidised bike (and often also car) sharing service to inhabitants who require more flexible transport solutions.

6.1.2 Digital Mobility Service Users (MaaS / Tech-Enabled)

Digitalisation has changed many aspects of our lives, including the way in which we travel. Increasingly, transport providers pursue a 'digital first' strategy for planning, booking, and buying public transport tickets and shared mobility services, and nudge their users towards apps and websites rather than to 'real' humans for requesting information or purchasing tickets. For tech-savvy users, the '*appification*' of the mobility industry made it possible to unlock shared modes using smartphones, compare and purchase (multimodal) services through mobility marketplaces like MaaS (Mobility as a

of the resolutions of the World Conference on Women held in Beijing in September 1995 and integrating the gender dimension into all federal policies.

³²⁸ Pot, F. et al. (2020). Linking experienced barriers during daily travel and transport poverty in peripheral rural areas: the case of Zeeland, the Netherlands. The European Journal of Transport and Infrastructure Research (EJTIR) 20 (3), pp. 29-46. Retrieved from <https://journals.open.tudelft.nl/ejtir/article/view/4076/4778> ; Fondation Roi Baudouin (2022). Fair Energy Transition for All : 11 recommandations pour la Belgique. Résultats des dialogues sur la transition énergétique avec des personnes vulnérables et des experts, Brussels, 35p. Retrieved from : https://media.kbs-frb.be/fr/media/10081/FR_FETA_PUB

Service) platforms, to retrieve real-time information, to choose the travel option that fits your needs or desires the best (e.g. fastest route, most eco-friendly travel option, etc.).

Although the vast majority of transport users know how to travel in the ‘digital first’ age, there are – and will always be – users who are digitally excluded because they do not have access to a smartphone (or do not wish to own one), cannot afford a data subscription, or do not have sufficient skills to use these devices. In general, older people make up a considerable part of this group³²⁹, but so do young children who do not own a smartphone, or a part of the female population, of who we illustrated earlier that they are, on average, less digitally skilled than men.

Citizens without access to smart devices or MaaS apps should maintain access to the transport ecosystem³³⁰. To enhance equitable access to the transport ecosystem, several measures can be implemented like:

- Providing printed alternatives available to each digital source of information - consider printed maps or timetables³³¹.

As part of the assistance obligations set out in passenger rights regulations, carriers must ensure that the information provided to travellers is accessible in various formats. This includes offering printed alternatives for every digital source of information, to guarantee access to essential data in cases where electronic media are unavailable or when passengers cannot or do not wish to use digital tools. Transport companies must therefore provide printed maps, brochures, or timetables, ensuring that passengers have clear, reliable, and usable information in all circumstances.

- Hands-on training sessions for people with limited digital skills, focusing on ‘the basics’ like buying PT-tickets through the local app, or retrieving real-time information.
- Co-designing and pre-testing digital apps and websites with less-digitally skilled end-users before being rolled out on a larger scale^{332 333}. When designing digital tools, guidelines from the Web Accessibility Initiative are followed³³⁴.
- Complementing MaaS-apps by call centres to order rides, and providing cash-based payments, like uploading cash to transport cards at convenience stores³³⁵.

³²⁹ Goudappel (2024). *Kwantitatieve analyse doelgroepen inclusieve deelmobiliteit*. Study for the Dutch Ministry of Infrastructure and Water Management, 42p., p. 8. Retrieved from https://www.eerstekamer.nl/overig/20250204/inclusieve_deelmobiliteit/document

³³⁰ UITP (2025b). Net zero mobility; Social considerations for limiting private vehicle access: <https://www.uitp.org/publications/net-zero-mobility-social-considerations-limiting-private-vehicle-access/>

³³¹ See, EU passenger rights regulations.

³³² Baguet, J. (2024). *Digital integration and signage at mobility hubs*. SmartHubs project deliverable 3.3, 81p., p.54-56.

Retrieved from https://www.smartmobilityhubs.eu/files/ugd/c54b12_0b9d9073923a45519a5442760fbf6fa2.pdf

³³³ Martinez, K, et al. (2024). Digital kiosks and inclusivity: a novel perspective on mobility hubs. *European Transport Research Review* 16 (53), 14p. Retrieved from <https://etr.springeropen.com/articles/10.1186/s12544-024-00676-8>

³³⁴ WAI – Web Accessibility Initiative (2025). Making the Web Accessible. Retrieved on 21.11.2025 from <https://www.w3.org/WAI/>

³³⁵ Shared-Use Mobility Center (2020). Towards the Promise of Mobility as a Service (MaaS) in the U.S. 19p., p. 12. Retrieved from <https://sharedusemobilitycenter.org/wp-content/uploads/2020/09/Towards-the-Promise-of-MaaS-in-the-US-July-2020-Shared-Use-Mobility-Center.pdf>

6.1.3 Community, Equity & Accessibility Residents

Community, equity and accessibility residents are the persona group that will benefit most from MaaR as it concerns (potential) travellers who, due to health or socioeconomic constraints, are not able to move around freely from A to B. To enhance equitable access to mobility for this group, the transport ecosystem should consist of an affordable and accessible mobility offer, barrier-free public transport, short walking distances to the mobility offer, an inclusively designed public realm (e.g. to reach the transport offer) including barrier-free walking lines, resting points, tactile paving, and simple, straightforward, non-digital communication carriers.

We focus on three groups that might face more barriers and for whom MaaR will have significant equity implications: older people, persons with impairments, and migrants.

The travel purposes of older people are mostly related to personal care such as going to the doctor, leisure or family reasons, and doing groceries³³⁶. When traveling, older people are confronted with different barriers when accessing or using the transport system. Firstly, they might have limited physical abilities, making it harder to walk long distances. Uneven footpaths, having to use stairs, or non-functioning elevators add to the challenge of walking. Secondly, older people are less familiar with digital mobility services: they do not own a smartphone, have never learned to use the app or website of their mobility providers, or are afraid of using smartphones for payments. As older people are particularly reliant on public transport, they are disproportionally affected by the ‘digital first’ strategies implemented by public transport providers. Thirdly, older people perceive unsafety and insecurity while travelling, which might prevent them from travelling at all, or reduce their travels to the bare minimum.

Given the fact that older people are limited in the distance they can cover, Demand-Responsive Transport solutions as well as inclusive shared mobility (like adapted shared cars or bikes) should be considered as essential components of the mobility ecosystem. Research for Switzerland shows that on-demand paratransit is vital to participate in daily life activities. Yet high per-trip costs can affect participation in leisure activities and lead to social exclusion.³³⁷ Community-based transport solutions also play significant role in enabling equitable social and economic inclusion and access to health, social and community care. Research shows that community transport offers substantial value in reducing pressure on the healthcare system and associated costs, for example by supporting early intervention, and therefore delivers an estimated \$8 to \$40 in social value per \$1 invested.³³⁸ A case in point of such a community-based mobility on-demand system is [Mobitwin](#) in Flanders: a network of 3.500 volunteers

³³⁶ Martinez, L., et al. (2022). Needs of users and digitally excluded citizens. SmartHubs project deliverable 3.2., 77p. Retrieved from: https://www.smartmobilityhubs.eu/_files/ugd/c54b12_e1c66f737c2a46ef85f64edb5f60f8d1.pdf ; Köse, E. et al. (2023). SMALL Insights 1: How can people with reduced mobility become an important driver of shared mobility? Paper from the Interreg North Sea Programme SMALL project), 28p. Retrieved from https://www.interregnorthsea.eu/sites/default/files/2025-03/SMALL%20Insight%20Paper%20%231_0.pdf

³³⁷ Egger, S. (2024). With Paratransit Services to Participation in Daily Activities: The Experiences of Persons with Disabilities in Switzerland. Ph.D. in *Health Sciences at the Faculty of Health Sciences and Medicine, University of Lucerne*, 42p. Retrieved from: <https://zenodo.org/records/10814269> ; Köse, E. et al. (2023). SMALL Insights 1: How can people with reduced mobility become an important driver of shared mobility? Paper from the Interreg North Sea Programme SMALL project), 28p. Retrieved from https://www.interregnorthsea.eu/sites/default/files/2025-03/SMALL%20Insight%20Paper%20%231_0.pdf

³³⁸ Institute for Public Policy and Governance (2022). Accelerating Innovative Local Transport: Community transport of the future. Final report. 172p., p.45-53.

<https://imoveaustralia.com/wp-content/uploads/2022/04/Accelerating-Community-Transport-RESEARCH-PAPER-FINAL.pdf>

transports around 35-40.000 less mobile, mostly older people, to supermarkets, family get-togethers, medical appointments, and so forth.

Note that in the Global South, paratransit takes a more prominent market share than catering for (mostly) older people as is the case in the Western world. In Africa for instance, paratransit is often the dominant form of public transport, ranging from a 36% modal share in Adis Ababa to 100% in Kampala³³⁹.

For elderly travellers, MaaR will facilitate travel to medical appointments and make it easier to look after grandchildren when the parents are at work. Moreover, participating³⁴⁰. Ensuring equitable transport access for older people can be achieved by honouring universal design principles, providing alternatives to ‘digital first’ strategies, and investing in paratransit solutions.

Universal design can consist of streets with sufficient resting points, even footpaths, platforms that have the same height as the vehicle, sufficient lighting, cleanliness, and bike parking for tricycles. These measures make it more practically feasible to walk or cycle to public transport stops, and to transfer between modes. Designing (adapted) vehicles with future users makes them better tailored to their needs. Organising test-events with adapted vehicles can further lower the barrier to using these transport solutions, hence reducing the risk of transport poverty³⁴¹.

For elderly travellers, alternatives to ‘digital first’ strategies are essential, like analogue network maps and timetables. Training can also be provided to (older) people who wish to learn how to purchase tickets or retrieve information via the app and website of their local transport provider. Apps should be (co-)designed (and tested) with older users, taking universal design principles into account³⁴². Human contact is essential to grant older people equitable access to the shared mobility system: in-person assistance or at a distance (via telephone or intercom on ticketing devices) are examples of this. Cash payments should also be considered given the lack of trust in digital payment solutions³⁴³.

³³⁹ UITP (2024b). *Statistics Brief. Global taxi and ride-hailing figures 2024*. 10p.

Retrieved from <https://www.uitp.org/publications/global-taxi-ride-hailing-figures-2024/>

³⁴⁰ See section 7.2 ; Egger, S. (2024). With Paratransit Services to Participation in Daily Activities: The Experiences of Persons with Disabilities in Switzerland. *Ph.D. in Health Sciences at the Faculty of Health Sciences and Medicine, University of Lucerne*, 42p. Retrieved from: <https://zenodo.org/records/10814269> ; Gantschnig, B. et al. (2023). Gleichberechtigte Mobilität dank ÖV-ergänzender Fahrdienste? Eine Mixed-Method Studie über die Mobilität von Menschen mit Behinderung in der Schweiz. *Working Paper ZHAW Zürcher Hochschule für Angewandte Wissenschaften*, 132p.

Retrieved from <https://digitalcollection.zhaw.ch/items/431f0c58-b5c9-4e7f-91e4-14e2177df5a0>

³⁴¹ Köse, E. et al. (2024). SMALL Insights 2: Prioritizing people with reduced mobility in shared mobility pilot design and post-project planning. Paper from the Interreg North Sea Programme SMALL project), 35p., p. 12 & p.32 Retrieved from https://www.interregnorthsea.eu/sites/default/files/2025-03/Small%20Insight%20Paper%20%232_0.pdf.

³⁴² Prev. Köse 2023, p.15

³⁴³ *Ibid.*

6.1.4 People with disabilities

People with impairments are restrained in their mobility options: 35% of people with a disability does not own a car³⁴⁴; the supply of wheelchair-accessible taxis remains limited, also in larger cities³⁴⁵; walking long distances is often a challenge, which is further complicated due to design flaws in the public domain (e.g. lack of tactile pavements, steps but no slopes or elevators) or insufficient maintenance (e.g. uneven footpaths, out-of-order elevators); or suboptimal access to public transport due to the physical environment and vehicle design; shared mobility vehicles are usually not designed with the user experience of an impaired person in mind³⁴⁶. Moreover, people with cognitive impairments might feel overwhelmed with the amount of information available at mobility hubs or might face severe stress in case of traffic disruptions. Finally, research for Switzerland has shown that more people with disabilities live below the national income median than people without disabilities. Consequently, next to the physical and/or cognitive burdens, people with a disability are more prone to economic hardship³⁴⁷.

Transforming mobility into “a Right” for people with impairments requires interventions related to the design of the public domain, affordable on-demand solutions, and in-person assistance. Honouring Universal Design principles allows people with impairments to participate in daily life activities and facilitates travelling to medical appointments. Public transport stops and mobility hubs can be made (more) accessible through even, non-slippery footpaths, guiding lines and tactile pavements, and straightforward and universally recognisable signposting³⁴⁸. It is essential that the platforms have the same height as the vehicle itself, and that the vehicle provides sufficient space for people in (electric) wheelchairs. For the visually impaired, auditive announcements are imperative, both in the vehicle and at the transport stops. Public transport ticket machines should be designed at such a height that they can also be manipulated by people in a wheelchair. Auditive support should be integrated into these devices. Moreover, in the ‘digital first’ world, transport apps should be co-designed and pre-tested with this group and tailored to their needs³⁴⁹.

Door-to-door and on-demand transport schemes are essential for people with impairments (and older persons as well, see previous section). Research for Switzerland has shown that on-demand paratransit is essential to let people with a mobility or visual impairment participate in public life³⁵⁰. DRT-solutions

³⁴⁴ Babio, L. et al. (2023). *Fostering active travel for disabled people. Best foot and wheel forward*. Report from the ‘Just Transition’ webinar series (POLIS Network), 15p., p. 8

Retrieved from: <https://www.polisnetwork.eu/news/celebrating-disability-pride-month/>

³⁴⁵ UITP (2024b). *Statistics Brief. Global taxi and ride-hailing figures 2024*. 10p.

Retrieved from <https://www.uitp.org/publications/global-taxi-ride-hailing-figures-2024/>

³⁴⁶ Hatzakis, T. (2021). Views of persons with disabilities on future mobility. White Paper from the TRIPS project, 15p. Retrieved from <https://trips-project.eu/wp-content/uploads/2021/06/D2.1-TRIPS-White-Paper.pdf>; Prev. Köse 2023, p.12;

³⁴⁷ Prev. Egger 2024, p.29

³⁴⁸ Baguet, J. (2024). *Digital integration and signage at mobility hubs. SmartHubs project deliverable 3.3*, 81p., p. 57-60.

Retrieved from https://www.smartmobilityhubs.eu/_files/ugd/c54b12_0b9d9073923a45519a5442760fbf6fa2.pdf; VFG – Vereniging personen met een handicap (2020). *Rapport toegankelijkheid Hoppinpunt Zoutleeuw*. 13p. Retrieved from <https://www.ditovzw.be/wp-content/uploads/2023/02/Rapport-Toegankelijkheid-Hoppinpunt-Zoutleeuw.pdf>

³⁴⁹ Hatzakis, T. (2021). *Views of persons with disabilities on future mobility*. White Paper from the TRIPS project, 15p., p.11.

Retrieved from <https://trips-project.eu/wp-content/uploads/2021/06/D2.1-TRIPS-White-Paper.pdf>

³⁵⁰ Gantschnig, B. et al. (2023). *Gleichberechtigte Mobilität dank ÖV-ergänzender Fahrdienste? Eine Mixed-Method Studie über die Mobilität von Menschen mit Behinderung in der Schweiz. Working Paper ZHAW Zürcher Hochschule für Angewandte Wissenschaften*, 132p. Retrieved from <https://digitalcollection.zhaw.ch/items/431f0c58-b5c9-4e7f-91e4-14e2177df5a0>

should therefore be part of public transport planning and funding, making sure that the service will not place an economic burden on its users³⁵¹³⁵². Adding to that, shared mobility providers can be requested to add adapted vehicles, like tricycles, to their fleet. Subsidies will play an important role in doing so, given the high upfront cost and narrow user basis for adapted vehicles³⁵³.

Overall, in-person assistance is crucial for the impaired: discussions with this user group showed that the fact that a bus or tram driver might not be willing to help is a considerable stress factor³⁵⁴. Measures like buddy-systems for public transport can take (a part of) the stress away and facilitate access to transport.

As a reminder, the EU Charter of Fundamental Rights guarantees the social integration of persons with disabilities (Art. 26). In the context of mobility, this is reflected in the “passenger rights” regulations, which impose technical standards and requirements to ensure that infrastructure and vehicles are accessible to persons with reduced mobility. Stations, terminals, ports, and airports must be equipped with appropriate facilities such as ramps, elevators, and spaces reserved for wheelchairs. Public transport vehicles, whether trains, buses, coaches, or ships, must gradually incorporate equipment to facilitate access and safety for passengers with disabilities. Signage and information systems must be accessible, with adapted formats such as Braille, large print, and audio and visual announcements. Ticket machines and online booking sites must comply with digital accessibility standards, in accordance with European accessibility law, which requires interfaces to be compatible with assistive technologies. These standards aim to ensure inclusive mobility, enabling every citizen to travel independently and safely throughout Europe³⁵⁵.

Directive (EU) 2019/882, also known as the *European Accessibility Act*, aims to ensure that essential products and services are accessible to people with disabilities and older people throughout the European Union. It harmonizes rules between Member States in order to remove national differences that could create barriers for both users and businesses. This directive is part of the implementation of the United Nations Convention on the Rights of Persons with Disabilities, which enshrines accessibility as a fundamental right.

The directive establishes common requirements for a wide range of products and services, such as computers, smartphones, ATMs, payment terminals, telephone services, banking services, e-commerce, e-books, and transport services. Companies must design these products and services in such a way that they can be used by as many people as possible, regardless of their physical, sensory, or cognitive abilities. This includes interfaces compatible with assistive technologies, visual and audio alternatives, and clear and understandable information³⁵⁶.

³⁵¹ Babio, L. et al. (2023). *Fostering active travel for disabled people. Best foot and wheel forward. Report from the ‘Just Transition’ webinar series* (POLIS Network), 15p. Retrieved from: <https://www.polisnetwork.eu/news/celebrating-disability-pride-month/>

³⁵² Egger, S. (2024). *With Paratransit Services to Participation in Daily Activities: The Experiences of Persons with Disabilities in Switzerland. Ph.D. in Health Sciences at the Faculty of Health Sciences and Medicine, University of Lucerne*, 42p. Retrieved from: <https://zenodo.org/records/10814269>

³⁵³ *Prev. Köse 2023, p. 12.*

³⁵⁴ *Ibid.*

³⁵⁵ See ch.3, section 3.1.3

³⁵⁶ See ch.3, section 3.1.1.2.

The implementation of EU policies by each state is in accordance with the hierarchy of norms.

6.1.5 Migrants and tourists

Migrants face the risk of being excluded from the transport system because (1) they might not be familiar with the local transport system and tariff structure, or (2) do not have sufficient language skills to retrieve information. This statement can be expanded to all non-locals, including tourists or businesspeople. Some migrant groups are confronted with socioeconomic deprivation, further reducing access to the transport ecosystem. Migrant groups often settle in the less expensive outskirts of our cities, where real estate is cheaper. These outskirts are often less-well served by public transport and shared mobility, which increases the risk of transport poverty and reduced access to jobs and amenities. Moreover, for people with limited income, shared mobility is often (perceived as) too expensive, and does require access to credit cards, to which groups with reduced income have no or less access³⁵⁷.

For migrants and tourists, equitable access to public transport and shared mobility can be increased through using universally recognisable signposting, coaching that explains how the transport system works, and multilingual communication. An interesting example of the latter stems from Translink, Vancouver, Canada, where frontline transit workers wear pins that say “hello” in various languages to let customers know which languages they speak in addition to English³⁵⁸. Cycling can also provide a solution for this group. Some migrant women have no or limited cycling skills due to cultural reasons³⁵⁹. For them, initiatives that promote cycling among women and children and provide training are good practices - like [Ride Your Future](#) in Brussels. Events like workshops and pop-ups to test and provide information on bikes and bike sharing, as piloted in one of Chicago's diverse suburbs (Belmont Cragin) is another good practice to foster cycling communities³⁶⁰. In addition, digital solutions like the NaviLens QR codes to help visually impaired people navigate their public spaces and transport systems, is available in 34 languages³⁶¹. These kinds of solutions offer support for different kinds of needs and users.

For several years, the European Union has been working to make transport more accessible, affordable and suitable for everyone, regardless of whether they live in the city or the countryside, have a disability or lack financial means. The central idea is that nobody should be prevented from travelling.

³⁵⁷ Fondation Roi Baudouin (2022). *Fair Energy Transition for All : 11 recommandations pour la Belgique. Résultats des dialogues sur la transition énergétique avec des personnes vulnérables et des experts*, Brussels, 35p. Retrieved from : https://media.kbs-frb.be/fr/media/10081/FR_FETA_PUB

³⁵⁸ Mass Transit (2025). *TransLink frontline workers wearing ‘hello’ pins to improve accessibility and inclusion*.

Retrieved on 21.05.2025 from <https://www.masstransitmag.com/technology/passenger-info/signage-and-displays/press-release/55304439/translink-translink-frontline-workers-wearing-hello-pins-to-improve-accessibility-and-inclusion>

³⁵⁹ Gorrini, A. et al. (2021). *Unveiling Women’s Needs and Expectations as Users of Bike Sharing Services: The H2020 DIAMOND Project*. Sustainability, 13 (9), 29 p. Retrieved from: <https://doi.org/10.3390/su13095241>

³⁶⁰ Shared-Use Mobility Center (2023). *Bikes for Belmont Cragin Evaluation Report*, p.12-13.

Retrieved from https://sharedusemobilitycenter.org/wp-content/uploads/2025/12/BikesForBelmontCragin_v5.pdf

³⁶¹ NaviLens, 2025. Available at: <https://www.navilens.com/en/>

The EU considers people to be in a precarious transport situation when travel is too expensive, there are not enough transport options, or they are not easily accessible (e.g. because they are too far away or not adapted for people with disabilities).

To support countries in addressing these issues, the EU has established a fund to finance solutions such as new buses or trains, cheaper tickets for those in need, bike paths, and more environmentally friendly transportation. The EU wants to enable everyone to travel, even in rural or isolated areas. To this end, it is financing a large European transport network that connects roads, railways, ports and airports. Countries can also require transport operators to provide regular services, even if they are not very profitable, to prevent certain areas from becoming inaccessible.

The EU imposes rules to ensure that transport is accessible to everyone, including people with disabilities and the elderly. This includes stations with ramps and lifts, clear signage, and audio and visual announcements on trains and buses. It also includes accessible ticket machines and websites, as well as free assistance at airports, stations, ports and bus stations. The aim is to enable everyone to travel independently and safely.

An increasing number of journeys are now made using digital tools such as transport apps, real-time information and online ticketing. Europe requires transport data to be updated in real time, digital systems to be compatible across borders, and personal data to be kept safe. This makes it possible to have reliable apps for finding out about disruptions, organising multimodal journeys or locating charging stations, for example.

Women use public transport more frequently and tend to undertake more complex journeys, such as travelling to work, taking the children out, and going shopping. They are also more likely to feel insecure. European recommendations include better lighting, secure waiting areas and '*on demand*' stops at night, as well as encouraging more women to enter transport professions.

The aim is to make transport safer and better suited to everyday needs.

The European Union wants to build a transport system that is:

- affordable (to prevent cost from being a barrier);
- accessible (for everyone, including people with disabilities);
- ubiquitous (even in isolated areas);
- safe and inclusive (especially for women and vulnerable groups);
- modern and connected (thanks to digital technology and data)³⁶².

The implementation of EU policies by each state is in accordance with the hierarchy of norms.

6.2 Environmental and Public Health Implications

Embedding Mobility as a Right (MaaR) into policy and planning has far-reaching implications for public health and environmental sustainability. By reframing mobility as a guaranteed social entitlement built upon sustainable principles rather than a market-driven service, MaaR creates the conditions for healthier behaviours, cleaner environments, and more equitable access to the determinants of well-being.

³⁶² See ch.3.

6.2.1 Implications for health and physical activity

Through a focus on active modes of mobility as a pillar of sustainable and just mobility, MaaR has the potential to encourage the expansion of safe, accessible walking and cycling routes and quality public spaces that respond to both social and recreational needs. These shifts can significantly increase daily physical activity, helping reduce associated chronic illnesses such as cardiovascular disease, diabetes, and obesity.³⁶³

Investing in public transport is investing in public health.³⁶⁴ A study from the European Environment Agency shows that public transport is four times more efficient per pax-km than private cars. Arguably, this suggests that significant part of the health solution would involve equipping cities and their inhabitants with integrated public transport, which would contribute to decreasing existing inequalities. In alignment with the social equity section in 7.1, it would also contribute to decreasing existing health inequalities as those with lower incomes generally live in the most polluted areas of cities.

Decades of research show that transport-related health studies traditionally focused on road safety, air pollution, and noise. With the resurgence of active travel modes as primary travel means, the substantial health benefits of physical activity are now well recognised. Yet Europe still faces major inactivity challenges with almost a quarter of adults and four in five adolescents reported to be insufficiently active.

Examples of non-EU cities that encourage active mobility through urban (re)design are Salvador (Brasil) and Seoul (South-Korea). The City of Salvador built 18 footbridges, implemented a 12km bike and jogging track, developed 670,000m² green area, and launched seventeen bike-sharing stations. In Seoul, the city repurposed an elevated highway into a garden and walkway in 2017, called the Seoul Skygarden. It is located close to the main station of Seoul, with new pathways and park planned as part of the project's future developments.³⁶⁵

Economic evaluations, including Cost-benefit Analysis (CBA), to assess health impacts of transport initiatives presents challenges that are well documented in the literature.^{366 367 368} However, they could also present a general picture of how sustainable modes of travel can contribute to positive health benefits, both at the individual and the societal level. The WHO's Health Economic Assessment Tool (HEAT) is a widely used tool to estimate the economic value of health benefits from walking and cycling by quantifying impacts on mortality.

³⁶³ World Health Organization. (2025b). *Let's Get Moving! 100 Reasons to Walk and Cycle More*.

<https://www.who.int/europe/publications/m/item/let-s-get-moving!-100-reasons-to-walk-and-cycle-more---brochure>

³⁶⁴ UITP (2022a). *Report: Rail Success Stories*. 76p. Retrieved from <https://www.uitp.org/publications/rail-success-stories/>

³⁶⁵ UITP (2021). *Better Urban Mobility Playbook*. 78p., p.36;38.

Retrieved from <https://www.uitp.org/publications/better-urban-mobility-playbook/>

³⁶⁶ Brown, V., Diomedi, B. Z., Moodie, M., Veerman, J. L., & Carter, R. (2016). A systematic review of economic analyses of active transport interventions that include physical activity benefits. *Transport Policy*, 45, 190–208.

<https://doi.org/10.1016/j.tranpol.2015.10.003>

³⁶⁷ Gordon, C. (2025). *Economic evaluation of transport projects with significant health impacts: Cost-Benefit Analysis and "active travel"*. 101.

³⁶⁸ Gössling, S., Choi, A., Dekker, K., & Metzler, D. (2019). The Social Cost of Automobility, Cycling and Walking in the European Union. *Ecological Economics*, 158, 65–74. <https://doi.org/10.1016/j.ecolecon.2018.12.016>

For example, an application in the Netherlands estimated that cycling (27% of trips) prevents roughly 6,500 deaths annually (worth €19 billion), adding six months of life expectancy and generating health benefits equal to more than 3% of the country's GDP.³⁶⁹ According to a study by EIT Mobility quantifying the costs and benefits of the transition to sustainable urban mobility in European cities, shifting to public transport, shared mobility, and active modes generates cumulative health benefits of up to €1,170 per capita by 2050, mainly due to increased physical activity.³⁷⁰ The same study estimates that a combination of policy interventions focused on (i) infrastructure and mobility services, (ii) regulation and demand management, and (iii) zero emissions can reduce road fatalities by up to 70% by 2050 compared to 2022.³⁷¹

MaaR also has indirect impacts on public health through its impact on health accessibility. A rights-based mobility framework ensures that all residents, including low-income households, older adults, people with disabilities, and precarious workers, can reliably reach local destinations for health services, healthy food, open green spaces, social services, and so on. Research has shown that transport-related barriers can contribute to poor health outcomes, often causing missed or rescheduled appointments, and leading to delayed or foregone care³⁷². Transport-related health barriers require deliberate action to enhance transit access and reliability, as well as a focus on urban proximity services, such as those targeted by “15-minute City” initiatives^{373 374}. By promoting walkability through high proximity neighbourhood models and high accessibility to low-cost and low-carbon transport modes, MaaR stands to improve both direct health and access to health-related destinations, which, in turn, improves personal and societal health outcomes. MaaR therefore aligns mobility planning with health equity goals, narrowing disparities in well-being and life expectancy across cities.

6.2.2 Implications for air quality and environment factors

By prioritising low and zero-emission mobility options, MaaR can produce significant environmental benefits. Investments in public transport, walking, cycling, and shared mobility reduce vehicle kilometres travelled and lower emissions of CO₂, NO_x, and particulate matter³⁷⁵. Transport-related carbon emissions per person in Europe are twice the global average, and transport emissions remained

³⁶⁹ World Health Organization. (2025b). Let's Get Moving! 100 Reasons to Walk and Cycle More. <https://www.who.int/europe/publications/m/item/let-s-get-moving!-100-reasons-to-walk-and-cycle-more---brochure>

³⁷⁰ EIT Urban Mobility. (2024, October). *Costs and Benefits of the Urban Mobility Transition*. <https://www.eiturbanmobility.eu/wp-content/uploads/2024/09/37-EIT-Study-on-costs-and-benefits-v2c-digital.pdf#page=7.08>

³⁷¹ EIT Urban Mobility. (2024, October). *Costs and Benefits of the Urban Mobility Transition*. <https://www.eiturbanmobility.eu/wp-content/uploads/2024/09/37-EIT-Study-on-costs-and-benefits-v2c-digital.pdf#page=7.08>

³⁷² Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013). Traveling Towards Disease: Transportation Barriers to Health Care Access. *Journal of Community Health*, 38(5), 976–993. <https://doi.org/10.1007/s10900-013-9681-1>

³⁷³ Moreno, C., Allam, Z., Chabaud, D., Gall, C., & Pratlong, F. (2021). Introducing the “15-Minute City”: Sustainability, Resilience and Place Identity in Future Post-Pandemic Cities. *Smart Cities*, 4(1), 93–111. <https://doi.org/10.3390/smartcities4010006>

³⁷⁴ Teixeira, J. F., Silva, C., Seisenberger, S., Büttner, B., McCormick, B., Papa, E., & Cao, M. (2024). Classifying 15-minute Cities: A review of worldwide practices. *Transportation Research Part A: Policy and Practice*, 189, 104234. <https://doi.org/10.1016/j.tra.2024.104234>

³⁷⁵ World Health Organization. (2022). *Walking and cycling, latest evidence to support policymaking and practice*. WHO.

largely unchanged from 2010–2019 despite reduction efforts³⁷⁶. Cars alone account for around 12% of Europe’s greenhouse gas emissions³⁷⁷.

In freight mobility, while making up about 10-15% of urban traffic in European cities, freight can account for 30-50% of urban particulate matter and Nitrogen Oxide pollution, in part due to diesel dominance³⁷⁸. Coupled with low fuel efficiency, delivery vehicles tend to have very low load factors for (38% for vans in London, for example), resulting in low overall vehicle efficiency, exacerbated by changing freight patterns due to telecommuting and the post-Covid e-commerce boom, ageing populations, etc.

An EIT Urban Mobility study looking at 12 European city prototypes found that combining vehicle fleet renewal with modal shift results in the fastest reductions in particulate matter (PM2.5), cutting levels by up to 61% by 2030 and up to 70% by 2050 under the zero-emissions scenario³⁷⁹. MaaR directly addresses these structural challenges by encouraging fewer polluting modes. These improvements particularly benefit children, older adults, and residents in high-traffic areas.

Additionally, traffic-dominated environments are associated with other health externalities including high noise levels, heat islands, and stress. The EEA highlights that road traffic noise is the most prevalent source of environmental noise, with over 20 million people in the EU-27 estimated to be affected and 7 million experiencing sleep disruption because of it³⁸⁰. At the same time, European cities often dedicate one-fifth of their space to transport, with about half of street space reserved for cars^{381 382}. MaaR supports a shift toward people-centred streets that reduce environmental stressors by providing a policy framework for reclaiming traffic space for pedestrian and non-motorized activity, while ensuring heavy traffic corridors are treated with noise mitigation strategies.

By addressing structural and systemic barriers to urban mobility, MaaR creates a virtuous cycle: healthier behaviours reduce healthcare costs, cleaner air improves community well-being, and reduced car dependency frees space for sustainable urban development³⁸³. Infrastructure improvements, regulatory measures, and zero-emission strategies stand to create large-scale, long-term health and environmental benefits for European cities. Over time, these integrated measures could contribute to more liveable, attractive, equitable, and environmentally neutral urban environments.

The European Union places the **decarbonization** of transport at the **center** of its climate strategy to achieve carbon neutrality by 2050. Through the Green Deal, the European Climate Law and the “Fit for 55” package, the EU requires a major reduction in greenhouse gas emissions, particularly in the transport sector, which must cut its impact by 90%. To reach these goals, the EU is strengthening emissions

³⁷⁶ SLOCAT Partnership, 2021, as cited in WHO, 2022.

³⁷⁷ Haas & Sander, 2020 as cited in World Health Organization. (2022). *Walking and cycling, latest evidence to support policymaking and practice*. WHO.

³⁷⁸ Alliance for Logistics Innovation through Collaboration in Europe, 2022.

³⁷⁹ EIT Urban Mobility. (2024, October). Costs and Benefits of the Urban Mobility Transition.

<https://www.eiturbanmobility.eu/wp-content/uploads/2024/09/37-EIT-Study-on-costs-and-benefits-v2c-digital.pdf#page=7.08>

³⁸⁰ European Environment Agency. (2025, October 6). Health impacts of exposure to noise from transport in Europe. Retrieved from <https://www.eea.europa.eu/en/analysis/indicators/health-impacts-of-exposure-to-1?activeAccordion=>

³⁸¹ Gössling, S., Choi, A., Dekker, K., & Metzler, D. (2019). The Social Cost of Automobility, Cycling and Walking in the European Union. *Ecological Economics*, 158, 65–74. <https://doi.org/10.1016/j.ecolecon.2018.12.016>

³⁸² TransportShaker, 2018, as cited in WHO, 2022.

³⁸³ World Health Organisation, 2025.

standards for new vehicles, **modernizing** infrastructure through the revision of the Trans-European Transport Network (TEN-T), **and** encouraging a shift toward cleaner alternatives such as rail and inland waterways.

This transition also relies on a profound transformation of urban mobility. The new EU Urban Mobility Framework provides a roadmap to reduce pollution, ease congestion and promote public transport and active modes such as walking and cycling. Sustainable Urban Mobility Plans (SUMP) are becoming a key tool to help cities plan cleaner, more inclusive and better-integrated mobility. They support multimodality, universal accessibility, and the electrification of transport networks.

Overall, the EU's strategy combines regulation, innovation and substantial investment to accelerate the shift toward a transport system that is more sustainable, more efficient and more environmentally responsible³⁸⁴.

The implementation of EU policies by each state is in accordance with the hierarchy of norms.

6.3 Economic and Affordability Implications

The core economic implication is the mandatory shift toward policies that guarantee affordability and eliminate transport poverty, which refers to the inability to meet transport costs or access essential services due to financial difficulty.

6.3.1 Implications for users

For users, MaaR directly addresses the financial burden of travel, particularly for low-income households. In London, for example, Transport for London, calculate transport poverty as when travel costs consume a tenth or more of citizens' personal outgoings³⁸⁵. To combat this, authorities are obliged to implement mechanisms such as subsidised public transport and reduced-price tickets to ensure equal access. Furthermore, for the poor, low-cost travel options such as promoting walkability and proximity planning relieve financial burdens, and ensuring access to non-digital payment options like cash is crucial for unbanked individuals³⁸⁶.

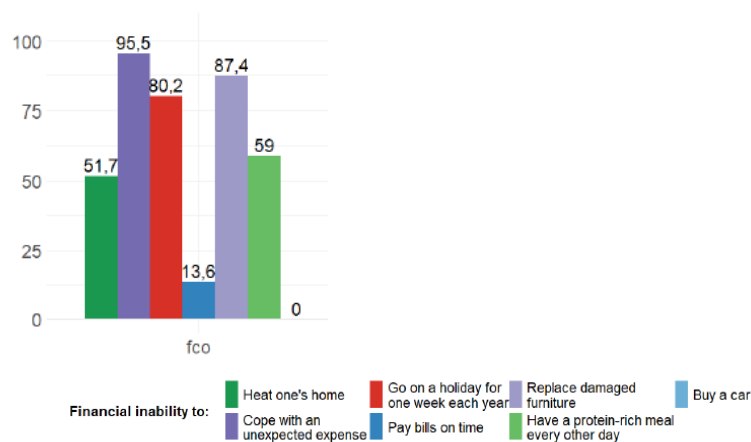
MaaR also recognises and seeks to mitigate the economic stress caused by "forced car ownership" (FCO), where financially constrained households buy a car because no alternatives exist, forcing trade-offs against essential household needs like heating or furniture³⁸⁷. In Brussels, 5,7 % of households own a car but are in a situation of deprivation (FCO), and 21,8 % of households do not own a car due to a lack of financial resources. This is particularly relevant for those living in less connected areas, such as peri-urban and rural areas. The graph below shows the trade-off that residents with FCO in the Brussels Capital Region make. By mitigating these economic stresses, MaaR better supports households in access to other basic services for healthy, social and financially stable livelihoods.

³⁸⁴ See ch.3, section 3.1.2

³⁸⁵ Transport for London (2015). *Travel in London: Understanding our diverse communities*. 330p. Retrieved from <https://www.yumpu.com/en/document/view/54658113/travel-in-london-understanding-our-diverse-communities>

³⁸⁶ *Ibid.*

³⁸⁷ De Meyer & Gilsoul (2025). *Car dependency and precariousness in Brussels. Brussels Studies fact sheet*. The Journal of Research on Brussels. <https://journals.openedition.org/brussels/8577>



Source: SILC 2023, Brussels Mobility calculations

Figure 16 SILC 2023, Brussels Mobility calculations³⁸⁸

6.3.2 Implications for public authorities

For public authorities, MaaR imposes a systemic financial duty, requiring the adoption of subsidies not as an act of charity, but as a mandate to uphold citizen rights. Fulfilling this universal right demands substantial and continuous funding mechanisms, posing a significant challenge, especially in low-density rural or peripheral areas where public transport services are often unprofitable and require high levels of public subsidy.

To manage this fiscal responsibility efficiently, authorities must increasingly deploy sophisticated funding models, such as micro-subsidies or individual mobility budgets, targeting aid based on income or disability. While this can improve efficiency and equity, it introduces new administrative costs for managing and tracking targeted support and may raise the digital barrier to vulnerable users, because digital channels are essential to manage micro-subsidies for narrowly defined user categories, dependent on their circumstances (such as income or disability) and journey features (time, location, mode).

Despite the heavy initial investment, public investment in transport is economically advantageous, generating returns of approximately €4-6 in value for the total economy for every €1 invested in local public transport³⁸⁹. Authorities are also tasked with correcting policy imbalances by mitigating the hidden costs of private vehicle dependence through measures such as adjusting parking passes and car tax rates³⁹⁰. However, a key risk highlighted by existing studies is that efforts to expand equitable coverage through resource redistribution, without increasing the overall quality or capacity, can lead to a decline in service quality for all users, as seen in cases where improved equity coincided with declining service reliability. In some cases, greater equity results from a redistribution of existing resources rather than from an expansion or improvement of service³⁹¹.

³⁸⁸ As cited in De Meyer & Gilsoul, 2025, prev.

³⁸⁹ EGUM, 2024. The optimal ways of complementing public transport with shared mobility solutions both in urban and rural/peri-urban areas, considering best practice examples from cities, regions, and Member States.

³⁹⁰ De Meyer & Gilsoul (2025). Prev.

³⁹¹ De Souza Coelho et al., (2025). The trade-off between equity and quality in public transportation: lessons from a Brazilian case study. *npj. Sustain. Mobil. Transp.* 2, 2. <https://doi.org/10.1038/s44333-025-00039-3>

The case of Switzerland's national service provision law can help to answer the question of whether authorities can provide available mobility as any place, at any time, for any user's physical/mental/intellectual ability. Because of the dense network and integration across modes, many Swiss residents (urban and rural alike) can rely on public transport for daily commutes, shopping, social activities and long-distance travel, often without owning a car. The combination of frequent trains, regional buses, and coordinated transfer points means even small towns and mountainous areas are connected, sometimes several times per day. However, despite national laws on the right to service, there is still threshold compliance.

In low-density rural areas, the subsidies required are often far greater than revenues from passenger fares, making the financial outlay by authorities particularly high. For example, bus lines can only remain in service if the farebox revenue covers a minimum of 20% of the service costs, as an average over the year. This percentage is lowered to 10% in some Cantons which have very mountainous and rural regions.

If MaaR is recognized as a fundamental right, it would create enforceable claims for citizens and impose clear duties on governments and transport providers, making authorities accountable for providing service levels and guaranteeing the right. This could in turn make authorities and operators more resistant to accept mobility as a right, without clearer legal roles and responsibilities – including potentially advocating limitations to the right based on limitations of public funds, service feasibility, etc.

MaaR could support to serve a door-to-door perspective that accounts not only for the operating cost of DRT itself but also for the lower cost of the main leg of the trip when travellers use mass public transport. By helping more people access these high-capacity modes, on-demand services can increase overall ridership and reduce the cost per passenger across the system. This assessment changes how the full cost of the customer journey is measured. Shared services, particularly e-bikes and carpooling, contribute to environmental benefits by reducing driven kilometers and CO2 emissions. For instance, modelling suggests that e-bike carbon reduction capability is highest for residents of rural areas and the rural urban fringe³⁹². In this broader view, DRT has the potential to transform the OPEX calculation rather than inflate it.

By pooling different subsidized services—such as regular public buses, school transport, health transport, and services for the elderly or disabled—into a single DRT scheme, authorities can realize large cost savings for the public sector. In Denmark, for example, FlexDanmark achieved cost savings estimated at 20-40% by integrating various subsidized services³⁹³.

Given the advantages that mass public transport solutions provide to citizens, the EU and member states should need to prioritise funding for new technologies (zero-emission vehicles including their infrastructure; digitalization of mass transit), as well as infrastructure and network projects (e.g. accessibility improvements, new rail links, urban rail projects, bus prioritisation and bus rapid transit systems). Whenever possible, new revenue (e.g. from road charges, polluter pays mechanisms, the Emission Trading System (ETS), and the Social Climate Fund) should be earmarked fully or partially for the development of the public transport offer, with integrated active mobility. More generally, a revised approach to investment appraisal based on the wider economic, social, and environmental benefits of services and sectors would be welcomed³⁹⁴.

³⁹² ITF. (2021b). Micromobility, Equity and Sustainability. Summary and Conclusions. OECD Publishing.

³⁹³ *Ibid.*

³⁹⁴ UITP et al., (2024e). Joint Open Letter. Public transport as backbone of sustainable urban mobility. Retrieved from: <https://www UITP.org/publications/joint-open-letter-public-transport-as-the-backbone-of-sustainable-urban-mobility/>

6.3.3 Implications for public transport operators and mobility service providers

The operational implications for transport operators and private mobility providers are defined by the need to balance financial viability with equity mandates. For Public Transport Operators (PTOs), implementing affordability measures, such as discounted fares, risks reducing farebox revenue, thereby hindering their ability to fund essential maintenance and investment in infrastructure³⁹⁵.

Private micromobility operators face the challenge of being compelled to provide service in underserved "equity priority areas" that are not commercially remunerative³⁹⁶. For example, this is mandated in the tendering process by Västtrafik, the PTA in Sweden, for micromobility providers to operate across the functional urban area, including the less economically viable locations in the suburbs. To sustain operations and maintain affordability in these unprofitable zones and comply with regulatory requirements, operators require financial incentives or subsidies, coupled with lower regulatory fees and fleet caps.

Moreover, operators frequently find that uptake of mandatory discount programs remains low overall, presenting a persistent challenge in raising awareness despite the policy framework³⁹⁷. research shows that in the US, 62 % of 239 US micromobility programmes have implemented at least one equity policy, including requirements for cash payment, text to unlock, community outreach, and discounted rides for travellers earning low incomes. It remains unclear, however, how effective these policies are at increasing adoption among target traveller groups and neighbourhoods, or how policies that look identical on paper may yield varied levels of success.

Conversely, cooperation with authorities offers financial efficiencies: by collaborating on integrating various publicly subsidised services, such as school, elderly, and health transport, into a single Demand Responsive Transport (DRT) scheme, operators can realise large cost savings, sometimes achieving 20-40% savings in operational expenditure.

Regulation (EU) 2024/1679 on the Trans-European Transport Network (TEN-T) enshrines the principle of universal accessibility and territorial cohesion in Articles 3, 18 and 28. Firstly, it requires isolated regions – mountainous areas, islands and sparsely populated areas – to be connected to major economic centres, thereby ensuring equal access to essential services.

The TEN-T facilitates travel for citizens and businesses by integrating multimodal corridors that combine rail, road, river and maritime transport (Article 10). This intermodality allows travellers to easily switch from train to plane or bus via connected hubs, reducing the need to reload their luggage.

Finally, by promoting public and sustainable transport, the regulation helps to reduce dependence on private cars, which is crucial for people without vehicles or with reduced mobility. These provisions are fully in line with the European Union's objective of promoting inclusive mobility, in accordance with the Green Deal and fundamental social rights³⁹⁸.

³⁹⁵ Cludius et al. (2024). Transport poverty: definitions, indicators, determinants, and mitigation strategies Final Report. European Commission. Directorate-General for Employment, Social Affairs and Inclusion. Accessed: https://employment-social-affairs.ec.europa.eu/transport-poverty-definitions-indicators-determinants-and-mitigation-strategies-final-report_en

³⁹⁶ ITF, 2023.

³⁹⁷ Brown & Howell, 2025. From Paper to practice: Shared micromobility equity policies yield mixed outcomes. Transportation Research Interdisciplinary Perspectives.

³⁹⁸ See ch3, section 3.1.1.2

As a reminder, European regulations are directly applicable in EU Member States.

6.4 Governance and Political Implications

MaaR fundamentally entails a political and governance paradigm shift, transversing from the ability to move from a market commodity or segmented service toward a guaranteed, foundational public entitlement necessary for full societal participation. This approach transforms the core objective of transport policy: it is a strategic vision aiming to ensure inclusive mobility where all citizens are considered, regardless of their circumstances, making MaaR one of the pillars of future transport systems (EGUM, 2022). A key political implication is the need to embed MaaR principles into public policy decisions to create governance models that are resilient to political instability, as the commitment is co-developed and co-monitored by and for citizens.

6.4.1 Implications for Public Authorities among various levels of Governance

For public authorities across all levels of governance, MaaR mandates profound changes in strategic planning and coordination. The concept requires systemic integration into all strata of governance, particularly within planning frameworks such as Sustainable Urban Mobility Plans (SUMP). While the European Union sets overarching standards (e.g., accessibility mandates), regional and local governments are crucial for adapting national plans to local specificities, necessitating robust multi-level cooperation. Governance models must shift from supplying fixed routes based on historical provision to adopting demand-driven transport systems tailored to the specific needs of peri-urban or rural areas.

MaaR cannot just be seen as operators providing low-floored bus with spaces for wheelchairs/push chairs or a step-free metro stop with lighting. Rather, it goes beyond and rethinks the entire urban physical space. For example, the city of Barcelona consider the street furniture, items of urbanisation, items linked to transport, construction works, communications and signage³⁹⁹. We need to think about the chain of movement and the different impacting variables that influence how people choose to move around. RUTER, the Public Transport Authority in Norway view MaaR (*'Freedom of Movement'*) as central to their strategic framework and to implement in a comprehensive way across all departments⁴⁰⁰.

Switzerland's federal laws with a decentralised approach means that cantons manage and coordinate setting their own cost-coverage thresholds, service expectations, and openness to innovation. Minimum service requirements are dealt with as an operational guidance, but enforcement also tends to be informal and politically driven - public pressure often influences whether services are adhered to, rather than consistent regulatory oversight.

Authorities also bear the responsibility of establishing the regulatory vision for the entire mobility ecosystem, including establishing governance models able to deliver policies resilient to political instability. In today's world, gaining public and political acceptance is identified as both a crucial driver for success and a major barrier for inclusive mobility, especially for measures that necessitate the redistribution of urban space or prioritise public transport over private vehicles, such as Low Emission

³⁹⁹ Truillo, 2025; cited in UPPER project, 2025, prec.

⁴⁰⁰ Ruter, (2021). Ruter's Strategic Aim. Annual Report 2021. Available here : <https://aarsrapport2021.ruter.no/en/sustainable-movement/ruters-strategic-aim> (last accessed; 03/12/2025)

Zones (LEZs) or dedicated bus lanes⁴⁰¹. Mobility must no longer be a political issue and should transcend changes in government politics. This includes explicitly defining the regulatory conditions for new Multimodal Digital Mobility Services (MDMS) or MaaS, ensuring they comply with standards for non-discrimination and accessibility. In addition, the ability to utilise the data to improve services through clearer insights, monitoring and evaluation of impact of measures. Furthermore, compliance involves retaining regulatory control over data management and platforms, ensuring an open-data policy is enforced.

6.4.2 Implications for Operators and Economic Accountability

The governance implications for transport operators and private service providers manifest primarily through changes in the contracting and accountability mechanisms. MaaS shifts the core purpose of public procurement away from maximizing cost efficiency toward guaranteeing universal access, forcing tenders to heavily weigh service quality, coverage, and accessibility outcomes. Operators are compelled to meet mandatory minimum service levels, even on routes with low ridership, limiting the ability of authorities to remove unprofitable services from the network. Due to the enforceable nature of the right, contracts may mandate higher frequencies, extended operating hours, and accessibility features. Furthermore, MaaS introduces accountability for broader social objectives. Operators must demonstrate an ability to meet social objectives beyond mere operational efficiency and comply with strict regulatory control concerning data management, often necessitating an open-data policy.

6.4.3 Implications for Users and Participatory Governance

For citizens, MaaS institutionalises a move toward participatory governance, transforming them into active partners in the decision-making process. An example of this is Barcelona's Mobility Pact, where citizens are granted the right to intervene in political decision-making processes and systems and can actively propose citizen initiatives⁴⁰². This entitlement provides channels for proposing the convocation of a public hearing or the celebration of citizen consultation polls. MaaS enables citizens to legally contest unlawful or discriminatory policies and challenge infrastructure decisions, strengthening their role in ensuring social equity outcomes. Following any participatory process, local authorities have a duty to provide feedback or return to the contributors regarding the ultimate impact of their input on the final decision. Crucially, the governance structure must manage the widespread challenge of gaining public and political acceptance, particularly for necessary measures like Low Emission Zones (LEZs) that require the redistribution of urban space. To facilitate this engagement, local authorities are mandated to adopt a proactive attitude by promoting communication channels and ensuring that when participation relies solely on digital means, physical municipal spaces are available to provide administrative assistance, thereby eliminating potential digital barriers to intervention.

While this provides benefits to society in general, offering citizens the opportunity and right to have their say, there is a very real challenge of growing contempt for changing urban spaces for sustainable mobility. The rise of 'fake news' and conspiracy theories have resulted in populations around the world distrusting public authorities and even leading to criminal offences to prevent changes to support sustainable mobility behaviour. For example, in London, with the expansion of the ULEZ, over 300 cameras were damaged or stolen in four months. This outlined the anger of certain citizens in society with the decision to move ahead

⁴⁰¹ UPPER project, 2024. Deliverable 2.4: UPPER measures, requirements and Policy Recommendations.

⁴⁰² Ajuntament de Barcelona, 2022. Reglament de Participació Ciutadana. Àrea de Cultura, Educació, Ciència i Comunitat.

with the vehicle restrictions. This places a huge responsibility on the local authorities to lead with evidence, debunk false information quickly and engage with citizens to understand their fears and how to implement supportive mitigation measures to ensure people are not affected negatively⁴⁰³.

⁴⁰³ UITP, 2025, prev.

7 Towards a New Inclusive Definition of Mobility as a Right

7.1 Embedding Equity, Diversity, and Inclusion (EDI) into MaaR:

Building on the analyses, this section integrates equity, diversity and inclusivity requirements into the definition of MaaR. It identifies what additional dimensions (e.g. gender responsiveness, cultural diversity, disability access, digital inclusion) must be part of *Mobility as a Right* in the 21st century so that the concept fully covers all community needs. The goal is to ensure MaaR is not just about access, but fair access for **all** groups, thereby operationalizing “*inclusive mobility*” as a core principle.

Persona Groups Driving Insight	Resulting Requirement for MaaR
Elderly pedestrian, parent with impaired child, low-confidence novice drivers	Universal design + safe navigation must be embedded — step-free paths, intuitive layouts, tactile cues, slow-speed areas.
Low-income shift worker, warehouse employee, students, workers	Affordability and cost fairness must be core to MaaR (not discretionary).
Night-shift workers, late commuters, care-trip parents	Service availability must extend beyond peak — temporal equity , not just network presence.
Migrants, newcomers, intercultural communities	MaaR must address language and cultural inclusion in signage, digital tools, and ticketing.
Digitally fluent vs digitally limited personas	MaaR requires digital inclusion by design → low-literacy mode, offline usability, intuitive apps.
Community advocates, NGO road safety leaders	Participation must be a right — co-creation embedded in mobility planning.
Logistics actors, shop owners, courier drivers	Equity also applies to business users → predictability of rules as a fairness condition .

7.2 Proposed Definition of MaaR for GOLIA

A refined definition of Mobility as a Right is presented, synthesizing legal and societal perspectives. This definition explicitly incorporates the EDI determinants and the sustainability and digital considerations highlighted by GOLIA (e.g. right to mobility that is **accessible, affordable, green, and digitally inclusive**⁴⁰⁴). It serves as a “*new definition*” of MaaR that the GOLIA project will adopt moving forward. Key principles underlying this definition are outlined (universality, equity, adaptability, etc.), providing a clear baseline understanding for all project partners.

- Mobility as a Right means being able to move safely, affordably and autonomously regardless of skill, age, income or language. (Seen in elderly, students, shift workers, novice drivers)
- MaaR must ensure multiple usable modes, not just one available option. (PT user + e-bike hesitant commuter + car-reliant parent)
- Information and interfaces must be understandable without digital privilege. (Low-literacy industrial worker, newcomer migrant, non-digital commuters)

⁴⁰⁴ uitp.org

- Fairness applies to residents and economic actors. (Courier drivers + local businesses repeatedly highlighted predictability needs)
- A rights-based approach values proximity — essential daily trips should be short and simple. (Elderly users, care-trip parents, neighbourhood pedestrians)

Based on the discussion above, **'Mobility as a Right'** (MaaR) can be defined as the right to safe, affordable, inclusive and sustainable access to essential societal resources (employment, health, education, culture and civic participation) through mobility and accessibility systems designed according to the principles of equity (horizontal and vertical), universal accessibility (physical, economic and digital) and environmental sustainability, and which are free from discrimination.

This right includes:

- **Universality and equality:** applicable to all, regardless of age, gender, income, disability, migration status or digital skills.
- **Multidimensional accessibility:** accessible infrastructure and services (PMR), accessible digital information and interfaces, affordable pricing and territorial availability (urban, peri-urban and rural), including the right to voluntary immobility (proximity and teleservices).
- **Justiciability:** individuals have the right to invoke this right and obtain redress, and authorities have positive obligations. Under certain conditions, there are also horizontal effects with regard to private operators.
- **Inclusive governance** involves co-development and co-evaluation with citizens, multi-level coordination (EU–State–local authorities) and integration into plans (SUMP/PMUS), budgets and public service contracts.

7.3 Alignment with GOLIA's Vision and Objectives

This section explains how the definition and proposed conclusions for Mobility as a Right (MaaR) support the smart adaptive mobility governance model and the Social Optimal Mobility Index (SOMI) developed by GOLIA. It illustrates how the integration of MaaR strengthens the project's research into inclusive, resilient and climate-friendly mobility systems, and how these results feed into strategic deliverables such as the Mobility Smart Governance Handbook and European policy recommendations.

7.3.1 MaaR as a pillar of the smart governance model

GOLIA's smart governance model is based on an adaptive, participatory and data-driven approach. Recognising MaaR as a fundamental right:

- Transforms mobility into a normative obligation, imposing standards of accessibility, equity and sustainability on authorities and operators.
- Strengthens policy resilience: by integrating MaaR, mobility plans become capable of adapting to crises (pandemics, climate events, political instability) through co-design and co-monitoring mechanisms.
- Contributes to the Mobility Smart Governance Handbook: MaaR principles (horizontal and vertical equity, universal accessibility, right to voluntary immobility) are translated into operational checklists for SUMPs, public service contracts and accessibility audits.

7.3.2 Direct contribution to SOMI

The Socially Optimal Mobility Index (SOMI) aims to measure the performance of mobility systems by integrating social, environmental and economic dimensions. The integration of MaaR into SOMI translates into:

- Normative indicators: physical, digital and economic accessibility; territorial equity; safety and inclusion of vulnerable groups.
- Legal and social variables: derived from the legal determinants identified in the deliverable (e.g. Guaranteed Minimum Service Level, Inclusive Mobility Design), which become metrics for assessing the compliance of systems with MaaR.
- Alignment with European objectives: SOMI incorporates the targets of the Green Deal, the Strategy for Sustainable and Smart Mobility and the Accessibility Directives, ensuring multi-level consistency.

7.3.3 Strengthening GOLIA's strategic objectives

The integration of MaaR into the GOLIA framework promotes social inclusion: by ensuring equitable access to mobility, it reduces territorial and socio-economic inequalities. It increases resilience by imposing continuity and adaptability requirements, preparing systems to cope with shocks. It accelerates climate transition by orienting policies towards active and collective modes of transport, reducing dependence on private cars and integrating decarbonisation objectives. Finally, it strengthens the legitimacy of policy recommendations by incorporating MaaR into legal and strategic frameworks, positioning its recommendations as levers for harmonising European policies.

The conclusions of the MaaR deliverable directly feed into:

- The Mobility Smart Governance Handbook: integration of MaaR principles into governance tools, risk matrices and SOMI indicators.
- European policy recommendations: proposal to include MaaR in national constitutions and urban strategies, in line with the Green Deal and the Strategy for Sustainable and Smart Mobility.
- Local action plans: adaptation of SUMP to include MaaR objectives (universal accessibility, social pricing, gender-based safety).

The integration of MaaR into the GOLIA framework is not merely conceptual: it operationalises social justice and ecological transition in mobility. By linking MaaR's normative principles to technical tools (SOMI, Handbook), GOLIA creates a coherent ecosystem where mobility becomes an effective, measurable right, guaranteed by adaptive and inclusive policies.

8 Integrating Equity and Fairness into SOMI (Contributions to Task 1.4)⁴⁰⁵

The methodology applied in this section follows a structured three-stage process designed to translate the legal and normative findings of this deliverable into an implementation-ready contribution to Task 1.4. The process begins with Contextual Mapping in Section 8.1, where the pilot objectives defined in Task 1.1 are linked to the multilevel legal inventory developed in this deliverable and consolidated into a standardised draft catalogue of legal determinants. It then proceeds to Operational Assessment in Section 8.2, where this draft catalogue is cross-referenced against the project's data-readiness layer and city-level implementation conditions in order to assign feasibility scores and distinguish between determinants that are immediately measurable and those that require proxies or phased operationalisation. Finally, the process concludes with Methodological Synthesis and Formal Validation in Section 8.3, where the validated definitions and the confirmed feasibility notes are integrated into the Final Validated Legal Determinant Catalogue for direct handover to Task 1.4.

This methodology is cumulative and evidence based. Section 8.1 draws on three principal inputs:

1. the pilot objectives from T1.1,
2. the multilevel legal inventory established through the EU, national, and local legal analysis, and
3. the recurring determinant families already consolidated in the legal determinant summaries.

Section 8.2 adds the data-readiness and implementation layer by combining the validated draft catalogue with the deliverable's feasibility evidence, including the data-legislation analysis and the enforcement and data-availability notes contained in the determinant summaries. Section 8.3 formalises the result by producing a single master catalogue in which each determinant is classified as either Core or Aspirational, depending on whether it can be directly operationalised in Task 1.4 or must initially be retained through proxy- or survey-based measurement.

The overarching methodological logic follows a compliance-to-measurement approach. Legal obligations identified in this deliverable, including continuity and public service guarantees, accessibility requirements, multimodal information obligations and data-interoperability duties, are first translated into standardised legal determinants and subsequently into structured measurement routes. The contribution of SOMI remains legally grounded and operationally implementable because determinants supported by clear data sources become immediate candidates for indicator development, while those that remain legally necessary but are only partially measurable remain within scope through proxy indicators or staged implementation. The final catalogue functions as the structured legal foundation for the KPI and dashboard development foreseen under Task 1.4 rather than a static legal annex.

⁴⁰⁵ Refer to Appendix 3 for a summary of MaaR-related Legal Determinants

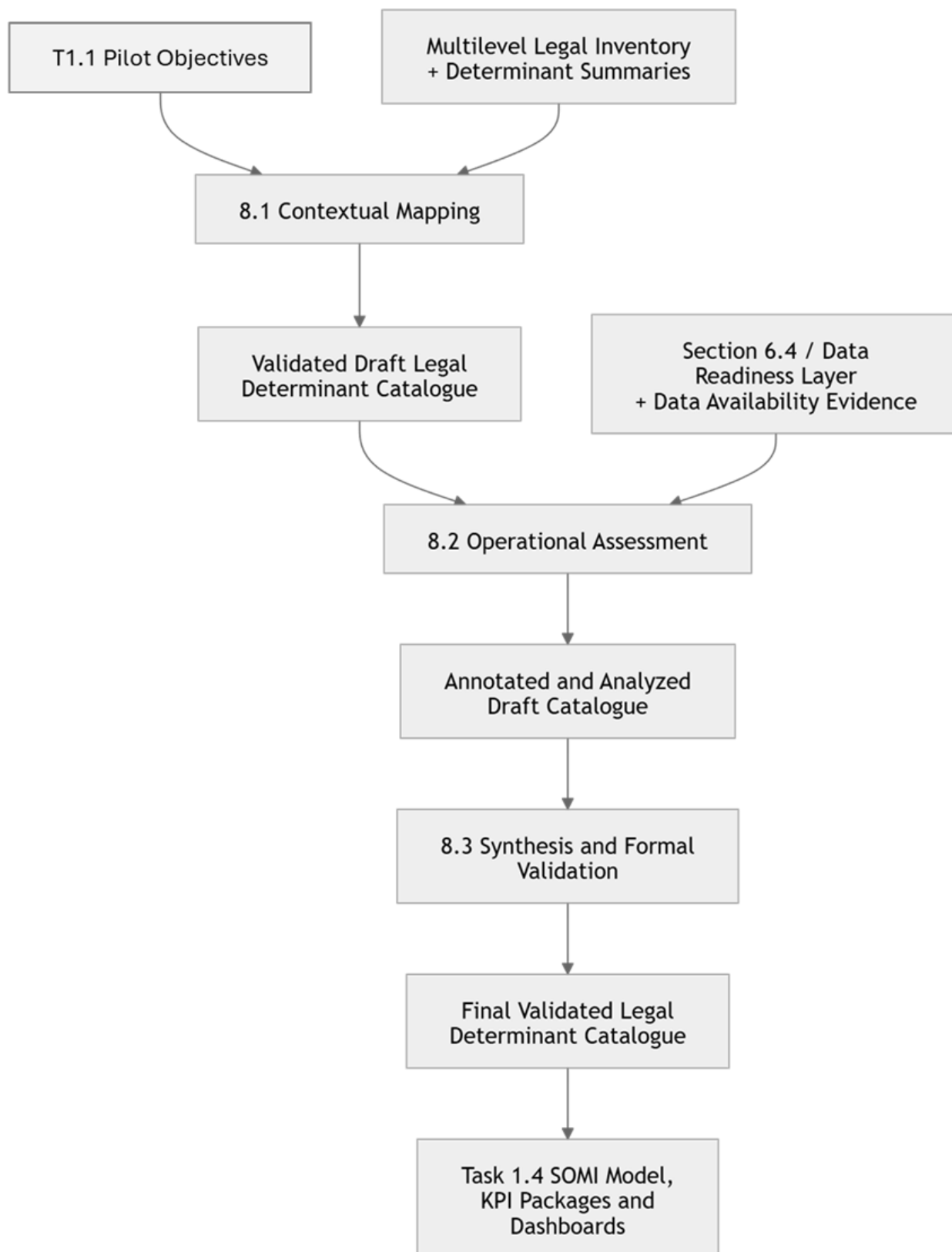


Figure 17 : Three-stage workflow employed for the integration of legal determinants into SOMI.

8.1 Identification and Catalogue of Legal Determinants

This section implements the first stage of the determinant-definition process, namely Contextual Mapping, and produces the Validated Draft Legal Determinant Catalogue. This stage operationalises the pilot objectives defined in Task 1.1 by linking them to the multilevel legal inventory established in this deliverable. The methodological sequence comprises three steps: *(i) the import of the pilot objectives from T1.1*, *(ii) the import of the legal inventory and determinant summaries derived from the D1.3 legal analysis* (Appendix 3: Summary of MaaR-related Legal Determinants), and *(iii) the mapping of each objective to one or more legal sources using the MaaR/SOMI pillars of Equity, Accessibility, and Sustainability as the organising framework*. This stage also includes an internal refinement step and an expert validation step, ensuring that the result is not a raw list but a cleaned and standardised catalogue suitable for technical implementation.

This section is based on the repeated determinant structure already identified across the pilot-city legal determinant summaries in Appendix 3: Summary of MaaR-related Legal Determinants. Across Antwerp, Florence, and Plzeň, the legal mapping is consistently organised around five recurring determinant families: Access & information, Physical access & information, Basic affordability of mobility, Safe journeys for vulnerable road users (VRUs), and Security. These recurring families constitute the baseline output of the legal mapping exercise, as they already provide the cross-city structure embedded in the deliverable's legal analysis. In this section, these recurrent families are consolidated into standardised determinant labels that can be used consistently in Task 1.4 and in the downstream implementation of SOMI.

Two consolidation principles are applied. First, where different city objectives reflect the same underlying rights logic, the determinant is standardised under a single common label while retaining distinct legal justifications in the supporting fields. This is illustrated by the standardisation of Antwerp's objective concerning "hard-to-reach groups" and Plzeň's objective concerning "social exclusion" under the common determinant Guaranteed Minimum Service Level. Second, where a legally distinctive local context materially shapes MaaR compliance and monitoring, the resulting determinant is retained as a specific catalogue entry rather than being absorbed into a generic category. This is the case for Florence's Heritage-Compatible Accessibility, which is derived from the objective "Promote sustainable logistics" through its explicit linkage to the UNESCO heritage-protection framework.

The output of Section 8.1 is therefore a draft determinant catalogue that is already structured for downstream measurement, even though feasibility scoring is addressed only in Section 8.2. In practice, each determinant is recorded with a pillar alignment, an evidence basis in the deliverable, a legal grounding, and an indicative measurement route that can subsequently be formalised into a KPI package. This approach is consistent with the MaaR-to-SOMI integration logic developed in this deliverable, according to which MaaR contributes to SOMI through normative indicators relating to physical, digital, and economic accessibility, territorial equity, safety, and the inclusion of vulnerable groups, as well as through legal and social variables such as Guaranteed Minimum Service Level and Inclusive Mobility Design.

Table 3: Validated Draft Legal Determinant Catalogue

Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
Accessible and Reliable Mobility Information	Accessibility; Equity	Consolidates the repeated Access & information	ITS-linked service information, multimodal	A1 10-minute walk access to PT; A2 10-minute walk	% of population; % of population

Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
		family across all three city tables	access points, real-time passenger information, and continuity-of-service logic across pilots	access to frequent PT	
Inclusive Mobility Design	Accessibility; Equity	Consolidates the repeated Physical access & information family and the explicit MaaR/SOMI accessibility direction	Accessible stops, vehicles, stations, ticketing, digital channels, and disability-related compliance requirements	I1 share of fully accessible stops/stations; I2 accessible fleet share; I3 EN 301 549 digital compliance	% of stops/stations; % of fleet; % compliant channels
Guaranteed Minimum Service Level	Equity; Accessibility	Explicitly standardised in the workflow from Antwerp “hard-to-reach groups” and Plzeň “social exclusion”	PSO continuity logic, minimum service, peripheral coverage, strike/crisis continuity	M1 night-time essential coverage; M2 trips operated vs trips scheduled on guaranteed services	% of population covered; % of trips
Social Inclusion of Hard-to-Reach Groups	Equity; Accessibility	Retained as a thematic determinant because D1.3 explicitly notes missing direct metrics	Antwerp used as the explicit example of a determinant requiring proxy development	P1 proxy: stop density / service coverage in underserved areas	density or % coverage
Basic Mobility Affordability	Equity; Accessibility	Consolidates the repeated Basic affordability of mobility row across pilots	Social pricing, fare discounts, subsidy schemes, targeted affordability support; D1.3 explicitly notes	F1 mobility cost burden; F2 social tariff coverage	% of income; % of eligible population

Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
			no combined metric yet		
Safe and Dignified Travel	Equity; Sustainability; Accessibility	Combines the repeated Safe journeys for VRUs and Security lines	Accident monitoring, safe infrastructure, local security measures, gender-sensitive safety conditions	S1 VRU KSI/fatality rate; S2 perceived safety index; S3 safe-speed network coverage (where available)	rate; index; % of network
Data Interoperability	Accessibility; Sustainability	Derived from Appendix 2 data-legislation layer and the explicit Plzeň example in the workflow	Open/machine-readable data, APIs, dynamic updates, operational interoperability	D1 dataset completeness; D2 API uptime; D3 update timeliness	% completeness; % uptime; days/hours
Heritage-Compatible Accessibility	Sustainability; Accessibility	Explicit pilot-specific determinant created in the workflow for Florence	Florence's heritage-sensitive logistics and access constraints	H1 compliance with heritage-zone access/logistics rules; H2 logistics emissions proxy (if available)	% compliance; tCO ₂ e/year
Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
Accessible and Reliable Mobility Information	Accessibility; Equity	Consolidates the repeated Access & information family across all three city tables	ITS-linked service information, multimodal access points, real-time passenger information, and continuity-of-service logic across pilots	A1 10-minute walk access to PT; A2 10-minute walk access to frequent PT	% of population; % of population
Inclusive Mobility Design	Accessibility; Equity	Consolidates the repeated Physical access &	Accessible stops, vehicles, stations, ticketing, digital	I1 share of fully accessible stops/stations; I2 accessible	% of stops/stations; % of fleet; %

Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
		information family and the explicit MaaR/SOMI accessibility direction	channels, and disability-related compliance requirements	fleet share; I3 EN 301 549 digital compliance	compliant channels
Guaranteed Minimum Service Level	Equity; Accessibility	Explicitly standardised in the workflow from Antwerp “hard-to-reach groups” and Plzeň “social exclusion”	PSO continuity logic, minimum service, peripheral coverage, strike/crisis continuity	M1 night-time essential coverage; M2 trips operated vs trips scheduled on guaranteed services	% of population covered; % of trips
Social Inclusion of Hard-to-Reach Groups	Equity; Accessibility	Retained as a thematic determinant because D1.3 explicitly notes missing direct metrics	Antwerp used as the explicit example of a determinant requiring proxy development	P1 proxy: stop density / service coverage in underserved areas	density or % coverage
Basic Mobility Affordability	Equity; Accessibility	Consolidates the repeated Basic affordability of mobility row across pilots	Social pricing, fare discounts, subsidy schemes, targeted affordability support; D1.3 explicitly notes no combined metric yet	F1 mobility cost burden; F2 social tariff coverage	% of income; % of eligible population
Safe and Dignified Travel	Equity; Sustainability; Accessibility	Combines the repeated Safe journeys for VRUs and Security lines	Accident monitoring, safe infrastructure, local security measures, gender-sensitive safety conditions	S1 VRU KSI/fatality rate; S2 perceived safety index; S3 safe-speed network coverage (where available)	rate; index; % of network

Determinant label	Pillar(s)	Basis in D1.3	Main legal / city grounding	Indicative KPI route for Task 1.4	Unit(s)
Data Interoperability	Accessibility; Sustainability	Derived from Appendix 2 data-legislation layer and the explicit Plzeň example in the workflow	Open/machine-readable data, APIs, dynamic updates, operational interoperability	D1 dataset completeness; D2 API uptime; D3 update timeliness	% completeness; % uptime; days/hours
Heritage-Compatible Accessibility	Sustainability; Accessibility	Explicit pilot-specific determinant created in the workflow for Florence	Florence's heritage-sensitive logistics and access constraints	H1 compliance with heritage-zone access/logistics rules; H2 logistics emissions proxy (if available)	% compliance; tCO ₂ e/year

Table 3 presents the validated draft legal determinant catalogue. At this stage, the table identifies the measurement route associated with each determinant but does not yet assign feasibility scores. Feasibility scoring is introduced only in Section 8.2, following cross-referencing with the data-readiness layer and the city-level validation process

8.2 Multi-level Feasibility Analysis of Legal Determinants

This section implements the second stage of the process, namely Operational Assessment, and transforms the legally grounded determinant list into a technically feasible implementation matrix. This stage receives the Validated Draft Legal Determinant Catalogue from Section 8.1 and combines it with the project's data-readiness layer, referenced in the working structure as Section 6.4, in order to assign a feasibility score to each determinant. The purpose of this section is not to reassess the legal validity of the determinants, but to determine whether each determinant can be measured immediately with available data, whether it requires additional standardisation, or whether it must initially enter Task 1.4 through proxy- or survey-based measurement.

The feasibility logic follows the three-level classification established in the methodological process: High, Medium, and Low. High feasibility applies to determinants for which structured or automated data already exist and can be operationalised directly through a KPI package. In this regard, Data Interoperability in Plzeň represents the clearest example. Low feasibility applies to determinants for which no quantitative metric currently exists. In this category, Social Inclusion of Hard-to-Reach Groups in Antwerp is the explicit reference case, and such determinants are not removed from the catalogue but are instead retained and flagged for proxy development, with bus stop density identified as the illustrative proxy. Medium feasibility applies to determinants for which the legal grounding is strong and relevant data components are

available, but implementation still requires standardisation, audit design, or the construction of a composite indicator.

Section 8.2 therefore produces an Annotated and Analyzed Draft Catalogue in which each determinant is classified not only by feasibility score but also by implementation status as Core or Aspirational. In this context, Core refers to determinants that are sufficiently measurable to support immediate use in Task 1.4 dashboard development, governance monitoring, or KPI design, even where limited technical calibration is still required. Aspirational refers to determinants that remain legally and strategically essential, but whose measurement requires a phased implementation route through proxies, survey instruments, or additional data harmonisation. This distinction is inherent to the methodology and is formalised fully in the final handover structure presented in Section 8.3.

Table 4: Feasibility Matrix for Legal Determinants

Determinant	Feasibility	Status	Justification for rating	Primary data route	Proxy implementation note
Data Interoperability	High	Core	D1.3 explicitly uses Plzeň as the example where automated/open-platform data allow immediate tracking	National Access Point, open-data portal, API logs, metadata	No proxy required; direct technical compliance KPIs
Accessible and Reliable Mobility Information	Medium–High	Core	Repeated across all pilots; D1.3 already identifies access/coverage indicators such as 10-minute walk to PT / frequent PT	Stop geodata, timetable feeds, population grid	If “frequent PT” cannot yet be computed consistently, start with baseline PT access only
Inclusive Mobility Design	Medium	Core	Strong legal basis and explicit D1.3 KPI direction (accessible stops/stations; EN 301 549), but city-level audit readiness is uneven	Asset inventories, accessibility audits, web/app audits	If audits are incomplete, implement staged audit coverage first
Guaranteed Minimum Service Level	Medium	Core	Explicitly standardised in the workflow; measurable through service coverage and trip	Timetables, AVL/service logs, contract/PSO reports	Use scheduled service as an interim proxy where operated-trip logs are incomplete

				delivery, but thresholds must be defined		
Social Inclusion of Hard-to-Reach Groups	Low	Aspirational / proxy-needed	D1.3 explicitly states Antwerp lacks a quantitative metric and requires proxy development	Stop inventory, deprivation mapping, service coverage	Use P1 proxy: stop density or minimum service coverage in underserved zones	
Basic Mobility Affordability	Medium–Low	Aspirational / proxy-ready	D1.3 explicitly states ticket price data and income data exist, but no combined metric exists	Fare tables, subsidy counts, income statistics	Use F2 first; build F1 composite affordability burden in a second phase	
Safe and Dignified Travel (VRU safety)	Medium	Core	Accident data are available, but VRU disaggregation varies by city	Crash databases, road safety layers	If VRU-specific detail is incomplete, use total KSI with a limitation note	
Safe and Dignified Travel (perceived safety/security)	Low–Medium	Aspirational / survey-based	D1.3 explicitly proposes a perceived safety KPI, but it requires structured survey collection	Surveys; optional aggregated incident logs	Implement through a common survey module; not an administrative KPI at baseline	
Heritage-Compatible Accessibility	Low	Aspirational (pilot-specific)	Explicitly justified for Florence, but no direct standard metric is prescribed	Permit databases, access logs, freight compliance records	Use heritage-zone compliance proxy; optional emissions proxy where available	

The output of Section 8.2 is not the rejection of low-feasibility determinants, but the structured prioritisation of the full determinant set. High- and medium-feasibility determinants move forward as **Core** elements for immediate SOMI integration, while low-feasibility determinants remain in the catalogue as **Aspirational** rights conditions and are carried forward with explicit proxy- or survey-development instructions. This preserves the legal integrity of the MaaR framework while ensuring that the handover to Task 1.4 remains operationally realistic.

8.3 The Final Validated Legal Determinant Catalogue

This section implements the final stage of the process, namely Methodological Synthesis and Formal Validation, and produces the Final Validated Legal Determinant Catalogue for direct handover to Task 1.4. In accordance with the methodology set out in this deliverable, this stage combines the validated determinant definitions from Section 8.1 with the confirmed feasibility assessments from Section 8.2 into a single Master Catalogue. The purpose of this section is not to generate new determinants, but to

synthesise the validated legal logic and the implementation logic into a single structured output that can directly support SOMI modelling, dashboard development, KPI engineering, and governance monitoring.

The key result of this section is the explicit distinction between Core Determinants and Aspirational Determinants. Core determinants are those that combine clear legal grounding with at least medium operational readiness and can therefore be translated directly into indicators or governance checks in the near term. Based on the legal and operational analysis, the strongest Core set comprises Data Interoperability, Accessible and Reliable Mobility Information, Inclusive Mobility Design, Guaranteed Minimum Service Level, and the measurable safety component of Safe and Dignified Travel (VRU safety). Aspirational determinants remain part of the formal catalogue because they are legally and strategically indispensable, but they require proxy development, survey-based measurement, or additional standardisation before full operationalisation. Accordingly, the Aspirational determinant set includes Basic Mobility Affordability, Social Inclusion of Hard-to-Reach Groups, Safe and Dignified Travel (perceived safety/security), and Heritage-Compatible Accessibility.

For implementation in Task 1.4, each row in the final catalogue must contain the minimum fields required by the technical workstream: determinant label, pillar alignment, legal basis, feasibility rating, data-source class, and KPI package with explicit units. This row structure preserves legal traceability while ensuring operational usability, thereby enabling each legal determinant to be translated into measurable and monitorable variables for Task 1.4 implementation.

Table 5: Final Validated Legal Determinant Catalogue for Task 1.4 Handover

Category	Determinant	Pillar(s)	Final package to hand over	KPI to	Unit(s)	Primary data source type	Immediate T1.4 use
Core	Data Interoperability	Accessibility ; Sustainability	D1 dataset completeness ; D2 uptime; D3 update timeliness		%; %; days/hours	National Access Point, open-data APIs, metadata logs	Direct technical compliance and data-readiness monitoring
Core	Accessible and Reliable Mobility Information	Accessibility ; Equity	A1 10-minute walk access to PT; A2 10-minute walk access to frequent PT		%; %	Stops, timetables, population grid	Direct accessibility and territorial-equity KPI set
Core	Inclusive Mobility Design	Accessibility ; Equity	I1 accessible stops/stations ; I2 accessible fleet; I3 EN 301 549 digital compliance		%; %; %	Asset inventories , accessibility audits, web/app audits	Direct accessibility audit and compliance monitoring
Core	Guaranteed Minimum Service Level	Equity; Accessibility	M1 night-time essential coverage; M2		%; %	Timetables , operator service	Direct service continuity

				% scheduled trips operated		logs, contract KPIs	and minimum- service monitoring
Core	Safe and Dignified Travel (VRU safety)	Sustainability; Equity; Accessibility	S1 KSI/fatality rate; S3 safe-speed network coverage (where available)	VRU rate; %		Crash statistics, road-safety layers	Direct safety KPI set
Aspirational	Basic Mobility Affordability	Equity; Accessibility	F1 mobility cost burden; F2 social tariff coverage	% of income; %		Fare systems, income statistics, eligibility registries	Staged composite affordability KPI package
Aspirational	Social Inclusion of Hard-to-Reach Groups	Equity; Accessibility	P1 inclusion proxy via stop density / coverage in underserved zones	density or %		Stop inventory, deprivation mapping, coverage analysis	Proxy-based inclusion tracking until richer equity data exist
Aspirational	Safe and Dignified Travel (perceived safety/security)	Equity; Accessibility	S2 perceived safety index (day/night, gender-sensitive)	index		Surveys; optional aggregated complaint logs	Survey-based EDI-sensitive safety monitoring
Aspirational	Heritage-Compatible Accessibility	Sustainability; Accessibility	H1 compliance proxy for heritage-zone access/logistics rules; H2 emissions proxy (if modelled)	%; tCO ₂ e/year		Permit systems, access logs, logistics reporting	Florence-specific proxy monitoring

The process concludes with the following validation statement: the final catalogue is **goal-oriented** because each determinant is linked to a pilot objective or to a pilot-specific strategic requirement; **legally required** because each determinant is grounded in the multilevel legal inventory established in D1.3; and **operationally assessed** because every determinant has been screened for data maturity and classified either as **Core** for immediate implementation or as **Aspirational** with an explicit proxy- or survey-based route. In this form, the catalogue is suitable for direct transfer to Task 1.4 as the legal-determinant foundation for SOMI metric design, dashboard variables, and governance follow-up.

9 Conclusions and Policy Recommendations

The right to mobility is both an individual right and a collective issue. It aims to ensure that everyone can travel freely, equitably and sustainably, which is essential for equal opportunities, social justice and territorial cohesion.

9.1 Summary of Findings

The comparative analysis across European, national, and local governance levels confirms that while the vision of MaaR is widely endorsed in principle, its legal status and practical enforcement remain inconsistent. MaaR currently operates within a complex governance hierarchy where high-level policy goals are filtered and often fragmented by national legal and cultural traditions and local implementation challenges. Aligning these multiple levels is essential for transforming the concept from an aspirational objective into a fully guaranteed public right.

The Ambiguous Legal Status of Mobility as a Right. At the European level, MaaR is not explicitly recognised as an autonomous, enforceable fundamental right. Instead, it is anchored in the principles of social inclusion, freedom of movement (Article 45 TFEU), and non-discrimination (Article 26 of the Charter of Fundamental Rights). The EU sets strategic policy goals, such as combating transport poverty (via the Social Climate Fund and recommendations), and establishes legally binding standards, like the European Accessibility Act, which mandates accessibility requirements for transport services across all Member States. This provides a robust legal floor, yet the ultimate enforceability of the right often relies on its interpretation through associated human rights and non-binding political commitments, such as the European Pillar of Social Rights.

At the National level, the approach is characterised by significant legal divergence. Belgium is considering the explicit constitutional inclusion of the right to mobility in Article 23 (economic and social rights), a move that would grant it higher legal visibility and enforceability. Italy, conversely, treats mobility as a fundamental right associated with human dignity and equality (deriving from Article 2 of the Constitution), rather than a stand-alone constitutional provision. The Czech Republic adopts a more pragmatic approach, guaranteeing the right primarily through public transport laws and national plans aimed at increasing accessibility for people with disabilities, without defining it as an autonomous fundamental right in its Constitution. This varying legal recognition directly affects the justiciability of claims and the positive obligation placed on national governments to guarantee minimum service levels.

Implementation demonstrates a necessary tension between standardised requirements and local adaptation. Strong vertical coherence is seen in technical and ethical standards, such as the mandatory deployment of Intelligent Transport Systems (ITS) and the harmonised governance of mobility data (via the Data Governance Act and ITS Directive). These standards compel seamless cross-level integration to ensure interoperability and digital inclusion. Furthermore, the EU requires Member States to embed MaaR principles, particularly accessibility and equity, into key planning instruments like SUMPs.

However, the actual operationalisation of MaaR is highly decentralised, demanding that local authorities adapt national plans to local realities. For example, the Flemish "Basisbereikbaarheid" policy shifts transport planning from a fixed-supply model to a demand-driven system using tailored transport solutions for low-density areas. Similarly, Florence localises policy by using Limited Traffic Zones (ZTLs) and the Green Shield to reconcile sustainable mobility and heritage protection, necessitating local policy instruments that align with national laws (like the *Codice della Strada*). This localisation is crucial as it allows policies to address specific socio-economic and environmental needs that blanket national rules often miss, such as ensuring compensatory measures (subsidies, exemptions) within Low Emission Zones to mitigate social exclusion.

The mandate of MaaR has profound implications for governance structures, requiring political coordination across all administrative levels to ensure the right is delivered. Authorities must retain regulatory control over new digital services (MaaS) to uphold standards of accessibility and non-discrimination, ensuring compliance with an open-data policy from operators. This is essential for monitoring equity outcomes, though local authorities frequently lack the quantitative metrics needed to measure complex concepts like the "Social Inclusion of Hard-to-Reach Groups".

Crucially, the governance model must tackle the challenge of sustainable funding. Recognising mobility as a right transform's subsidies from discretionary "charity" into a duty required to uphold citizen entitlements. This imposes significant budgetary pressures, particularly in low-density or rural areas where services are not economically viable without substantial public funding.

Finally, MaaR strengthens democratic accountability by supporting participatory governance models, empowering citizens to challenge discriminatory policies and demand justification for decisions regarding mobility infrastructure and service levels. The goal of maximizing participation and universal access must become the overarching mandate for local authorities, transcending short-term political instability.

This deliverable defined and analysed Mobility as a Right (MaaR) across legal, social, and governance dimensions, framing mobility as a fundamental entitlement that guarantees equitable, accessible, and sustainable access to essential opportunities (work, health, education, culture).

The analysis provided a legal definition and scope for MaaR, including justiciability, horizontal effects for certain private actors, and the position of MaaR within the hierarchy of norms—leveraging EU law primacy to make accessibility, service-continuity and data obligations operational in courts. For example, the European Accessibility Act (EU) 2019/882 requires accessible ticketing, digital interfaces and real-time information. The Belgium's 2024 federal law transposes accessibility and assigns sanctioning powers to the transport regulator for websites, apps, ticketing and terminals.

This task presents a multi-level legal and policy analysis (EU–national–local) identifying determinants and feasibility. For examples:

- Belgium: continuity of public service (minimum rail service during strikes) and a new Federal Transport Regulation Agency overseeing accessibility compliance.
- Italy: legally mandated minimum service windows during strikes (e.g., 06:00–09:00 and 18:00–21:00), mandatory SUMP for cities >100,000 inhabitants, and the STIBM integrated fare system in Milan.
- Czech Republic: Act 194/2010 on passenger transport PSOs and large-scale investments in ERTMS/ETCS and TEN-T corridors (co-financed by EU/EIB).

This task gives off a full integration of Equity, Diversity and Inclusion (EDI)—gender-sensitive safety, universal accessibility (physical/digital), affordability and the recognition of voluntary immobility (proximity). EU Parliament work on women-friendly transport (lighting, CCTV, on-demand night stops, gender-disaggregated data) and local deployments of 30 km/h zones and safer pedestrian environments.

All Task 1.3 objectives (legal definition, multi-level analysis, implications for actors, EDI integration) have been met and illustrated with real cases, laying a solid foundation for SOMI and the Smart Mobility Governance model.

9.2 Policy Recommendations

There are many barriers hindering equitable access to mobility. For some groups, these barriers are more outspoken than for others and within each of the discussed user groups, significant differences can occur based on one's socio-economic, cultural, or geographical background. MaaR has the potential to reduce these barriers as much as possible⁴⁰⁶. By providing target approaches to improving street design, access to public transport infrastructure and improvements to the service quality – for example to children, persons with disabilities, elderly etc – then it designs a system for more diverse needs overall. Mobility as a Right also shifts the challenge of stakeholder acceptance, by re-aligning all actors' priorities and visions towards ensuring mobility for everyone⁴⁰⁷.

Crucially, embedding MaaR necessitates a comprehensive view of mobility that extends beyond the transport network itself, advocating for proximity planning to reduce the *need* for travel. This includes promoting **proximity planning** models, such as the "15-minute city" concept, making **walkability** a fundamentally affordable and health-promoting mode that relieves financial burdens for lower-income groups. There is increasingly greater significance of pedestrian access in public transport planning, with walking playing a crucial role in the first and last mile. One key element is the importance of walking environments, as over 85% of public transport users walk to/from a transport hub in Europe⁴⁰⁸ and it makes up at least 50% of the travel time. Hillnhütter's⁴⁰⁹ research has shown that, even before increasing public transport service and coverage, improving the walking environment will reduce people's perception of distance and enlarge the public transport catchment area by three.



⁴⁰⁶ The concept of the right to mobility refers to the implementation by the State, local authorities and civil society of conditions that enable everyone to access the resources of the territory (employment, education, health, culture) through modes of transport that are open to all. It is in line with fundamental rights such as freedom of movement and the right to equality.

⁴⁰⁷ UPPER project, 2025. Streets for all. Mobility as a Right & School Streets.

Webinar. <https://www.youtube.com/watch?v=Vfhj6JFkdu8>

⁴⁰⁸ Hillnhütter H (2016) *Pedestrian Access to Public Transport*. Stavanger, Norway: University of Stavanger.

⁴⁰⁹ *Ibid.*

Figure 18 UITP, 2023b⁴¹⁰

However, consideration must be made to the fact that walking times vary greatly across age groups and abilities, impacting accessibility and should be considered from a justice perspective e.g to walk 400 metres, it would take someone under 30 years old 5.3 minutes. Whereas someone over the age of 65 would take more than 11 minutes. This means that it takes an elderly person twice as long to walk to the bus stop⁴¹¹. Simplistic distance-based models do not consider the realities of walking in cities. For example, poor pedestrian infrastructure, such as pedestrian underpasses and poorly designed crossings slows people or completely prevent people accessing transport services.

Embedding Mobility as a Right (MaaR) into a legal framework has significant implications for social equity because it reframes mobility as a necessary public good rather than a commodity. When mobility is treated as a right, states are then required to address structural barriers that restrict people's ability to access different amenities and services in the city.^{412 413}

This shift amplifies opportunities for vulnerable urban user groups who are often disproportionately affected by mobility inequities. A rights-based approach forces governments to invest in affordable, accessible, and safe transport, with equal spatial and social distribution. This improves conditions for marginalized and underserved communities, as well as active, conventional and MaaS commuters who benefit from strong walkability potential, robust, accessible and integrated public transit and non-car-centric mobility systems.

Embedding mobility as a right also supports recognition of the right to immobility (i.e. the right to remain rooted), protecting vulnerable communities from displacement, forced migration, and other forms of coerced movement⁴¹⁴ This is crucial both at the urban scale, as well as within global mobility flows.

From a transport justice perspective, a legal mobility right exposes and challenges socio-spatial inequalities in mobility. It provides a legal basis for contesting discriminatory transport policies and discriminatory practices in public space. It also has the potential to strengthen democratic participation by providing recourse for citizens to challenge unlawful or discriminatory transport policies, obliging municipalities to justify mobility decisions and to follow strict participatory decision processes.

Mobility as a Right (MaaR) principle should also extend beyond passenger mobility to include rights of users within freight mobility, including logistics workers and delivery drivers, as well as freight rights of urban communities. Under current urban logistics planning schemes, restrictions on movement and access meant to facilitate urban mobility do not affect all actors equally. Smaller logistics operators tend to be more heavily penalised by access regulations such as low-emission zones, time-window restrictions, or

⁴¹⁰ UITP (2023b). Policy Brief. Pathways to Multimodal Lifestyle: Reinforcing public transport with active and micromobility. <https://www.uitp.org/publications/pathways-to-a-multimodal-lifestyle-reinforcing-public-transport-with-active-and-micromobility/>

⁴¹¹ Alves et al, (2020). Walkability Index for Elderly Health: A Proposal. <https://doi.org/10.3390/su12187360>

⁴¹² ICLEI Europe. (2025). Prev.

⁴¹³ Martens, K. (2016). Prev.

⁴¹⁴ Pritchard, E. A. (2000). The Way Out West: Development and the Rhetoric of Mobility in Postmodern Feminist Theory. *Hypatia*, 15(3), 45–72. <https://doi.org/10.1111/j.1527-2001.2000.tb00330.x>; Rau, H., & Mögele, M. (2025). A new direction for mobility? Integrating immobility into sustainable consumption corridors. *Consumption and Society*, 1–18. <https://doi.org/10.1332/27528499Y2025D000000050>; Toivanen, A.-L., & García, P. (2024). Mobility, Immobility and the City: Theoretical Orientations and Concepts. In P. García & A.-L. Toivanen (Eds), *Urban Mobilities in Literature and Art Activism* (pp. 1–24). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-42798-5_1

pedestrianisation schemes than larger operators⁴¹⁵. These policies also have cascading effects on freight and delivery drivers – many of whom are migrants, low-income earners, or platform workers⁴¹⁶. The added costs, detours, and inefficiencies faced by non-compliant freight operators may also be passed on to residents through higher delivery fees or increased prices for goods and services.

In essence, the shift from “Mobility as a Commodity” to “Mobility as a Right” entails a reconceptualization of mobility systems from the perspective of individual choice and market dynamics to the perspective of public welfare and the common good.⁴¹⁷ This entails, not only the provision of equal opportunity to individuals with different mobility needs but also involves the making of a mobility system that respects the environment, ensuring that a functioning and accessible mobility system is also a reasonable and sustainable one. In other words, while it might be equitable to provide equal access to motorised vehicles, it might not be fair in terms of shared values for the common good.

MaaR should, therefore, prioritise principles of equity alongside principles of sustainability and resilience. This involves a vision that goes beyond transportation, such as planning for proximity to enable walking to be a viable mode to achieve daily and essential activities. Since walking is, essentially, a free travel mode, higher walkability relieves the financial burdens experienced by citizens in poverty or with lower economic conditions, thereby reducing social inequality.⁴¹⁸ Neighbourhood walkability has also been linked with higher social cohesion by creating the conditions for fostering social interaction and building social capital.^{419 420 421} Enhancing walkability, thus, acts as a social equilibrators for access to services and work opportunities, as well as building social capital at neighbourhood level in cities.

Measures therefore need to be taken at several levels: European, national and local.

9.2.1 EU Level

The European Union must recognise mobility as a right of effective access to essential services, including employment, education, health, culture and social participation. To this end, this right must be explicitly incorporated into the Union's major strategies and policy frameworks, including the European Green Deal and the Strategy for Sustainable and Smart Mobility. It is incumbent upon the European institutions to ensure the operationalisation of Principle 20 of the European Pillar of Social Rights by establishing an explicit legal link between access to transport, the fight against poverty, territorial cohesion

⁴¹⁵ Ma et al., 2025, prev.

⁴¹⁶ Fried et al., 2024, prev.

⁴¹⁷ Beemer, E., Diercks, G., & Loorbach, D. (2025). From commodity to commons: Understanding the transformative potential of mobility cooperatives for just sustainability transitions. *Environmental Innovation and Societal Transitions*, 57, 101039. <https://doi.org/10.1016/j.eist.2025.101039>

⁴¹⁸ Bridge, G. (2025). Equitable mobility: Enhancing walkability and rollability for inclusive and healthy communities. *Cities & Health*, 1–5. <https://doi.org/10.1080/23748834.2025.2468016>

⁴¹⁹ Carson, J. R., Conway, T. L., Perez, L. G., Frank, L. D., Saelens, B. E., Cain, K. L., & Sallis, J. F. (2023). Neighborhood walkability, neighborhood social health, and self-selection among U.S. adults. *Health & Place*, 82, 103036. <https://doi.org/10.1016/j.healthplace.2023.103036> ;

⁴²⁰ Morales-Flores, P., & Marmolejo-Duarte, C. (2021). Can We Build Walkable Environments to Support Social Capital? Towards a Spatial Understanding of Social Capital; a Scoping Review. *Sustainability*, 13(23), 13259. <https://doi.org/10.3390/su132313259>

⁴²¹ Sonta, A., & Jiang, X. (2023). Rethinking walkability: Exploring the relationship between urban form and neighbourhood social cohesion. *Sustainable Cities and Society*, 99, 104903. <https://doi.org/10.1016/j.scs.2023.104903>

and social inclusion. European energy, climate and social policies must consider the impact of transport accessibility on the exercise of fundamental rights.

Member States are required to fully implement the European Accessibility Act (Directive (EU) 2019/882). This obligation covers the physical accessibility of infrastructure and vehicles; the digital accessibility of transport services, including ticketing; and the accessibility of information for passengers. Effective control, monitoring, and sanction mechanisms must be put in place. In this regard, the European Union must ensure that the Trans-European Transport Network (TEN-T) complies with the principles of universal accessibility and territorial cohesion. Regulation (EU) 2024/1679 must be interpreted and applied in such a way as to ensure that rural, peripheral, island, and underserved areas are effectively connected to the main networks.

The European Commission must ensure the interoperability, openness, and reusability of mobility data in accordance with the ITS framework and Directive 2010/40/EU as amended. This data must be accessible under non-discriminatory conditions to enable the development of inclusive multimodal services, in particular *Mobility as a Service (MaaS)* solutions. European funding for mobility and ecological transition (CEF, ERDF, Social Climate Fund) must be conditional on compliance with measurable objectives in terms of accessibility, affordability and continuity of service.

9.2.2 National Level

Member States must recognise the right to mobility to create a positive obligation on the part of the State to ensure equitable access to transport systems. To this end, States are required to:

- Guarantee for the continuity of public transport services, including establishing a minimum service, particularly in the event of strikes, health, climate or energy crises. Public transport service contracts must include mandatory clauses relating to the right to mobility, covering universal accessibility; temporal coverage, including in the evening and at night; and service to unprofitable but socially essential areas.
- Establish national social pricing mechanisms, including targeted reductions, conditional free travel schemes and, where appropriate, mechanisms to cap transport expenditure for low-income households.

To this end, States must create or strengthen independent regulatory authorities with effective powers of control and sanction in relation to accessibility, non-discrimination and quality of transport services.

In terms of inclusiveness, national inclusive mobility plans must be adopted. These will incorporate explicit equity and inclusion objectives, considering the specific needs of people with reduced mobility, older people, young people, and people living in rural or underserved areas.

9.2.3 Local Level (Cities and Transport Authorities)

Local authorities must make the right to mobility a structuring principle of Sustainable Urban Mobility Plans (SUMP/PMUD). SUMP/PMUDs must set minimum standards, including in particular: access to frequent service within a reasonable distance or time ($\leq 10\text{--}15$ minutes); accessibility of all stops and passenger information; consideration of perceived safety, particularly about gender and vulnerabilities; and off-peak and night-time coverage.

Local authorities must promote local strategies aimed at reducing forced mobility and recognising the right to chosen immobility, through better coordination between urban planning, services and mobility. Local

policies must ensure that public spaces are designed to promote safe and inclusive mobility, including 30 km/h zones, barrier-free pathways, appropriate lighting, inclusive signage, and on-demand night-time stops.

Local authorities must deploy an adapted mobility offer by setting up inclusive multimodal hubs; on-demand transport services and/or solutions adapted to sparsely populated areas and specific groups.

In terms of equity, local authorities must ensure that local social tariffs are in place and maintain non-digital channels of access to mobility services to prevent any form of digital exclusion.

Local authorities must systematically involve citizens, particularly vulnerable groups, in the design, implementation and evaluation of mobility policies.

Areas of action	European level	State/national level	Local/regional level
Legal and political recognition	Explicitly include mobility as a condition for access to fundamental rights in EU strategies (Green Deal, Sustainable Mobility Strategy) Give operational scope to the European Pillar of Social Rights (principle 20 – access to essential services)	Recognise the right to mobility Include the right to accessibility, affordability and continuity in transport law	Affirm the right to mobility as a guiding principle of local policies (PDU, SUMP, territorial plans) Also recognise the right to chosen immobility (proximity, local services)
Universal accessibility (physical & digital)	Enforce and monitor the implementation of the European Accessibility Act (Directive 2019/882) Require universal accessibility in the TEN-T	Strictly transpose accessibility standards (PRM, digital accessibility, passenger information) Penalise operators for non-compliance	Adapt stops, vehicles, routes and transport hubs Ensure accessible passenger information (audio, visual, plain language)
Affordability and combating transport insecurity	Define and recognise transport poverty at EU level Mobilise the Social Climate Fund and structural funds to finance social tariffs	Introduce national social tariffs (caps, targeted free travel, reductions) Integrate mobility into social and employment policies	Free or reduced fares for targeted groups (young people, senior citizens, people with reduced mobility, low-income households)
Continuity and availability of service	Authorise and regulate public service obligations (Regulation 1370/2007) Promote service to sparsely	Guarantee a minimum service (strikes, crises) Finance unprofitable but essential routes	Ensure minimum frequencies, including off-peak and evening services Deploy on-demand transport

	populated and peripheral areas		
Territorial cohesion	Fund connections to rural, island and peripheral areas via the TEN-T and the CEF Make EU funding conditional on territorial equity objectives	Rebalance supply between urban centres and peripheral areas Integrate mobility, housing, employment and health into development policies	Develop local multimodal hubs Coordinate urban planning, services and mobility (15-minute city)
Safety and gender dimension	Integrate gender and safety into EU guidelines (women-friendly transport) Fund inclusive pilot projects	Integrate gender into mobility policies (gender mainstreaming) Combat harassment in transport	Improve lighting, human presence and on-demand stops at night Conduct local prevention campaigns
Data, digital technology and interoperability	Require open data and interoperability (ITS, MMTIS, open data) Regulate the use of data and AI	Create national access points for mobility data Ensure GDPR compliance and digital inclusion	Publish local data as open data Maintain non-digital alternatives (service counters, telephone)
Governance and participation	Encourage multi-level governance and the exchange of best practices Support co-creation through European programmes	Create or strengthen independent regulatory authorities Enforce social and MaaR clauses in public contracts	Involve citizens and vulnerable groups in policy design Establish local indicators
Funding and conditionality	Make EU funding conditional on accessibility, equity and sustainability objectives	Allocate dedicated budgets to inclusive mobility Establish equalisation mechanisms	Prioritise inclusive investments (public transport, active modes, on-demand transport) Reinvest local revenue (tolls, LEZs) in mobility provision

Figure 19 Summary table of policy recommendations

Conclusions:

The effective recognition and implementation of the right to mobility depends on:

- clear legal obligations at European level,
- normative transposition and effective guarantees at the state level,
- operational, measurable, and participatory implementation at the local level.

9.3 Outlook for Future Work

The next step is to publish a MaaR/SOMI dashboard for each pilot city, making data openly available and tracking progress across four key dimensions: equity, accessibility, sustainability, and rights effectiveness. These dashboards will serve as monitoring tools and link KPIs directly to Public Service Obligation (PSO) contract incentives, ensuring accountability and measurable impact.

Example KPIs include:

- Percentage of population within a 10-minute walk to frequent public transport services.
- Night-time coverage for essential mobility needs.
- Share of fully accessible stops and stations, including compliance with EN 301 549 for digital channels.
- Combined mode share for public transport and active modes (walking, cycling).
- Perceived safety index, based on user surveys and gender-sensitive indicators.

GOLIA could release a comprehensive Handbook providing practical tools for embedding MaaR into governance frameworks. This could include:

- Contract templates for MaaR-proof PSO agreements.
- Audit procedures for accessibility, real-time data availability, and gender safety compliance.
- Case study sheets showcasing best practices from pilot cities such as Florence, Antwerp, Plzeň, and Brussels, illustrating how MaaR principles translate into operational measures.

To operationalize MaaR effectively, GOLIA proposes a practical mini-toolbox that can be adopted by policymakers and transport authorities at different governance levels. First, the Legal Key recommends enacting a “Right to Mobility” clause in national legislation, granting regulators sanctioning powers to enforce accessibility and equity standards, as demonstrated by the Belgian model. Second, the Contract Key focuses on embedding MaaR-proof clauses in Public Service Obligation (PSO) agreements, covering dynamic data obligations in line with ITS Annex III, accessible ticketing systems, minimum night-time service coverage, demand-responsive transport (DRT) for rural areas, and the deployment of zero-emission fleets—drawing on best practices from Italy and the Czech Republic. Third, the SUMP Key calls for setting measurable targets within Sustainable Urban Mobility Plans, such as the percentage of fully accessible stops, ensuring ≤ 10-minute access to frequent services, achieving a +20-point improvement in perceived safety, and a +10-point increase in sustainable mode share. These targets could be monitored through annual audits and published openly to guarantee transparency. Finally, the Gender/Safety Key emphasizes implementing on-demand night stops, improved lighting, human presence in stations and vehicles, harassment reporting systems, and integrating gender-disaggregated data into planning and monitoring processes to ensure inclusive and safe mobility for all users.

APPENDIX

Appendix 1: Overview of the primacy of European law over national legislation in the target countries of Golia.

Each of the pilot countries (Belgium, Italy and the Czech Republic) has affirmed the primacy of European law.

Belgium

The Belgian Constitutional Court has confirmed the primacy of European law over decisions of the Court of Cassation in accordance with Article 34 of the Constitution. Judgment No. 159/2022 of 1 December 2022 illustrates this position⁴²², in which the Court set aside national case law in favour of European Union law in a case concerning the recognition of a driving licence falsely reported as lost by its holder to the Dutch authorities.

Italy

The Italian decision is the founding decision of the principle of the primacy of European law over national law, *Costa v. ENEL*⁴²³. This historic decision by the CJEU arose from an Italian dispute. This ruling is one of the foundations of EU case law. It establishes the principle of the primacy of Community law over national legislation. However, tensions have recently arisen, particularly under the Meloni government, which has expressed reservations about primacy, particularly in [migration](#).

Czech Republic

The Czech Republic recognises the primacy of European Union law, but the Czech Constitutional Court has sometimes challenged certain decisions of the CJEU, notably in the *Landtová* case⁴²⁴. The *Landtová* judgment was challenged by the Czech Constitutional Court in a decision dated 31 January 2012⁴²⁵. The case concerned a differentiated pension scheme between Czech and Slovak citizens after the dissolution of Czechoslovakia. The CJEU ruled that the Czech Republic could not discriminate against Slovak nationals in the granting of pensions, in accordance with the principle of non-discrimination and the free movement of persons. In its decision, the Czech Constitutional Court refused to apply the CJEU ruling on the grounds that:

1. The CJEU had exceeded its powers by intervening in an area falling within national sovereignty (the social security system after the dissolution).
2. The *Landtová* judgment would undermine the Czech constitutional identity, particularly the principle of equality before the law as interpreted by the Constitutional Court.
3. The Czech Court asserted that European Union law could not take precedence over the national Constitution in this specific case.

⁴²² Sadeleer N., '[The Constitutional Court recognises the primacy of European law, even over certain rulings of the Court of Cassation](#)', online, accessed on 10.2025.

⁴²³ CJEU, 15 July 1964, Case 6/64.

⁴²⁴ CJEU, 22 June 2011, case C-399/09.

⁴²⁵ [Czech Constitutional Court in a decision dated 31 January 2012](#).

It is one of the rare cases in which a national court explicitly rejects the primacy of European Union law. It illustrates the growing tension between national courts and the CJEU on the issue of constitutional sovereignty. It has paved the way for other similar challenges, notably in Germany, Poland and Hungary, where constitutional courts have also invoked the 'constitutional identity clause' to limit the scope of European law.

The Court of Justice of the European Union (CJEU) responded firmly and explicitly to challenges such as that of the Czech Constitutional Court in the *Landtová* case, reaffirming the principle of the absolute primacy of European Union law, including over national constitutions.

In several subsequent judgments, notably the *Energotehnica* judgment⁴²⁶, the CJEU clarified that "*a national court must disregard a decision of its constitutional court if it is contrary to EU law, even if this means not applying the national constitution*". It added that national courts cannot be penalised for applying EU law as a matter of priority. The principle of primacy applies to all national rules, including constitutional rules. National courts must amend their case law if it is incompatible with the objectives of a European directive. The *Energotehnica* judgment establishes the unconditional primacy of European Union law, including over Decisions of national constitutional courts, and protects judges who apply this primacy. This upsets the traditional balance of the hierarchy of norms in Member States⁴²⁷.

Described as an "*earthquake for the hierarchy of norms*" by legal scholars, many authors describe the *Energotehnica* ruling as an explicit affirmation of the primacy of EU law over national constitutions and of the obligation for ordinary judges to set aside conflicting constitutional case law from the outset⁴²⁸. Authors anticipate an increase in preliminary rulings to circumvent constitutional case law and an increased role for ordinary courts as "judges of the Union"^{429 430}.

⁴²⁶ CJEU, 26 September 2024, case C-792/22.

⁴²⁷ Many legal experts believe that the CJEU, by asserting that national judges must set aside their own constitution if it conflicts with EU law, is going too far, as this amounts to placing EU law above national constitutions, which has never been explicitly accepted by Member States.

⁴²⁸ Viangalli, F., "Que reste-t-il de la Constitution..." (What remains of the Constitution...), Village-Justice, 4 October 2024/mal 16 April 2025,

<https://www.village-justice.com/articles/que-reste-constitution-face-droit-europeen-suite-plaidoyer-pour-institution-une,53092.html> (accessed on 10/2025).

⁴²⁹ Pinggen A., "ECJ Ruled on Res Judicata...", Eucrim, 28 Oct. 2024 (Issue 3/2024) <https://eucrim.eu/news/ecj-ruled-on-res-judicata-effects-of-administrative-court-decision-before-criminal-courts/> (accessed on 10/2025).

⁴³⁰ SCarcello, O., "Energotehnica: Primacy and Effective Judicial Protection Beyond the Rule of Law Crisis", Perspectives on Federalism, 2024: <https://www.on-federalism.eu/articles/volume-16-issue-2-2024/note/energotehnica-primacy-and-effective-judicial-protection-beyond-the-rule-of-law-crisis> (accessed on 10/2025).

However, another part of the doctrine sees this ruling as merely an example of ‘*well-established case law*⁴³¹ (...) *not always fully integrated into judicial practice within the various Member States*’⁴³². “*This ruling by the CJEU contributes to the construction of the European legal area*”⁴³³.

From a state perspective, there are fears that tensions will be renewed in countries where primacy has already sparked controversy, while in more integrated legal systems, the ruling is seen as a consolidation of known solutions but applied in a more intrusive manner at the substantive stage⁴³⁴⁴³⁵.

Finally, the CJEU's official statement welcomes the strengthening of effective judicial protection (Art. 47 of the Charter) and the independence of judges, while acknowledging the primacy of EU law⁴³⁶.

Recurring points of doctrine

- **Hierarchy of norms: transition from "functional" primacy to "operational" primacy at the litigation stage**⁴³⁷.
- **Role of the ordinary judge: pivotal role in the protection of EU rights, including against constitutional case law.**
- **Normative governance: call to clarify, in domestic law, the relationship between constitutional review and review of conformity with conventions/European law.**

⁴³¹ Concerning the primacy of EU law over any national law, including the constitutions of Member States, [CJEU 17 December 1970, case 11.70](#); see point 3.

⁴³² Bertouille U., “Écarter la jurisprudence d’une Cour constitutionnelle relative à l’autorité de la chose jugée afin de garantir une protection effective des droits consacrés par l’Union (Arrêt Energotehnica) » (Set aside the case law of a constitutional court relating to res judicata in order to ensure effective protection of the rights enshrined by the Union, Energotehnica judgment), La tribune- le blog, mars 2025, <https://latribune.avocats.be/fr/ecarter-la-jurisprudence-d-une-cour-constitutionnelle-relative-a-l-autorite-de-la-chose-jugee-afin> (accessed on 01/2026)

⁴³³ <https://www.trouver-avocats.fr/actualites/arret-de-la-cjue-energotehnica-primaute-du-droit-de-lunion-et-obligation-des-juges-nationaux/>

⁴³⁴ *SCarcello, O., prev.*

⁴³⁵ Doctrine.fr – Fact sheets & comments on C-792/22, 2024.

⁴³⁶ CJEU, 26 Sept. 2024, case C-792/22, operative part and points 63–66.

⁴³⁷ **Functional primacy** refers to the theoretical hierarchy of norms (Constitution > laws > regulations). But at the **litigation stage**, there is a shift to **operational primacy**: the judge applies the most relevant and effective norm to resolve the conflict, even if it is hierarchically inferior. This reflects a more pragmatic approach to law, focused on the protection of rights and legal effectiveness.

Appendix 2: Data legislation

European data

- European data legislation is now based on a regulatory framework governing the protection, access, sharing and reuse of data, whether personal or non-personal. The main legal instruments include:
- The General Data Protection Regulation (GDPR)⁴³⁸. The GDPR came into force in 2018 and aims to guarantee the protection of European citizens' personal data by imposing strict obligations on data controllers and processors. It enshrines fundamental principles such as lawfulness, fairness, transparency, data minimisation, storage limitation and security of processing. Recent developments in 2025 have strengthened this framework by incorporating specific requirements related to artificial intelligence and the Internet of Things (IoT). Data controllers must now conduct regular audits and ensure greater transparency on the algorithms used to prevent the risk of discrimination and guarantee compliance with data protection principles. In the event of non-compliance, the penalty regime has been tightened: administrative fines can reach 6% of the global turnover of the offending company, which underlines the European legislator's desire to ensure effective and dissuasive enforcement of data protection rules.
- The Data Act⁴³⁹ establishes a harmonised framework to ensure fair access to and fair use of data, in particular data generated by connected devices such as vehicles, industrial machines and IoT objects. This regulation requires manufacturers to design equipment that allows data sharing, to prevent any technical or contractual restrictions. It also enshrines a right of access for consumers and businesses to data produced by their own equipment, thereby enhancing transparency and control over information. In addition, the Data Act prohibits unfair contractual terms that would limit or hinder data sharing between economic actors. Finally, it provides for measures to facilitate data transfer between cloud service providers, ensuring the interoperability and portability of information throughout the internal market.
- The Data Governance Act⁴⁴⁰ establishes a legal framework to organise the reuse of public data, regulate the establishment of data intermediation services and promote the creation of common European data spaces. This regulation aims to ensure that these exchanges take place in conditions of security, transparency and compliance with the principles of the internal market. Its impact is significant in that it promotes the circulation of industrial and scientific data, while ensuring the protection of economic interests and the confidentiality of sensitive information. It is therefore an essential tool for strengthening confidence in the data economy and supporting the development of innovative services based on the secure sharing of information.

⁴³⁸ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons regarding the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, *OJ L 119*, 4.5.2016, p. 1-88

⁴³⁹ Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828, *OJ L*, 2023/2854, 22.12.2023.

⁴⁴⁰ Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Regulation), *OJ L 152*, 3.6.2022, pp. 1-44.

- The 2002 ePrivacy Directive⁴⁴¹ strengthens the confidentiality of electronic communications and consent for online tracking (cookies, fingerprinting). Complementary to the GDPR, it focuses on privacy protection in digital communications. Transport applications and MaaS platforms must obtain explicit consent for user tracking and the use of navigation data.
- The AI Act⁴⁴² regulates the use of artificial intelligence systems, particularly those that process personal data. It imposes obligations such as algorithmic impact assessment, transparency of automated decisions and bias management. Dynamic pricing, route optimisation and predictive flow management systems must comply with these requirements to ensure fairness and non-discrimination.

These instruments form a coherent framework. The GDPR and ePrivacy ensure the protection of personal data and the confidentiality of communications. The Data Act and Data Governance Act guarantee access to, sharing and reuse of non-personal data. The AI Act regulates the use of algorithms that exploit this data. In terms of mobility, this articulation enables user protection (confidentiality and consent); system interoperability (open data for ITS and MaaS) and regulated innovation (transparent and non-discriminatory AI).

European data legislation is not limited to protection: it creates a framework that promotes accessibility, interoperability and transparency, which are essential conditions for smart, inclusive and sustainable mobility. Operators and authorities must incorporate these obligations into their contracts and infrastructure to ensure the effective availability of networks.

Belgian legislation on mobility data

Belgian legislation requires employers with more than 100 employees to carry out a diagnosis of home-to-work travel every three years. This assessment must be submitted to the Federal Public Service Mobility and Transport. This obligation stems from the Programme Law of 8 April 2003 and the Royal Decree of 16 May 2003, which aim to encourage sustainable mobility and provide reliable data for public policy planning.

Directive (EU) 2019/1024 on open data requires the availability of public data, in particular dynamic mobility data such as timetables, traffic conditions and vehicle availability. In Belgium, this directive was transposed by the federal law of 4 May 2016, amended in December 2023, as well as by regional texts such as the Walloon decree of 24 November 2022 and the Brussels ordinance of 10 December 2021. The law applies to federal public authorities and legal entities governed by public law that are dependent on the federal state. It covers all administrative documents, regardless of their medium, including source codes and algorithms, which were expressly added by the 2023 reform. This extension aims to ensure greater openness of data and to promote digital innovation.

⁴⁴¹ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications), OJ L 201, 31.7.2002, pp. 37-47.

⁴⁴² Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L, 2024/1689, 12.7.2024.

Any collection or processing of personal data related to mobility, including journeys, geolocation or subscriptions, must comply with the General Data Protection Regulation (GDPR), applicable since 2018.⁴⁴³ The fundamental principles include informed consent, transparency on the use of data, the right of access, rectification and deletion, as well as the implementation of enhanced security measures against leaks and cyberattacks. Monitoring is carried out by the Data Protection Authority (DPA) and the Data Protection Officer (DPO) of the FPS Mobility.

European Regulation 2022/868, known as *the Data Governance Act*, in force since September 2023, promotes the creation of common European data spaces, including one dedicated to mobility. It provides a framework for the secure reuse of protected data held by public services, the establishment of data intermediation services and data altruism, allowing voluntary sharing in the public interest. To implement the provisions of Regulation (EU) 2022/868, known as the Data Governance Act, the Belgian legislator adopted two laws, dated 13 and 15 May 2024 respectively⁴⁴⁴. These texts organise the reuse of protected data held by public services, regulate data intermediation services and establish mechanisms to promote data altruism. They also define the powers of the supervisory authorities and the security conditions applicable to data exchanges.

The Act of 17 August 2013 and the Royal Decree of 15 December 2013 establish the legal framework for the deployment of intelligent transport systems (ITS), in accordance with Directive 2010/40/EU. These systems enable the collection and exchange of real-time data on traffic, incidents and parking availability, while ensuring interoperability between different modes of transport.

The FPS Mobility and Transport⁴⁴⁵ is responsible for collecting, publishing and protecting data. The Data Protection Authority (DPA)⁴⁴⁶ ensures compliance with the GDPR. Open Data portals, such as [data.gov.be]⁴⁴⁷ and regional platforms, centralise the provision of information. Transport operators (SNCB, STIB, TEC, De Lijn) are required to publish their data in real time and to comply with data protection obligations. Finally, the European Union, through DG MOVE and CINEA, finances and supervises projects related to intelligent transport systems and data governance.

Belgian legislation requires public mobility data to be made available in accordance with Directive (EU) 2019/1024 and the law on the reuse of public sector information. The data concerned includes timetables, traffic conditions, parking availability and real-time information. To comply with these obligations, operators must publish their data on official portals such as [data.gov.be] or on regional platforms (ODWB, VODAP). The formats used must be open and allowing automated access.

Any data related to an individual, such as a journey, geolocation or subscription, constitutes personal data and must comply with the General Data Protection Regulation (GDPR).

Operators must clearly inform users through a privacy policy, obtain their explicit consent for collection, guarantee rights of access, rectification and deletion, and secure data through measures such as encryption and anonymisation. For example, a carpooling application must anonymise journeys before any statistical analysis.

The deployment of intelligent transport systems (ITS) is governed by Directive 2010/40/EU and the Belgian law of 17 August 2013. These systems must enable the collection and exchange of real-time data on traffic, incidents and parking availability, while ensuring interoperability between different modes of transport

⁴⁴³ [Law of 30 July 2018](#) on the protection of natural persons about the processing of personal data.

⁴⁴⁴ [Law of 13 May 2024 amending the](#) Law of 15 August 2012 on the creation and organisation of a federal service integrator. And [Law of 15 May 2024](#) implementing Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724

⁴⁴⁵ Federal Public Service Mobility and Transport: <https://mobilit.belgium.be/fr>

⁴⁴⁶ <https://www.autoriteprotectiondonnees.be/citoyen>

⁴⁴⁷ <https://data.gov.be/fr>

(bus, train, bicycle). To implement these provisions, connected sensors and systems must be integrated to collect data and share it with national and European platforms.

European Regulation 2022/868, known as *the Data Governance Act*, requires the secure reuse of protected data and the creation of common data spaces for mobility. Operators must use certified platforms for data intermediation and establish sharing agreements between public and private actors, guaranteeing the security and transparency of exchanges.

Italian legislation on mobility data.

In Italy, legislation on mobility data is based on two requirements: the protection of personal data and the implementation of intelligent transport systems (ITS) in accordance with European directives. The legal framework consists mainly of the General Data Protection Regulation (GDPR), supplemented by the Italian Personal Data Protection Code (Legislative Decree No. 196/2003⁴⁴⁸, amended by Decree No. 101/2018⁴⁴⁹). The competent authority, the Garante per la protezione dei dati personali, ensures compliance with the rules on the collection, processing and security of sensitive information, such as geolocation or payment data. At the same time, the transposition of the European ITS Directive (2010/40/EU and its revision 2023/2661) requires the digitisation and interoperability of traffic and transport data to ensure the cross-border flow of information and promote smart mobility. The Ministry of Infrastructure and Sustainable Mobility (MIMS) is coordinating this implementation, while the Autorità di Regolazione dei Trasporti (ART) is ensuring regulatory compliance and the fair access to services. This framework aims to reconcile technological innovation, data security and sustainable mobility objectives.

The challenges associated with this regulation are numerous and strategic. On the one hand, it guarantees the interoperability of systems at the European level, enabling travellers and operators to benefit from consistent and reliable services, particularly for integrated ticketing and multimodal planning. On the other hand, it strengthens data security by imposing high standards of protection and limiting the risks associated with cybercrime, which is essential in a context of increasing digitalisation of infrastructure. Economically, the establishment of a harmonised framework promotes technological innovation and stimulates the competitiveness of Italian companies in the smart mobility sector. Finally, this regulation contributes to major environmental objectives by encouraging the optimisation of traffic flows, the reduction of congestion and the promotion of public transport, thus supporting the transition to sustainable and carbon-free mobility.

Example of application: the national "Mobility as a Service Italia" (MaaS) platform, deployed in several major cities such as Milan and Rome, is a concrete illustration of this approach. It integrates real-time data from public transport operators, car-sharing services and self-service bicycles, while complying with GDPR standards. Thanks to a single ticketing system and multimodal information accessible via an app, users can plan, book and pay for their journeys in complete security. This project, supported by the MIMS and partly funded by the National Recovery Plan, demonstrates how legislation can promote innovation and sustainable mobility.

Directive (EU) 2019/1024 on open data and the reuse of public sector information was transposed by Legislative Decree No. 200 of 8 November 2021⁴⁵⁰, which came into force on 15 December 2021. This decree amends Legislative Decree No. 36 of 24 January 2006⁴⁵¹, which already provided the legal basis for the re-use of public data in accordance with previous PSI directives. The reform extends the scope of

⁴⁴⁸ [Legislative decree No. 196 of 30 June 2003.](#)

⁴⁴⁹ [Legislative decree No. 101 of 10 August 2018.](#)

⁴⁵⁰ [Legislative Decree No. 200 of 8 November 2021.](#)

⁴⁵¹ [Legislative Decree No. 36 of 24 January 2006.](#)

application: the reuse of data no longer concerns only public administrations, but also public enterprises (energy, gas, transport) and certain private actors subject to public service obligations.

It also introduces new key concepts:

- Dynamic data: obligation to make data available in real time via APIs.
- High-value data sets: mandatory publication in open and free formats.
- Data from publicly funded research: must be accessible to promote innovation.

In terms of pricing, the general principle is free access, with the possibility of charges limited to marginal costs, plus a "reasonable profit" to cover investments. Restrictions are in place to limit exclusivity agreements, to ensure competition and transparency. Finally, personal data protection remains a priority, with strict anonymisation rules and compliance with the GDPR.

Implementation is supervised by the Ministry for Innovation and Digital Transition and by the Agenzia per l'Italia Digitale (AgID). In 2023, AgID published technical guidelines for administrations, specifying formats, metadata, licences, search tools and reuse procedures, in accordance with Article 12 of the amended decree.

Regulation (EU) 2022/868, known as the *Data Governance Act* (DGA), has been in force since 24 September 2023 and was incorporated into Italian law by Legislative Decree No 144/2024⁴⁵², which entered into force on 25 October 2024. This implementation establishes a legal framework for data governance and its secure and transparent re reuse. The Agenzia per l'Italia Digitale (AgID) has been designated as the national authority responsible for data governance. It is responsible for supervising data intermediation service providers, managing notifications and registrations relating to these services, and creating and maintaining the register of organisations practising data altruism, i.e. the voluntary sharing of data for purposes of general interest. To ensure effective implementation, AgID collaborates with several key bodies: the Garante per la protezione dei dati personali for personal data protection, the Autorità Garante della Concorrenza e del Mercato (AGCM) for competition aspects, and the Agenzia per la Cybersicurezza Nazionale (ACN) for system security. Data intermediation service providers must submit a mandatory notification to AgID. Organisations wishing to practise data altruism must register officially. All actors must adhere to strict principles of transparency, neutrality, and security in data management. In the event of non-compliance, severe penalties are provided for, up to 6% of annual global turnover. The DGA applies to a wide range of strategic sectors, such as mobility, health, energy, the environment, agriculture, finance, and industry. Its objectives are to facilitate the reuse of protected public data, promote secure intermediation models, and encourage data altruism for projects of general interest, particularly in research and innovation.

At national level, the Italian Personal Data Protection Code (Legislative Decree No. 196/2003⁴⁵³, amended by Decree No. 101/2018), harmonised with the GDPR, regulates the collection, use and storage of personal data, including location and mobility data. The competent authority responsible for ensuring compliance with these rules is the *Garante per la protezione dei dati personali* (Data Protection Authority). The Ministry of Infrastructure and Sustainable Mobility (MIMS) is responsible for mobility policies and the regulatory framework for transport, particularly about digitisation and open data. Italy implements European obligations via national platforms for data publication. Transport operators, local authorities and infrastructure managers must publish their data according to defined standards.

Finally, the key principles for mobility data management include data openness and interoperability, which must be accessible via a national access point in standardised formats. The protection of personal data is paramount: any data that could identify a person, such as geolocation or journeys, is subject to the GDPR and the Italian Code. Users must be informed of the use of their data and give their explicit consent. In

⁴⁵² Legislative Decree No. 144/2024.

⁴⁵³ Prev.

addition, there is an obligation to secure data and, where possible, anonymise it to prevent re-identification.

The management of public mobility data is part of an open data approach and is based on both European and national regulatory frameworks.

At European level, Directive 2010/40/EU and Delegated Regulation (EU) 2017/1926 require the provision of mobility data, such as timetables, real-time information and infrastructure, to enable multimodal information services. Each Member State must create a National Access Point (NAP) to centralise this data and ensure its interoperability. In addition, the European Open Data Directive encourages the reuse of public sector information, including transport data, to promote innovation and transparency.

At the national level, the *Codice dell'Amministrazione Digitale* (CAD), established by Legislative Decree No. 82/2005, defines the principles of dematerialisation and openness of public data. The *Codice della Trasparenza* (Decree No. 33/2013) reinforces the total accessibility of public data, including data related to mobility. The Italian Digital Agenda promotes digitisation and open data in line with the European Digital Agenda. The competent authority for personal data protection is the *Garante per la protezione dei dati personali*, which ensures compliance with the GDPR and the Italian Code.

In terms of organisation, Italy has a National Access Point like transport.data.gouv.fr in France. This platform centralises open mobility data, such as timetables, disruptions or the availability of shared vehicles, to make it accessible to developers, local authorities and operators. To ensure interoperability, standardised formats such as NeTEx, SIRI and GBFS are used.

Finally, the key principles of this management system are based on open and free data, which must be freely accessible and reusable. Interoperability is ensured using harmonised formats, and data quality requires that data be accurate, updated and corrected quickly in the event of errors. The protection of personal data remains essential: any data that could identify an individual must be anonymised and processed in accordance with the GDPR.

In summary, Italy applies European rules on the openness of mobility data through a national framework (CAD, Transparency Code) and a National Access Point. The aim is to promote intermodality, transparency and innovation, while respecting the protection of personal data.

Czech legislation on mobility data

Czech legislation on mobility data is based primarily on the General Data Protection Regulation (GDPR), which applies throughout the European Union, and on national law No. 110/2019 Coll. on the processing of personal data. This law, which came into force in 2020, adapts the GDPR to the national context and transposes Directive 2016/680 for processing related to security and justice. It defines specific rules for processing outside the scope of European law and entrusts supervision to the national data protection authority, the Úřad pro ochranu osobních údajů (UOOÚ).

Data generated by intelligent transport systems (ITS), such as traffic information, geolocation or real-time data, is considered personal data when it can be used to identify an individual. Its processing must comply with the principles of the GDPR: transparency, explicit consent, purpose limitation, data minimisation and enhanced security. European guidelines specify that connected mobility projects must provide for anonymisation mechanisms where possible and ensure protection against unauthorised access.

In terms of interoperability, the Czech Republic applies Directive 2010/40/EU and its delegated regulations, particularly those relating to real-time and multimodal information. Data must be exchanged using harmonised formats, such as DATEX II, while complying with the confidentiality and cybersecurity requirements imposed by the GDPR and national law.

ITS and Smart Mobility projects are supervised by the UOOÚ, which ensures compliance with processing requirements. Penalties for violating the rules can be significant, as illustrated by the conviction of a company fined several million euros for illegal data processing in 2023.

In summary, any smart mobility project in the Czech Republic must have a solid legal basis, guarantee user consent, comply with European interoperability standards and incorporate strict cybersecurity measures.

Area	Legal basis / Standard	Main obligations
Data protection	GDPR (EU 2016/679) + Act No. 110/2019 Coll.	Explicit consent, transparency, purpose limitation, data minimisation.
Supervisory authority	Úřad pro ochranu osobních údajů (UOOU)	Supervision of processing, penalties for non-compliance.
ITS interoperability	Directive 2010/40/EU + Delegated Regulations (2015/962, 2017/1926)	Harmonisation of formats (DATEX II), compatibility with European systems.
Cybersecurity	GDPR + European ITS standards	Protection against cyberattacks, data confidentiality, compliance with the GDPR.
Smart Mobility	EDPB guidelines (connected vehicles)	Data anonymisation, secure access, clear user information.

Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 establishes a legal framework for the reuse of public sector information and open data. Its aim is to stimulate innovation, increase transparency and promote the development of digital services. To achieve these objectives, it requires Member States to make public data available in open, interoperable and machine-readable formats. It also provides for free access to high-value data sets to facilitate their reuse by businesses, researchers and citizens. The Czech Republic has transposed this directive mainly through two pieces of legislation. The first is Act No. 106/1999 Coll. on freedom of access to information⁴⁵⁴, which has been amended to incorporate European obligations. The second is Act No. 123/1998 Coll. on access to environmental information⁴⁵⁵, which supplements the provisions for environmental data. These amendments impose several key obligations: the provision of public data in open, machine-readable formats; real-time access to dynamic data such as traffic or mobility data⁴⁵⁶; free access to high-value data sets as defined by the European Commission; and compatibility with European standards, in particular the INSPIRE Directive⁴⁵⁷ for geospatial data.

The implementation of these provisions is based on the national open data portal⁴⁵⁸, managed by the Ministry of the Interior. This portal centralises data sets from government departments, public companies and research institutions, in accordance with publication and reuse obligations. Public bodies must publish their data in interoperable formats such as CSV, JSON or RDF, regularly update dynamic data and ensure the availability of metadata to facilitate search and reuse by third parties.

The Ministry of the Interior is the competent authority for supervising compliance and managing the national portal. It ensures that transparency rules are applied and European standards are implemented.

⁴⁵⁴ [Act No. 106/1999 Coll.](#)

⁴⁵⁵ [Act No. 123/1998 Coll.](#)

⁴⁵⁶ As part of the **Prague Smart City** project, data on real-time traffic, adaptive traffic lights and connected car parks is published on the national portal. This information enables developers to create navigation and urban traffic management applications.

⁴⁵⁷ [Directive 2007/2/EC](#) of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), *OJ L 108*, 25.4.2007, pp. 1-14.

⁴⁵⁸ [data.gov.cz](#): This portal centralises datasets from government agencies, public companies and research institutions. It offers data on mobility, road infrastructure, public transport timetables and environmental information. The formats used are interoperable (CSV, JSON, RDF) and comply with European standards.

In the event of non-compliance with obligations, sanctions may be applied, ranging from administrative measures to budgetary restrictions for defaulting bodies.

The transposition of the directive in the Czech Republic increases the openness of public data, which stimulates innovation and the development of digital services. It improves administrative transparency and promotes citizen participation. Finally, it ensures European interoperability, facilitating the creation of cross-border applications in strategic areas such as mobility, the environment and urban services.

Field	Main obligations	Legal basis	Responsible actor
Data accessibility	Provision of public data in open and machine-readable formats	Directive 2019/1024; Act No. 106/1999 Coll. (EU)	Ministry of the Interior; Public bodies
Dynamic data	Real-time publication of data (traffic, mobility, weather)	Directive 2019/1024; Amendments to Act 106/1999 (EU)	Administrations; ITS operators
Free access to key data	Free access to high-value datasets defined by the European Commission	Directive 2019/1024; Regulation (EU) 2023/138 (EU)	Ministry of the Interior
Interoperability	Compliance with European standards (INSPIRE, CSV, JSON, RDF formats)	Directive 2019/1024; INSPIRE standards (EU)	National portal data.gov.cz
Control and sanctions	Supervision of compliance and penalties for non-compliance	Act No. 106/1999 Coll.; GDPR	Ministry of the Interior; UOOU

Regulation (EU) 2022/868, known as the Data Governance Act (DGA), entered into force on 24 September 2023 in all Member States of the European Union. This regulation aims to facilitate the secure sharing of data, whether personal or non-personal, by establishing harmonised governance mechanisms at European level. It introduces several major innovations:

- The possibility of reusing protected data held by the public sector.
- The establishment of a framework for data intermediary services.
- The concept of data altruism, allowing the voluntary sharing of data for purposes of general interest.
- The creation of the European Data Innovation Board, responsible for coordinating the implementation of the regulation.

The implementation of the DGA in the Czech Republic is based on the Data Governance Act (DGA)⁴⁵⁹ on several authorities: The Ministry of Industry and Trade, which is the main administrator of the regulation; the Ministry of the Interior, responsible for Articles 3 to 9 relating to the reuse of protected public data; and the Úřad pro ochranu osobních údajů (UOOU), the national data protection authority, which oversees compliance and can impose penalties for violations.

Mobility data management in the Czech Republic is part of a national strategy for digitisation and open public data, in line with European directives (Directive 2010/40/EU on ITS, Directive 2019/1024 on open data) and Regulation (EU) 2022/868 (Data Governance Act). The aim is to ensure the accessibility, interoperability and security of transport and mobility data, while promoting its reuse for innovative services.

⁴⁵⁹ [Akt o správě dat \(DGA\) – EU Regulation on data management](#)

The Ministry of Transport is responsible for defining mobility policies and overseeing the deployment of intelligent transport systems (ITS) throughout the country.

The Ministry of the Interior is responsible for publishing public data and managing the National Open Data Portal (data.gov.cz), which centralises data sets from government agencies and operators.

The Digitální a informační agentura (DIA) coordinates the national data management strategy. It ensures the quality of information and the standardisation of formats and is preparing the future law on public data management. The Úřad pro ochranu osobních údajů (UOOÚ), the national personal data protection authority, is responsible for ensuring compliance with the GDPR and confidentiality rules. It has powers of control and sanction in cases of non-compliance. Finally, transport operators and local authorities produce mobility data, such as timetables, traffic information, parking and carpooling. They are also responsible for publishing this data in open and interoperable formats.

The Czech Republic has a national open data catalogue (NKOD), accessible via data.gov.cz, which centralises data sets from administrations, transport operators and local authorities. The data is published in interoperable formats (CSV, JSON, RDF) and complies with European standards. For dynamic data (traffic, real-time mobility), APIs are made available to enable integration into third-party applications. The DIA plays a key role in coordinating and establishing the methodology for data publication, while the Ministry of the Interior manages the national portal. The UOOÚ monitors compliance with personal data processing regulations and can impose penalties in the event of violations. A bill on public sector data management is currently being drafted to strengthen governance, introduce a single point of access for reuse requests and regulate data intermediation services in accordance with the Data Governance Act.

Appendix 3: Summary of MaaR-related Legal Determinants

Legal Determinants: Antwerp

Determinant label on gender mainstreaming	EU level – coverage & example	National level – coverage & example	Local/city level – coverage & example	Note on enforcement / data availability
Access & information	Strong: Regulation 2024/1679 (RTE-T): Interconnections and the reliability of services Regulation (EC) 1370/2007: Continuity of service Directive 2019/882 (European Accessibility Act)	Strong Law of 29 November 2017 on the continuity of passenger rail transport services in the event of a strike. (Minimum service, but only for SNCB (Belgian National Railway Company)) Law of 8 May 2024 : Accessibility and availability of services (ticketing, real-time information, terminals) Example: Modernisation of railway lines (EuroCap-Rail) Deployment of ERTMS on 500 SNCB trains Intermodal hub at Brussels Airport	Strong: Regional mobility plans (Wallonia, Brussels, Flanders) Antwerp implements the Flemish strategy for sustainable mobility^[4] Example of application: Grote Verbinding project^[5] Flemish basic accessibility 03.04.2019 Ex: Multimodal hubs, such as Hoppin points	
Physical access & information	Strong – EU rail/bus passenger rights regs on accessibility Regulation (EC) No 1107/2006 (air transport) & Regulation (EU) 2021/782 (rail passengers rights) & Regulation (EU)	Strong: Belgian Constitution, 22 ter Law of 10 May 2007^[6] requires reasonable adjustments in transport Law of 12.01.2007 on gender mainstreaming	Medium: In Flanders, the De Lijn programme aims to gradually improve the accessibility of stops and vehicles.	

	No 181/2011 (bus and coach services)			
Basic affordability of mobility	Weak – only general consumer protection	Medium – Fare discount <u>Mobility Budget</u> : finance sustainable modes of transport Collective labour agreements No. 19/9 and 19/11 require employers to contribute financially	Low – no systematic local affordability monitoring. Antwerp focuses on transparent pricing and on-demand solutions to ensure affordability (in line with the Flemish Decree on Basic Accessibility)	Ticket price data exist; income data from NSOs; no combined metric
Safe journeys for VRUs	Strong – EU road safety framework, Vision Zero objectives	Strong – national road safety plans <u>"All for Zero" Plan"</u>	Strong: New <u>Flemish Highway Code</u> Antwerp: the widespread introduction of 30 km/h zones throughout almost the entire city; safe facilities for cyclists and pedestrians, on prevention and information, using digital tools such as Smart Ways to Antwerp	Accident data is collected; consistent VRU-specific data is variable by city
Security	Low: Only a strategy or a report	Medium strong: Camera Law of 21 March 2007; surveillance is mandatory in stations Private Security Act of 2 October 2017: coordination between police forces and transport operators Prevention campaigns against incivility and aggression	Medium strong - measures to prevent harassment and assault: relies on human presence and surveillance, safe urban design, such as improved lighting at stops and multimodal hubs, demand drop-off points in the evening, digital tools – such as reporting and alert applications – are integrated into mobility platforms such as Hoppin, offering safe routes	The City of Antwerp has been recognised by the Smart Mobility Awards for its innovative projects aimed at safer and multimodal mobility.

			and booking options to avoid waiting in isolated areas.	
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Legal Determinants: Florence

Determinant label on gender mainstreaming	EU level – coverage & example	National level – coverage & example	Local/city level – coverage & example	Note on enforcement / data availability
Access & information	Strong: Regulation 2024/1679 (RTE-T): Interconnections and the reliability of services Regulation (EC) 1370/2007: Continuity of service Directive 2019/882 (European Accessibility Act) Directive 2010/40/EU: ITS	Strong Decree-Law No. 179 of 18 October 2012: to create a national framework for the deployment of intelligent systems in road transport to improve infrastructure management and efficiency Law No. 146 of 12 June 1990, amended by Law No. 83/2000, which regulates the exercise of the right to strike in essential public services (servizi pubblici essenziali), including mobility.	Low: deploying intelligent transport systems (ITS) to optimise traffic flow management and reduce congestion. All these actions, which are part of the Piano Urbano della Mobilità Sostenibile (PUMS), illustrate Florence's desire to reconcile accessibility, innovation and respect for the environment.	
Physical access & information	Strong – EU rail/bus passenger rights regs on accessibility Regulation (EC) No 1107/2006 (air transport) & Regulation (EU) 2021/782 (rail passengers	Strong: Law No. 104/1992 the right to accessibility in transport Legislative Decree No. 285/1992, known as <i>the Codice della Strada</i> (Highway Code), contains specific provisions	Not found	

	rights) & Regulation (EU) No 181/2011 (bus and coach services) Directive 2019/882 (European Accessibility Act)	for parking spaces reserved for persons with disabilities and requires the adaptation of road infrastructure to facilitate their mobility. Stanca Law No. 4/2004, on digital accessibility (including mobility information) Decree No. 82/2022 ^[1] transposes the European Accessibility Act (EAA) obligations for transport services and online ticketing systems to make them accessible		
Basic affordability of mobility	Weak – only general consumer protection	Low: National Recovery Plan: promoting transport solutions that are less costly in the long term Decree-Law No. 50 of 17 May 2022: Bonus Trasporti (a €60 voucher)	Strong Bonus TPL « Ti Porta Firenze » Édition 2025 Subscription split into instalments Aim to progressively move towards conditional, targeted free public transport	Ticket price data exist; income data from NSOs; no combined metric
Safe journeys for VRUs	Strong – EU road safety framework, Vision Zero objectives	Strong: New Highway code from 2024: overall objective is to reduce serious accidents and sustainably change risky driving behaviours.	Strong: long-term Vision Zero approach, based on lower speeds, safer street design, controlled car access, strict enforcement and public awareness.	Accident data is collected; consistent VRU-specific data is variable by city

			A central urban Control Room uses cameras and sensors to monitor traffic in real time, detect incidents quickly and coordinate emergency responses. Speed limits (Zone 30)	
Security	Low: Only a strategy or a report		Strong Programme “Viaggiare più sicuri” (“Travelling more safely”) : clear rules of conduct, a strong and visible security presence, advanced monitoring technologies, and coordinated action between the city, operators and police forces.	

Legal Determinants: Plzeň

Determinant label on gender mainstreaming	EU level – coverage example	National level – coverage & example	Local/city level – coverage & example	Note on enforcement / data availability
Access & information	Strong: Regulation 2024/1679 (RTE-T): Interconnections and the reliability of services Regulation (EC) 1370/2007:	Medium: Resolutions No. 57/2017, 259/2021, Modernisation of rail corridors, renovation of strategic stations⁴⁶⁰ National Transport Strategy 2035.	Strong Deploying intelligent transport systems (ITS) to optimise traffic flow management, reduce congestion and improve	Plzeň is an European model for smart mobility, combining intermodality, digitalisation and sustainability to improve quality of life

⁴⁶⁰ <https://www.eib.org/en/press/all/2025-313-czech-republic-to-advance-high-speed-train-travel-with-eib-advisory-support>

	Continuity of service Directive 2019/882 (European Accessibility Act) Directive 2010/40/EU: ITS	Loi n° 424/2023 Sb. « Zákon o požadavcích na přístupnost některých výrobků a služeb » Act No. 13/1997 Sb., on roads (zákon o pozemních komunikacích), which provides the legal basis for traffic management, the collection and dissemination of road data and the operation of ITS systems	the punctuality of public transport.	and reduce environmental impact.
Physical access & information	Strong – EU rail/bus passenger rights regs on accessibility Regulation (EC) No 1107/2006 (air transport) & Regulation (EU) 2021/782 (rail passengers rights) & Regulation (EU) No 181/2011 (bus and coach services) Directive 2019/882 (European Accessibility Act)	Medium : The National Plan for the Creation of Equal Opportunities for Persons with Disabilities sets specific objectives for the removal of architectural and mobility barriers. The Social Inclusion Strategy 2021-2030		
Basic affordability of mobility	Weak – only general consumer protection	Strong: Str: Act No. 194/2010 Sb.; reduced fares for Students, senior citizens (60+), persons with disabilities; partial free access for Children <15, & seniors >65 Compensation for operators		Ticket price data exist; income data from NSOs; no combined metric

		Subsidies for rural areas		
Safe journeys for VRUs	Strong – EU road safety framework, Vision Zero objectives	Strong: Act No. 361/2000 Coll. on Road Traffic ⁴⁶¹ , supplemented by Act No. 13/1997 Coll. on Roads	Strong: low speed zone, Measures to benefit pedestrians and cyclists (markings, dedicated areas, etc.), use of intelligent traffic management systems	Accident data is collected; consistent VRU-specific data is variable by city
Security	Low: Only a strategy or a report	Strong Act No. 13/1997 Sb., on roads (<i>Zákon o pozemních komunikacích</i>): It includes a specific chapter on road safety, covering signage, user protection and, more recently, the integration of intelligent transport systems (ITS). For travellers, this law ensures that the roads they use meet minimum safety standards and are subject to ongoing administrative and technical monitoring. Road-travel safety is Act No. 361/2000 Safety of travellers using collective road transport Act No. 111/1994 Coll. on Road Transport	Strong: Enforces national legislation	

⁴⁶¹ <https://www.zakonyprolidi.cz/cs/2000-361>

		Act No. 266/1994 Coll. on Railways Act No. 49/1997 Coll. on Civil Aviation Traveller safety is reinforced by legislation on public security and police powers		
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Embedding equity, diversity, inclusive requirements:
toward a new definition of Mobility as a Right

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Embedding equity, diversity, inclusive requirements:
toward a new definition of Mobility as a Right