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EU Urban Mobility Observatory

SUMP Reference Document on Cycling

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About
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Guide to the reader

This SUMP reference document supports practitioners in integrating cycling into Sustainable Urban Mobility Planning (SUMP). It applies the SUMP concept as outlined in the European Commission's Urban Mobility Package and the SUMP Guidelines, while reflecting the latest policy developments such as the European Green Deal (2019), the new EU Urban Mobility Framework (2021), the EU Declaration on Cycling (2024), and the revised Trans-European Transport Network (TEN-T) Regulation (2024).

The document is part of the compendium of SUMP reference materials developed under the EU Urban Mobility Observatory. It provides hands-on planning guidance and complements the main SUMP Guidelines by focusing on the specific role of cycling within the planning process.

The primary intended audiences are local and regional authorities, urban planners, transport practitioners, and mobility managers. The guide offers:

- Practical recommendations for incorporating cycling measures into each phase of the SUMP cycle in alignment with the EU Declaration on Cycling;
- Best practice examples from across Europe;
- Tools to support practitioners throughout the SUMP process.

The guide follows the SUMP cycle and highlights how cycling can be embedded in each of its four phases. It also helps municipalities reflect the principles of the EU Declaration on Cycling into local measures and provides practitioners with relevant entry points for action.

Executive Summary

Cities and towns across Europe are increasingly recognising cycling as an efficient, reliable, healthy, and affordable mode of transport that contributes to climate targets, road safety, social inclusion and economic vitality.

The EU Declaration on Cycling (2024) outlines eight areas for advancing commitments on cycling. Further, recent revisions to the TEN-T Regulation require all urban nodes to have a SUMP by 2027 and require multimodal passenger hubs to provide access to active mobility. Together, these factors establish cycling as a legitimate mobility mode requiring dedicated infrastructure, services and policies.

This SUMP reference document provides practical guidance on how to incorporate cycling into SUMPs, including:

- Embedding cycling into the vision, objectives, and targets of a SUMP, ensuring alignment with broader EU and national policies.
- Planning safe, connected and continuous cycling networks, complemented by services such as secure parking, bike sharing, and charging facilities.
- Ensuring cycling connects seamlessly with public transport and shared mobility, offering citizens flexible and sustainable travel options.
- Making cycling accessible for all, also addressing issues of transport poverty.
- Using monitoring tools to identify needs, assess impacts, and adapt strategies over time.
- Ensuring public support through transparent communication and participatory planning.

By following the SUMP cycle, users of this guide can help to ensure that cycling in their city is systematically planned, implemented, and monitored. Doing so strengthens the entire urban mobility system, making it safer, cleaner, more resilient and better connected.

Introduction

Context

In recent years, cycling has grown in prominence in Europe as cities strive for cleaner, more efficient, and inclusive urban mobility solutions. SUMPs identify cycling not just as a good alternative mode of transport but rather as a key element in the development of resilient and sustainable cities. As SUMPs are developed and implemented, cycling's contributions have become increasingly prominent, driving reductions in greenhouse gas emissions, supporting equitable access to mobility, and promoting multimodal, healthy, liveable urban environments. Integrating cycling further into SUMPs with the latest (political and technological) developments is essential not only for achieving immediate improvements in transport systems but also for addressing broader long-term social, economic, and environmental goals articulated at European, national, and local levels.

The most recent updates to the policy landscape within the European Union further amplify the significance of cycling. The European Green Deal[1] (2019), which sets ambitious climate neutrality goals for 2050, directly underscores the need to shift towards sustainable transport, with cycling being an economically effective and scalable solution. The Fit for 55 package (a set of laws aiming to reduce greenhouse gas emissions[2]) underscores these goals, aiming for at least a 55% reduction in EU emissions (in comparison to 1990) by 2030, thus elevating the importance of active mobility and integrated cycling policies. The Sustainable and Smart Mobility Strategy[3] (2020) emphasises cycling as central to achieving sustainable mobility, reinforcing its role in climate-resilient transport solutions. Complementing this, the New EU Urban Mobility Framework[4] (2021) explicitly advocates for stronger integration of active mobility – including cycling – as fundamental to a transition to safe, accessible, inclusive, smart, resilient and zero-emission urban mobility systems.

In 2024, the EU Declaration on Cycling[5] Formally recognised cycling as an accessible, inclusive, economical and healthy form of transport and recreation. This declaration has accelerated investments[6] in cycling infrastructure and encouraged Member States to mainstream cycling in national and local transport strategies. The revised Trans-European Transport Network (TEN-T) Regulation, which now requires the adoption and monitoring of SUMPs for 431 urban nodes by 2027[7], also calls for the integration of cycling infrastructure for planning or upgrading transport infrastructure. This approach integrates cycling as a core component of Europe's transport system, establishing it as a central and strategic priority rather than a secondary "nice-to-have". This development marks a significant shift towards acknowledging cycling as a central element of Europe's transport systems and policy strategies, driving European municipalities and regions towards sustainable mobility practices.

[1] The European Green Deal (2019), COM (2019) 640 final. https://eur-lex.europa.eu/

[2] Fit for 55. https://www.consilium.europa.eu/en/policies/fit-for-55/

[3] Sustainable and Smart Mobility Strategy – putting European transport on track for the future (2020), COM (2020) 789 final. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789

[4] The New EU Urban Mobility Framework (2021), COM (2021) 811 final. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0811

[5] European Declaration on Cycling (2024), C/2024/2377. https://eur-lex.europa.eu/eli/C/2024/2377/oj

[6] EU Urban Mobility Observatory (2025), One year of the European Declaration on Cycling: Progress and impact made since the adoption. https://urban-mobility-observatory.transport.ec.europa.eu/

[7] Regulation (EU) 2024/1679. https://eur-lex.europa.eu/eli/reg/2024/1679/oj/eng

Objectives of this reference document

The objective of this SUMP reference document is to provide comprehensive guidance and practical insights for practitioners to effectively integrate cycling into SUMPs. The document targets urban planners, transport practitioners and mobility managers, equipping them with practical and evidence-based strategies, case studies and practical tools to integrate cycling infrastructure development (including the cycling network and cycle services such as charging stations, parking facilities, and bike share docking stations) and policy within broader mobility planning frameworks. This guidance aims to facilitate informed decision-making, foster cooperation among stakeholders, and enable cities to implement cycling measures efficiently and inclusively.

Why is a specific focus on cycling in a SUMP important?

Cycling brings with it broad-ranging societal benefits, including improved personal health, reduced environmental impacts, enhanced social equity, increased independence for children and youth, financial savings and more liveable, attractive cities. Cycling can contribute to addressing transport poverty by offering an affordable, accessible mode of transportation for economically vulnerable populations. This is further reflected in the European Commission's Guidance on Social Climate Plans[8], which encourages Member States to prioritise cycling infrastructure development connecting low-income areas with key destinations.

Despite the many advantages, the reallocation of space associated with high-quality cycling facilities often leads to strong opposition, sometimes referred to as "bikelash", which has been defined as "disproportionately intense resistance to a project, which goes beyond the "not-in-my-backyard" concern commonly experienced by other infrastructure projects not related to cycling"[9]. Overcoming such resistance requires broad, proactive engagement, transparent communication, inclusive and integrated planning approaches, and a recognition that the opposition may be loud but does not necessarily represent the views of the majority. Cities must effectively balance diverse stakeholder interests, ensuring that cycling integration yields tangible benefits across the entire community.

Current mobility trends underscore the dynamic evolution of cycling. Advances in technology have broadened the range of bicycle types available, offering numerous options in terms of size, speed, and functionality. E-bikes, cargo bikes, long-tail bikes, bike trailers, tricycles and various adapted cycles cater to a wider range of users, making cycling accessible to more people than ever before. This technological progress, coupled with shifting consumer preferences and supportive policy frameworks, has embedded cycling firmly into intermodal journey chains, seamlessly linking cycling with public transport and other mobility services. Cycling plays an increasingly vital role in multimodal transport systems, complementing public transport and substantially enhancing overall accessibility.[10] Additionally, cargo bikes are

[8] Guidance on the Social Climate Plans (2025), C (2025) 881 final. https://commission.europa.eu/publications/guidance-social-climate-plans_en

[9] Glossary of terms, "bikelash", https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-standards-and-guidance/cycling-network-guidance/cycle-network-and-route-planning-guide/glossary-of-terms/

[10] Intermodal vs multimodal: *Intermodal* transport describes a chain of travel on a single journey where the traveller switches from one mode to another (e.g., cycling to a train or bus station). *Multimodal* describes a lifestyle in which the traveller

emerging as efficient urban logistics solutions, alleviating road congestion and reducing emissions associated with conventional delivery vehicles. The significant expansion of cycle tourism, exemplified by the growth of the EuroVelo network[11], highlights the sector's strong economic prospects.

Cycling experienced a significant boost during the COVID-19 pandemic as it allowed people, particularly in cities, to retain the necessary physical distance while still enabling mobility (and physical activity). Authorities in some cities responded by rapidly developing both temporary and permanent cycling infrastructure through various measures involving traffic calming, reallocation of space and placemaking. Concurrently, investments[12] in micro-mobility services, including shared bicycles and e-scooters, have expanded significantly since the COVID-19 pandemic, driving demand for integrated infrastructure solutions. At the same time, the growth in food and parcel deliveries by bike and e-scooters[13] has further increased the number and diversity of users relying on safe cycling infrastructure.

Data-driven insights allow relevant stakeholders to make informed decisions about where cycling infrastructure is most needed. For instance, data from traffic patterns, bicycle use, crash hotspots leading to injuries or fatalities and environmental factors can be used to identify high-demand areas, peak use times, high-risk areas, safety concerns, and potential gaps in the infrastructure. Using a data-informed approach to support planning decisions enhances transparency and provides evidence of the need for change (e.g., crash data on a given stretch of road can highlight the need for safety measures, which could include separation of vehicle types, traffic calming, better drainage to avoid slippery surfaces, or better signage). Data on the network itself can help to narrow down the list of appropriate measures. This is crucial when seeking public support for new cycling initiatives, especially when allocating more space to cycling infrastructure may be met with resistance. Technological advancements have facilitated real-time data collection and analysis, enabling more effective monitoring and improvement of cycling infrastructure and policies using cycling data. Cities can update their SUMPs over time using collected data[14], so mobility plans can be adapted to evolving needs and trends.

In summary, the evolving landscape of urban mobility reflects how cycling is becoming an integral part of city life, with policies increasingly adapting to these ongoing changes. Policy and planning are responding to technological advances, to shifting user preferences, and to trends that are establishing cycling as a key component of sustainable and connected cities.

European Declaration on Cycling and SUMP

The EU Declaration on Cycling outlines a clear commitment by the European Union to ensure that cycling becomes a core element of urban mobility. The declaration recognises cycling as a key contributor to public health, environmental sustainability and economic growth. It outlines 36 commitments structured in eight core chapters,

chooses from a range of options (or combinations) for each journey. This flexibility is only possible if attractive options are available to choose from.

[11] EuroVelo (2025), EuroVelo 15 – Rhine Cycle Route extended to Austria and Liechtenstein. https://en.eurovelo.com/news/2025-06-03_eurovelo-15-rhine-cycle-route-extended-to-austria-and-liechtenstein

[12] Heineke, K. et al. (2022), How the pandemic has reshaped micromobility investments, McKinsey Center for Future Mobility, https://www.mckinsey.com/features/mckinsey-center-for-future-mobility/mckinsey-on-urban-mobility/how-the-pandemic-has-reshaped-micromobility-investments

[13] While e-scooters are not the focus of this document, in general, improvements in cycling facilities benefit e-scooter users as well. They also help keep them off sidewalks.

[14] The Cycling Counts project offers an approach to defining and assessing cycling data and methodologies. It covers cycle network, cycle use, cycle services and safety of cyclists.

each addressing a critical area of cycling policy and infrastructure development. The EU Declaration on Cycling and the SUMP guidelines[15] have in common that they both emphasise the need for integrated mobility planning. While the Declaration naturally focuses on cycling from various angles, and the SUMP guidelines tackle urban mobility as a whole, extensive overlaps and synergies exist and can be capitalised on (see Table 1).

This document provides a detailed, practical approach to incorporating the principles from the EU Declaration on Cycling into the SUMP process.

What's in the EU Declaration on Cycling	What it means for the SUMP process
(1) Develop and strengthen cycling policies: The Declaration calls for developing cycling policies at the EU, national, regional and local levels, integrating cycling into broader mobility and urban planning strategies.	Integrate cycling into SUMP, considering existing national, regional and local cycling policies (Step 2); develop measures with stakeholders that promote cycling through mobility management (Step 1, Step 7); and overall raise awareness of the benefits of cycling (Step 8).
(2) Encourage inclusive, affordable and healthy mobility: The Declaration focuses on making cycling accessible to all, promoting social inclusion with particular attention to women, children, the elderly, and vulnerable and marginalised groups. It highlights cycling's role in promoting social inclusion, health, and affordability.	Engage with diverse stakeholders and citizens to ensure that cycling is inclusive, including those who do not currently cycle, those who use specialised bikes (e.g., tricycles or cargo bikes), operators of bike sharing systems, parents and health-related actors (Steps 1, 4-7); assess the accessibility of current cycling infrastructure for all users, including those who use non-standard bikes (Step 3); and provide cycling training for children and for vulnerable and marginalised groups (Step 6).
(3) Create more and better cycling infrastructure: The declaration focuses on safe, continuous, and well-connected cycling infrastructure, including physically separated bike paths and secure parking and charging opportunities (including at railway stations, bus stops, and mobility hubs).	Consider a scenario in which citizens can access all their daily needs by bike, and tourists can visit the city's attractions by bike (Step 4), including considering bikes of various speeds and sizes for different user groups and enough capacity to meet the needs of your future mode share goals. Make sure cycling is part of a positive vision for your city's mobility future (Step 5); Think about safe cycle parking infrastructure at stations, including charging opportunities (Step 7); Consider the relative costs of lower overall speed limits vs the cost of building separated cycling infrastructure (Step 8); Monitor the use and safety of infrastructure and make improvements as needed (Step 11).
(4) Increase investment and create favourable conditions for cycling:	Strengthen investments in cycling in an integrated way, supporting the development and implementation of municipal cycling strategies (Step 9); Include public and private sector

[15] Rupprecht Consult (2019), Guidelines for Developing and Implementing a Sustainable Urban Mobility Plan, Second Edition, https://urban-mobility-observatory.transport.ec.europa.eu/

The Declaration encourages investment in cycling strategies, infrastructure and services at all levels of governance.	providers of shared bikes and cargo bikes in the discussions and consider the role they may play in making cycling, and your city, accessible to more citizens and visitors (Step 3); Also, consider food delivery services and logistics operators who use e-bikes and cargo bikes for deliveries (Step 3).
(5) Improve road safety and security: The Declaration aims to halve serious cycling injuries by 2030, enhance enforcement of road safety rules, improve safety standards for e-bikes, improve security of public bike parking and strengthen cycle safety training and awareness of risks for vulnerable users	Establish targets and indicators for the reduction of road crashes involving cyclists (Step 6); Place emphasis on improving road safety through the implementation of safer cycling infrastructure (Step 7); Consider reassessing speed limits and the design of roads to accommodate bikes of different speeds and sizes – particularly in areas of high pedestrian traffic and around schools (Step 7); Address potential security concerns when planning or renovating cycle parking (Step 7); Monitor the use and safety of new cycling infrastructure and adapt as needed (Step 11).
(6) Support high-quality jobs and the development of a world-class European cycling industry: The Declaration highlights the economic potential of cycling to boost jobs and support the EU's industrial strategy by promoting cycle tourism and integrating cycle logistics into logistics systems.	Support cycling service-related measures, such as bike sharing and cycle logistics (Steps 7, 8 and 10); Engage stakeholders from local bike and e-bike manufacturers, from operators of bike and cargo bike sharing services, from educational institutions that offer professional development for bike mechanics and mechatronics engineers, cycle tourism operators and from hotels providing services for cycle tourists (Step 4); Consider including lockers at tourist destinations for cycle tourists to leave their luggage while they visit (Step 7).
(7) Support multimodality and cycling tourism: The Declaration emphasises the importance of integrating cycling with trains and public transport and promoting it as a sustainable form of tourism. It highlights the role of cycling in enhancing connectivity, including between urban and rural areas, and in supporting first- and last-mile mobility.	Improve the integration of cycling with public transport, both locally and beyond the city borders through improved intermodal hubs including both bike and car sharing, secure and well-lit bike parking at stations that allows easy access to platforms, easy transport of bicycles on buses and trains, with clear and simple instructions on ticketing (Steps 2, 3, 7, 8 and 10); Consider installing uniform and attractive signage to and through the area for cycle tourists, including directions to secure bike parking (Step 7).
(8) Improve the collection of data on cycling: Focuses on consistent and comprehensive data collection across the EU to effectively monitor the implementation of our commitments and to support cycling policies and infrastructure development	Identify gaps in cycling-related data as you collect baseline data about your city's mobility (Step 3); Establish targets and indicators for cycling infrastructure, use, safety and services following EU guidance on harmonised cycling indicators (Step 6); Regularly monitor cycling measures (Steps 11 and 12).

Table 1: Implications of the EU Declaration on Cycling on the SUMP process

Benefits of integrating cycling into SUMP

Cycling delivers wide-ranging benefits that align closely with the objectives, principles and phases of SUMP. Explicitly integrating cycling into SUMP ensures that it is addressed in planning policies, leading to overall improvements in the dedicated cycling infrastructure and in the way cycling is addressed in the city[16].

Early planning, alignment and analysis of the mobility situation

Including cycling from the outset of the SUMP process ensures a clear understanding of existing cycling conditions, behaviours and barriers. Integrating cycling objectives with other strategic plans, such as land-use, housing and logistics, early in the process allows for the identification of synergies and for the alignment of the different plans, ensuring long-term positive outcomes. A strong baseline built on information on infrastructure, safety, current use and user demographics, supports the identification of gaps and opportunities.

Infrastructure development and modal integration

Cycling infrastructure designed within the SUMP framework allows for better integration with other modes of transport, such as public transport, walking and shared mobility services, including bike sharing. Safe, direct and continuous cycle networks, adapted to different users and cycle types, enhance accessibility and enable multimodal lifestyles. Secure and abundant bike parking at stations and stops supports seamless intermodal journeys and extends the reach of public transport services. In parallel, stakeholder engagement and targeted campaigns help build public support and encourage behaviour change.

Reallocation and more efficient use of urban space

Cycling both requires and supports a more efficient and equitable use of public space. By reallocating road space and on-street parking from private cars to protected cycle lanes and cycle parking, cities can rebalance street functions in favour of people using active modes. This enhances liveability, safety, and climate resilience, particularly in dense urban areas.

Funding and financing

Embedding cycling in SUMPs can unlock dedicated funding streams at regional, national and EU levels. A clear vision and an evidence-based strategy can win both political and financial support for cycling measures, especially when they are tied to wider goals such as health, equity or climate protection.

Monitoring and continual improvement

By defining cycling-specific indicators, cities can track progress and adapt measures accordingly, further improving the integration of cycling with other modes. Regular data collection also strengthens the case for further investment and provides evidence of progress that can be communicated to stakeholders, the media and the public.

[16] Kasraian, D., Murdock, H. E., Faghih Imani, A., Yu, Y., de Nazelle, A., Stead, D., & Kahlmeier, S. (2024). Health in mobility planning: An assessment of how health is considered in Sustainable Urban Mobility Plans. Journal of Transport & Health, 39, 101919. https://doi.org/10.1016/J.JTH.2024.101919

Guidelines for incorporating cycling into SUMP

In this section, we detail the main actions and aspects crucial to making cycling safe and attractive, and we address them through the four phases of the SUMP cycle (Figure 1).

This document offers advice to urban planners, transport practitioners and mobility managers on how to integrate cycling into every step of the SUMP process, and it informs policymakers, stakeholders and other departments on what this process looks like. The objective is to put cycling high on the agenda, integrate it holistically with other modes and ensure that it is safe, attractive and inclusive.

In line with the SUMP concept, it emphasises the need to overcome physical, institutional and perceptual barriers between urban cores, peri-urban areas and surrounding rural areas, ensuring coherent, continuous and safe cycling networks that support everyday mobility across the entire functional city.

Figure 1: The SUMP cycle (SUMP Guidelines, 2019)

Phase 1: Preparation and analysis

Step 1: Set up working structures

The first phase of the SUMP process lays the foundation. Integration of cycling into the planning process begins here. A critical early step is to set up inclusive and effective working structures that embed cycling from the outset. This can be done by involving stakeholders who bring specific knowledge and expertise on cycling, such as cycling advocacy groups, courier and other delivery and logistics companies, industry and retail representatives, schools, etc., including those who use specialised cycles such as tricycles or

wheelchair extensions or who transport children in cycle trailers. Local employers (e.g. hospitals, educational institutions, and private companies) should also be actively involved, as they influence mobility patterns and can support the identification of priority cycle routes and encourage cycling among their staff. Their involvement ensures that diverse voices are heard and that a range of needs are considered from multiple angles, including health and logistics.

Internally, municipalities should assess their own capacity and expertise to work on cycling topics. Where skills or resources are lacking, they should plan to work with external experts. Mobility practitioners should establish a local cycling task force to coordinate across departments, with representation from transport, health, planning, tourism and education. Within this structure, a cycling officer should be designated to act as a single point of contact and to maintain a consistent focus on cycling throughout the process. A dedicated cycling budget to fast-track priority action may be considered if the city's vision around cycling is already clear. The cycling officer should also participate in other relevant working groups, such as those on climate or public health. From the outset, practitioners should aim to gain backing from the mayor and commitments from stakeholders. This ensures political ownership and legitimises cycling as a core part of the SUMP.

A network of National Cycling Contact Points (NCCPs) for the 27 EU Member States was created in the context of the EU Declaration on Cycling. Practitioners can get in touch with their respective NCCPs, where established.

Step 2: Determine planning framework

In the second step, practitioners should consider cycling planning beyond the city borders. Many cycling trips with different purposes do not begin and end within municipal boundaries. This is particularly true for commuting, which may or may not be done in combination with public transport, and for cycle tourism. Planning beyond the city borders allows cities and surrounding municipalities to develop coordinated cycling infrastructure, such as radial cycle paths or regional routes.

Practitioners should aim to embed cycling into a broad intermodal system, with seamless links to public transport, walking and shared mobility. To achieve this, coordination with other local and regional strategies is essential. This can include Sustainable Energy and Climate Action Plans[17], Climate City Contracts[18], Sustainable Urban Logistics Plans[19], land-use plans and tourism strategies. Alignment with national cycling strategies and with EU requirements, such as the TEN-T Regulation, is also critical[20].

According to the TEN-T Regulation, urban nodes must give attention to the integration of active modes of travel into the larger TEN-T network alongside motorised modes[21]. Incorporating cycling into the SUMP framework ensures that cycling measures address legal mandates, follow all

[17] European Commission: Joint Research Centre, How to develop a Sustainable Energy and Climate Action Plan (SECAP) – Covenant of mayors guidebook – Main document, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2760/4489817

[18] The Climate City Contract (CCC) is a governance innovation tool to help cities collaboratively address their barriers to accelerate transformative action and reach climate neutrality by 2030. https://netzerocities.eu/climate-city-contract/

[19] Recommendations on Urban Logistics, Expert Group on Urban Mobility, Sustainable Urban Logistics Planning (SULP), 2024, https://transport.ec.europa.eu/document/download/b818ff86-2463-4949-9413-d3ca559f60b9_en?filename=EGUM_Recommendations_SG4_D1_SULP.pdf

[20] Regulation (EU) 2024/1679. https://eur-lex.europa.eu/eli/reg/2024/1679/oj/eng

[21] Art. 32 and 42 of the TEN-T Regulation, ibid.

applicable standards or requirements, tap into available funding and contribute to broader behaviour change objectives.

Practitioners should also review the relevant legislative and regulatory framework for cycling at local, regional and national levels, including rules on bicycle circulation and access, fiscal or incentive schemes, and requirements affecting parking, safety and e-bikes, to clarify constraints, opportunities and the scope for local action.

Aligning all the different planning documents in preparation for the SUMP process ensures any identification of synergies and gaps to implement specific measures. Alignment can take place with national and EU policies that touch on cycling, health and climate objectives. This offers the potential to unlock external co-financing or access to EU and national funding streams, as the existence of SUMPs can be a requirement for funding access, such as the European Regional Development Fund (ERDF)[22], Cohesion Fund, Connecting Europe Facility (CEF)[23], Recovery and Resilience Facility (RRF)[24], or LIFE programme[25] for cycling infrastructure and projects for promotion. For example, to create secure bicycle parking, practitioners need to ensure the allocation of urban space for this use and/or require new developments to include such infrastructure, including ensuring that developers are aware of applicable quality standards.

In the case of logistics, last-mile deliveries using bicycles or cargo bikes can be made possible through the development of smaller logistics hubs in the city. A final example can be taken from the growing use of electric bicycles, requiring adaptation of the energy grid to include bicycle charging stations.

Rail Passenger Rights Regulation (2021/782)

Article 6 of Regulation (EU) 2021/782[26] establishes passengers' rights to carry bicycles on trains for a reasonable fee and reservations, promoting the integration of cycling with rail travel. If a reserved bicycle is refused without justification, passengers are entitled to re-routing, reimbursement, and compensation. Bicycles must be stored in designated areas when available or supervised by passengers to prevent harm or disruption to others. Railway undertakings may impose restrictions based on safety, operational constraints, or bicycle dimensions, and must publish clear transport conditions and capacity information online.

To further support bicycle transport, railway undertakings are required to include an adequate number of bicycle spaces when procuring or upgrading rolling stock, with a minimum of four spaces per train unless otherwise planned or mandated by national authorities. They may also develop public consultation-based plans to improve bicycle transport and promote multimodal travel. These plans must be published and kept up to date, ensuring transparency and alignment with public needs. This article reflects the EU's commitment to sustainable mobility and encourages the seamless combination of cycling and rail travel across Member States.

[22] EBRD. http://www.ebrd.com/home

[23] Connecting Europe Facility. https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/connecting-europe-facility_en

[24] Recovery and resilience facility https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility_en

[25] LIFE Programme. https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/programme-environment-and-climate-action-life_en

[26] European Commission (2021), Regulation (EU) 2021/782, Official Journal of the European Union, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0782

Practice Example

Bologna, Italy: Integration of cycling in SUMP

In 2018, the Metropolitan City of Bologna, in the Emilia-Romagna region became one of the first metropolitan areas in Italy to adopt a SUMP. The plan aims to reduce greenhouse gas emissions by 40% by 2030 and shift 60% of trips toward walking, public transport, and cycling. With half of all trips under 5 km, cycling was identified as a central lever for change. Bologna integrated cycling into its SUMP through multiple complementary measures, including:

- **Introduction of a cycling network**: It is Italy's first metropolitan-scale cycling system, with 980 km planned for daily mobility and 920 km for leisure/tourism. 440 km are already built, including 40 km in 2024.
- **Creation of design and signage manuals**: Technical and visual guidelines were distributed to all 55 local municipalities to ensure high-quality, coherent, and recognisable cycling infrastructure.
- **Facilitation of intermodal integration**: Secure cycle parking and repair services were added at train stations and future BRT stops, and bicycles are now permitted on trains to extend reach beyond the city.
- **Adressing safety and comfort**: Through the *Città 30* programme, speed limits were reduced to 30 km/h on most streets, resulting within the first three month in a 14% reduction in road accidents compared to the same period in 2023.
- **Support for cycling incentives**: Different incentives for bike and e-bike purchases, anti-theft measures, bicycle cooperatives, and public rental schemes were put in place.
- **Engagement with the public:** Dedicated campaigns and local involvement were planned to support a cultural shift toward everyday cycling.

Image: Cyclists on the *Bicipolitana* cycling network in Bologna (Source: POLIS Network (2025))

Step 3: Analyse mobility situation

The analysis of the mobility situation is a key step in understanding the current state of cycling and in identifying opportunities for improvement. This analysis must address cycling and walking independently, as opposed to combining them under the umbrella of active mobility as the needs of the two groups are different. The analysis should include a comprehensive review of existing cycling infrastructure, user behaviour, safety conditions, and barriers to cycling. During this review, data gaps should be identified and mapped to link with potential external sources aiming to fill these gaps. Sources of useful datasets could include other municipal authorities, national statistical offices, National Access Points[27], European Mobility Data Space and Eurostat. Traditional tools such as on-street counts and surveys can be combined with big data, crowd-sourced information (e.g. GPS cycling apps) and sensors or counters, always keeping in mind that these only account for current cyclists and not for those who do not (yet) cycle, and the reasons for this.

[27] National Access Points. https://transport.ec.europa.eu/transport-themes/smart-mobility/road/its-directive-and-action-plan/national-access-points_en

Many people may choose not to cycle due to a lack of infrastructure, safety concerns or personal preferences. Mobility practitioners need to look at locations where people do not cycle to identify potential causes (e.g. a dangerous junction may motivate cyclists to avoid certain areas or put people off cycling altogether).

Mobility practitioners should also consider inclusivity by collecting disaggregated data on gender, age, ability and socio-economic status, including whether respondents have young children. This ensures that infrastructure meets the needs of diverse population groups.

Different analytical methods (e.g., level of traffic stress framework; see toolbox) can help classify cycling environments and determine where improvements are most needed. Practitioners can identify where cycling can realistically replace short car journeys or be combined with public transport by understanding patterns of demand, trip purposes, peak times and key origins and destinations. Tactical urbanism initiatives such as closing streets to car traffic and reallocating vehicle lanes for cyclists have been shown to significantly increase cycling and walking. These changes have provided valuable data, demonstrating their positive impact on active travel and safety[28]. Cities can now use this evidence to guide future infrastructure investments and urban planning decisions. This approach ensures that resources are allocated effectively and cycling lanes are positioned where they are most needed. In addition, a strong baseline analysis will support better decision-making in subsequent phases, leading to more targeted and effective measures.

OpenStreetMap data can be leveraged to map cycle infrastructure and allow the establishment of datasets on network length and density, and on the type and width of facilities. Ensuring comparable, geo-coded data across neighbouring authorities ensures consistency and facilitates EU-level reporting.

Overview of data sources

The main EU-wide data sources on cycle use are the European Health Interview Survey[29] and the EU-wide travel survey[30]. The CARE database[31] contains disaggregated data on road crashes in the Member States that result in death or injury. For data on bike parking, three open sources include 1) National Access Points, either dedicated to multimodal information (MMTIS) or to road information (RTTI) or both[32], 2) local open data portals, mostly operated by cities or regions and 3) OpenStreetMap (OSM). Cycle network data in the EU is limited and uneven across Member States. Some collect detailed information on the infrastructure that makes up their cycle networks, while others currently have little or no data.

[28] Pandit et al. (2020), How do people use Frankfurt *Mainkai* riverfront during a road closure experiment? A snapshot of public space usage during the coronavirus lockdown in May 2020, Cities & Health, DOI: 10.1080/23748834.2020.1843127

[29] European health interview survey. https://op.europa.eu/en/publication-detail/-/publication/08b6d0be-1ea1-11ed-8fa0-01aa75ed71a1/language-en

[30] EU-wide travel survey. https://op.europa.eu/en/publication-detail/-/publication/adfc18f1-80e1-11ed-9887-01aa75ed71a1

[31] CARE database dashboard. https://road-safety.transport.ec.europa.eu/care-public-dashboard_en

[32] Cycling Counts (2025), Methodology for the current and future collection of cycling data in the EU.

Toolbox: *Level of traffic stress framework* to assess the quality of cycling infrastructure

In transport planning, the theory of level of traffic stress has found wide traction: "For a cycling network to attract the widest possible segment of the population, its most fundamental attribute should be low-stress connectivity, that is, providing routes between people's origins and destinations that do not require them to use routes that exceed their tolerance for traffic stress, and do not involve an undue level of detour". This approach can be used during the diagnosis of the cycling infrastructure to quantify the quality of the cycling infrastructure and examine any potential barriers to cycling uptake associated with the cycling infrastructure.

Source: Maaza C. Mekuria, P., Peter G. Furth, P., & Hilary Nixon, P. (2012). LOW-STRESS BICYCLING AND NETWORK CONNECTIVITY. http://transweb.sjsu.edu

Phase 2: Strategy development

This phase and the fourth step ensure that cycling is embedded not as an isolated initiative, but as a central element in a municipality's SUMP. It is the stage where the data from the first phase is used to create informed, forward-looking strategies and to structure dialogue with stakeholders around potential futures.

Step 4: Build and jointly assess scenarios

The data collected in the first phase should be used to build and jointly assess scenarios with stakeholders. These scenarios should include different levels of cycling integration, such as increased use of e-bikes and cargo bikes or trailers for transporting children or for shopping, expansion of protected cycling infrastructure, increased use of specialised bikes (e.g. tricycles), seamless integration with public transport, and the availability of shared bike services. Other elements, such as the role of logistics cargo bikes or the impact of reduced speed limits and street redesigns, can be explored to understand how they can influence future mobility behaviour. Finally, consider assessing certain risks and opportunities along with the likely impact of local, regional and national cycling-related policies. Including stakeholders in the process can ensure a sense of ownership of the vision and build upon external data or expertise.

To the extent possible, practitioners should use modelling tools that incorporate cycling patterns to assess the likely impacts of different measures on travel demand, space requirements, emissions, accessibility and inclusion. In case of limited access to such modelling tools, peri-urban municipalities should aim at collaboratively developing a model at such a scale, or reach out to regional entities to develop such models in collaboration.

Toolbox: Cycling Network Planning and Assessment Tool

Mobility practitioners can use BiclaR, a decision support tool that facilitates the design and development of a metropolitan cycling network (or similar open-source tools), to test alternative network scenarios, identify network gaps and conflict points (e.g., unsafe crossings) or assess connectivity to suburban/rural areas.

Source: https://u-shift.github.io/biclar/, https://www.sciencedirect.com/science/article/pii/S0198971524001595

Step 5: Develop vision and objectives with stakeholders

One of the core elements in building a robust SUMP which fully integrates cycling is to develop a common vision and objectives together with relevant stakeholders. The vision should consider going beyond simple infrastructure provision and reflect an ambition to increase cycling modal share as a key enabler of decarbonisation, health and equitable access.

In addition, the vision needs to be well anchored in car-demand management strategies and closely aligned with other SUMP goals, such as reducing emissions, achieving Vision Zero targets and improving the quality of life in cities. Practitioners should aim to make the vision tangible, integrating cycling in the urban fabric from the vision onwards. This could, for example, include a clear vision on how urban development should incorporate cycling. Concrete and measurable cycling objectives should be derived from the vision, including, for example, targets for the number of daily cycling trips in relation to the number of car trips, for the reduction of traffic injuries involving cyclists, for the number of women cycling, and for the extent and quality of the cycling network, etc. It is important that these objectives be aligned with other local or national plans and strategies. Jointly with relevant stakeholders, practitioners should set objectives ensuring that cycling is understood as a system-level solution, integrated across policy fields.

Step 6: Set indicators and targets

Once objectives are defined, practitioners should set specific indicators and targets to guide implementation and monitoring. Indicators should capture both quantitative and qualitative aspects of cycling. Core indicators may include infrastructure length, modal share, cycling-related fatalities and serious injuries and the use of bike-sharing schemes[33]. Other important indicators could include the share of children cycling to school, while further ones may focus on perceptions of safety or user satisfaction. Practitioners should also consider public health-related indicators and metrics on the avoided external costs of car traffic (e.g. emissions, noise, congestion) to demonstrate the wider societal value of cycling investments. Applying a "bikenomics" perspective can help further quantify wider societal returns, such as improved health, reduced congestion, enhanced local accessibility and the costs of the alternatives[34]. This approach strengthens the economic case for cycling-focused investments.

When selecting indicators, it is important to define the frequency at which they should be updated, identify the data sources and assign clear responsibilities for data collection and reporting. This ensures continuity and accountability in

[33] *Add link to cycling counts deliverable (when available)*

[34] Bruntlett, C. (2025). Rethinking transport infrastructure investment through the lens of bikenomics. https://www.oevg.at/wp-content/uploads/2025/05/OeZV-Ausgabe-2025-01.pdf

tracking progress. Practitioners should be selective with the number and complexity of indicators, balancing ambition with available capacity and budget. Setting robust indicators and targets not only prepares the ground for effective monitoring (Phase 4) but also strengthens transparency and helps maintain public and political support for cycling policies.

Phase 3: Measure planning

Step 7: Select measure packages with stakeholders

In this phase, practitioners move from strategic goals to defining concrete cycling interventions. Selecting a well-balanced package of measures should be a collaborative task involving relevant stakeholders, including cycling advocacy groups, schools, logistics providers, vulnerable road user groups (i.e. children, women, elderly, people with disabilities), local employers and public health agencies. Practitioners can tailor measures to user needs, improve long-term support for implementation and engage with stakeholders to increase the uptake of new cycling measures.

To ensure increased cycling among citizens, practitioners should aim for both quick wins and long-term interventions. COVID-19 showed that temporary bike lanes can provide quick wins and also establish long-term behaviour change among citizens. Quick wins arise from measures that are deployed rapidly with visible impact, such as reducing speed limits, implementing tactical urbanism (to protect junctions, and reallocating road space. These can immediately make cycling more attractive and reinforce political momentum. Nonetheless, systemic efforts and long-term measures should also be developed in parallel to create a coherent low-stress cycling network beyond the city borders. This includes, for example, constructing segregated cycle lanes, introducing green waves along cycling corridors, implementing traffic-calming measures, developing high-quality cycling routes to support longer-distance commuters and ensuring supporting facilities and services at mobility hubs (e.g., lockers and bike service stations with pumps and tools) and developing educational programmes around cycling to support new cyclists (both adults and children).

Green waves along cycling corridors are traffic signal systems that time traffic lights to allow cyclists to travel along a route at a consistent speed (generally 18-20 km/h) without stopping.

When planning new cycling infrastructure, mobility practitioners should take into account the growing diversity of cycle types and users. Measures should include providing space for e-bikes, cargo bikes and adapted cycles, as well as bike sharing services. These vehicle types require dedicated parking, charging infrastructure, wider cycle lanes and improved cycle infrastructure with smooth transitions at curbs. Consider developing adaptive municipal rental fleets or targeted subsidies for handcycles, tandems, tricycles and e-cycles, so people with reduced mobility can benefit from new cycling facilities as well.

To ensure that new measures lead to increased cycling, practitioners need to integrate the measures into the broader mobility system. Seamless transitions between cycling and public transport can be supported through secure bike parking at stations, shared bikes docking points and coordinated fare systems. Consider expanding parking in high-demand areas and embed cycle parking in urban developments and building

permits[35]. For new residential, commercial and mixed-use developments, it may be interesting to require secure residential storage and end-of-trip facilities (showers and lockers). When indoor storage is limited (e.g., in dense areas), practitioners may use grants to deliver on-street bike shelters or convert car parking spaces into short-stay bike parking. Ensure that e-bike charging is implemented and encourage private deployment (local stores, workplaces, housing) and in public transportation nodes like train stations via grants or bonuses. The goal is to position cycling as a practical mode within an intermodal transport system.

Different forms of space reallocation can support cycling measures. For further information, check the fact sheets created by the CIVITAS ReVeAL project.

Non-infrastructure measures are crucial to ensure the success of cycling strategies. Education and awareness campaigns can encourage behaviour change and help build a cycling culture. This includes school-based cycling education, cycling proficiency programmes for different age groups and community outreach initiatives aimed at groups that tend not to cycle. These can include, for example, immigrant women who didn't learn to cycle in their home countries or teenagers reaching the legal driving age, to encourage them to continue cycling. Schools can serve as focal points for interventions such as bike buses, school streets and road safety education. Campaigns should also target drivers to raise awareness of the safety of people, particularly children, riding bikes.

Bike buses are organised group rides along a set route where children travel to school by bicycle, together with accompanying adults.

School streets are streets around school entrances that are temporarily (during drop-off and pick-up times) or permanently closed to car traffic. Limiting car traffic creates a safer and more attractive environment for walking and cycling to school. Such measures also ensure cleaner air around schools. Similar measures can be implemented near hospitals.

Children's training programmes teach children essential cycling skills, traffic rules and road safety through hands-on practice. These programmes build confidence and competence, aiming to encourage lifelong cycling habits. *(See the next section on recommendations for further information)*

Workplace mobility management can also be a powerful lever. Mobility practitioners may encourage local employers to adopt Cycle-Friendly Employer Certification, which is a European standard.

Cycle-friendly employer certification is a European standard for companies that support employees who cycle to work. Employers can earn a certificate in recognition of their efforts. The certification includes various measures aimed at promoting bicycle friendliness. The certification process is based on six action fields, including 1) information, communication and motivation, 2) coordination and organisation, 3) services, 4) facilities, 5) car parking management as a complementary measure and 6) customer traffic. Each bicycle-friendly measure is assigned points based on effort, cost, and employee acceptance. To earn

[35]EU/2024/1275, https://energy.ec.europa.eu/topics/energy-efficiency/energy-performance-buildings/energy-performance-buildings-directive_en

bicycle-friendly employer certification, a minimum point threshold must be met in each action field.

For more information: https://cfe-certification.eu/

Incentives such as employer-based benefits, reward schemes or subsidies for bicycle purchases should be considered as a complement to infrastructure and educational measures. Employers can provide tax-free mileage allowances, secure bike parking or showers at the workplace to encourage their employees to cycle to work. National or regional governments can support the increased use of e-bikes or cargo bikes through targeted subsidies[36]. There are currently over 300 tax-incentive and purchase-premium schemes for cycling in Europe[37]. In addition, health insurance companies in some countries (e.g., Germany, the Netherlands) run programmes that reward regular cycling as part of preventive healthcare, recognising its role in reducing health risks and promoting active lifestyles. Practitioners can prioritise bike-based delivery services in public procurement processes and in urban vehicle access regulations (providing preferred access to cargo bikes can improve last-mile logistics and cut congestion and emissions).

Cost-benefit analyses for cycling infrastructure and programmes should include economic, social, health and environmental returns on investments[38].

Cycling measures often offer excellent value for money; a cost-benefit analysis conducted in Copenhagen has shown that investments in cycling infrastructure have a higher return on investment than investments in car infrastructure[39].

image © Laura Lopez

[36] Ideally, such subsidy programmes enable people to purchase a cycle who could otherwise not afford it.

[37] Tracker Money for bikes, 2025, https://www.ecf.com/en/resources/tracker-money-for-bikes/

[38] EIT Urban Mobility (2025) Return on investment in bike sharing schemes https://www.eiturbanmobility.eu/knowledge-hub/return-on-investment-in-bike-sharing-schemes/

[39] Cost Benefit of cyling infrastructure https://cyclingsolutions.info/cost-benefit-of-cycling-infrastructure/

How to design safe, inclusive and attractive cycling infrastructure

The Dutch have identified five core design principles for cycling-friendly infrastructure. These include:

1. **Cohesion**: Ensure a uniform and multimodal network by reducing the number of crossings and providing links and alternatives.
2. **Directness:** Minimise detours for cyclists by reducing stops, by prioritising cyclists at traffic lights and by making separated cycling facilities.
3. **Safety**: Guarantee both security and road safety by setting up cycling lanes in low-speed neighbourhood streets rather than on busy roads and create physically separated bike lanes.
4. **Comfort**: Make cycling a pleasant experience by minimising stops and nuisances in the network, by creating smooth pavements to reduce both vibration and elevation changes and by optimising wayfinding and signage systems.
5. **Attractiveness**: Create cycling facilities in green and open areas and avoid unpleasant conditions in congested and polluted streets.

In addition to these design principles, consider carefully the separation of cycle traffic from motor vehicle traffic following the maxim: separate when necessary and mix where possible.

Separate from car traffic

- Provide bicycle paths on streets with speed limits higher than 30km/h or on 30km/h streets with high-volume and heavy-goods vehicles
- Provide physical separation on streets with speed limits over 50km/h
- In areas with significant slopes, speed-based criteria may not be sufficient and additional measures-
- Design for safe crossing at junctions with traffic calming measures

Mix with car traffic

- Traffic can be mixed when speed limits are 30km/h or lower and when streets have a low volume of traffic and little to no heavy goods vehicles.
- Refer to cycling infrastructure such as bicycle streets, school streets or car-free neighbourhoods to manage speed.

Source: https://dutchcycling.nl/expertises/cycling-infrastructure/ and CROW: Design manual for bicycle infrastructure, 2017.

Practice Example

Ghent, Belgium: Circulation Plan

In 2017, Ghent introduced its circulation plan to reorganise traffic in the city centre. The plan divides the city into six sectors and prevents cars from travelling through the city centre or directly from one sector to the neighbouring one, redirecting car traffic to the ring road.

Key cycling-related measures and impacts include:

- **Bicycle priority streets**: introduction of *fietsstraten* where cyclists have priority, and cars are treated as guests.
- **Cycling corridors**: new routes connecting outer districts with the centre for more direct daily trips.
- **Supporting infrastructure**: thousands of new bicycle parking spaces, including large underground facilities at train stations and mobility hubs.
- **Bike sharing**: steady expansion of the system across the city.
- **Traffic calming and communication**: clear signage, speed reduction, and campaigns explaining the new rules.

As a result, in the first year, cycling increased by 25% and car traffic in the centre dropped by over 10%. By 2020, cycling accounted for nearly 35% of all trips.

Figure: Cyclists using redesigned street (Source: City of Ghent https://stad.gent/en/mobility-ghent/circulation-plan, 2025)

Practice Example

Darmstadt, Germany: Lincoln Settlement mobility concept

The Lincoln Settlement in Darmstadt, Germany, is an urban development project initiated after the withdrawal of U.S. armed forces in 2008. The city repurposed vacated military areas, adopting the urban development framework plan for the Bessungen Süd area in 2011. The Lincoln Settlement was formalised through a development plan in 2015, which became legally binding in 2016. The project includes a traffic-calmed residential area using a push-and-pull mobility concept developed by the Mobility Office of Darmstadt.

This concept involves restrictive “push” measures (e.g. centralised car parking space allocation and management) and “pull” measures (e.g. promoting cycle parking, e-carpooling services, bike-sharing and e-cargo bike rental systems). The mobility concept also includes expanding cycle and pedestrian paths, traffic calming on neighbourhood streets, and good connections to local public transport. Residents benefit from a bike sharing scheme with around 50 stations in Darmstadt. In addition, the “Heinerbike” initiative offers free use of 20 e-cargo bikes.

Figure: Sigo green e-cargo bikes in the Lincoln Settlement (Source: Mobility Office of Darmstadt (2025) at https://www.lincoln-darmstadt.de/)
For more information, visit: https://www.darmstadt.de/leben/umwelt/freiraumplanung/lincoln

Practice Example

Poland: *Rowerowy Maj*, the Cycling May Campaign 2025

Rowerowy Maj is Poland's largest campaign promoting healthy and sustainable commuting to school among preschoolers, primary school students, teachers, parents and guardians. It combines fun, education, and friendly competition encouraging active commute - by bike, scooter, skateboard, or rollerblades - to school throughout May, fostering safer, cycle-friendly school environments. The campaign includes following steps:

- **City registration:** Cities and municipalities can join the campaign through an inter-municipal agreement with the Municipality of Gdańsk, the initiator and primary organizer, which provides resources, templates, a campaign management platform, and dedicated support from the national coordinator.
- **School registration:** Local authorities invite schools, including children aged 3-15 and staff to join by contacting their city or commune office. Local organizers provide materials and prizes, while schools handle campaign activities and report participants' bicycle attendance.
- **Participation and support:** Each participating student or teacher who commutes actively in May receives stickers as rewards, with the most active participants, top classes and schools winning attractive prizes, group outings, or meetings with notable figures. The campaign is further supported by local cultural and recreational centres, which offer additional incentives.

For more information, visit https://rowerowymaj.eu/

Step 8: Agree on actions and responsibilities

Once measures are selected, actions must be clearly defined and tasks allocated. This includes establishing a logical sequencing of measures and highlighting interdependencies. For example, practitioners may need to first define cycle parking standards before infrastructure can be built in new developments. Measures to manage car traffic should be coordinated in parallel with investments in attractive cycling and public transport options. Car restrictions alone can generate resistance and risk excluding certain groups if attractive alternatives are not available. By ensuring that car restrictions go together with improved cycling infrastructure, public transport and shared mobility services, cities can offer more viable options for all. Practitioners must outline specific responsibilities for each measure, including which departments or external partners are leading. Coordination mechanisms will need to be formalised when cross-departmental cooperation is required. Practitioners should establish communication protocols to ensure both relevant stakeholders and the public are kept informed throughout the implementation and that their input is solicited at appropriate moments in the process. Transparency and public engagement are essential to the implementation process and to the acceptance of the planned changes. Practitioners should provide regular public updates on the implementation status, preparing the public for the monitoring phase when feedback will be gathered. Digital dashboards or periodic bulletins can support these actions.

Once responsibilities are established, the required human and technical resources should be mapped, including staff time, technical expertise and tools. When gaps in capacities remain, training, hiring or external partnerships should be considered. Regular data collection for monitoring the impact of measures may, for example, require external partnerships for data collection.

Integrated cycle logistics in practice: Lessons from leading operators (ULaaDS)

The EU ULaaDS project[40] showcases how integrated cycle logistics can transform urban delivery systems through real-world examples from companies like **bpost**, **PostNL**, **Pedal Me**, and **Urbike.** These operators demonstrate that cargo bikes and trailers can effectively replace vans for last-mile deliveries, especially in dense urban areas. However, successful integration requires more than just swapping vehicles; it involves **adapting infrastructure**, **logistics processes**, and **employee mindsets**. For instance, **durability and load capacity** may remain a challenge, prompting innovations such as bike-trailer combinations and digital loading tools (e.g., the Tetris tool examines the pile of parcels and plans for the compartments of a truck's roller cages). Smaller companies highlight the importance of **mission-driven approaches** and training and stress the need for **standardised delivery containers**, **digital tracking systems**, and **skilled riders** to ensure smooth operations and customer satisfaction.

Supportive urban policies and infrastructure play a significant role in the adoption of cycle logistics, including clear rules on which vehicles can be used on the road (e.g. bicycles, tricycles and cargo bikes). Strategies such as low-emission zones, micro-hubs and financial incentives can facilitate this transition, as a wider range of permitted vehicle types makes engagement easier for logistics operators.

For more information, visit: https://ulaads.eu/

Step 9: Prepare for adoption and financing

When actions and responsibilities are defined and agreed upon, practitioners should carefully plan the adoption and the financing of measures, particularly when actions involve both public and private stakeholders. Practitioners can start by setting a clear financial framework for delivery, preparing a multi-year cycling investment plan, embedding cycling in relevant transport and urban budget and setting investment targets with annual expenditure monitoring. Including cycling in wider local investment frameworks, such as health, land use or education, can help safeguard allocations.

Practitioners should develop costed implementation plans for the short- and medium-term. These plans should include infrastructure and operating costs and integrate projections of cycling demand linked to modal shift targets. Cost estimates need to account for specific elements such as the reallocation of street space, the long-term maintenance of cycle tracks, and the provision of safe and secure cycle parking. Practitioners should define funding sources along with costs and identify potential roles for private co-investment. Transparency about projected spending and delivery is essential, as reallocating space and budgets from car traffic to cycling can be politically sensitive and trigger opposition. Providing clear cost-benefit arguments and framing measures with positive communication helps ensure accountability, maintain trust and strengthen the case for investment.

Multiple incentives and co-financing programmes can be considered. **Subsidy programmes** co-finance upfront costs that can unlock private spending. **Bike to work or cycle-friendly employer schemes** can co-finance commuting shifts via workplace measures.

[40] ULaaDS, bike-based solutions in urban logistics, Retrieved from https://ulaads.eu/bike-based-solutions-in-urban-logistics/

Public-private partnerships (PPPs) can be effective in scaling infrastructure investments that go beyond what public budgets can cover. For example, employers or commercial developers may co-finance secure cycle parking at workplaces and mobility hubs, or developers may provide bike-sharing stations and charging facilities as part of their development obligations. In such cases, PPPs can accelerate delivery, ensure broader use, and mobilise private resources, as long as roles, responsibilities and long-term maintenance commitments are clearly defined.

As schemes roll out, practitioners may need to adapt measures to evolving travel patterns and mobility needs. Monitoring results (step 10) and investment metrics (e.g. net present value, economic internal rate of return; see toolbox below for examples) can help with the decision whether temporary measures should become permanent or be scaled up.

Toolbox: CyclingMax: Cost and benefit scoping tool for cycling infrastructure investments

This tool, jointly released by ITDP and the World Bank in early 2025, helps planners and policy makers make informed decisions on building sustainable urban transport infrastructure and evaluating investments in cycling infrastructure.

The tool outputs include monetised metrics, such as the total costs of construction and maintenance as well as annual benefits in four benefit categories (safety, emissions, health and travel time savings) over the project evaluation period (which can include multiple decades in the future or a number of years manually selected by the user). Practitioners seeking to increase cycling investments can leverage this research and tool to advocate for their cycling measures.

Figure: Input module while accessing the CyclingMAX tool (Source: World Bank 2025)[41]

For more information, visit https://cyclingmax.worldbank.org/

Phase 4: Implementation and monitoring

Step 10: Manage implementation

Implementing cycling measures that involve reallocating road space, building new cycling corridors or integrating cycling with public transport requires strong coordination, efficient resource management and proactive communication. Procurement processes should be checked against a dedicated checklist that ensures that design quality, life-cycle cost analysis and maintenance obligations are addressed.

The process of putting in place new infrastructure can be streamlined, and ideally accelerated, by standardising design details, establishing framework contracts and/or fast-tracking permits

[41] World Bank (2025), The Case for Cycling Infrastructure Investments, http://hdl.handle.net/10986/42923

for recurring elements (e.g. separating elements such as kerbs, bollards or delineators).

Specifications should include the full range of cycle types so facilities are usable by all from day one. For example, large infrastructure projects such as cycling integration in mobility hubs (safe, separated infrastructure, traffic light changes, etc.) demand close cooperation between transport, planning and utilities departments, while smaller interventions such as bicycle parking benefit from clear agreements on maintenance and responsibility. Including design standards and sustainability clauses may help ensure that infrastructure remains functional and cost-effective in the long term.

Practitioners should develop a shared implementation plan, including experimental short-term projects (see example below), in coordination with other departments such as transport, public works, communication and law enforcement. This plan should clearly highlight responsibilities and ensure mutual accountability. Bringing in additional stakeholders such as traffic police and local communication teams helps address enforcement, messaging and compliance challenges early on.

Practitioners should prepare structured risk and mitigation frameworks that anticipate potential obstacles and consider means to overcome them. One challenge may be the emergence of bikelash, which can stem from concerns over increased congestion, changes to parking or perceived safety risks. Groups that may feel particularly affected include local business owners worried about reduced car access, residents concerned about parking availability, professional drivers and delivery operators facing route changes, tradespeople who need to park at their job sites or commuters who anticipate longer car journeys. Transparent communication, tailored messages, solutions for affected groups and early engagement through meetings, surveys or pilot projects are critical to reducing this opposition. For example, creating loading zones or parking spaces exclusive to tradespeople could be one targeted solution.

Practice Example

Amsterdam, Netherlands: Safer e-bike speeds with Intelligent Speed Adaptation (ISA)

Background: Amsterdam's increasing traffic, especially on bike paths, has led to more crashes and a sense of insecurity. E-bikes, often modified to exceed the legal speed limit of 25 km/h, contribute to this issue.

ISA experiments: Two ISA experiments conducted in Amsterdam aim to improve traffic safety, especially in response to the growing use and speed of e-bikes:

- Experiment 1 (nudge): Riders receive speed warnings via a smartphone app when entering designated zones. The app, mounted on the bike, sends signals encouraging slower riding.
- Experiment 2 (nanny): E-bikes are physically limited in speed through onboard technology. This was tested in a controlled setting during a demonstration event.

Timeline: The experiments ran from 2022 to 2023, with key trials in April and October 2023.

For more information, visit:
https://openresearch.amsterdam/image/2023/9/28/digitale_snelheidsmeldingen_voor_e_bikes-971194293.pdf

Ensuring compliance with new regulations plays a vital role in increasing cycling. This includes putting in place systems to address illegal parking in cycle lanes and non-compliance with speed limits. This will likely involve a combination of policy (e.g. fines or enforcement patrols), technology (e.g. curb-side management systems) and physical deterrents (e.g. bollards).

Step 11: Monitor, adapt and communicate

During the implementation, practitioners should continuously monitor and adapt measures to refine cycling strategies over time. The indicators and targets defined in Phase 2 provide the foundation for continuous monitoring, but feedback from citizens and cycling groups is also essential. People who use the infrastructure daily can highlight remaining safety issues, missing connections, or maintenance problems that data alone may not reveal. Practitioners should combine technical monitoring involving installation of dynamic monitoring systems (use a combination of manual counts and automated cycle counters/sensors at key points, e.g., junctions, bike lanes, and major thoroughfares), collect modal share data and user feedback (with participatory approaches such as online reporting platforms, regular engagement with local cycling organisations) to assess infrastructure perception and usage trends. This combination ensures that measures are not evaluated against quantitative indicators but also adjusted based on user experience.

Quantitative monitoring may use technologies such as GPS-enabled counters, automated sensors and data from bike-sharing schemes to track usage levels and modal share. Qualitative monitoring can be carried out through user surveys, interviews and focus groups to understand perceptions of comfort, safety and accessibility. This is particularly relevant to identifying perceptions of new cyclists, women and vulnerable groups. This combined approach offers a fuller understanding of the effectiveness of implemented measures.

Practitioners can keep the public informed through open-data platforms and interactive dashboards and through feedback systems via specific channels (e.g., collaboration with local cycling associations). Transparent and continuous communication will reinforce public trust and provide visibility into the outcomes of implemented measures. To achieve this, cities should collect, use and share cycling data. Sensitive information must be anonymised to address privacy and security concerns, and data handling must comply with GDPR. The datasets should follow the quality parameters defined in the revised Multimodal Travel Information Services (MMTIS) Regulation, which requires standardised bike-sharing data. Once collected, this information can be integrated into traffic-management systems to support evidence-based urban planning. Doing so enables applications such as traffic-light prioritisation, hazard warnings, real-time road-closure updates, planning new cycle lanes, and monitoring bicycle-parking availability[42]. Monitoring should also include feedback loops that enable quick fixes as well as longer-term strategic shifts.

[42] Megabits and Meridian (2025), The Roadmap for Smart Cycling: A Call to Action. Retrieved from https://meridian-corridors.eu/wp-content/uploads/2025/05/250501-Brochure-Smart-Cycling-Road-Map_a-call-to-action_final68.pdf

Some cities actively use and publish their cycling data to communicate with their citizens about their achievements, such as Copenhagen, with its biannual public report[43] and Dublin with its active travel dashboard[44].

Step 12: Review and learn lessons

After implementing their SUMP measures, practitioners should conduct structured reviews to draw lessons for future SUMP updates and to celebrate their achievements. Lessons learned sessions should be institutionalised through workshops or joint reviews with key implementation partners. Celebrating successes, such as reaching milestones or completing infrastructure, can build momentum and reinforce public and political support. Practitioners should promote these milestones through awards, media events, or mobility festivals (e.g., European Mobility Week).

image © shutterstock.com

[43]Copenhagen Bicycle Account (2022) https://www.scribd.com/document/805956386/The-Bicycle-Account-2022-2420

[44]Dublin Active Travel Dashboard https://activetraveldashboard.smartdublin.ie/

Recommendations on cross-cutting topics

This section provides more in-depth guidance on topics that cut across different phases of the SUMP cycle, and which require dedicated attention to ensure that cycling is successfully embedded within an integrated, inclusive and data-driven mobility system. Each topic begins with a short explainer to set the context and is followed by practical recommendations that can be applied when developing or updating local plans. It highlights how to face common barriers such as bikelash, how to improve safety for all users, how to strengthen intermodality and multimodality, how to ensure inclusion and affordability, how to mobilise private sector partnerships and investment, how to develop cycle tourism as a driver of local economic growth and how to ensure that data collection and monitoring support evidence-based planning and evaluation. Together, these elements enable cities and regions to build coherent, resilient and widely supported cycling strategies within the SUMP framework.

Engagement and communication to avoid and address "bikelash"

Public support and clear communication are essential for the successful implementation of cycling measures. "Bikelash", the disproportionately negative or hostile reaction to cycling infrastructure or policies, can arise when changes in street use are perceived as sudden, unfair or inadequately explained. Addressing these reactions proactively through transparent and consistent engagement and communication can help practitioners maintain trust and credibility throughout the SUMP process.

Recommendations for practitioners:

- **Communicate benefits clearly and locally.** Emphasise practical, personal and local benefits such as improved safety for children, reduced congestion, quieter streets and economic benefits for businesses[45].
- **Avoid polarising messages**. Present cycling as one of several attractive mobility options and use inclusive, neutral language, avoiding narratives that frame changes as taking space or privileges away from car users, or that rely on moralising or ideological terms.
- **Engage early and often**. Involve residents, local businesses and interest groups from the design stage to build a shared understanding of project goals and to understand the needs of different groups. Establish hotlines, online forums or pop-up events where citizens can share feedback and see their input reflected in design adjustments.
- **Show tangible results**. Use visuals and data (before/after photos, air quality data, collision reductions) to demonstrate the impact of cycling measures.
- **Ensure diverse voices are heard**. Balance the debate by amplifying supporters' experiences, such as parents, healthcare professionals or local business owners.
- **Plan communication alongside design**. Communication should be considered an integral part of implementation, with an allocated budget and responsibility.

[45] Developing or upgrading active travel infrastructure generally benefits, or at least does not harm, nearby retail and food service businesses. (Source: Volker, J. M. B., & Handy, S. (2021), Economic impacts on local businesses of investments in bicycle and pedestrian infrastructure: a review of the evidence, Transport Reviews, 41(4), 401–431. https://doi.org/10.1080/01441647.2021.1912849)

Safety

Safety is a precondition for increasing cycling levels and ensuring its integration into the wider mobility system. Safe cycling environments encourage people of all ages and abilities to use bicycles for everyday travel. The Valletta Declaration[46] and the EU Road Safety Policy Framework 2021–2030[47] have established a goal to halve serious injuries by 2030 and reach zero road deaths by 2050. Practitioners should apply the Safe System[48] approach, recognising that human error is inevitable and that streets must be designed to minimise the consequences of such errors.

Recommendations for practitioners

- **Prioritise protected infrastructure** (when needed) by building physically separated cycle tracks along major roads and ensuring clear demarcation from both motor vehicles and pedestrians.
- **Develop low-stress cycling networks** by introducing 30 km/h zones, filtered permeability (i.e., roads where cycles can continue through, while motor vehicle access is restricted), and safe crossings to reduce risks, improve comfort and ensure connectivity for cyclists, both in urban and peri-urban areas.
- **Ensure good visibility and maintenance** by applying consistent standards for lighting, surface quality and drainage. Maintain winter operations and carry out rapid repairs for all cycling infrastructure (including parking).
- **Integrate safe junction design** by simplifying crossing movements, improving sight lines, and introducing advanced stop lines or cycle-specific signals. Maintain standardised signage across metropolitan areas and within cities (static and dynamic) to ensure clear public understanding and manage and inform cyclists about heavy traffic, encouraging speed reduction where required. Integrate cycle infrastructure with intelligent and cooperative systems (C-ITS) to enhance safety (e.g., through "green wave" traffic signals or roadside units at junctions integrating warning systems to alert drivers of approaching bikes).
- **Strengthen training and awareness** by offering training programmes on e-bike handling, braking distances and interaction with other traffic. Collaborate with driving schools to improve driver awareness.
- **Apply safety standards in logistics** by requiring delivery companies that use cargo bikes to comply with standards on visibility gear, helmets and braking. Establish city-level certification schemes, ensuring consistency in safety equipment, insurance and route planning (e.g., avoiding peak-hour conflict areas such as schools or markets, avoiding areas such as tunnels or bridges without cycling infrastructure).
- **Monitor and learn** by regularly analysing crash data, assessing streets or cycling facilities through tools like CycleRAP Demonstrator[49], and near-miss reports[50] to prioritise interventions at high-risk locations.

[46] Valletta Declaration (2017). https://data.consilium.europa.eu/doc/document/ST-9994-2017-INIT/en/pdf

[47] European Commission (2019), EU Road Safety Policy Framework 2021-2030 - Next steps towards "Vision Zero", SWD (2019) 283 final.

[48] https://www.itf-oecd.org/sites/default/files/docs/safe-system-in-action.pdf

[49] CycleRAP Demonstrator Tool. For more information, visit https://irap.org/cyclerap/demonstrator/

[50] Potential sources include reports from the cities such as the Cycling Near Misses Report from UK (https://nacto.org/wp-

For clear terminology on different types of cycling infrastructure, check the 6th edition of the Glossary for Transport Statistics from Eurostat/ITF/UNECE.[51]

Cycling Counts project: Cycle infrastructure categories and quality requirements

Based on a detailed analysis of national and EU documents and practices on cycling infrastructure, three main categories of cycle infrastructure were identified:

1. A **cycle track** is an independent road or part of a road designated for use by cyclists and signposted as such. A cycle track is separated from other roads or other parts of the same road by structural means[52].
2. A **cycle lane** is a part of a carriageway designated for use by cyclists and distinguished from the rest of the carriageway by longitudinal road markings[53].
3. A **cycle-friendly mixed traffic road** is a road on which cyclists share the carriageway with motorised traffic, without having a part of the carriageway (cycle lane) designated for cycles. Such a road needs to be safe for cycling due to speed limitations and limited traffic volumes[54].

The table below gives an overview of possible combinations of quality attributes and corresponding values. The values are based on desk research conducted by the Cycling Counts project, drawing from existing guidelines and benchmarks for width, speed limit and traffic volumes established across EU Member States.

Cycle Track	**Uni-directional**	**Bi-directional**
Width	≥ 1.5 m	≥ 2.4 m
Surface quality	Perfectly, well or moderately rideable	
Cycle Lane		
Surface quality	Perfectly, well or moderately rideable	
Speed limit, traffic volume and width	50 km/h or lower < 3000 vehicles/day ≥ 1.4 m	
Cycle-friendly mixed traffic roads		
Surface quality	Perfectly, well or moderately rideable	
Speed limit and traffic volume	30 km/h or lower < 3000 vehicles/day	
Speed limit and traffic volume	50 km/h or lower < 1000 vehicles/day	

Source: Cycling Counts (2025), Methodology for the current and future collection of cycling data in the EU

content/uploads/Nearmissreport-final-web-2.pdf) or crowdsource tools like BikeMaps (https://bikemaps.org)

[51] https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/w/ks-01-25-048

[52] Vienna Convention on Road Traffic, also used by Eurostat 2019 - B.I-15

[53] Vienna Convention on Road Traffic, also used by Eurostat 2019 - B.I-14.

[54] United Nations, ECE/TRANS/WP.5/2024/4

Planning for intermodality

Cycling alone can replace a certain number of car journeys, but its real potential comes when it is combined with public transport. Cycling plays a vital role in a seamless, intermodal transport system. If its infrastructure is well done, cycling can significantly extend the catchment area of public transport services, support first and last-mile connections, and enhance accessibility within urban and suburban areas. A well-integrated cycling system contributes to more efficient use of public transport infrastructure and supports a shift towards sustainable modes.

Mobility hubs at stations facilitate intermodal journey chains. They may include e-bike charging, secure cycle parking and/or bike share bikes for the onward journey. Cycle infrastructure should facilitate a smooth onward journey from the station. Another kind of mobility hub may be appropriate in local neighbourhoods, often within walking distance of users' homes. A neighbourhood mobility hub can offer car sharing and/or cargo bike sharing, and possibly a limited number of bike racks. Their purpose is to enable a multimodal lifestyle.

Recommendations for practitioners

- **Plan for integration of cycling at mobility passenger hubs**[55] by designing safe, direct and legible cycling connections to train and bus stations, complemented by secure and weather-protected parking.
- **Support first- and last-mile connections** by expanding or integrating bike-sharing services with public transport tickets or passes.
- **Coordinate information and ticketing** by integrating cycling options (e.g., shared bike availability, secure parking locations, e-bike charging, availability of (e-)cargo bikes for goods transfer) into multimodal travel planners and MaaS platforms.
- **Ensure continuity between modes** by designing cycling routes, pedestrian areas and public transport stops as connected, coherent spaces[56], for example, by providing direct, barrier-free links between cycle lanes, sidewalks and stations, and coordinated wayfinding that makes transfers easy and intuitive.
- **Promote multimodal lifestyles** by developing policies and campaigns that encourage and enable citizens to choose different modes for each journey depending on trip purpose and conditions.

[55] A mobility hub provides a focal point in the transport network that seamlessly integrates different modes, especially mass public transport, shared and active mobility. It combines supportive multimodal infrastructure such as charging points and placemaking strategies (Source: UITP Policy Brief on Multimodal Hubs (2023). https://www.uitp.org/wp-content/uploads/sites/7/2025/04/Policy-Brief-Mobility-hubs-web.pdf)

[56] Integrating bicycles with trains creates a powerful alternative to car travel by enabling fast, flexible door-to-door journeys; successful planning requires early inclusion in urban development, safe and direct cycling routes, ample station bike parking, seamless transfers, and shared mobility options for the last mile (Dutch Cycling Embassy (2021), https://dutchcycling.nl/knowledge/blogs-by-experts/the-bicycle-train-combination-a-ticket-to-success/)

Practice Example

Utrecht Central Station, the Netherlands

Europe's largest integrated mobility hub includes a three-level underground bike parking facility for 12500 bicycles, directly connected to tram, bus and rail services. It includes a "*Bicycle and Service*" point for repairs, maintenance, parts and accessories, and a digital space indication system that directs cyclists to free spaces. Its design demonstrates how cycling and public transport can function as a single system.

Management: The Municipality of Utrecht, ProRail, and NS (Dutch Railways) jointly oversee the *Stationsplein* bicycle parking to ensure accessible, safe, and well-used bicycle parking facilities at Utrecht station.

Figure: Person using the bicycle parking facility at *Stationsplein* (Source: CU2030.nl at https://www.utrecht.nl/city-of-utrecht/mobility/cycling/bicycle-parking/bicycle-parking-stationsplein)

image © Laura Lopez

Including the private sector

The private sector is a key partner in advancing the integration of cycling in mobility systems. Businesses ranging from logistics operators, delivery platforms and bike share operators to tourism companies, cycle manufacturers, retailers and repair shops contribute to innovation, service provision and job creation. Local authorities can encourage businesses in this significant market, and encourage more cycling, by creating regulatory clarity, by ensuring open and ongoing communication and by working together collaboratively when private operators can provide services that significantly support and complement existing public transport offers.

Recommendations for practitioners:

- **Encourage public-private partnerships** by engaging with cycling industry representatives and inviting their input in urban mobility and sustainability plans. Co-design frameworks on bike data sharing, collaborative R&D and finding opportunities for co-investment.
- **Integrate cycle logistics** into your mobility planning by supporting urban micro-hubs and providing incentives for last-mile deliveries by cargo bikes.
- **Encourage sustainable operations** by integrating clear environmental criteria in municipal procurement processes (e.g., prioritising logistics operators that use zero-emission vehicles such as cargo bikes and report emissions and energy use).
- **Support production and repair** by facilitating access to affordable and well-located spaces for cycle assembly, repair, refurbishment and recycling businesses, including social enterprises. This should ensure that local communities across the urban (and suburban) area can benefit from the services.
- **Leverage digitalisation** by using shared data (such as counts, incident reports, network performance) and smart-city tools (like GIS mapping, real-time dashboards, network sensors to measure flows, speed or surface conditions, digital twins, predictive maintenance systems) to optimise cycling networks, maintenance and fleet management.
- **Promote local job creation** by integrating cycling initiatives into economic development and training programmes (e.g., bike library programmes to promote cargo-bike use for households or small businesses).

Practice Example

Logroño, Spain: logistics micro-hub

In the Spanish city of Logroño, as part of the EU-funded DECARBOMILE project, a modular logistics micro-hub was established close to the city's pedestrian zone. The hub is equipped with solar-powered units, secure digital access, e-cargo bikes (capacity ~100 kg) and charging stations.

The micro-hub enables business owners, logistics operators, and the local community to benefit from eco-friendly last-mile services by allowing the transfer of goods from vans to e-cargo bikes or tricycles. Citizens and businesses can use these cargo bikes free of charge for up to 4 hours daily, supported by integrated digital tools.

Figure: Logroño urban micro-hub on-site (Source: DECARBOMILE project 2025)
For more information, visit https://decarbomile.eu/living-lab/logrono-spain/

Supporting tourism with cycling

Cycle tourism supports local economies, promotes healthy lifestyles and strengthens the visibility of cycling as a sustainable mode of transport. It generates demand for high-quality infrastructure that benefits both residents and visitors, and cycling on a holiday tends to lead to more everyday cycling. Practitioners can ensure that active mobility and tourism objectives reinforce each other.

Recommendations for practitioners

- **Identify and promote cycling routes** by developing scenic corridors linking cultural sites, nature preservation and commercial areas. Promote accessible itineraries for domestic and international visitors, using consistent branding and information materials, collaborating with local, national and/or international tourism operators.
- **Invest in supportive infrastructure** by providing wayfinding signage (showing distances and travel time to attractions and service points), rest areas on intra-urban cycle routes, service points (including lockers to leave luggage and/or cycles) and connections to public transport.
- **Foster partnerships** by collaborating with tourism boards, local businesses and accommodation providers to establish bike-friendly services (such as maps of cycle routes and attractions, a repair café with skilled volunteers, integrated booking for cycle hire, tours and accommodation).
- **Align with quality standards** and, where relevant, seek EuroVelo certification to enhance visibility and ensure route quality.
- **Monitor impacts** by tracking visitor numbers, overnight stays, and local spending to quantify benefits and guide further investment

EuroVelo cycling routes and certification

The expansion of cycle tourism vividly underscores cycling's robust economic potential. As networks extend across the continent, such as the extension of EuroVelo 15 - Rhine Cycle Route in 2025, they attract a growing number of domestic and international tourists, each contributing to local economies through their expenditures on accommodations, meals, visits to attractions, equipment rentals, and guided tours. This influx stimulates small businesses and encourages new enterprises, particularly in less-developed regions that benefit from increased visitor numbers.

Certification: Authorities managing at least 300 km of EuroVelo routes can apply for EuroVelo Certification[57]. The process involves multiple steps, including a field survey conducted by qualified EuroVelo Route Inspectors using the ECS methodology. Fieldwork is carried out alongside desk research to collect additional evidence that the route provides suitable accommodation, services, and promotional materials.

Investments in cycling infrastructure for tourism purposes often have spillover benefits for daily commuters and residents, enhancing the overall mobility ecosystem. The rise of cycle tourism also fosters job creation, from hospitality and maintenance to tour operations and local artisans catering to cyclists. In this way, the flourishing of cycle tourism not only elevates the profile of cycling as a sustainable mode of travel but also cements it as a catalyst for economic growth and regional development.

[57] EuroVelo (2025), What is a certified EuroVelo route? https://en.eurovelo.com/news/2025-04-25_what-is-a-certified-eurovelo-route

Making cycling inclusive and affordable for all

Cycling should be accessible to everyone, regardless of age, gender, income, or physical ability. Inclusion ensures that cycling contributes to equitable, affordable and healthy mobility systems. Addressing barriers such as safety concerns, cost, and cultural perceptions is central to making cycling an everyday option for all. By improving access, increasing affordability, and encouraging active mobility, practitioners can both improve public health and wellbeing, and promote social inclusion and reduce inequalities.

Recommendations for practitioners

- **Adopt accessibility standards** by ensuring cycle infrastructure and parking are suitable for various cycle types, including cargo bikes, tricycles and hand-pedalled bikes.
- **Expand adaptive services** by integrating adaptive or family bikes (i.e. cycles designed to carry children or family-related cargo safely and comfortably) into bike-sharing fleets and ensure docking stations are step-free and spacious.
- **Improve affordability** by introducing reduced fees, subsidy schemes or e-bike trials targeting low-income users, seniors and persons with reduced mobility.
- **Design age-friendly routes** by providing calm, low-traffic corridors with rest areas, benches and shade to support older users.
- **Promote cycling education** by implementing school-based training and community programmes addressing the needs of children, women, the elderly and new residents. For children and students, consider developing solutions for school trips (e.g. bike buses, school trains or school streets). For the elderly, consider specifically training on the use of e-bikes to improve safety and prevent injuries.
- **Ensure that participatory processes are inclusive** by engaging with diverse groups regardless of age, gender, origin and social background.
- **Work through partnerships** by collaborating with schools, senior centres and local NGOs to promote inclusive cycling initiatives for all, including migrant communities.
- **Promote cycling** as an accessible, cost-effective and healthy means of mobility by ensuring that cycling policies and initiatives consider the needs of all user groups

Practice Example

Turku, Finland: Promoting Cycling and Skills Development for Children

In May 2025, the City of Turku concluded its involvement in the EU-funded SCALE-UP[58] The project aimed to improve sustainable and user-focused urban mobility through ten targeted initiatives. Among the cycling-focused actions were the introduction of Finland's first bicycle accessory vending machine and a shared cargo bike scheme.

Cycling agents actively worked to evaluate and enhance cycling infrastructure, while children developed their cycling skills through dedicated training, tracks, and group bikes for children tailored for daycare and school excursions. These efforts supported a shift toward active travel, making cycling more accessible and encouraging children to engage in sustainable mobility from an early age. Seasonal innovations, such as pedestrian-friendly winter streets and winter squares, further enabled year-round cycling activity.

Figure: Improving the cycling skills of children (Source: Jalmari Salaterä/SCALE-UP 2025)
For more information, visit: https://www.scale-up-project.eu/news/city-of-turku-article

Practice Example

Paris, France: Permanent "School Streets"

Paris began experimenting with *rues aux écoles* during the COVID-19 pandemic to make routes to school safe, to reduce pollution, and to reclaim space from cars for children. The initiative proved so successful that the idea has since been made permanent and steadily expanded to more schools. By the start of the 2025 school year, over 300 school streets had been created, covering around half of all primary schools in the city, with 100 of those fully redesigned and greened.

Implementation depends on local conditions: some streets are fully closed to car traffic with removable barriers, while others are partially pedestrianised, allowing delivery drivers and residents to pass at walking speed. In all cases, motor traffic is reduced, and pedestrians have priority. The calmer conditions have made cycling to school easier and safer, encouraging parents and children to use bikes for short everyday trips. Design improvements in school streets often include new paving, planted trees, and shaded areas, which both support walking and cycling, greening the city and improving air quality.

Figure: *Rue aux écoles* in Paris (pedestrianised school street) (Source: Christophe Belin / City of Paris)

[58] Turku's project activities were jointly implemented by the Regional Council of Southwest Finland, Turku University of Applied Sciences, and Vinka Oy. https://www.scale-up-project.eu /

Collecting and monitoring cycling data

Collecting harmonised cycling data is fundamental to driving evidence-based policy and monitoring progress following the Cycling Declaration. Cities should move from ad hoc data collection to a coordinated, harmonised, and open framework that tracks cycle network quality, cycle use, cycle services and safety of cyclists.[59], feeding into broader EU efforts to establish baselines, harmonised indicators (including for TEN-T urban nodes), and comprehensive reporting with Eurostat. By investing in tools like static and dynamic counters, digital dashboards, and open-data platforms, municipalities can unlock insights that help steer strategic investments, improve user experience, and accelerate the transition to cycling-friendly mobility systems.

Recommendations for practitioners

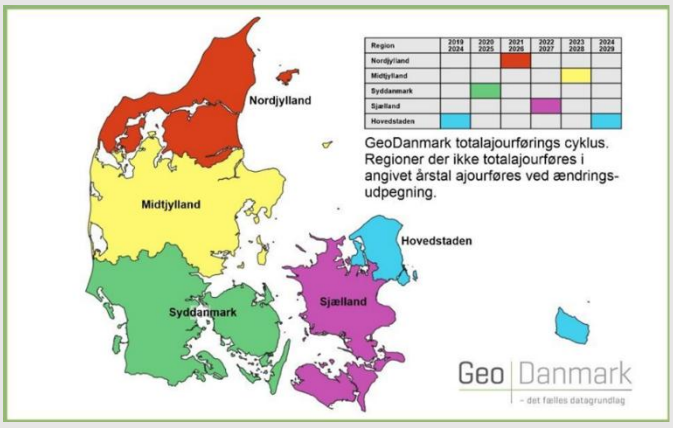
- **Establish a local cycling data strategy** aligned with national and EU indicators across four domains: cycle network, cycle use, cycle safety and cycle services. Assign a responsible city department to coordinate and validate cycling data collection, ensuring consistency and continuity.
- **Integrate existing and new data sources** by combining local datasets (e.g., infrastructure inventories, counters, surveys) with open and crowd-sourced platforms such as *OpenStreetMap* to improve coverage and accuracy. Encourage collaboration with national agencies and statistical offices to feed city data into Eurostat-compatible datasets.
- **Standardise data formats and indicators** and use common geospatial standards (e.g., WGS84) and open formats (e.g., GeoJSON, CSV) for spatial data and sharing through open data portals.
- **Strengthen monitoring and evaluation systems** by deploying automatic and manual counting systems across key corridors and junctions to measure cycling flows continuously. Use digital tools (sensors, AI cameras, or mobile tracking) to capture network use, cycling speeds, and seasonal variations. Develop dashboards for visualising progress on measures being implemented on cycling infrastructure, safety, services and use.
- **Promote cross-sector collaboration** by creating data partnerships between municipalities, educational institutes, and private actors (e.g. bike-sharing operators, navigation apps, cargo bike platforms) to share anonymised cycling data.
- **Enhance data on safety and inclusivity** by collecting georeferenced crash and near-miss data from police, hospitals, and insurance sources. Disaggregate data by user type (e.g., e-bikes, cargo bikes, gender, children, elderly) to support inclusive safety interventions.
- **Build capacity and skills** by training local staff on GIS tools, data validation, and open-data publication. Engage with local cycling groups and citizen scientists to verify and crowdsource missing data on infrastructure quality or barriers.

[59] This reflects on the Cycling Counts project (2025) outcomes on data collection regarding four key domains i.e., cycle network, cycle use, safety of cyclists and cycle services.

Practice Example

Denmark: Network data maintenance

GeoDanmark's database includes the *Vejmidte* layer, which maps Denmark's national road network. Every five years, each of Denmark's five regions receives a comprehensive update to this layer, so all regions are refreshed within that period. In the years when a region isn't being fully updated, changes are kept current by municipalities submitting updates. This approach allows for systematic updating; one region gets a full refresh annually, and ongoing, nationwide maintenance through continuous municipal reporting.



About GeoDanmark: GeoDanmark is a collaboration between the Danish Climate Data Agency and the 98 municipalities to maintain a mapping of cities and landscapes that is accurate and up to date.

Figure: GeoDanmark's dataset total update cycle (Source: GeoDanmark). In: Cycling Counts (2025), D3 Deliverable Methodology for the current and future collection of cycling data in the EU.

Conclusion

Cycling is essential for delivering on Europe's mobility, climate, and health objectives. Integrating cycling into SUMPs enables cities to create transport systems that are efficient, inclusive, and future-proof.

Investments in cycling deliver high returns in terms of environmental, social, and economic benefits, while enhancing the attractiveness and liveability of cities.

The guidance presented in this document shows that cycling must be planned as part of a seamless intermodal system, supported by strong policy frameworks, reallocation of urban space towards a more integrated and sustainable transport system that integrates cooperation across governance levels.

For practitioners, the key message is clear: a SUMP that fully integrates cycling is a SUMP that delivers more sustainable, resilient, and people-centred mobility.

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