THE DEVELOPMENT OF CROSS-BORDER CYCLING LANE INFRASTRUCTURE: Study on current state and possible development of European Union cycling infrastructure.

Contract: MOVE/2024/OP/0029

Final Report

Written by Cycling Counts partners:

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Contact: Keji Alex ADUNMO

E-mail: MOVE-B3-secretariat@ec.europa.eu

European Commission
B-1049 Brussels

Final Report

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LIST OF ACRONYMS

Acronym	Meaning
AIS	Abbreviated Injury Scale
API	Application programming interface
CADaS	Common Accident Dataset
CARE	Community database on Accidents on the Roads in Europe
CEP	Courier, Express, and Parcel services
EC	European Commission
EFTA	European Free Trade Association
EHIS	European Health Interview Survey
EU	European Union
EUDC	European Declaration on Cycling
FCR	Floating Car Data
GBFS	General Bikeshare Feed Specification
GIS	Geographic Information System
GPS	Global Positioning System
ISA	Intelligent Speed Assistance
ISS	Injury Severity Score
LAU	Local Administrative Unit
MAIS	Maximum Abbreviated Injury Scale
MDS	Mobility Data Space
MMTIS	Multi-Modal Travel Information Services
MS	Member State
NAPCORE	National Access Point Coordination Organisation for Europe
NAP	National Access Point
NBPP	Number of bike parking places
NMP	New Mobility Patterns
NCCP	National Cycling Contact Point
NeTEx	Network Transport Exchange
NGO	Non-Governmental Organisation
NTS	National Travel Survey
NVDB	Swedish National Road Database
OSM	OpenStreetMap
POI	Point Of Interest
RTTI	Real Time Traffic Information
SME	Small and medium-sized enterprises
SULP	Strategic Urban Logistics Plan
TEN-T	Trans-European Transport Network
WGS	World Geodetic System

PROJECT SUMMARY

Cycling Counts is a study commissioned by the European Commission's Directorate-General for Mobility and Transport (DG MOVE) to assess the current state of cycling within the European Union. Its goal is to provide comprehensive data on cycle network, cycle use, cycling safety and cycle services and to define a methodology for collecting and monitoring cycling data across Europe.

Cycling Counts partners

Rupprecht Consult: https://www.rupprecht-consult.eu/ (Coordinator)
Cycling Industries Europe: https://cyclingindustries.com/
Eurocities: https://eurocities.eu/
European Cyclists' Federation: https://ecf.com/
Transport & Mobility Leuven: https://www.tmleuven.be/en/

ABSTRACT

This document is the final report of the year-long Cycling Counts project, which assessed the current state of cycling within the European Union. It summarises the project's key activities, which included: 1) definition of elements for the EU-wide baseline for cycling data, 2) reviewing the current state of data across the EU for the cycle network, cycle use, cycling safety and cycle services (including bike share, cycle parking and cycle logistics), 3) developing methodologies for future data collection and progress monitoring and 4) collecting data and establishing a data baseline for the cycle network.

This document provides an overview of the deliverables produced in the project, which include:

1) Definitions of a set of relevant data entities, proposed indicators and key sources;
2) A set of 27 fiches (one per EU Member State), describing the current state of data availability in the MS;
3) Suggested calculation methodologies for future data collection and monitoring in the Member States.

It describes briefly the activities carried out and the results achieved in each of the four data domains of cycle network, cycle use, cycle safety and cycle services and offers guidance to Member States on collecting data in each of the four data domains so as to be able to monitor future progress of cycling development in their countries.

EXECUTIVE SUMMARY

This final report for the European Commission's Directorate General for Mobility and Transport presents the results of the study under SPECIFIC CONTRACT MOVE/B3/SER/2024-460/SI2.929448 (hereafter referred to as 'the contract'), THE DEVELOPMENT OF CROSS-BORDER CYCLING LANE INFRASTRUCTURE: Study on current state and possible development of European Union cycling infrastructure.

This report, prepared by Rupprecht Consult (RC) with contributions from project partners Cycling Industries Europe (CIE), European Cyclists' Federation (ECF), EUROCITIES, and Transport and Mobility Leuven (TML), presents the findings from work packages and deliverables 1, 2, 3 and 4. Work package 1 addresses the definition of elements for the EU-wide baseline for cycling data, WP2 reviews the current state of data for the cycle network, cycle use, cycling safety and cycle services, WP3 presents methodologies for future data collection and progress monitoring, and WP4 focuses on data collection and establishment of a data baseline for the cycle network. Furthermore, the definitions in Deliverable 1 have been revised and validated based on the feedback from the National Cycling Contact Points (NCCPs), DG MOVE, and the Cycling Counts project's four-person advisory board.

The report presents the results for the four data domains of cycle network, cycle use, cycling safety and cycle services. This structure outlines the consortium's activities for each domain distributed across work packages, building upon the final results through further data collection, analysis, and stakeholder engagement. Accordingly, this report is structured along the following chapters:

- Chapter 1 presents the objectives and scope of the project
- Chapter 2 describes the work plan and the objectives and methodology of the different work packages
- Chapter 3 presents the results and methodology for future data collection for each data domain
- Chapter 4 offers conclusions of the project and overall recommendations

Annexes contain a consolidated list of EU-wide national datasets and a glossary of terms and definitions used in the project.

The following sections summarise the key insights, datasets analysed, data availability and quality, and the recommended methodologies for the four domains analysed.

Cycle network

EU-level insights

An EU-wide cycling infrastructure baseline has been established using a hybrid approach combining national, regional and local datasets with harmonised OpenStreetMap (OSM) data processed using the methodological framework developed in Deliverable 3. This results in an EU cycle network of approximately:

- 342,931 km dedicated cycle network (cycle tracks + cycle lanes):
  - 312,115 km of cycle tracks

    - 30,816 km of cycle lanes
- 631,389 km of cycle-friendly mixed traffic roads
- **974,320 km total extended cycle network** (dedicated network + cycle-friendly mixed traffic)

These figures provide a first comparable EU overview of the network accessible to cyclists and form the baseline for future monitoring. The results highlight strong national differences in coverage, quality, classification systems, definitions, and completeness. Some Member States (e.g. AT, NL, SE) have established national datasets, while others rely on regional or municipal datasets. In many countries, OSM remains the only comprehensive source, and its integration proved essential.

Member States broadly recognise the value of establishing national cycle network datasets, agreeing that this must become a long-term structural element of mobility data management.

Summary of datasets analysed

- 26 national datasets from 19 Member States were identified.
- Nine national datasets had sufficient coverage and were detailed enough for baseline inclusion (providing geometry, infrastructure type and at least some quality attributes).
- 90 regional and local datasets were reviewed; 36 were converted to a common format, and 23 were assessed to be of good enough quality to be included in the baseline.
- For the remaining gaps, OSM was used to complete the EU baseline.

Insights on data availability and gaps

Data availability varies widely across the EU:

- Data formats, definitions and terminology lack harmonisation, making interoperability challenging.
- The most commonly available quality attributes are width, surface type, lighting and speed limit (the last attribute being relevant only for cycle lanes and for cycle-friendly mixed traffic roads); the only cycle network attribute from the Multimodal Travel Information Services (MMTIS) Regulation[1] used in practice in several datasets is surface quality.
- Local datasets often exceed national datasets in detail but use inconsistent classifications.
- Lack of national dataset and reliance on municipal data results in incomplete coverage.

OSM emerges as a critical complementary dataset – comprehensive but with variable quality and uneven representation of non-urban/rural areas.

Methodological insights and recommendations

Deliverable 3 defines a harmonised methodology for network data collection, establishes

[1] Commission Delegated Regulation (EU) 2017/1926 of 31 May 2017 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide multimodal travel information services; consolidated text: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02017R1926-20240304

minimum quality filtering criteria, and sets out key indicators for progress monitoring.

Key suggested methodological principles

- A unified classification of infrastructure types (cycle tracks, cycle lanes, cycle-friendly mixed traffic, contraflow cycling) and its variants (cycle and pedestrian tracks, bus and cycle lanes, cycle streets, specific service roads etc.)
- A defined set of quality attributes: width, surface type, surface quality, speed limit, traffic volume, lighting, directionality.
- Selection of "minimum acceptable quality" infrastructure for monitoring purposes.
- Comparison between official datasets and OSM to identify potential inaccuracies in the data.
- Administrative attributes to facilitate the data maintenance, such as infrastructure owner/manager, role in the cycle network, (re)construction date, attribute check date, attribute source/measurement method.

Recommended key indicators to monitor progress

- Length of (dedicated) cycle network per 10,000 inhabitants
- Length of (dedicated) cycle network per 100 km²
- Length of (dedicated) cycle network relative to the road network (%)

Key recommendations to Member States

- Establish and maintain a national cycle network dataset with standardised infrastructure types and attributes.
- Integrate and harmonise local datasets.
- Adopt common definitions consistent with the UNECE Definitions for cycling infrastructure[2], MMTIS Regulation and the Glossary of Transport Statistics[3].
- Establish correspondences between the official and OSM tagging schemes.

Cycle use

EU-level insights

Cycle use levels in Europe show strong variation, and results depend on differing national survey methods. Based on EU-wide surveys:

- 23.6% of EU residents cycle at least once per week (male residents: 27.6%, female residents: 20.0%).
- Cycling represents on average 7.8% of all trips under 300 km (EU-wide mobility survey, 2021).
- Male respondents exhibit higher modal share (share of trips) than females (9.2% vs. 6.3%).

These values offer the first cross-EU estimates but underline the need for systematic, comparable data collection across countries.

Summary of datasets analysed

- 23 national travel surveys were identified.
- Only seven provide all core indicators required for country fiches (modal share,

[2] https://unece.org/transport/publications/definitions-cycling-infrastructure
[3] Glossary for transport statistics - 6th edition (2026): https://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/w/ks-01-25-048

purposes, km cycled, demographic splits).
- 12 surveys include data from 2021 onwards.
- Five physical activity surveys, and 24 additional sources (counter platforms, thematic surveys, census data) supplement national datasets.

Insights on data availability

The major challenge in cycle use data is inconsistency. This includes:
- National surveys differ in methodology, representativeness, age groups, and trip definitions.
- Modal share results from national travel surveys often differ substantially from EU-wide survey results.
- The use of additional, innovative data sources such as real-time counter data is expanding but remains fragmented.

Methodological insights and recommendations

Key suggested methodological principles
- Use travel surveys as primary data source, harmonised through shared metadata requirements.
- Combine surveys with other data sources, such as automatic counter data or privacy-compliant GPS tracking, where available.
- Standardise data collection methodologies and frequencies for key indicators (see below)

Recommended key indicators to monitor progress
- Share of population that cycles at least once a week
- Cycling modal share of all trips
- Distance cycled per inhabitant per year

Key recommendations to Member States
- Conduct National Travel Surveys (NTSs) at least every 3 years, including distance cycled.
- Continue coordinating National Travel Surveys (NTSs) through collaboration with Eurostat building on the Eurostat Guidelines on Passenger Mobility Statistics.
- Make the research report and underlying datasets openly accessible, ensure clear documentation of the datasets, terminology and methodology.
- Integrate counter data platforms at national level and explore options to use other data sources, such as GPS-based movement data (collected in accordance with data protection and privacy regulations) while ensuring representativeness and explore producing high-resolution georeferenced cycle-use datasets (e.g., link-level (i.e., road segment) flows).

Cycling safety

EU-level insights

Cycling safety data across the EU shows strong discrepancies, especially for non-fatal injuries. The CARE database provides harmonised fatality data, enabling calculation of fatalities per exposure (distance cycled), using the EU-wide travel survey as a base for exposure data. Injury data, however, remains inconsistent due to:

- Underreporting in police records
- Significant variation in hospital data integration

- Divergent definitions of "serious injury"

As a result, while a fatality-based exposure indicator could be calculated at EU level, the project concludes that serious-injury-based EU-wide indicators are not yet feasible.

Summary of datasets analysed

The datasets analysed included:

- CARE database (EU level), harmonised for fatalities and injuries.
- 24 national data sources, with major variation in:
  - Whether hospital data is integrated
  - Availability of geo-referenced crash data
  - Separation of e-bike crashes
  - Severity classification
- Seven Member States provide separate data for e-bike crashes.
- Five Member States have geo-referenced crash data publicly available (while a larger number reports these data to CARE).

Insights on data availability

Fatality data is generally robust. Injury data is not comparable between Member States due to different definitions of serious/light injuries, lack of standardised collection method, incomplete links between police and hospital data.

Methodological insights and recommendations

Key suggested methodological principles

- Integrate police, hospital, ambulance, death records and insurance data.
- Ensure consistent definitions using the Glossary for Transport Statistics.
- Collect exposure data through standardised travel surveys.

Recommended indicators to monitor progress

- Fatalities per 100 million km cycled
- Seriously injured cyclists per 100 million km cycled

Key recommendations to Member States

- Conduct a National Travel Survey, including distance cycled, every 3 years.
- Establish national data linkage between police and health records for crashes.
- Adopt EU-aligned injury definitions (Maximum Abbreviated Injury Scale (MAIS)/ Injury Severity Score (ISS)[4].
- Improve public availability of geo-referenced crash data.

Cycle services

This study focuses on the three services where measurable indicators can currently be defined. A wider range of services was considered but most were not realistic for EU-wide

[4] A unified EU definition of "serious road injury" was introduced in 2013 to improve comparability of safety data across Member States. It is based on the Abbreviated Injury Scale (AIS), an internationally accepted anatomical-based trauma classification of injuries published by the Association for the Advancement of Automotive Medicine (AAAM). As one person can have more than one injury, the Maximum Abbreviated Injury Scale (MAIS) is the maximum AIS of all injury diagnoses for a person (ETSC (2021), Ranking EU progress on road safety. 15th Road Safety Performance Index Report). ISS, an anatomical scoring system, provides an overall score for patients with multiple injuries. AIS is the basis for the Injury Severity Score (ISS).

analysis. Cycle services included are bike sharing, cycle logistics, and cycle parking, each requiring distinct methodologies.

EU-level insights

Bike sharing: A comprehensive EU-wide assessment of bike sharing was conducted, covering all EU cities with over 150,000 inhabitants, plus additional smaller cities where Member States provided data. This included:

- 289 cities above 150k inhabitants
- 271 cities identified with active bike sharing
- 302,757 shared bicycles in total
- 127,725 shared e-bikes (42% of fleet)
- 202 million trips/year in cities with validated data
- 0.96% of all cycling trips in the EU are bike-share trips

Cycle logistics: Cycle logistics is a rapidly growing sector but suffers from very low data availability. Companies in several Member States had previously provided some data to industry surveys. Of these, three (BE, FR, DE) have mature systems capable of producing indicators, five others (EE, HU, IT, NL, RO) had data that could be used to illustrate a possible process for the future while three (SE, PT, LA) have insufficient data to analyse. The sector spans multiple subdomains including courier, express, parcels, food delivery, municipal use and tradespeople, making harmonisation more complex than for bike sharing.

Cycle parking: No fully harmonised EU definitions or reporting frameworks exist yet. NAPCORE[5], the National Access Point Coordination Organisation for Europe, have drafted standardised attributes to facilitate compliance with the MMTIS Regulation but methodologies to make data available require further development. Despite these limitations, 4.5 million parking places were found in OSM, but national or regional datasets that could be verified are rare, except in a few OSM-rich areas. Some local datasets exist but they use inconsistent categories (on-street racks, secure parking, shelters, station parking, bike garages).

Insights on data availability

Bike sharing: Data availability is strong: 19 Member States have sufficient data to calculate full indicators (included in the Member State fiches annexed to this report). Gaps are mainly due to non-responsive operators, operators declining disclosure for confidentiality reasons, lack of data integration at national level, and limited National Access Point (NAP) presence. During consultation, NCCPs from 3 Member States (AT, FR, DE) provided information about bike share data in their NAP.

Cycle logistics: In most Member States, structured data sharing does not exist. Operators collect commercial data but rarely disclose it. Trade associations exist only in a few countries, and these mainly cover SMEs. It was only possible to calculate validated indicators in three Member State fiches (BE, FR, DE). Five additional countries (EE, HU, IT, NL, RO) have some sample data as a demonstration of future methods.

[5] EU-wide body coordinating the work of NAPs, improving both availability of data and standardisation processes https://napcore.eu/

Cycle parking. Data was found on OSM for all Member States, but assessment shows that the level of availability at this time more likely reflects OSM use by public bodies and the activity of the OSM community than a valid indicator. All data collected was included in Member State fiches as a demonstration of the methodology.

Methodological insights and recommendations

Bike sharing: the study finds that annual operator or city-level data collection is feasible and that it should become standard practice. The General Bikeshare Feed Specification (GBFS) serves as the harmonised real-time data standard under MMTIS.

Recommended key indicators to monitor progress

- Share of cities with bike share
- Fleet size per 10,000 inhabitants
- Trips per 1,000 inhabitants per day
- Contribution to national cycling modal share
- Long-term addition: km travelled and unique users

Cycle logistics: To enable EU-wide monitoring, Member States need to develop sectoral capacity for research and reporting. This would require building or supporting national cycle logistics associations or other researchers to build relationships with the sector and capture data. If this capacity for reporting is facilitated, the process should:

- Introduce structured annual reporting using agreed indicators.
- Engage large users (Courier, express and parcel, postal services, food delivery platforms, etc.).
- Pilot collection through Sustainable Urban Logistics Plans.

Recommended key indicators to monitor progress

- Fleet size (cargo bikes per 10,000 inhabitants)
- Distance travelled per million inhabitants
- Share of cycle logistics in all km cycled
- Number of professional riders per million inhabitants
- Safety indicators (crashes per km ridden)

Cycle parking: The current data in OSM, the requirements of the MMTIS Regulation and the standardisation work of NAPCORE are a basis for improving standardised cycle parking data availability in each Member State if public bodies commit consistently to the use of these methodologies. Progress can be tracked on the data availability, which will then populate the suggested indicators. This also measures MMTIS compliance.

Recommended key indicators to monitor progress

- Number of bike parking places relative to kilometres of cycling infrastructure.
- Number of parking places relative to kilometres travelled per day by the whole population.
- Number of parking places relative to daily trips taken by the whole population.

1. INTRODUCTION

1.1 Objective

Following the tender requirements, the objective of Cycling Counts is to "provide a definition (including type of data) and a calculation method composed of all the elements of the EU-wide baseline, including (but not limited to) the length, network density, quality and accessibility of cycling infrastructure and services for several user types, the share of cycling in total transport and mobility activity and the number of serious injuries and fatalities among cyclists".

Below, it is indicated how the consortium operationalised the key elements of the project. These definitions provided guidance throughout the project, but they were also refined and updated based on advancing knowledge, insights and feedback received.

1.2 EU-wide baseline

The baseline refers to a current status, in this case, a reference point or standard against which future measurements, progress, or changes can be compared. In Cycling Counts, this applied to the cycle network across the EU. Besides the network baseline, the study also provides a comprehensive overview of available data and recommendations for measurement of progress on cycle use, cycling safety and cycle services.

1.3 Scope

The examination of cycling data in the four identified domains, including definition of data entities and indicators, the development of methodologies of collecting cycling data and monitoring progress over time and data collection make up the scope of the project.

Below, the main characteristics of each of those four data domains are provided.

(a) **Cycle network**: the study defines the cycle network as the road infrastructure that can be used by cyclists. As key categories, the study has identified:

- cycle tracks
- cycle lanes
- cycle-friendly mixed-traffic roads

The definition was operationalised, matched with other/complementary definitions (for example those in the Vienna Convention on Road Traffic and the 6th version of the Glossary of Transport Statistics) and further refined, while remaining consistent with EU legislation.

Furthermore, the identified categories (and variations) of the cycle network domain have been grouped into two main groups. Cycle tracks and cycle lanes together form the "dedicated cycle network". When cycle-friendly mixed-traffic roads are also added, the study refers to this as the cycle network (or sometimes 'extended cycle network'). This is visualised in Table 1.

Table 1: Categories of cycling elements and variations

CYCLE NETWORK			
Categories	Variations		
Cycle track	Cycle and pedestrian track	DEDICATED CYCLE NETWORK	[EXTENDED] CYCLE NETWORK
	Greenway		
Cycle lane	Bus-and-cycle lane		
Cycle-friendly mixed traffic road	Cycle street		
	Advisory cycle lane		
	Residential area		
	Specific service road		

(b) **Cycle use**:

- Modal share/trips made/distances travelled by cyclists (= all users of pedal-powered vehicles, including electric pedal assisted cycles (EPACs). Distinctions are possible according to trip purpose (leisure, shopping, commuting…) and user types classified according to parameters like gender, age or area (urban/rural).
- The number of cycles (+ characteristics of these cycles) that are used or owned across Europe.

(c) **Cycling safety** refers to the set of conditions, measures, and design principles that enable cyclists to travel without undue risk of injury or harm. Safety is typically assessed through its counterfactual — the occurrence of crashes. To accurately describe the safety performance of the cycling system, the number of cycling crashes must be analysed in relation to exposure to possible crashes (for example, the distance travelled), allowing meaningful comparisons and a more reliable assessment of risk.

(d) **Cycle services**: the study defines cycle services as any kind of cycling related service that can be used by people cycling. This encompasses infrastructure including parking facilities, charging stations for e-bikes, and cycling services such as bike-sharing systems and cycle logistics operations. Because not all services can be defined at a level where indicators can be created, the project focuses on bike sharing, cycle parking, and cycle logistics for detailed analysis.

This document summarises the work carried out and its results as well as recommendations resulting from the data collection and methodology development.

2. METHODOLOGY

Chapter 2 presents a brief overview of the project methodology organised according to the work package structure defined in the project's inception report. In chapter 3, the project results are presented thematically, along the four data domains addressed in the project (cycle network, cycle use, cycling safety and cycle services).

2.1 Workplan

This subchapter describes our methodological approach, which was designed to accomplish the objectives stated in the call.

- **Objective 1:** Define a common methodology for the collection of relevant cycling data.
- **Objective 2:** Collect the data to establish a baseline
- **Objective 3:** Define a methodology for the progress monitoring towards further infrastructure development against the baseline

The work plan included a detailed outline of our planned activities, broken down into six work packages that directly reflect the tasks carried out in the project. These are:

- **WP1:** Definition of different elements of the EU-wide baseline
- **WP2:** Review of the current state of the cycle network, use, safety and services
- **WP3:** Methodologies for data collection and progress monitoring
- **WP4:** Data collection and baseline establishment
- **WP5:** Engagement with relevant actors and stakeholders
- **WP6:** Project management and quality control

The interaction among the first five work packages is indicated through arrows in Figure 1, while WP6 supported and guided all the other five WPs. The tasks within work packages 1, 2 and 3 have been divided into four domains:

(a) Cycle network
(b) Cycle use
(c) Cycling safety
(d) Cycle services

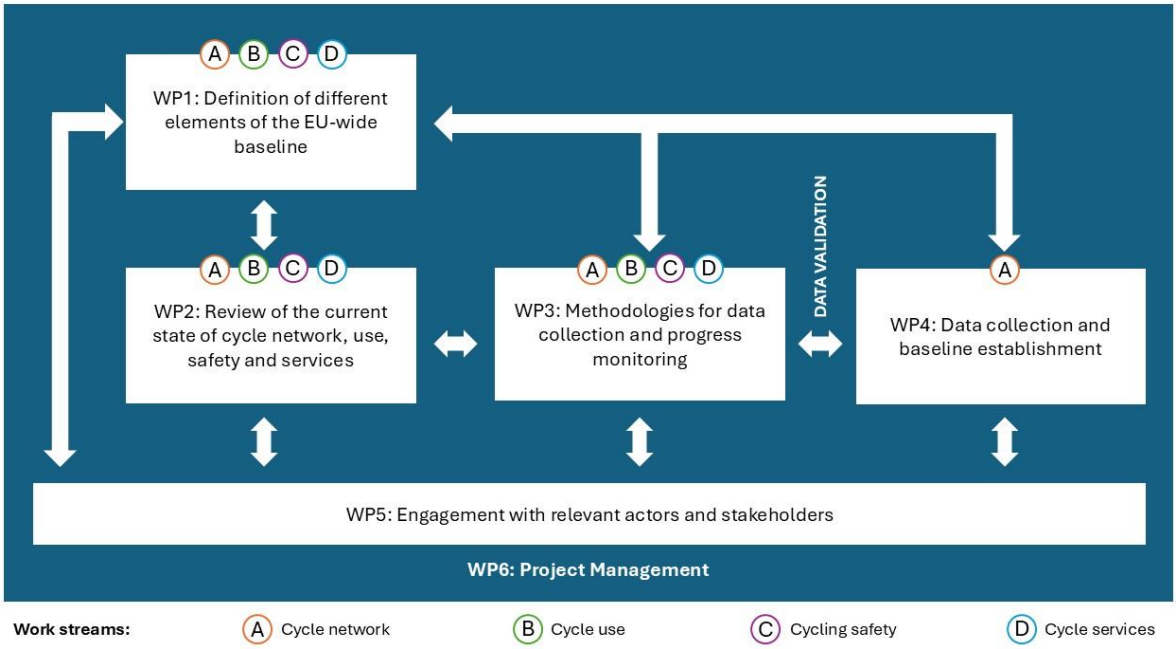

Figure 1: Project design and workflow

2.1.1 Definition of elements of the EU-wide baseline (WP1)

2.1.1.1 WP1 Objective

The objective of WP1 was to define a common methodology for the collection of relevant cycling data for the EU Member States. Deliverable 1 (D1) defines the different components of the EU-wide baseline for cycling. It includes definitions, performance indicators, and key sources of information related to cycling in Europe. These definitions, and related indicators, were essential for structuring the metadata of the cycling landscape across the EU. D1 presents a definition (including types of data) and a calculation method for all the elements of the EU-wide baseline. It includes the following:

- A common framework of definitions to establish the EU-wide cycling baseline;
- Definitions of performance indicators to allow the monitoring of the evolution of cycling across the EU;
- Calculation methods for these indicators that can be applied at an EU-wide level.

2.1.1.2 WP1 Methodology

The approach for D1 was structured around three sets of Excel tables that present different components of the EU-wide baseline for cycling: (1) definitions, (2) performance indicators and (3) key sources of information. These components are explained below. The information in these Excel tables is based on desk research and on input from stakeholders.

Definitions

In defining the cycling baseline in Europe, the study refers to the descriptions of the various 'data entities' that make up this baseline. These definitions are based on external sources, following a hierarchical structure in descending order:

- EU legislation (MMTIS Regulation, TEN-T Regulation[6], …)
- International treaties signed or ratified by all or most EU Member States (Vienna Convention on Road Traffic[7], Vienna Convention on Road Signs and Signals[8], …)
- Non legally binding documents published in the Official Journal of the European Union (European Declaration on Cycling[9], the Green Deal[10], the Sustainable and Smart Mobility Strategy[11], the new EU Urban Mobility Framework[12], SUMP guidelines[13])
- Definitions adopted by EC agencies or related bodies such as Eurostat or NAPCORE
- Non legally binding documents from International Governmental Organisations, other than the EU (UNECE, WHO…).
- European Commission documents and relevant studies (e.g. Staff Working Documents, Study on New Mobility Patterns in European Cities[14])
- Other sources (reports from expert committees, EU funded projects/initiatives such as the DATA4PT[15] project or Transmodel[16], NGOs, universities, industry…)

Key sources

D1 also includes a list of key sources for definitions used throughout the project. These sources include legally binding and non-binding documents at the EU or international level (see list in the Definitions section above). Referencing these sources ensured clarity and consistency across the project and it aligned the project with existing legal and other frameworks and with established concepts.

Indicators

In the context of the EU-wide baseline for cycling, the study used performance indicators to assess various aspects of cycling, such as the quality of infrastructure, safety or levels of use. Indicators help tracking progress over time or compare performance across areas. They also support data-driven decision-making.

2.1.2 Review of the current state of cycle network, use, safety and services (WP2)

2.1.2.1 WP2 Objective

The objective of WP2 was to take stock of the national-level data currently available in EU Member States on the state of the cycle network (geographical data) and services for several user types, on the share of cycling in total transport and on mobility activity and the number of serious injuries and fatalities among cyclists (statistical data).

[6] https://eur-lex.europa.eu/eli/reg/2024/1679/oj/eng
[7] https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XI-B-19&chapter=11
[8] https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XI-B-20&chapter=11
[9] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C_202402377
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[15] https://data4pt-project.eu/
[16] https://transmodel-cen.eu/

2.1.2.2 WP2 Methodology

The methodology for this work package consists of a review of the currently available data, including an assessment of data quality. The deliverable takes the form of a comprehensive overview and 27 country fiches (one per Member State), providing data availability, comparisons between EU and national data where available, data quality and a first estimate of infrastructure needs based on currently available data (2030 projection). Country fiches include:

- Visuals and maps per Member State with information on indicators that summarise the data on the cycle network;
- Available data on cycle use, including the share of cycling in total transport activity;
- The number of fatalities among cyclists put in relation to available data on exposure and the number of serious/light injuries among cyclists and crashes with no injuries where available;
- The number of cities over 150,000 with a bike sharing scheme, fleet size by population, bike share trips per day and the contribution of bike sharing to the national mode share;
- The number of bike parking places relative to kilometres of cycling infrastructure, relative to daily kilometres travelled and relative to daily trips taken;
- Logistics fleet size relative to population, distance travelled by cycle logistics relative to population and relative to distance cycled by the whole population; the number of users of commercial cargo bikes relative to population and relative to the number of cyclists; and relative safety of cycle logistics.

2.1.3 Methodologies for data collection and progress monitoring (WP3)

2.1.3.1 WP3 Objective

The objectives of WP3 were to define options for a suitable methodology for the harmonised collection of EU cycling-related data (cycle network, cycle use, cycling safety and cycle services) to both establish an EU-wide baseline as well as a methodology for the regular measurement of progress in the EU vis-à-vis the baseline, including recommendation for the collection, treatment, storage, maintenance and updating of the data.

2.1.3.2 WP3 Methodology

To achieve WP3's objectives, Deliverable 3 (D3) defines a comprehensive and standardised data management framework for cycling data across Europe. The approach first describes the building blocks of the methodology, made up of four domains and three maturity levels.

The four general domains, as previously identified, are:

- Cycle network
- Cycle use
- Cycling safety
- Cycle services (bike sharing, bike parking and logistics)

Each domain represents a distinct aspect of the cycling system, and each is linked to specific objectives of the EU Declaration on Cycling. Using four domains allowed the consortium to acknowledge their differing nature and data sources and requirements and to allow for tailored recommendations for progress by domain.

For each of the four domains, three conceptual maturity levels of cycling data are identified.

These levels are illustrated in Figure 2 and are structured hierarchically from Level 1 to Level 3. Level 1 represents the current situation, as revealed by a Member State analysis, while Levels 2 and 3 express proposed levels of ambition for the near and longer-term future, respectively.

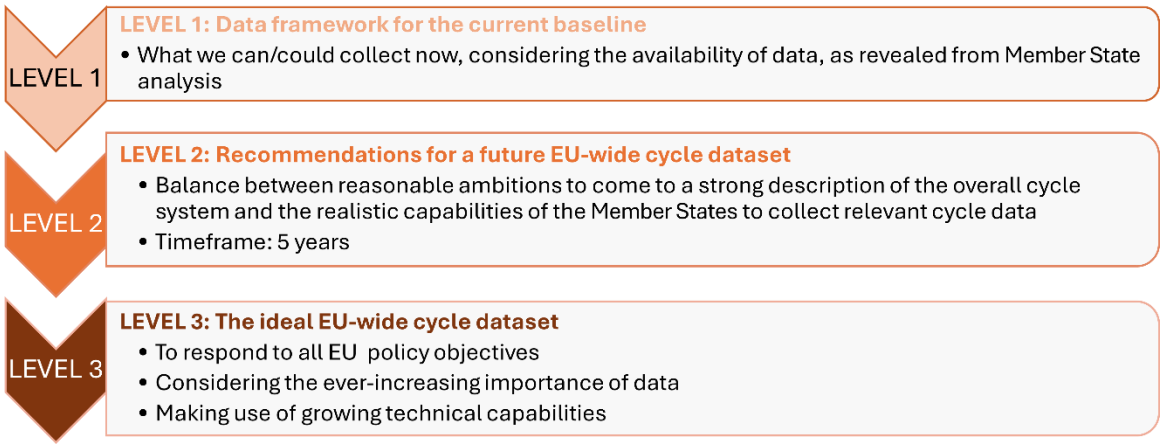

Figure 2: Three levels of maturity for cycle data collection and progress monitoring

2.1.4 Data collection and baseline establishment (WP4)

2.1.4.1 WP4 Objective

The objectives of WP4 were:

- to collect cycle network data from a geographically representative sample of municipalities and regions across the EU, focusing in the first phase on those Member States where little or no useable data was identified at the national level in WP2, and to bring these data into a coherent format to create a unified dataset, according to the draft methodologies and parameters developed in WP1.
- to establish an EU-wide baseline for cycle network data against which further infrastructure development can be measured in the future following the methodologies developed in WP3.

2.1.4.2 WP4 Methodology

Following WP4's objectives, Deliverable 4 (D4) presents a dataset of cycle network data from a geographically representative sample of municipalities and regions across the EU and an EU-wide baseline of cycle network data, based on OpenStreetMap data to which correction factors derived from the data collection exercise of the sample from municipalities and regions have been applied.

2.1.5 Engagement with relevant actors and stakeholders (WP5)

2.1.5.1 WP5 Objective

The objectives of WP5 were:

- to identify and engage a comprehensive group of stakeholders, encompassing all relevant actors at local, regional, national, and European levels, including representatives from all four domains addressed by this project.

- to inform the tasks of work packages 1, 2, 3 and 4. Specifically, in the initial stage of the project, WP5 complemented desktop research by collecting existing information. WP5 also created forums for discussion and gathered feedback on the outputs of the other WPs.
- to create synergies with strategic EU initiatives, including the EC's Expert Group on Urban Mobility[17]. When beneficial, the input and feedback collection process extended beyond the pre-identified stakeholders, engaging other relevant platforms and communities focused on sustainable transport indicators.

2.1.5.2 WP5 Methodology

A flexible and result-oriented approach (combining a mix of physical meetings, online meetings and e-mail exchanges) was adopted to adapt to the need of the revised timeline of the project.

Across all consultation activities, stakeholder engagement served a dual function: validating the results of extensive desktop research and actively enriching it through the provision of new or complementary datasets. NCCPs played a central role in confirming data quality and forwarding official national statistics, while local, regional and sectoral actors contributed critical sub-national and operational insights.

In parallel, the consultation process functioned as a co-creation and consensus-building mechanism, ensuring that definitions, indicators and methodologies developed under WPs 1–4 are robust, feasible and broadly accepted across the EU. Continuous interaction with EU institutions and expert groups ensured alignment with EU policy priorities, statistical standards and ongoing initiatives, while outreach and dissemination activities extended the impact beyond the core stakeholder community.

The methodology is described in Table 2.

Table 2: Stakeholder engagement activities

STAKEHOLDERS / ACTIVITY	FORMAT	WP	SCOPE AND PURPOSE
Eurocities Cycling Task Force (M1) – city representatives, Eurocities, ECF	Hybrid workshop (Mobility Forum, Riga)	1, 2	Presentation of interim results; feedback on definitions, indicators and datasets; identification of missing local/metropolitan data sources
Velo-city workshop (M2) – national authorities (incl. NCCPs), regional/local authorities, academia, industry, NGOs	Physical workshop (World Café)	1–4	Presentation of preliminary results and country fiches; structured feedback across all four project domains; identification of missing data sources and proposals for methodological improvements.
Urban Mobility Days workshop (M3) – NCCPs, cities, cycling and	Physical workshop + moderated	1–4	Validation of outputs in all four domains; collection of feedback to finalise definitions, indicators and methodologies via discussion and survey tools

[17] Expert Group on Urban Mobility (EGUM) E03863 established by COMMISSION DECISION C(2022) 5320 final of 28.7.2022 setting up the Commission expert group on urban mobility

mobility experts	discussion + online survey		
National authorities (NCCPs, NAPs, national statistical and mobility bodies)	Network meetings, bilateral exchanges, and customised email consultations	1–4	Validation of desktop research; provision of national datasets; feedback on definitions, indicators and methodologies
European Commission and EU bodies (DG MOVE units, Eurostat, JRC)	Continuous bilateral exchanges; ad-hoc consultations	1–4	Policy alignment with EU frameworks and regulations; methodological input; coordination with related EU initiatives; expert input on statistical consistency and data aggregation approaches.
Local and regional authorities (Eurocities networks, cities & regions)	Physical and online meetings; bilateral contacts	1–4	Validation of findings at city and regional level; identification, provision and clarification of sub-national datasets; insights on data maintenance, updating practices and local governance models.
Urban mobility and cycling experts (EGUM subgroup and plenary; sectoral experts)	Network meetings; ad-hoc consultations	1–4	Technical validation of definitions, indicators and methodologies; expert feedback on feasibility, robustness and EU-wide applicability of proposed approaches.
Service operators, industry and data holders (incl. bike-sharing operators, data companies)	Bilateral meetings; workshops; email exchanges	2–4	Assessment of the availability and quality of private and operational datasets; feedback on aggregation principles, coverage thresholds, and representativeness; validation of methodological choices for service data.
Cycle network data – NCCPs, national/regional authorities, cities, infrastructure data holders	Customised emails; bilateral online meetings	2,4	Verification of identified datasets; requests for geodata; clarification of methodologies and governance
Cycle use data – NCCPs, national experts, research bodies	Customised emails; bilateral exchanges	2	Validation of national travel survey interpretations; identification of complementary data sources
Cycling safety data – NCCPs, road safety authorities	Customised emails; bilateral follow-up	2	Verification of national safety datasets and methodologies
Bike-sharing and services data – NCCPs, cities, operators, industry associations	Meetings, emails, and presentations to expert groups	3	Validation of available datasets; feedback on aggregation principles, city size thresholds and coverage; confirmation of the feasibility of national-level indicators
European initiatives and projects	Joint meetings; ad-hoc	1–4	Alignment with ongoing EU initiatives and projects; exchange of expertise, methodologies and good practices;

(NAPCORE, MEGABITS[18], EuroVelo, related EU projects)	exchanges		avoidance of duplication and reinforcement of complementarities. Alignment with ongoing initiatives; exchange of expertise and data practices
Wider expert and stakeholder outreach (consultancies, companies, academics, NGOs)	Bilateral outreach; social media	WPs 2–4	Identification of additional data sources, analytical perspectives and emerging practices; engagement beyond pre-identified stakeholders to broaden the evidence base. Identification of additional data sources and analytical perspectives
Final webinar – all stakeholder groups and wider audience	Online webinar	WPs 1–4	Presentation of final results, lessons learnt and next steps; broad dissemination

2.1.6 Project Management (WP6)

2.1.6.1 WP6 Objective

The objectives of WP6 were to:

- Efficiently manage the project team and subcontractor to achieve all objectives.
- Ensure fair and transparent resource allocation among all partners.
- Maintain clear, timely communication within the consortium and with the European Commission.
- Complete all reporting tasks on time and with high quality.
- Monitor processes, identify risks, and implement risk mitigation strategies.
- Collect and compile partners' contributions, ensuring independent quality checks and timely submission.

2.1.6.2 WP6 Methodology

This was done through:

- effective and regular communication with all project partners, with relevant stakeholders, with the project's advisory board and with the project officer.
- Regular meetings with project partners and ad hoc meetings with the project officer, with minutes sent out promptly
- Use of online sharing tools (SharePoint) for effective collaboration
- Use of monitoring tools to track progress and ensure timely delivery of outputs

3. RESULTS

This chapter presents the findings for each domain based on the objectives described in Chapter 2 for WP1-WP4.

[18] MegaBITS project, https://www.interregnorthsea.eu/megabits

3.1. Cycle Network

3.1.1. Definition of elements of the EU-wide baseline

The study defines the cycle network as the road infrastructure that specifically can be used by cyclists. This means that, for example, cycle tracks are part of the cycle network. At the same time, all roads that can be legally used by cyclists should not be considered part of the cycle network. For example, roads mainly built for motorised traffic with high traffic speeds and volumes are not considered part of the cycle network, even if they legally may be used by cyclists.

Therefore, the cycle network in the current study includes cycle tracks, cycle lanes and cycle-friendly mixed traffic roads (where cyclists get a specific treatment and/or are not dominated by disproportionately large flows or high speeds of motorised vehicles, for example, cycle streets, 30 km/h roads or roads with bus-and-cycle lanes). This represents a refined version of the concepts listed in the revised (2024) MMTIS Regulation[19], the Vienna Convention on Road Traffic,[20] the 6th edition of the Eurostat/ITF/UNECE Glossary on Transport Statistics[21] and the final report of the UNECE Group of Experts on Cycling Infrastructure Module.[22]

This definition of the cycle network needs to be distinguished from the cycle route networks. A cycle route connects at least two points through a combination of various infrastructure types (for example, cycle tracks, cycle lanes, cycle streets or roads with low volumes of motorised traffic) and is equipped, where appropriate, with wayfinding solutions (road direction, confirmation and identification signs as well as road markings). A cycle route can serve commuting, recreation, tourism or a mix of different purposes.

The following **key indicators** are used to describe the current baseline for the domain **cycle network**:

- The length of the (dedicated) cycle network relative to the total number of inhabitants of the Member States (in km/10,000 inhabitants).
- The length of the (dedicated) cycle network relative to the surface area of the Member States (in km/100 km^2).
- The length of the (dedicated) cycle network relative to the length of the road network of the Member States (in %).

In addition to the key indicators, the following **additional indicators** were defined for the domain cycle network:

- The length of streets with contraflow cycling in relation to road network length, number of inhabitants and area.
- The percentage of the EuroVelo routes developed, surveyed and certified.

3.1.2. Review of the current state of cycle network

[19] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02017R1926-20240304
[20] https://unece.org/DAM/trans/conventn/Conv_road_traffic_EN.pdf
[21] Glossary for transport statistics - 6th edition (2026): https://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/w/ks-01-25-048
[22] https://unece.org/transport/documents/2024/07/working-documents/final-report-group-experts-cycling-infrastructure

The study reviewed data on cycle networks available on National Access Points (NAPs) according to the Commission Delegated Regulation (EU) 2017/1926 with regard to the provision of EU-wide multimodal travel information services (MMTIS), amended by Delegated Regulation (EU) 2024/490. Where applicable other sources like open data portals in our search for national-level datasets were also consulted. After locating the datasets, their content was reviewed along two main guiding questions:

- Are different types of cycling infrastructure (cycle tracks, cycle lanes, cycle streets, contraflow cycling…) included?
- Are quality parameters (surface type, surface quality, width, lighting, directionality) available?

The study used the quality parameters listed in the MMTIS Delegated Regulation as a starting point (as stated in WP1); however, the list reviewed as data on those specific parameters was not available, except for surface quality in some datasets.

The study used the preliminary findings from this stage for extensive stakeholder consultations (see Table 2) with the National Cycling Contact Points and other relevant stakeholders. They were asked to signal if any relevant datasets either on the NAP or outside of it was missing, whether there are ongoing efforts for harmonising country-wide cycling infrastructure datasets, and whether there are any other stakeholders to be consulted. In case of locating additional datasets not published on NAP the review procedure was repeated as described above. The consortium also followed up with detailed questions on the datasets that were analysed, for example, on local definitions of specific infrastructure types. The relevant data was then extracted and used for the comparison with data from OpenStreetMap and the establishment of the baseline in WP4.

The study identified 26 national (geographical coverage for the whole country) cycling infrastructure datasets across 19 EU Member States. For two of them, interactive maps exist, but the underlying geodata were not provided to the consortium. Nine of the identified datasets proved useful for establishing the baseline because of their coverage and inclusion of relevant information on infrastructure types and quality parameters. In addition, the study identified 90 regional and local cycling infrastructure datasets, of which 36 proved useful.

3.1.3. Data collection and baseline establishment

The study analysed the national-level data on the cycle network component retrieved in WP2 to establish which ones contained the necessary geodata to be used in the cycle network baseline after consulting the relevant national stakeholders. This concerned notably full coverage of the geography concerned and information on different types of cycling infrastructure and quality parameters.

Starting with Member States where no useful national dataset was available after this first phase, the research was extended to regional (first priority) and local (second priority) datasets. Regional datasets were prioritised before local ones because of the potential to include larger areas and populations, and also different area types, including rural/sparsely populated areas. Like the national datasets, regional/local datasets were screened for geodata that would be usable for the cycle network baseline, notably regarding full coverage of the geography concerned and different types of cycling infrastructure and

quality parameters.

For the national, regional and local datasets that contained relevant data, the study extracted this data and brought it into a common format. In parallel, similar cycling infrastructure data was extracted from OpenStreetMap. In line with the feedback from the NCCPs, the extraction of data was expanded from OpenStreetMap by streets with a 30 km/h speed limit and by lighting as an additional quality parameter. The study then compared the data from official sources with the OpenStreetMap data for each geography in order to assess which of the two sources was more precise for each infrastructure type and should be included in the EU-wide baseline. For this assessment, spot checks were carried out via tools like Google Street View or Mapillary to see whether the available geodata corresponded to the reality on the ground. If there were deviations, the consortium followed up through contacts with relevant stakeholders to clarify the underlying reasons (for example, differences in terminology or recent developments).

Finally, the results of the comparison for the available infrastructure types were summarised. The chosen datasets were included in the baseline and in the calculation of the key indicators for each Member State (cycling infrastructure per area/population/length of road network).

Some notes on the data sources and how the study processed them:

- Whenever OSM data is listed as a source, this refers to OSM processed in line with the methodology detailed in https://european-cyclists-federation.github.io/Documents/Methodology.pdf (with minor adaptations resulting from the consultations with stakeholders); the data was downloaded in November 2025.
- LAU borders are used as provided by EuroGeographics; the borders include only land area and have limited accuracy; therefore, certain infrastructure sections (for example, bridges connecting islands to mainland) fall outside the boundaries of any LAU.
- OSM is used for road network length, because the Eurostat numbers were not available on LAU level. https://ec.europa.eu/eurostat/web/nuts/local-administrative-units
- For population and area, LAU/Eurostat is listed as the source of data. At first, the study relied on the partially validated 2024 public dataset from Eurostat (https://ec.europa.eu/eurostat/web/nuts/local-administrative-units). In that version, several issues were present: missing population data for France and Spain, and incorrect, missing area values for Germany and France accordingly. In the final workflow, the study instead uses the partially validated 2023 LAU/ Eurostat public dataset (ibidem), which provides complete and consistent information for both population and DEGURBA (degree of urbanisation) and area for all countries.
- For statistical summaries, the length of unidirectional cycling infrastructure is calculated as one half of the geometric length. Therefore, some of the figures might differ from the national/regional/local statistics calculated with no distinction between uni-directional and bi-directional infrastructure, or with doubling the length of bidirectional infrastructure (methodology applied in France).

The study established the following EU-wide baseline for the main infrastructure types of the cycle network:

Table 3: EU-baseline for the main cycling infrastructure types

Category	Cities	Towns and suburbs	Rural Areas	Outside LAU	Unknown	Total
Cycle tracks	*80,777 km*	*136,964 km*	*94,198 km*	*161 km*	*14 km*	***312,115 km***
Cycle lanes	*10,950km*	*12,798 km*	*7,061 km*	*2 km*	*4 km*	***30,816 km***
Dedicated cycle network	***91,727 km***	***149,762 km***	***101,259 km***	***163 km***	***18 km***	***342,931 km***
Cycle-friendly mixed traffic	*167,590 km*	*260,430 km*	*203,150 km*	*80 km*	*138 km*	***631,389 km***
Extended cycle network	***259,317 km***	***410,193 km***	***304,409 km***	***244 km***	***156 km***	***974,320 km***
Contra-flow cycling	*12,325 km*	*6,313 km*	*1,274 km*	*1 km*	*0 km*	*19,913 km*

Table 4 gives an overview of the national, regional and local datasets the study identified and analysed:

Table 4: Identified and processed cycle network datasets

EU Member States	**27**
Identified national cycling infrastructure datasets	26 (across 19 EU Member States), including 2 (HU and LT) datasets that were not available but interactive maps exist online
Useful national cycling infrastructure datasets	9
Identified regional/municipal cycling infrastructure datasets	90
Useful regional/municipal cycling infrastructure datasets	36
Processed regional/municipal cycling infrastructure datasets	36
Regional/municipal cycling infrastructure datasets included in the country fiches	23
Ongoing efforts	18

3.1.4. Methodologies for future data collection and progress monitoring

The first step in preparing for future data collection is to identify the different infrastructure categories listed in Table 5 (which are all described in D3).

Table 5: Categories of cycling infrastructure and their variations

CYCLE NETWORK			
Categories	Variations		
Cycle track	Cycle and pedestrian track	DEDICATED CYCLE NETWORK	EXTENDED CYCLE NETWORK
	Greenway		
Cycle lane	Bus-and-cycle lane		
	Advisory cycle lane		
Cycle-friendly mixed traffic road	Cycle street		
	Residential area		
	Specific service road		
	30 km/h road Low traffic road		

To develop a complete and reliable overview of the cycling network, each infrastructure segment should be enriched with relevant attributes whenever they are available in the datasets. These attributes describe how the segment operates and its quality. The following lists summarise the key attribute categories identified as the most important for assessing cycle infrastructure.

- Direction: Indicates whether the segment is unidirectional or bidirectional.
- Width: Provides the width of the cycling segment.
- Surface type: Defines the material used, helping assess comfort and maintenance needs.
- Surface quality: Describes the rideability level, from perfectly rideable to not rideable.
- Traffic speed limit: States the legal car speed limit on the road.
- Traffic volume: Indicates motorised vehicle flow.
- Lighting: Shows whether dedicated lighting exists, comes from an adjacent road, or is absent.

The following attributes have been identified as important for the maintenance of the dataset:

- Infrastructure owner/manager: Identifies the responsible organisation for maintenance or operation.
- Access basis: Explains the legal or contractual basis for public use of the segment.
- Management level/type: Specifies the authority level, such as municipal or national.
- Role in the cycle network: Classifies whether the segment belongs to a main, regional, or local route.
- (Re)construction date: Records when the infrastructure was built or last reconstructed.
- Area type: Indicates whether the segment lies in an urban, suburban, or rural

context.
- Attribute check date: Shows when specific attributes were last verified.
- Attribute source/measurement method: Notes how the attribute was obtained, for example, field survey, documentation, another dataset, etc.

The next step involves selecting only those infrastructure segments that meet minimum quality requirements. The selection process relies primarily on key measurable attributes such as width, traffic speed limit, and traffic volume, drawing on values already used across Member State guidelines. Other attributes, such as surface type and lighting, are not used as strict filters because they do not reliably indicate overall rideability or safety. Instead, surface quality will play the central role in assessing whether a segment provides sufficient comfort and safety for cycling. Table 6 gives an overview of possible combinations of quality attributes and values of the quality attributes to be used to make this selection. The currently ongoing support study for guidance on the design of 'forgiving roadsides', 'self-explaining and self-enforcing roads, and on quality requirements of road infrastructure for vulnerable road users[23] will further refine these thresholds.

Table 6: Example quality thresholds for different categories of cycling infrastructure

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	
Traffic speed limit & traffic volume & width	50 km/h or lower < 3000 vehicles/day ≥1.4 m	
Cycle-friendly mixed traffic roads		
Surface quality	Perfectly, well or moderately rideable	
Traffic speed limit & traffic volume	30 km/h or lower < 3000 veh./day	
Traffic speed limit & traffic volume	50 km/h or lower < 1000 veh./day	

To monitor the progress of the cycle network the below **key indicators** should be calculated. Before doing so, it is essential to update the underlying reference data – specifically population figures, the total area, and the length of the road network within the analysis area.

[23] MOVE/C2/2023-279 - Guidance on the design of 'forgiving roadsides', 'self-explaining and self-enforcing roads', as well as on quality requirements of road infrastructure for vulnerable road users. Framework contract: MOVE/ENER/SRD/2020/OP/0008/Lot 6

1. The **length of the (dedicated) cycle network relative to the total number of inhabitants of the Member State** (in km/10,000 inhabitants), calculated for the cycle network (sum of the length of the categories cycle track, cycle lane and cycle-friendly mixed traffic road) and for the dedicated cycle network (sum of the length of the categories cycle track and cycle lane). This indicator provides a measure of cycling infrastructure availability per capita, reflecting the level of investment in and accessibility of cycling infrastructure for the inhabitants.
2. The **length of the (dedicated) cycle network relative to the surface area of the Member State** (in km/100 km^2), calculated for the cycle network and for the dedicated cycle network. This indicator expresses the density and coverage of the cycle network. It provides insights into how well the cycle network is distributed across an area and helps identify areas with limited cycling infrastructure availability.
3. The **length of the (dedicated) cycle network relative to the length of the road network of the Member State** (in %), calculated for the cycle network and for the dedicated cycle network. This indicator reflects the extent and integration of cycling infrastructure within the overall road network. A higher value indicates a greater commitment to supporting cycling as an accessible means of transport. This indicator for the dedicated cycle network best represents the cycle-friendliness of a Member State.

Table 7: Key indicators on the cycle network

Key indicators	Unit
Length of the (dedicated) cycle network per 10,000 inhabitants	km/10,000 inhabitants
Length of the (dedicated) cycle network per 100 km²	km/100 km^2
Length of the (dedicated) cycle network relative to the road network	%

Apart from developing a methodology to monitor the progress of the cycle network, the study also estimated the level of new cycling infrastructure required for all EU Member States. To do this, the study analysed which national-level indicators correlate most strongly with cycling modal share. A regression analysis showed that the ratio of dedicated cycle network length to total road network length is the strongest predictor, yielding an R^2 of 0.66 with the regression equation $y = 0.83x + 0.03$.

Although an R^2 of 0.66 is not exceptionally high, it is acceptable for this type of cross-country analysis. Cycling behaviour is influenced by a wide range of social, cultural, and infrastructural factors, so achieving a higher R^2 at EU level is inherently challenging, with cycling modal share available only on country level. In this context, 0.66 indicates a meaningful and statistically useful relationship that can guide high-level planning.

Using this relationship and assuming Netherlands, the Member State with the highest levels of cycle use, as the benchmark, the amount of dedicated cycling infrastructure that would be required to reach the Dutch level of the dedicated cycle network/road network ratio was calculated for each other Member State. For the Netherlands, the study carried out a similar analysis on LAU level, estimating the amount of infrastructure missing in the LAUs currently

below the national average.

As an intermediate milestone, the dedicated cycle network needed to roughly double existing cycling traffic across the EU was estimated. The estimation was divided among the Member States proportionally to the total infrastructure needs, calculated in the previous step, with the assumption that the countries with currently less developed cycle network have higher needs and a higher growth potential for cycle traffic. The study also calculated the corresponding expected increase in modal share for each country. The detailed country-by-country results are presented in Table 8 .

Table 8: Estimated cycling infrastructure needs in the EU Member States

Country	Dedicated network missing to NL level (km)	Dedicated network to double cycle traffic in the EU (km)	Expected growth in modal split
Austria	24,442	8,942	5.8%
Belgium	9,749	3,567	2.9%
Bulgaria	23,967	8,769	7.5%
Cyprus	5,042	1,845	7.3%
Czechia	25,127	9,193	6.5%
Germany	94,892	34,717	3.9%
Denmark	6,497	2,377	2.0%
Estonia	8,960	3,278	6.0%
Greece	54,063	19,779	7.6%
Spain	123,172	45,063	7.0%
Finland	41,121	15,044	5.0%
France	259,988	95,118	6.6%
Croatia	15,556	5,691	7.2%
Hungary	18,492	6,766	6.0%
Ireland	25,194	9,217	7.0%
Italy	138,183	50,555	6.7%
Lithuania	16,513	6,041	6.9%
Luxembourg	1,078	394	5.2%
Latvia	17,266	6,317	7.3%
Malta	505	185	6.6%
Netherlands	4,043	1,479	0.9%
Poland	83,396	30,511	6.0%
Portugal	40,581	14,847	7.3%
Romania	46,387	16,971	7.5%
Sweden	56,860	20,802	5.4%

Slovenia	9,248	3,384	6.6%
Slovakia	9,776	3,577	6.9%
EU total	**1,160,099**	**424,426**	—

At EU level, the analysis indicates that approximately 1.16 million km of dedicated cycle network would be needed to reach the Dutch benchmark. To double cycling traffic, around 425,000 km of dedicated infrastructure would be required.

3.2. Cycle Use

3.2.1. Definition of elements of the EU-wide baseline

Cycle use refers to the prevalence and duration of cycling as an activity. This is typically expressed by trips made or distances travelled by cyclists or by the modal share of cycling compared to other travel modes. Cyclists include all users of pedal-powered vehicles, including electric pedal-assisted cycles. Important indicators are the number of cyclists using the cycle network (also split into different user types), the number of trips, distances travelled and length of time travelled.

The **European Declaration on Cycling**[24] emphasises the use of cycles as both a sustainable form of transport and recreation that supports environmental, social and health objectives. It calls for measures to increase the use of cycling, particularly among women, children, older people and vulnerable groups, as part of broader efforts to ensure inclusive mobility. The Declaration also underlines the need to collect comparable data on cycling use across the EU to monitor progress and inform policy decisions.

The following **key indicators** were defined for the baseline of the domain **cycle use**:

- **Share of population** that cycles at least once a week
- **Cycling modal share** (of all trips) for the reference population.
- **Average distance cycled per year per person** of the reference population.

3.2.2. Review of the state of cycle use

For the cycle use domain, the study extracted and analysed relevant data on the share of cycling in total transport activity from the EU-wide mobility survey that was carried out in 2021 in the framework of the Study on New Mobility Patterns in European Cities[25]. Relevant data from the European Health Interview Survey was also extracted, focusing on the share of the population that cycles regularly. The consortium then carried out desk research on existing national travel surveys with data on cycling, and on other relevant data sources, such as nationally representative surveys focusing specifically on cycling, surveys focusing on public health and physical activity of the population, or national platforms for data from automatic cycling counters.

The preliminary findings from the study were used to approach the network of National Cycling Contact Points (NCCPs) and other relevant stakeholders to enquire about the

[24] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C_202402377
[25] https://op.europa.eu/en/publication-detail/-/publication/5bfa1938-80e0-11ed-9887-01aa75ed71a1/language-en

relevance of the identified data sources and other sources that the study might have missed. Finally, relevant data was extracted on cycling to establish our key indicators on the share of cycling in total transport activity, the share of the population that cycles, and the cycled distance annually at the national level, as well as more detailed information on cycling modal share among different groups of the population. After having compiled all relevant data in country fiches, a second round of verification of the results was done with the NCCP network.

Based on the available EU-wide data sources, the following average values for cycle use in the EU-27 emerged:

- Share of the population that cycles to get to and from places at least once a week: **23.6%** (Females 20.0%, Males 27.6%) – based on the European Health Interview Survey, data from 2019, published by Eurostat [Online data code in the EHIS: hlth_ehis_pe3e]
- Cycling modal share (share of trips, trips <300 km): **7.8%** (Females 6.3%, Males 9.2%) – based on the EU-wide travel survey in the framework of the study on New Mobility Patterns in European Cities, data from 2021

The analysis of national travel surveys and other relevant data sources can be summarised as follows:

- Identified national travel surveys: 23
  - with data from 2021 onwards: 12
  - had available all data entities and indicators used in the country fiches and based on WP1: 7
  - underlying data is not accessible: 2
- Identified + analysed physical activity surveys: 5
- Other identified data sources on cycle use: 24 (across 16 Member States)

in Annex 1 gives an overview of the national data sources identified for cycle use.

3.2.3. Methodologies for future data collection and progress monitoring

Methodologies used in the diverse national travel surveys across Europe vary widely, which does not allow for direct comparisons between them. Variations in methodology concern, amongst others, the definition of the reference population, distances and trip purposes exclusions and counting of trips and trip stages.

In the framework of this study, the only reference document identified that provides directly comparable modal share data between Member States is the **EU-wide travel survey 2021,** which has served as a base to develop the two draft key indicators stated above. Another key reference document is the **European Health Interview Survey**, which includes its variable P4 'Number of days in a typical week cycling to get to and from places at least 10 minutes continuously', providing comparable data on the share of the population that cycles regularly.

To provide guidelines for cycle use data collection in Member States, this study proposes three **key indicators** to develop cycle use data in a comparable and harmonised way across the EU. These indicators use the following reference values:

- Number of inhabitants aged 5 years and older in the Member State
- Total number of all trips per year by this population

The proposed key indicators are:

1. **Share of the population that cycles at least once a week (%)**

- Population above 5 years old, disaggregated by gender.
- Provides behavioural trends and cycling frequency.

2. **Cycling modal share of all trips (%)**

- Population above 5 years old and disaggregated by gender and age group.
- Reflects the role of cycling as a mode of transport in the mix of transport options.
- It helps assess modal shift objectives for policymakers.

3. **Distance cycled per year per inhabitant aged 5 years and older (km/inhabitant/year)**

- Population above the age of 5 years and disaggregated by geographic area (urban and non-urban areas).
- Captures the overall intensity of cycling activity.

3.3. Cycling Safety

3.3.1. Definition of elements of the EU-wide baseline (WP1)

Cycling safety refers to the set of conditions, measures, and design principles that enable cyclists to travel without undue risk of injury or harm. Safety is typically assessed through its counterfactual — the occurrence of crashes. To accurately describe the safety performance of the cycling system, the number of cycling crashes must be analysed in relation to exposure to possible crashes (for example, the distance travelled), allowing meaningful comparisons and a more reliable assessment of risk.

The European Declaration on Cycling treats safety as a core pillar of cycling policy. It combines infrastructure design, education, enforcement, and data collection under the shared goal of eliminating fatalities and serious injuries. Safety is not only a moral and legal responsibility but also a strategic enabler for increasing cycling participation and achieving wider EU objectives in sustainable mobility and public health.

The following **key indicators** are used to describe the current baseline for the domain cycling safety:

- **Cyclist fatalities** (3-year average)
- **Cyclist fatalities per million population**
- **Cyclist fatalities per 100 million kilometres cycled**

3.3.2. Review of the state of cycling safety

For this data component, the consortium started the analysis by extracting relevant data

on cyclist fatalities and injuries from the CARE Public Dashboard. Following this, relevant national data sources, such as statistical databases, national road safety reports or observatories were identified. The consortium approached the network of NCCPs and other relevant stakeholders with questions about the validity and relevance of the identified data sources, and where data deviated from the CARE Public Dashboard, with more detailed questions about the categories used, the methods of data collection, etc. The data retrieved from the CARE Public Dashboard was used to establish an indicator of cycling safety based on fatalities vs. exposure (expressed in cycled distance and retrieved from the EU-wide travel survey 2021 and national travel surveys identified in the cycle use data component). Following this, 11 Member States were identified where the collection of distance cycled is included in the national travel surveys. The national data and information on data collection methods was also included in the detailed section of the country fiches, including on how injury data is collected and/or modelled. The additional information on injury data, which revealed substantial disparities in definitions, collection/modelling methods, etc., between Member States, led to the conclusion that there is no possibility yet to calculate any meaningful indicator based on injury data as done for fatality data.

The harmonised data was analysed on cyclist fatalities and injuries from the EU-wide CARE database. In addition, 24 national data sources were identified with data on cyclist fatalities and injuries. In three Member States, national data were either not identified or considered confidential. For 22, the consortium could identify police reporting as a data source. In six Member States, it was found that police data was supplemented with data from hospital registers, and in eight Member States with data from other sources such as death registers and insurance company data. In seven Member States, separate data was identified for e-bike collisions, while the CARE database has the distinguished data on e-bikes available in eight Member States. In five Member States, geo-referenced collision data was identified. Table 17 in Annex 1 gives an overview of the national data sources identified by the study for cycling safety.

3.3.3. Methodologies for future data collection and progress monitoring

The review of the current state of cycling safety data across Member States and the EU level shows that data collection on fatalities is relatively well established at all levels, ensuring comparability, while injuries and serious injuries remain underreported and are defined unequally across the EU.

Additionally, exposure data, such as distance cycled, is not collected in all EU Member States on a regular basis. The only available source of comparable exposure data is the EU-wide travel survey (data collection in 2021). As evidenced in the research and emphasised by experts, exposure data reflecting cycling levels must be considered to obtain meaningful insights regarding cycling safety.

Effective monitoring of cycling safety requires a harmonised and comprehensive data collection framework that captures both crash outcomes and cycling exposure. To monitor the trends and progress in cycling safety, the following key indicators should be calculated for establishing an EU-wide baseline on cycling safety data in the medium term:

- Cyclist fatalities and cyclist fatalities per 100 million kilometres cycled
- Seriously injured cyclists and seriously injured cyclists per 100 million kilometres cycled

Looking forward, additional indicators could be part of an extension of the data collection in the long term:

- Lightly injured cyclists and lightly injured cyclists per 100 million kilometres cycled
- Cyclists involved in road crashes with no injuries and cyclists involved in road crashes with no injuries per 100 million kilometres cycled

To minimise annual fluctuations, safety indicators should be calculated on three-year averages. All indicators should be disaggregated by cycle type—pedal bicycles and e-bikes—to reflect differing risk profiles, speeds, and infrastructure needs.

To support these indicators, specific datasets must be collected. These include the annual number of fatalities, serious and light injuries among cyclists, the number of crashes with no injuries, as well as exposure data derived from national mobility surveys conducted at least every three years. These surveys should cover the entire population aged five years+ and capture distance cycled with sufficient detail to produce reliable exposure estimates. For more details on cycle usage data collection, see section 3.2.2 Cycle Use.

Crash data should be sourced from multiple complementary systems to ensure completeness. Police records remain the foundational source, but they should be systematically supplemented with hospital admissions, ambulance and emergency service data, insurance information, and death registry data. To avoid double-counting across systems, Member States are encouraged to introduce a unique crash identification mechanism linking all relevant datasets.

A crucial component of data harmonisation is the standardisation of definitions. For comparability across Member States, especially for seriously/lightly injured and no injuries, the definitions should align with EU standards. Police records should use the CARE definition ("A person seriously injured is defined as any person injured who was hospitalised for a period of more than 24 hours."), while hospital data should use the internationally recognised MAIS3+ injury classification, referring to serious, severe or critical levels of injury. Similarly, definitions of fatalities and other severity categories should match EU-wide norms. Crash data should also include single-vehicle incidents and record the types of other vehicles involved, ensuring a complete picture of interaction risks.

To expand the spatial analysis on cycling safety, the data should be geolocated and openly accessible. Whenever possible, police and emergency services should record precise crash locations using a common spatial reference system such as WGS84. Such geospatial information enables detailed spatial analysis, identification of high-risk locations, and better targeting of infrastructure improvements.

3.4. Cycle Services

3.4.1. Definition of elements of the EU-wide baseline

The study defines cycle services as any kind of cycling-related service that can be used by cyclists, can encourage cycle use, plus cycle logistics as a commercial service using cycles. This initial definition included all services mentioned in the EU Declaration on Cycling and by DG MOVE during the inception phase of this project. In the definition phase of the project preliminary analysis revealed that of the many services mentioned in the inception report could not realistically be defined or measured at present time, and work therefore

concentrated on bike sharing, bike parking and cycle logistics for further detailed analysis.

Bike sharing

The study adopted the definition of bike sharing as short-term bicycle rental schemes that enable bicycles to be rented and released at a self-service location, including rental schemes that return to their starting point such as some railway station-based services. Elements excluded: Long term rental - bikes rented to a single for multiple days where the bike is stored at the renters' premises (home or work) and not available for other users; Holiday/tourism rental on an occasional basis from a single or limited number of points which does not include a regular subscription; Company bike schemes where the bikes are only available to employees of a single business.

Cycle logistics

During the project the study adopted a scope for cycle logistics which had been developed by the industry at European level, working with leading national trade associations. This includes the use of cycles to deliver goods, services and people in a commercial setting.

Subdomains of cycle logistics include: CEP (courier, express, and parcel services); Transport and logistics; Food delivery platforms; Retail and wholesale enterprises delivering their products; Service delivery (professionals, such as plumbers, gardeners, etc.); Passenger transport; Municipal & institutional use; Waste collection and circular economy, The sector reports that the main sectors, representing around 80% of the professional use of bikes, are: CEP (courier, express, and parcel services), transport and logistics and food delivery platforms.

Cycle parking

For the purposes of this study, cycle parking is defined as "A designated area where cycles can be parked that is usable by the general public", a broad definition to include the wide range of parking types identified in other initiatives. As physical infrastructure for cyclists, the consortium recognises the relationship between creating datasets and indicators for cycle parking and those for infrastructure, but in developing the project, it was decided to treat parking as a separate domain under the "services" area of the project because parking has different attributes and a very different group of providers from infrastructure.

Other services

Data from the Confederation of European Bicycle Industries[26] is the recognised source on cycle sales so the consortium saw no requirement to duplicate any work in this area. The study has also identified that it is possible to summarise if Member States have some service-related policies in place. If required for future monitoring of the EU Declaration on Cycling it will be possible to conduct a short Member State survey, including such questions as "Are company bike schemes supported by your national tax code?"; "Has your country applied reduced VAT rates to any cycling services?"; "Is there a nationally recognised education programme for cycle use and safety in your country?"; "Does your country have a national cycle registration scheme?". Due to contractual time constraints, these aspects

[26] CONEBI BIMP – Bicycle Industry & Market Profile https://www.conebi.eu/industry-market-reports/

were not covered by the present study.

The following **key indicators** are used to describe the current baseline for the domain cycle services:

- Bike sharing
  - Percentage of measured cities with bike sharing
  - Bike sharing fleet relative to population
- Cycle logistics:
  - Fleet size of cycles used for logistic services
- Bike parking:
  - Number of Bicycle Parking Places

3.4.1.1 Bike Sharing

3.4.1.1.1 Review of the current state of bike sharing

In WP2, the project aimed to collect operator data from all EU cities with populations over 150,000 to test if the data was available at the city level and whether enough data was available to create a set of credible EU-wide indicators. This process was carried out for Cycling Counts by CIE and sub-contractor Fluctuo between March and October 2025.

This extended a methodology established by CIE for the bike sharing sector to publish "Shared Ambition: Benchmarking Bike Sharing in 147 EU Cities" in 2023 and 2024. (including 2022 and 2023 data, respectively)[27]. In the CIE reports, indicators were created aggregating multiple operators' datasets at the city level, but there was insufficient EU-wide coverage to confirm if a representative national indicator could be established. Therefore, to test the availability of data and create Member State indicators, WP2 used the data on cities over 150,000 inhabitants from CIE's 2024 report and sought data from a further 167 cities to complete the set of all cities over 150,000 inhabitants.

The threshold was chosen because the original CIE study showed that over 95% of the trips recorded came from cities over 150,000 population, meaning it might be efficient for Member States to limit measurement to this level. Member States were invited to provide data from smaller cities where they felt this was material to their baseline. During the consultation, both industry representatives and most of the Member States that replied, suggested that future reporting should allow for smaller cities and regional schemes to be included. Four member states provided the project with additional information on smaller cities, and the project team added one more, taking the sample up to 357.

Data was sourced to Cycling Counts from researchers, operators, cities, online and, in Greece and Ireland from the transport ministry. In five Member States, (FR, ES, BE, PL, DE) national studies also have aggregated operator data, which was used to fill gaps and provide alternative sources for calculating national indicators. A smaller sample of operators helped to check data availability for distances travelled and the number of unique users. Member States were asked about bike-sharing data sets in their NAP.

Cycling Counts succeeded in identifying 270 cities with bike sharing and got more complete

[27] Shared Ambition – benchmarking bike sharing in 148 cities https://cyclingindustries.com/news/details/the-2024-edition-of-cies-bike-sharing-in-148-cities-report/

data about trips in 172. The cities where data was available covered 95% of the fleet, meaning the cities where no trip data was available were concentrated at the smaller end of the scale and were in specific countries. The study concluded that 22 Member States had enough verified data to calculate indicators for fleet sizes and 19 had enough verifiable trip data to calculate indicators for mobility. Distance data was available from 70 cities and unique user data from 47, suggesting that this data could be available for future reporting. Some of the national studies also measure this additional data.

Gaps in the analysis arise primarily because:

- The bike share operator could not be contacted or did not respond to contact, either via Cycling Counts or indirectly via their government or city. Some data from online searches is included in country fiches, but if it is not confirmed by any local source, it was regarded as unvalidated.
- The operator refused to disclose data due to internal policies on confidentiality, which prevent their data from disclosure to public bodies or competitors. This was despite confidentiality measures that met the needs of most operators.

Table 9: Summary of the bike sharing data found

Data and Indicators	Number of cities with data	Total value found	Indicator calculated	Note
City over 150k inhabitants with bike sharing	289 cities in the sample	204	71%	Cities with over 150k inhabitants only
Number of bikes in the fleet	270	302,757	0.67	Bikes per 10,000 inhabitants (all cities including <150k inhabitants)
Number of e-bikes in the fleet		127,725	42%	Percentage share of the total fleet
Number of trips generated per year	172	202,387,156	1.23	Trips per 1000 inhabitants per day
Contribution to national mode share (trips)			0.96%	Trips as percentage cycling trips in the EU Travel Survey 2021
Number of kilometres travelled		70	181,042,543	Insufficient data for an indicator, except in a few member states

Number of unique users	47	2,147,265		Insufficient data for an indicator, except in a few member states
Bike sharing data in the National Access Point			3 have data; 5 have no data; 19 have no info.	Member State reporting

A more complete overview of data available by Member State is provided in Table 15 in Annex 1.

3.4.1.1.2 Methodologies for bike sharing data collection and progress monitoring

Overview

The data collection exercise carried out above shows that 19 Member States already have comprehensive data availability, and that the robust indicators can be calculated for the use of bike sharing. Therefore, repetition of these methods will cover the needs of all Member States on an ongoing basis. This will show the contribution of bike sharing to mobility and cycling mode share in each country and is replicable at the city and regional level as well. The country fiches created as part of D2 provide an opening baseline for progress monitoring in 22 Member States. Annex 1 provides a breakdown of the data availability across the Member States.

The methodologies work because the needed data to calculate indicators exists. All bike sharing operators need data to operate their businesses. In many cases, they are also obliged to report to cities for reasons of regulation, licensing or funding. The data collection and process monitoring depend on the capacity within Member States to collect existing data and aggregate it into a standardised report, not the need to create new data. This requires a process to contact and collate data from all operators, either directly or via a third party such as cities, researchers or industry. Relevant data is available annually, and collection can be organised to meet progress monitoring timetables at both the Member State and EU level.

In addition, real-time bike sharing availability and location of fleets for hire is a requirement of the MMTIS Regulation, so standardised data will be needed, which can be tracked and aggregated for reporting. The General Bikeshare Feed Specification (GBFS) is a globally recognised standard for providing the real-time data needed to manage fleet operations and show bike availability to users. GBFS is the only standardised source of bike share data recognised by the MMTIS Regulation.

Methodology

There are two broad methods of obtaining operator datasets, which are described in detail

in WP3. Either the operator gave their annual data directly, or expert researchers have created tools to monitor the live data in the operator's open-source feed and convert it into aggregated annual datasets. As well as the CIE and Cycling Counts EU-wide data collection exercises, the process has also been carried out as a standalone exercise in both large and small Member States, providing several templates for the work. A close partnership with cities and any industry associations for bike share or shared mobility in the country is essential, improves standardisation and avoids duplicating data collection.

The **key indicators** for bike sharing proved to be relevant and feasible to calculate because the data is available in a majority of Member States, and the indicators calculated are already an accepted industry standard for measuring the contribution of bike sharing to mobility at the city level.

These are:

- Percentage of cities with bike share – based on a threshold value of city size. Cycling Counts used 150,000 inhabitants as the threshold, but some Member States will measure smaller cities and regional schemes too.
- Fleet size measured as the national total of shared bikes per 10,000 inhabitants, disaggregated into mechanical (pedal bikes) and electrically assisted bikes (existing baseline).
- Bike share trips per 1000 inhabitants per day (can also be calculated per year).
- Contribution of bike share to cycling mode share by comparing the number of bike share trips generated to the total number of cycling trips identified in national surveys (drawn from the study's results on the cycle use domain). This is shown as a percentage of all cycling trips.

Kilometres travelled and unique user numbers are not calculated in a standardised way, but it should be possible to provide enough data for indicators if needed for further reporting. Member states are also required to report on compliance with the MMTIS regulation, so the number of bike-sharing data sets in the NAP will be an ongoing requirement.

Member States or city-level participation in the process will improve the responsiveness of operators who did not participate in the Cycling Counts baseline exercise.

The structure for maintaining the Member States' key indicators is as follows:

- Decide which cities to include, including any size threshold and whether to include regional schemes.
- Decide if the collation will be done by the government or by a third party, such as cities, researchers or industry. If a third party is used, consider the form the commission will take, including any financing arrangement.
- Identify barriers to data collection, including those reported above. Take action to encourage higher participation by operators and complete the datasets.

Taking into account the results of this study, it is recommended to maintain the 150k threshold for all Member States as a compromise between workload and accuracy, but Member States are encouraged to seek additional datasets to achieve inclusion of at least 95% of bikes and trips in their country.

For countries with larger numbers of cities, the proven methodology is to commission reporting through a third party, such as an industry association or research agency. This can include the development of indirect data collection from real-time feeds or annual reporting by operators. Where a Member State already has an existing national reporting framework for bike sharing, it is recommended this be maintained and, where relevant, adjusted to cover the same data sets and indicators as identified through the present study. An alternative to methods that require approaching operators directly is to collect the data from cities (or other relevant urban governance units). In most cases, cities license bike sharing or are involved in the scheme as a funder or operator. Getting aggregated data for all bike sharing at the city level reduces the number of operators to be contacted by the Member States and also means national aggregation will be aligned with the city's own indicators.

Seven countries are currently not at the suggested level. For these countries, the issue is mainly about contact with a small number of operators who were not reached by the Cycling Counts project. In some cases, there is only one operator or scheme in the Member State and if the operator or other contacts in the country did not respond to requests for information by Cycling Counts the study could not validate any data found such as information on websites. All operators will have the fleet and trip data, or cities have the data as part of licensing and funding bike share operations, so the issue is unlikely to be lack of data.

To improve disclosure of data by operators, some of the following actions can be considered:

- Make local contact with management directly or via the city.
- Encourage cities to consider a data disclosure obligation in new funding or licensing arrangements.
- Use a trade association or research organisation that has data handling and security procedures in place or provide study terms and conditions that protect individual company data from disclosure.
- Negotiate a single national disclosure for the operator that avoids individual city datasets being released.
- Help operators get advice from experts in the field, referring them to experts, cities or operators that are calculating and disclosing data.

Build up the standardised, open-source bike sharing datasets in the National Access Point using MMTIS obligations and contract researchers to extract real-time data. In addition to developing data sets and indicators to monitor progress in the availability and impact of bike sharing, the data and methodology is sufficiently developed to estimate the level of bike sharing required for Member States to reach recognised benchmarks established in other projects.

This is comparable to the calculation of infrastructure needs in section 3.1. of the Cycle Network domain.

In previous studies carried out by CIE, the closest correlation between bike sharing trips generated and other indicators was with the fleet size in relations to inhabitants. This is comparable to the infrastructure calculation, except in this case the bikes are the infrastructure that facilitates trip. Other factors like bike utilisation, city size and the

electrification of the fleet did not have the same correlation.

Methods for using the data and indicators from the previous city level benchmarking studies to develop action plans has been demonstrated by Cycling Industries Europe's Bike Sharing Expert Group at various webinars and workshops with experts and city representatives over the past three years. This allowed individual cities to calculate how many extra bikes the city requires to reach EU-wide benchmarked levels. For Cycling Counts the difference is that calculated need at each city has been aggregated to a Member State and EU-wide level. The calculations are as follows:

There is separate fleet size data on 266 cities and 86 cities without sharing. Of the 266 cities the mid-point city (113th highest) has 20.9 bikes per 10,000 inhabitants and the upper quartile city (66th highest) has 31.5 bikes per 10,000 inhabitants.

Every country except Luxembourg has at least one city in the sample that is below the mid-point and the upper quartile or has no bike sharing.

To calculate a realistic level of number of bikes needed to reach the sample mid-point and the upper quartile levels of bike sharing is calculated and then aggregated to give a member state total.

In addition, Cycling Counts has trip data for 278,756 bikes in the fleets, giving an average of 726 trips per bike per year (2 per bike per day). With this number the possible impact of the new bikes can be estimated, with the caveat that the average is highly dependent on the business model used to operate a new fleet, significantly higher utilisations are seen in benchmarked high performing cities. If all cities reached the EU mid-point for number of bikes this would generate an estimated 80 million trips per year. If all cities reached the EU upper quartile this would reach an estimated 157 million trips per year.

Table 10: Estimated need and impact additional bike sharing bikes

MS	Current Fleet Size	Extra bikes needed for all cities to get to EU midpoint	% change	Trips generated using EU average rate per bike	Extra bikes needed for all cities to get to EU upper quartile	% change	Trips generated using EU average rate per bike
AT	4531	1,554	34%	1,127,871	4,094	90%	2,972,399
BE	16521	1,195	7%	867,607	1,826	11%	1,325,967
BG	350	4,774	1364%	3,465,824	7,387	2111%	5,362,813
CY	1221	14	1%	10,160	276	23%	200,454
CZ	5159	266	5%	193,261	1,713	33%	1,243,978
DE	55458	11,461	21%	8,320,782	26,097	47%	18,946,202
DK	7598	714	9%	518,214	1,431	19%	1,038,677
EE	1100	583	53%	423,484	1,059	96%	769,021
ES	33312	15,926	48%	11,562,629	37,543	113%	27,256,528
FI	6950	448	6%	325,050	728	10%	528,596

FR	69368	10,724	15%	7,785,375	19,771	29%	14,354,023
GR	4810	8,694	181%	6,311,595	15,400	320%	11,180,122
HR	2113	112	5%	81,035	649	31%	471,109
HU	2660	2,104	79%	1,527,856	4,534	170%	3,291,795
IE	3050	675	22%	490,361	2,172	71%	1,576,835
IT	35463	11,612	33%	8,430,429	21,637	61%	15,708,711
LT	605	1,698	281%	1,232,997	2,873	475%	2,085,756
LU	1000	-	0%	-	-	0%	-
LV	500	782	156%	567,806	1,436	287%	1,042,474
MT	0	810	0%	587,956	1,223	0%	887,787
NL	20679	3,568	17%	2,590,460	6,566	32%	4,766,724
PL	18049	10,490	58%	7,615,815	20,594	114%	14,950,957
PT	2801	8,484	303%	6,159,345	14,239	508%	10,337,330
RO	2119	10,727	506%	7,787,478	16,946	800%	12,302,595
SE	4135	2,248	54%	1,631,940	4,342	105%	3,152,260
SI	1891	421	22%	305,405	748	40%	542,968
SK	1314	589	45%	427,585	1,049	80%	761,885
Total	302757	110,673	37%	80,348,321	216,333	71%	157,057,964

3.4.1.2 Cycle logistics

3.4.1.2.1 Review of the current state of cycle logistics

The underlying data to create cycle logistics indicators has much in common with bike sharing because it is also based on existing data that most cycle logistics scheme operators must have and use for their commercial operations. As with bike sharing, the complexity in calculating the indicators is in getting operators to provide the data and in a standardised format. However, the very substantial differences from bike sharing are that cycle logistics is a wide and complex sector covering multiple types of business and does not require licensing by public bodies, so there has been no obligation to develop data for reporting, and there has been no systemised data sharing. Industry surveys conducted from 2022 to 2024 by CIE[28] in partnership with national cycle logistics associations[29] in 3 Member States (Belgium, France, Germany) attempted to address these weaknesses by creating a method of collecting data from operators to provide a baseline of data collection.

In the 2024 report, data was received from 12 countries. This provides an indicative method for a comprehensive cycle logistics report; however, for some countries, the data only comes from a few operators. Because the data for most countries was not representative, a decision was made not to include it in the D2 country fiches. For five countries (Estonia, Hungary, Italy, Netherlands, Romania), there was enough data to

[28] European cargo bike and trailer manufacturers survey 2024, CIE
[29] BE – Belgian Cycle Logistics Federation https://bclf.be/; FR - Les Boîtes à Vélo https://lesboitesavelo.org/; DE - Radlogistikverband Deutschland https://rlvd.bike/

provide a limited extract in the Cycling Counts country fiches, but not as recommended key indicators. The three leading countries with national associations (Belgium, France, Germany) decided to work together to repeat their surveys in 2025 with a standardised set of questions. There is no reporting for the remaining 19 Member States.

Table 11: Summary of the results for the three 2025 surveys

Key indicator	FR	BE	DE
Logistics Fleet size relative to the number of inhabitants	2.1 bikes/10,000	4,6 Bikes/10,000	0.14 bikes/10,000
Distance travelled by cycle logistics per million inhabitants	236 thousand km per million inhabitants	930 thousand km per million inhabitants	1,000 thousand km per million inhabitants
Distance travelled by cycle logistics relative to the distance cycled by the national population	0.98% of km cycled	0.21 per cent of km cycled	0.02 per cent of km cycled
Number of unique users (riders) of commercial cargo bikes relative to the number of inhabitants	359 users per million inhabitants	1,147 users per million inhabitants	25 users per million inhabitants
Number of users of cargo bikes compared to the number of cyclists in the country	0.15% of all adult cyclists	0.9 % of adult cyclists	0.008% of all adult cyclists
Relative safety of cycle logistics measured by crashes per km ridden	Not available	12.9 crashes per million kilometres	3.6 crashes per million kilometres
Number of cycle logistics crashes as a proportion of all cycling incidents	Not available	1.2 % of all cycling incidents	0.03% of all cycling incidents

Table 12: Availability of data in the surveys

Cycle Logistics Sectors	BE	FR	DE
CEP (Courier, Express, and Parcel services)	yes	yes	yes
Transport and Logistics Waste collection and the circular economy	yes	yes	yes

Food delivery platforms	No	no	no
Commerce is delivering its products	No	yes	no
Service delivery (professionals, such as plumbers, gardeners, etc.)	no	yes	no
Passenger transport	no	yes	no
Municipal & institutional use	no	services only	no

3.4.1.2.2 *Methodologies for collecting cycle logistics data and for progress monitoring*

Where cycle logistics trade associations have formed, they mainly represent the small and medium-sized enterprises (SMEs) in the country and therefore don't have access to the data of the whole sector.

Cycling Counts has found that data availability and data maturity in the cycle logistics sector are starting from a relatively low point, for example, in comparison to bike sharing. Therefore, the study focused on the roadmap for Member States to start developing meaningful datasets and indicators for a future evaluation of progress in the EUDC.

Pragmatically, the initial objective is to collect sufficient data to calculate the key indicators described above for every Member State, encompassing all cycle logistics sectors. Currently, the only proven way to create Member State-level indicators on cycle logistics is for Member States to engage with representatives of businesses in the sector and start capacity building to create organisational infrastructure, which makes the sector visible, and starts collecting data. Strengthening data collection on cycle logistics is complementary to other actions in the logistics and cycling sectors which are aimed at capacity building and job creation, including industry programmes and EU funded projects.

With some capacity-building measures in place, data collection in specific economic sectors can be increased over time. For the three frontrunner countries that have a solid basis of indicators, the actions should focus on strengthening their processes by:

- Expanding the representativeness of the data collected to reach at least 85% of the addressed economic sectors (see 6.1)
- Ensuring the use of common reference values for national data on inhabitants, users and incidents

To expand the representativeness, a possible approach is to institutionalise the process of reporting by operators at the initiative of the Member State government. Such an approach could be complemented by requesting and funding a third-party expert, such as the National Association of Cycle Logistics or a research institute, to deploy the process and efforts to reach at least 85% of the addressed economic sectors.

Measuring cycle logistics at the city level

At a pilot level, city monitoring of cycle logistics activity could be piloted and researched

as part of the early Sustainable Urban Logistics Plan (SULP) rollout. SULP deployment and measurement give the opportunity to measure cycle logistics in a similar way to bike sharing. Recognising that bike sharing at scale is an urban service, Cycling Counts has concentrated on collecting data from the 300 largest cities in the EU, which provides a set of indicators for the level of bike share at the Member State level. Aggregating data on cycle logistics in SULPS for the same cities will provide a long-term tracking tool for cycle logistics, and it is possible that Member States could combine some city reporting on bike sharing and logistics for the progress monitoring of the EUDC.

3.4.1.3 Cycle parking

3.4.1.3.1 Review of the current state of cycle parking

Because vehicle parking and explicitly cycle parking are included in the MMTIS Delegated Regulation, experts in NAPCORE have already examined the datasets publicly available and their characteristics. Also, standardisation experts evaluated data production and collection on cycle parking as low-hanging fruit, as most required attributes are already included in existing standards for the description of (bike) parking. As a direct consequence, stakeholders agreed that data collection and making datasets available in NAPs should be feasible.

However, the reality is that the creation of standardised datasets for cycle parking has not so far been prioritised at a local or national level. Historical initiatives to create usable data are few and relatively uncoordinated, even though some countries and cities have made extensive investments in cycle parking. The main exception is in large-scale cycle parking garages with some form of access control, often at railway stations. In this sector, public-private partnerships in countries like the Netherlands and Belgium have created digitalised services that identify locations and parking place availability.

Cycling Counts has identified three main sources of open data on bike parking:

1. National Access Points (NAPs), either dedicated to multimodal information (MMTIS) or to road information (RTTI[30]) or both
2. Local open data portals, mostly operated by local authorities (cities or regions)
3. OpenStreetMap (OSM)

For these three data sources, the data collection was conducted as follows:

1. Extraction of all datasets that either had a direct mention of cycle parking (using as many synonyms as possible)
2. Analysis of meta-data of datasets in both MMTIS and Real-Time Traffic Information (RTTI) NAPs for any mention of parking
3. Qualification of all extracted/downloaded datasets by random sampling.

The three data sources very rarely overlap, except for Member States in which NAPs are set to harvest data from the local open data portals and local authorities that are regular contributors/users of OSM.

On NAPs, the study found two types of datasets that include details on bike parking:

[30] https://eur-lex.europa.eu/eli/reg_del/2022/670

- For MMTIS datasets, most of the data could be found in NeTEx (Network Timetable Exchange) datasets produced by major public transport operators (mostly urban & long-distance rail), where bike parking details are consolidated in the description of a multimodal hub/station.
- For RTTI datasets, there were two main types of datasets
  - The ones produced by public authorities that relate either to cycling infrastructure and/or are dedicated to bike parking.
  - The ones produced by major parking operators where "bike" is mentioned as a type of vehicle accepted in the described parking services.

On local data portals, especially the ones referred to in the workshops held with NAPCORE, the data was the most detailed within datasets solely dedicated to bike parking. However, their coverage is very limited and often the results of a locally funded project.

As OSM data was recurrently mentioned in the NAPCORE workshops and in other work conducted by CIE, it was selected as the preferred source of an EU-wide dataset for the analysis in WP2. It was also the only source of data that would allow the calculation of indicators across all Member States to confirm their relevance.

The analysis of OSM data did show the limitations on the amount of data entered, having a high correlation with the number of active OSM contributors per country, instead of the actual amount of parking. These countries often have some local authorities who are using OSM in their work to map their cities, conduct analysis, etc. In some countries with limited data, the entries appear to be concentrated on cities and routes for cycle tourism, suggesting that data has been provided for, or by, travelling OSM contributors. A summary of the data found in Table 13.

Table 13: Cycle parking indicators

Key indicators	Value	Calculated indicator
Number of bike parking places (NBPP) relative to kilometres of cycling infrastructure.	Locations found in OSM 523,000, of which 80% have capacity information, giving 4.5 million places	10.1 NBPP per 100km
Number of parking places relative to kilometres travelled per day by the whole population.		0.189 places per daily km cycled
Number of parking places relative to daily trips taken by the whole population.		1.720 places per daily trip cycled

For each Member State, this data is extracted into a fiche to demonstrate the method and the possible indicators (D2).

3.4.1.3.2 *Methodologies for parking data collection and progress monitoring*

Given the limitations of current datasets, the recommendations for the calculation of EU-wide cycle parking indicators focus on first creating the standardised datasets that will be needed for MMTIS compliance and then tracking progress on these indicators. Further tracking of parking supply at public buildings can also measure long-term compliance trends within the Energy Performance of Buildings Directive (EU) 2024/1275)[31].

The recommended key indicators and methods of calculation compare the demand for cycle parking, which will come from the Cycle Use domain, including the number of daily cycling trips, the number of daily cycling km, and the distance of cycling infrastructure (km).

Only at a later stage, when an EU-wide baseline is established, other indicators such as the ones mentioned in the European Declaration on Cycling (e.g., number of secured parking spaces) could be used.

Progressing the availability of these datasets and measuring progress through indicators will enable Member States, cities, regions and other stakeholders like public transport operators to familiarise themselves with the tools needed to track cycle parking and then expand their reach. With consistent use of these indicators, the demand and availability of cycle parking can be measured at every level of governance, from a city, a multimodal transport hub or a tourist destination up to Member State and EU-wide.

Monitoring the progress can also be done with fewer details by simply leveraging trip planning engines dedicated to cycling. The more datasets there are, the more parking amenities should appear in their solutions.

Table 14: Cycle parking key indicators

Level 2 key indicators		Unit
1	Number of bike parking places relative to the kilometres of cycling infrastructure.	NBPP per 100km
2	Number of parking places (NBPP) relative to kilometres travelled per day by the whole population.	NBPP per kilometre
3	Number of parking places (NBPP) relative to daily trips taken by the whole population.	NBPP per trip

Data collection methods

The target levels for data collection could be based on what has been achieved by Member States with existing OSM data (e.g., France), to get coverage of at least 50% of the number of parking places (NBPP). To reach these targets, the study suggests Member States to select the easiest path for them between:

- Leveraging the MMTIS Regulation to encourage all public transport authorities/operators to fill out the bike parking information.
- Encouraging local authorities to share their data either via the relevant NAP or directly on OSM or both.
- Member States could also elect to combine both, depending on the maturity level of their NAP / OSM data.

[31] https://eur-lex.europa.eu/eli/dir/2024/1275

Regardless of the chosen path for data collection, efforts should be put into improving data coverage, which requires the collection/creation of data by local stakeholders. Such an incentive could also be supported at the national level with a schema/guidance on data collection. It would then facilitate the aggregation of the data into a standardised report.

This requires a process to collate data from all involved stakeholders, which include at least public transport operators, local authorities, and cyclists (or involved citizens or OSM contributors). It could also involve data and standardisation experts, but for the longer term of having a unified data standard in Europe for bike parking.

The process for better data collection could be different based on the types of stakeholders:

- For public transport operators, reinforce the mandate to fill out information on bike parking services in major multimodal passenger hubs (i.e., ensure compliance with the MMTIS Regulation and publish it on their NAP).
- For local authorities,
    - Mandate data collection whenever there is an investment for bike parking amenities and make it publicly available either via OSM or any suitable open data portal.
    - Encourage crowdsourcing data collection and make it publicly available either via OSM or any suitable open data portal. Working with communities of volunteers in collaborative actions can be incentivised.
- For OSM communities, encourage them to be more exhaustive and precise in their data collection (e.g., number of parking spots, lighting, etc.)

Expertise in extracting datasets from sources such as OSM or national databases will be required to count the number of cycle parking, their locations and their attributes, but this expertise should already be available in all Member States. There may be a cost to this as a one-off exercise if the skills are not in-house. Last, Member States should invest more in existing coordination projects such as NAPCORE to mandate more resources to be put on bike parking data and its standardisation. They could also actively take part in the development of bike parking standards, ensuring that the EU standard does not lead to the creation of multiple profiles (or flavours) that would hinder data consolidation and comparison at the EU level.

4 CONCLUSIONS AND EU-LEVEL RECOMMENDATIONS

The study team has identified potential actions that could be undertaken to support the further extension and improvement of cycling data across the EU. These actions are presented below, grouped according to the four domains described above. The study team developed this list based on the outcomes of the work carried out in the various WPs, including input from a range of stakeholders. Regarding the Member State-level recommendations for all the domains, they can be found in Deliverable 3 of the Cycling Counts study, which focuses on the methodology for the current and future collection of

cycling data in the EU.

It is important to note that the list does not assign responsibility for implementation to any specific actor. These actions could be initiated at different governance levels, including by stakeholders. This list should not be interpreted as reflecting the official position of the European Commission.

Cycle network

- Develop and publish an EU-wide standard for cycle network representation. Establishing such a harmonised standard would:
  - simplify the task of establishing a national dataset, without duplicating efforts, and
  - ensure that cycling infrastructure data is comparable and interoperable across Member States.

- A relevant, ongoing initiative here is the Cyclinfra project[32], an initiative to improve the exchange and re-use of digital, machine-readable cycling network data across Europe, with the aim to define EU standards.

- Standardise surface quality measurement. A research project similar to the one used to develop the International Roughness Index for road infrastructure[33] would be useful to be able to monitor and compare the quality of cycling infrastructure surface without committing to tools and proprietary methodologies offered by a specific vendor.

- Offer training and capacity-building initiatives. Organise courses, training and peer learning sessions on topics such as:
  - Structure and application of the EU-wide cycle network standard,
  - Harmonised measurement and representation of specific quality attributes,
  - Understanding, using and updating OSM, how to employ it to verify and enhance data quality.

- To stimulate the uptake of the EU-wide cycle network data standard, its use could be integrated in the reporting for EU-funded projects. Currently, through Regulation (EU) 2021/1058, Regulation (EU) 2023/955 and Regulation (EU) 2021/1529, the EU collects data on length of dedicated cycling infrastructure newly built or significantly upgraded by projects supported. In parallel, Regulation (EU) 2021/1060 requires publication of location indicator or geolocation for each operation. In practice, Kohesio uses Nominatim (OSM-based tool) to compute geographic coordinates for EU-supported projects[34]. Replacing the statistical summaries currently used for indicators with geolocated data in a common standard was identified as one of the "low-hanging fruits" in the "NAPCORE cycling data – Workshops conclusions"[35]. Make the provision of infrastructure data, in line with the

[32] https://www.cencenelec.eu/news-events/news/2025/call-for-tender/2025-10-08-cyclinfra/
[33] Sayers, M. W. (Michael W.) (1986). International road roughness experiment: establishing methods for correlation and a calibration standard for measurements. World Bank Technical Paper No. 45. Washington, D.C.: World Bank. ISBN 0-8213-0589-1. OCLC 1006487409.
[34] https://kohesio.ec.europa.eu/en/faq
[35] NAPCORE Cycling ambassadors and taskforce, 2024: https://www.interregnorthsea.eu/sites/default/files/2025-07/Cycling%20data%20in%20Europe%20-%20Conclusions%20%28v5%29.pdf

EU standard, a requirement for projects receiving EU financial support.

Cycle use

- Explore options to better take into account the results of the European Health Interview Survey (EHIS) for frequency of use of active modes of travel in mobility policy and when planning European and national mobility surveys. The possible synergies in using these results might warrant an increase in the frequency of data collection on mobility-related variables to every three years instead of every six years.

- Explore options to repeat and expand the EU-wide travel survey with larger sample sizes that allow for statistically robust, detailed results on demographic categories, trip purposes, etc., including in Member States with a low cycling modal share[36].

- As a collaboration between Eurostat and relevant national authorities, continue the ongoing work of coordinating Member States' NTSs, which was started with the Eurostat Guidelines on Passenger Mobility Statistics.

- More research is needed on including new data collection methodologies (e.g., GPS tracking through smartphone apps or devices, automatic counters or cameras) into existing datasets while ensuring geographic and demographic representativeness. Meanwhile, explore options to provide high-resolution georeferenced cycle use datasets, e.g. flows at the link (road segment) level

Cycling safety

- Encourage adoption of existing definitions on injury levels across all Member States.

- Improve reporting of slight injury crashes in national databases

- Make crash data from CARE more easily available to stakeholders in Europe according to the principles of open data[37]. Currently, only a few dedicated users per country can access the CARE database.

- Establish an EU standard for cycling exposure data and collect these data systematically (see also section above on cycle use).

- Consider including property-damage-only crashes (i.e., no-injury cases) in national databases

- Foster research, for example through Horizon Europe as it is done already in calls HORIZON-CL5-2026-01-D6-13 aiming to improve data quality and HORIZON-CL5-2023-D6-01-12 aiming to improve injury classification. Aim to further establish methodologies to improve the consistent and systematic underreporting of cycle crashes

[36] For example, Bulgaria: In the current edition of the EU-wide travel survey, the lower bound of the confidence interval for distance cycled per person per day is at 0.02 km and the upper bound is at 0.96 km for the population as a whole without any split according to gender, age groups etc
[37] What is open data https://data.europa.eu/en/dataeuropa-academy/what-open-data

- Foster research, for example through Horizon Europe, and aim to establish methodologies to complement crash information with information from alternative data sources such as self-reported crashes, hospital data and data on surrogate safety measures (traffic conflicts).

Cycle services

- For bike sharing and cycle parking continue efforts via NAPCORE to encourage improved compliance with MMTIS Regulation and monitor progress in the number of standardised data sets that are available.

- For all services domains assist National Cycling Contact Points or other channels to Member States in identifying resources that can be used to strengthen their data capture processes and analysis of the results. Potential examples of use of funding instruments to improve data capture could be identified, where existing, and practices shared among NCCPs.

- The Commission and Member States to encourage use of the data sets and indicators developed for all services sub-domains as output indicators for EU, Member State and local investments in services – e.g. trips generated for bike sharing and cycle logistics or bike parking places relative to demand.

- Continue the recognition of cycle logistics as an emerging sustainable logistics opportunity in urban environments that should be consistently monitored by Member States and local authorities as part of overall urban logistics measurement, for example in the context of SULPs.

- The requirement for compliance with the MMTIS Regulation makes cycle parking a measurable domain for the Member States and the EU acting in coordination, but it needs greater resources and prioritisation. Through NAPCORE, compliance and data availability will be tracked, and cycle parking should be specifically identified as an area that can be monitored.

5 ANNEXES

5.1 Annex 1: Consolidated EU-wide national datasets

Table 15: Summary of bike sharing data availability in Member States

Information researched	Number of cities	Member State status	Notes and comments
Cities in the sample	289		EU cities with number of inhabitants over 150,000 obtained from Eurostat
Additional smaller city data provided by Member States	67 (of which 58 were in Greece)	Provided by AT, IE, EE, GR (LU added by project)	Most Member States that commented on the threshold said that in future studies they want to choose boundary size
Has an identifiable bike sharing fleet and confirmed bike numbers	204 over 150k, plus 64 smaller cities (of which 58 were Greece)	Fleets were identified in all countries except MT. In RO, BG, CY and LU, the numbers could not be verified. The remaining 22 Member States had data that came from verifiable sources and provides a baseline for fleet size.	Verifiable data is any source that gets information from operators' own numbers. This was provided directly to associations or researchers by the operator, via open-source data or indirectly via cities and governments. Unverified data came from online research and may have include incomplete or out of data information.
Annual bike-sharing trip data was provided	164 over 150k + 8 from smaller cities	Verified trip data could not be sourced from RO, BG, CY, LU, SK, CZ, EL In the remaining 19 Member States there was sufficient data to meet the criteria for establishment of a baseline and enable progress monitoring In FR[38], IT[39], PL[40], ES[41] and BE[42], the results are also comparable to other studies.	The trip data was not complete in every city due to some operators not providing data or not being able to be contacted. Where trip information came from operators that covered more than 90% of the bikes in the city the availability of data of considered proven for the purposes of the exercise. In large countries with a big sample of cities the city coverage may not be complete

[38] *RAPPORT VELO PUBLIC_AAVP* https://www.aavp-asso.fr/rapport-du-v%C3%A9lo-public
[39] *Rapporto nazionale* sharing mobility 2024 https://osservatoriosharingmobility.it/wp-content/uploads/2024/12/Rapporto-sharing-mobility-2024.pdf
[40] *Wspieranie publicznej mikromobilności RAPORT ROWEROWY* https://nextbike.pl/raport/
[41] *Informe OMM 2022 - Avance 2023* https://observatoriomovilidad.es/informes/
[42] SHARED MOBILITY IN BELGIUM report 2024 https://www.waytogo.be/nl/voor-professionals/expertise-inzichten-delen/rapport-deelmobiliteit-2024

Information researched	Number of cities	Member State status	Notes and comments
			not complete but big cities covered extensively – likely to be >95% of trips
Advanced information provided: **Annual KM travelled provided** **Number of unique users provided**	70 47	Operators in the 167 cities analysed by Cycling Counts were asked to provide this additional data to test. Availability only reflects this smaller sample. ES, IT, FR and PL also have existing data in the national studies referred to above which did provide more comprehensive data. DE collects data on use of shared mobility in its national travel survey[43]	Some operators report methodological difficulties producing trip distance and user data. This is examined in detail in Deliverable 3. Unique user data has a much lower accuracy level than distance analysed in Deliverable 3.

Table 16: Overview of identified national data sources on cycle use

Member State	National Travel Survey	Physical activity survey	Other sources	Availability of detailed data on cycling, extras
Austria	2013/2014	Physical activity monitoring 2022	Report on Active Mobility 2024 Micro census on environmental conditions and behaviour 2023	Yes Frequency of use of bicycles/e-bikes (up to 25 km/h)
Belgium	2025	No	The modes of transport used by Belgians 2024 Use of bicycles and scooters 2024	Yes Age by gender Frequency of use of bicycles (all types)
Bulgaria	No	No	No	Not applicable

[43] *Sharing-Angebote und On-Demand-Verkehre kleine Vertiefung*: https://www.mobilitaet-in-deutschland.de/pdf/MiD2023_Vortrag_Sharing.pdf

Croatia	2017 (not accessible)	No	No	No, only modal share available
Cyprus	2009	No	No	Nothing available
Czechia	2019	National Report on Physical Activity of Czech Children and Youth 2022	National platform for automatic cycle counters	No data on cycling modal share for different travel purposes and km cycled
Denmark	2023	The Danes' Physical Activity and Sports Habits 2024	National Bicycle Account	Yes
Estonia	2021	Yearly physical activity survey 2024 latest	Employed Persons by Gender and Mode of Transportation to Work 2024	No data on km cycled
Finland	2021	No	Passenger Transport Survey Autumn 2023	Yes Age by gender
France	2019	No	Survey on bicycle use 2024 Reports on bicycle traffic in France 2024 Data on cycling to work from the national census	Yes
Germany	2023	Health in Germany - Current State 2019/2020	Bicycle Monitor 2023 Mobility in Cities 2023	Yes
Greece	No	No	No	No
Hungary	2012	No	This is how Hungary Cycles 2022	Just cycling modal share available Frequency of use of bicycles
Ireland	2024	No	No	No data on km cycled, modal share

				by gender, purposes
Italy	2024	No	No	No data by gender, age, purposes
Latvia	2021	No	No	No data on gender, age, area, purposes
Lithuania	No	No	National Opinion Survey on Cycling Infrastructure 2023, data on frequency	No
Luxembourg	2017	No	Digital Mobility Observatory 2021 Survey on Soft Mobility 2020	Only data on modal share and purposes
Malta	2021	No	No	Only data on modal share
Netherlands	2023	No	Bicycle counting data platform	Yes
Poland	2015	No	No	Just cycling modal share available Frequency of use of bicycles
Portugal	No	No	Mobility Survey in Metropolitan Areas 2022	No data by gender, age, purposes
Romania	2018 (not accessible)	No	No	No
Slovakia	2015	No	No	No data by gender, age, area
Slovenia	2021	No	Household Survey on Transport Habits of the Population at the Level of the Republic of Slovenia 2022	No data by gender, area
Spain	2006	No	Barómetro de la Bicicleta en España	No

			Census data from National Institute of Statistics	
Sweden	2024	No	Environmental health survey 2023 National Cycling Account 2023	No data by age

Table 17: Overview of identified national data sources on cycling safety

Member State	Latest available safety data and source	Data on injuries and fatalities available? Additional data available?	Other identified sources
Austria	2024 - police data, uses hospital data to research underreporting	Yes, share of e-bikes in collisions with personal injuries involving bicycles	Yearly report on road safety including data on cycling
Belgium	2024 - police data for injuries, public prosecutor data for fatalities (verified with national death statistics)	Yes, distinguished data on e-bikes	Yearly report on road safety including data on cycling, dashboard
Bulgaria	2024 - police data	Yes, detailed data on age groups, geographies, road administrative types, etc.	
Croatia	2023 - police data for injuries, death certificate data from Croatian Bureau of Statistics for fatalities	Yes, light and serious injuries separated	
Cyprus	No (classified as confidential)	-	
Czechia	2024 - police data	Yes, interactive map, geodata	
Denmark	2023 - police data, separate statistics from hospital system (higher figures)	Yes, light and serious injuries separated, distinguished data on EPAC, includes info on infrastructure where accident happened	

Estonia	2024 - police and border control data	Yes, dashboard, geodata	National Institute for Health Development Statistics (hospital data)
Finland	2023 - police and hospital data	Yes, light and serious injuries separated, distinguished data on electrically assisted bikes	
France	2024 - police data for fatalities, police and hospital data for injuries	Yes, light and serious injuries separated	
Germany	2023 - police data	Yes, data on EPAC, geodata	
Greece	2023 – police and port authority data	Yes	
Hungary	Not identified	Not identified	
Ireland	2024 - police and security service data	Yes	
Italy	2023 - police data supplemented with hospital data for severity of accidents	Yes, data on e-bikes	
Latvia	2024 - police data	Yes, dashboard	
Lithuania	2024 - police data	Yes, geodata, distinguished data on e-bikes	
Luxembourg	2023	Yes, distinguished data on EPAC	Report on road safety
Malta	2022 - police and insurance association data	Yes, data on serious injuries	
Netherlands	2023 - police, hospital, ambulance, insurance data	Yes, data on e-bikes, data on cyclists transported with ambulance, geodata	
Poland	2024 - police data	Yes	
Portugal	2023	Yes, data on serious and light injuries	
Romania	Not identified	Not identified	
Slovakia	2024 - police data	No data on injuries, data includes scooters	

Slovenia	2023 - police data	Yes, data on serious injuries	
Spain	2023 - police data + death records	Yes	
Sweden	2024 - police data and emergency department data	Yes	Survey on traffic safety

5.2 Annex 2: Glossary of terms and definitions

Table 18: Key terms and definitions

TERM	DEFINITION	SOURCE
Cycle (or bicycle or bike)	Road vehicle which has two or more wheels and is generally propelled by the muscular energy of the persons on that vehicle, in particular by means of a pedal system, lever or handle (e.g. bicycles, tricycles, quadricycles, cargo cycles and wheelchairs). The most common type of cycle is the bicycle. Cycles include EPACs (electrically power assisted cycle).	Glossary for transport statistics – 6th edition – 2025 - Eurostat (europa.eu)
Cyclist	Person using a cycle as means of conveyance for their trip/journey	Glossary for transport statistics — 5th edition — 2019 - Products Manuals and Guidelines - Eurostat (europa.eu)
Pedelec	A pedelec or e-bike is a vehicle with at least two wheels with pedal assistance which is equipped with an auxiliary electric motor having a maximum continuous rated power of 0.25 kW, of which the output is progressively reduced and finally cut off as the vehicle reaches a speed of 25 km/h, or sooner, if the cyclist stops pedalling.	CARE DATABASE – CaDaS Common Accident Data Set Version 3.8, September 2023 p.68/133 cadas_glossary_v_3_8.pdf (europa.eu)
Speed-pedelec	A type of pedal-assisted bicycle where the electric assistance cuts off when the vehicle reaches approximately 45 km/h (exact limit depends on local regulations).	International Transport Forum, Measuring New Mobility Definitions, Indicators, Data Collection, https://www.itf-oecd.org/sites/default/files/docs/measuring-new-mobility-definitions-indicators-data.pdf
Person fatally injured (or killed person in	Person killed immediately or dying within 30 days as a result of a road injury accident, excluding suicides.	Glossary for transport statistics – 6th edition – 2026

a road injury accident)	A killed person is excluded if the competent national authority records or classifies the cause of death to be suicide, i.e., a deliberate act to injure oneself resulting in death. For countries that do not apply 30-day threshold, conversion coefficients are estimated so that comparisons on the basis of the 30-day definition can be made. Also referred to as 'fatalities'.	
Seriously injured person	Person injured as a result of an accident and hospitalised for more than 24 hours, excluding attempted suicides.	Glossary for transport statistics – 6th edition – 2026
Road collision (or road injury accident or road crash)	Accident involving at least one road vehicle in motion on a public or private road, resulting in at least one injured or killed person. Included are collisions between road vehicles; between road vehicles and pedestrians; between road vehicles and animals, or fixed obstacles; and collisions involving a single road vehicle alone. Included are also collisions between road and rail vehicles. In this regard, collisions between pedestrians and rail vehicles without the presence of a road vehicle are excluded. Multi-vehicle collisions are counted as only one accident, provided that any successive collisions happen within a very short time period. Accidents resulting only in material damage are excluded from injury accidents.	Glossary for transport statistics – 6th edition – 2026
Local Administrative Unit (LAU)	Municipalities and communes as submitted by Member States to Eurostat. 2023 administrative data was used to match the provided administrative boundaries © EuroGeographics.	Eurostat: https://ec.europa.eu/eurostat/web/nuts/local-administrative-units
Cities	LAUs classified as "cities" in the Eurostat degree of urbanisation classification.	https://ec.europa.eu/eurostat/web/degree-of-urbanisation/information-data
Towns and suburbs	LAUs classified as "towns and suburbs" in the Eurostat degree of urbanisation classification.	https://ec.europa.eu/eurostat/web/degree-of-urbanisation/information-data
Rural areas	LAUs classified as "rural areas" in the Eurostat degree of urbanisation classification.	https://ec.europa.eu/eurostat/web/degree-of-urbanisation/information-data
Outside LAU	Administrative boundaries provided by	

	EuroGeographics have limited accuracy and include only land areas. Some sections of the cycle network (for example, certain bridges) fall outside the provided boundaries.	
Unknown	Local administrative units for which Eurostat does not specify type of area.	
Cycle track	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.	Vienna Convention on Road Traffic, also used by Eurostat 2019 - B.I-15
Cycle lane	A part of a carriageway designated for use by cyclists and distinguished from the rest of the carriageway by longitudinal road markings.	Vienna Convention on Road Traffic, also used by Eurostat 2019 - B.I-15
Cycle-friendly mixed traffic	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.	United Nations, ECE/TRANS/WP.5/2024/4
Cycle street	A specially designed section of road or an area, which is not a cycle track, where special traffic rules apply and it is signposted as such at its entries and exits. A cycle street is subject to special regulations depending on national legislation, which can include a speed limit of 30 km/h.	Eurostat 2025 B.I-16
Bus and cycle lane	A part of a carriageway designated for buses and distinguished from the rest of the carriageway by longitudinal road markings, and on which also cycles are allowed.	United Nations, ECE/TRANS/WP.5/2024/4, Final report of the Group of Experts on Cycling Infrastructure
Specific service road	A non-public road closed to general traffic, but open to cycles and selected motor vehicles, for example agricultural, forestry, industry and/or water management vehicles.	United Nations, ECE/TRANS/WP.5/2024/4, Final report of the Group of Experts on Cycling Infrastructure
Dedicated cycle network	Cycle tracks and cycle lanes	
Extended cycle network	Cycle tracks, cycle lanes and cycle-friendly mixed traffic	
EuroVelo route	An international cycle route belonging to the European cycle route network coordinated by the European Cyclists' Federation. EuroVelo routes must connect at least two countries and be at least 1000 km long.	https://en.eurovelo.com/

Developed Euro Velo route	EuroVelo route developed and signed in line with the respective national standard (i.e. it is part of a local, regional or national cycle network). There must also be a website providing information to users. Developed route can be heterogeneous in terms of infrastructure: type of cycling infrastructure, surface, width, gradients, etc.	https://pro.eurovelo.com/download/document/EuroVelo-2025-Route-development-final%201.pdf
Surveyed Euro Velo route	EuroVelo route surveyed in line with the European Certification Standard (ECS) methodology.	https://pro.eurovelo.com/projects/european-certification-standard
Certified Euro Velo route	Section of an EuroVelo route at least 300 km long that has successfully undergone the certification process in line with the EuroVelo European Certification Standard.	https://pro.eurovelo.com/download/document/EuroVelo-2025-Route-development-final%201.pdf
Surface quality	Assessment of the physical usability of the infrastructure for cycling, considering surface material, its implementation and technical condition. Quantitative values are provided on basis of OSM, as other quality metrics included in the analysed datasets are not standardised and not comparable. For OSM, the smoothness attribute was converted to numerical values, with excellent as 100%, impassable as 0%, and other values in between in equal intervals.	https://unece.org/sites/default/files/2025-06/UNECE%20Guide%20for%20designating%20cycle%20route%20networks%20EN_0.pdf (Annex II, section III.D) https://wiki.openstreetmap.org/wiki/Key:smoothness
Bike sharing	Short-term bicycle rental schemes that enable bicycles to be rented and released at a self-service location, including rental schemes that return to their starting point such as some railway station-based services	Industry standard definition derived from multiple sources
Cycle logistics	The use of cycles to deliver goods, services and people in a commercial setting.	Developed by the European industry and national trade associations. (European cargo bike and trailer manufacturers survey 2024, CIE)
Cycle parking	A designated area where cycles can be parked that is usable by the general public	Derived from NAPCORE Cycling Experts Survey and MMTIS regulation glossary created by NAPCORE

Table 19: Sources

SOURCE	DESCRIPTION	LINK	DATE
OSM	OpenStreetMap; the OSM tags are converted to infrastructure categories in line with the ECF Cycling Infrastructure Tracker methodology	https://www.openstreetmap.org https://european-cyclists-federation.github.io/Documents/Methodology.pdf	Nov 2025
LAU/Eurostat	Local Administrative Unit data as defined and published by Eurostat	https://ec.europa.eu/eurostat/web/nuts/local-administrative-units	2023
Eurostat	Population - cities and greater cities	https://ec.europa.eu/eurostat/databrowser/product/page/urb_cpop1__custom_15626623	2025
EuroGeographics	Administrative borders of Local Administrative Units, only land area included	Received from the GISCO team via WeTransfer	2023
Online data code: hlth_ehis_pe3e	Performing (non-work-related) physical activities by sex, age and educational attainment level (part of European Health Interview Survey, third wave)	https://ec.europa.eu/eurostat/web/products-datasets/-/hlth_ehis_pe3e	2019
CARE Public Dashboard	Community database on Accidents on the Roads in Europe	https://road-safety.transport.ec.europa.eu/care-public-dashboard-complete_en	2010-2023
EU-wide travel survey	EU-wide survey on New Mobility Patterns covering all mobility modes, including urban and non-urban trips, using the methodology recommended by Eurostat Passenger Mobility Guidelines.	https://op.europa.eu/en/publication-detail/-/publication/adfc18f1-80e1-11ed-9887-01aa75ed71a1	2021
EuroVelo route network	EuroVelo is a network of 17 long-distance cycle routes that cross and connect Europe. The routes can be used by long-distance cycle tourists, as well as by local people making daily journeys. Only routes approved by the European Cyclists' Federation can be called EuroVelo.	https://en.eurovelo.com/ with the contribution of National EuroVelo Coordination Centres	2025
Shared Ambition, benchmarking bike sharing in	Original data and methodology for bike sharing data collection and indicators	Cycling Industries Europe https://cyclingindustries.com/news/details/the-2024-	2024

147 EU cities.	created by the industry	edition-of-cies-bike-sharing-in-148-cities-report	

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