



Green LaMiS

Pilot Action KPIs

Common Set of Evaluation KPIs



Version 3 07 2025

Eileen Dauti, Christina Haderer, UPAS	date:	May 2	25 versio	n n°2
Matteo Povolato, BG; Federica Leonarduzzi, CGM	date:	June 2	025 versi,	n n°2
			<u> </u>	
Federica Leonarduzzi, CGM (WP.2 leader)	date:	July 20	025	
	Matteo Povolato, BG; Federica Leonarduzzi, CGM	Matteo Povolato, BG; Federica Leonarduzzi, CGM date:	Matteo Povolato, BG; Federica Leonarduzzi, CGM date: June 2	Matteo Povolato, BG; Federica Leonarduzzi, CGM date: June 2 025 versió









INDEX

- A. INTRODUCTION
- B. PILOT ACTION KEY PERFORMANCE INDICATORS
 - Objectives
 - Guidelines
- C. DEVELOPMENT OF KPIs
- D. KPIs TO EVALUATE THE PROCESS OF CHOOSING A GREEN MOBILITY SOLUTION
 - Sustainability Impact Score
 - Cost-Benefit Feasibility Score
- E. KPIS TO EVALUATE THE RESULTS OF THE GREEN MOBILITY SOLUTION
 - Reduction of CO₂ Emissions
 - Employee Green Solution Usability Score
 - Change in Average km per Day per Operator
- F. KPIs TO EVALUATE THE MARGINS FOR IMPROVEMENT
 - Breakdown and Maintenance Rate
 - Cost per Service Contact
- G. KPIs TO EVALUATE THE SCALABILITY AND APPLICABILITY OF THE CHOSEN SOLUTIONS TO OTHER SERVICES
 - Adoption Readiness Index
 - Operational Flexibility Score
 - Investment Payback Period
- H. REFERENCES
- I. ANNEX 1: EXEMPLARY CALCULATIONS SUSTAINABILITY IMPACT SCORE
- J. ANNEX 2: EXEMPLARY CALCULATIONS COST-BENEFIT FEASIBILITY SCORE
- K. ANNEX 3: DATA COLLECTION







A. INTRODUCTION

This document represents D.2.2.1 "Pilot Action KPIs" and is part of Activity 2.2 "Pilot Action Implementation," within WP2 "Ground Testing and Validation of the Joint Strategy and Action Plan."

The purpose of this deliverable is to guide the pilot action implementation and evaluate the process as well as well as the results of the pilot action implementation. The Pilot Action KPIs will allow the services in the three involved territories to choose green mobility solutions that are economical and sustainable. In addition, the KPIs will give insights into areas for further improvement and assess the implemented solutions relative to the status quo before the pilot action implementation. Thus, the KPIs will allow the services in the three territories to track their progress while keeping absolute thresholds for improvement in mind. Moreover, the KPIs and their consistent application as well as their defined data foundations allow for comparison between the territories and services.

Beyond the project's lifetime, the services and territories can use the KPIs to assess other services. Further, policymakers at different governmental levels could use the KPIs to assess suggested mobility solutions.

The document is divided into successive sections, starting with identifying objectives and guidelines for the KPIs, a short overview of the development process of the KPIs and an in-depth description of the KPIs sorted according to their objectives. Additionally, the annexes provide exemplary calculations for the KPIs relevant to the process of choosing green mobility solutions as well as a comprehensive list of all needed data and data collection periods. UPAS, who has developed the Pilot Action KPIs and this document, will provide constant support to the three territories in applying the Pilot Action KPIs if any additional explanation or information is needed.

The Pilot Action KPIs also rely on previous deliverables in our project. Most importantly, the Pilot Action KPIs integrate the results from D.1.2.1 Common Assessment Tool and D.1.2.2 Baseline Analysis as well as the developed Carbon Footprint Tool. The Pilot Action KPIs follow the approaches developed in these deliverables to calculate carbon footprints. Further, the forward-looking Pilot Action KPIs, specifically the Sustainability Impact Score and the Cost-Benefit Feasibility Score, use the results from D.1.2.2 Baseline Analysis as well as calculations carried out with the Carbon Footprint Tool.







B. PILOT ACTION KEY PERFORMANCE INDICATORS

OBJECTIVES

The objective of this deliverable is to define a common set of KPIs which assess the pilot action implementation and the outcomes of the pilot action implementation. More specifically, the Pilot Action KPIs will evaluate the process of choosing a green mobility solution, the results achieved with the green mobility solution, as well as the margins for improvement of the green mobility activities tested in the pilot actions. Further, the Pilot Action KPIs will include indicators to assess the scalability of the green mobility solutions to other services and the applicability of the identified and tested green mobility activities.

To fulfill these objectives, of evaluating the chosen green mobility solutions as well as the tested green mobility activities, for example route optimization, the Pilot Action KPIs are based on economic as well as ecologic indicators. Moreover, the Pilot Action KPIs build on previous deliverables in this project and integrate the insights from the Carbon Footprint Tool.

GUIDELINES

The Pilot Action KPIs developed in this deliverable should be measurable, relevant, comparable, and actionable. To generate measurable Pilot Action KPIs, the method for each KPI must be clearly defined. Further, the KPIs should be relevant, thus directly linked to the goals of the pilot actions. To achieve comparable KPIs, all data input is clearly defined which allows tracking the development of a KPIs over time as well as benchmarking it against alternatives. Finally, each KPI should be actionable to provide insights for improvement or scaling.







C. DEVELOPMENT OF KPIs

After establishing the objectives of the Pilot Action KPIs and setting forth the guidelines to which the Pilot Action KPIs should adhere to, we developed a set of KPIs to discuss with all partners in the project. During a series of workshops on the KPIs, the project team discussed each proposed KPI and jointly decided whether a proposed KPI should be included in the final set of KPIs. These decisions were based on the KPI guidelines that each KPI should be measurable, relevant, comparable, and actionable.

The initial set of KPIs was further discussed during the second transnational project meeting. After deciding on a final set of KPIs, we discussed the measurement and calculation of the Pilot Action KPIs with the project partners. Thereby, we made sure that all KPIs would be measurable as the municipalities gave input on which was available to them and which data could be collected by them.







D. KPIs TO EVALUATE THE PROCESS OF CHOOSING A GREEN MOBILITY SOLUTION

SUSTAINABILITY IMPACT SCORE

The Sustainability Impact Score evaluates the estimated environmental benefits of the chosen mobility solution before implementation. It is based on a percentage decrease in CO_2 emissions compared to the baseline analysis. The scale measures the decrease in CO_2 emissions on a scale from 1 through 10. The scale points correspond to the following percentage decreases:

- 1: 0 10 % decrease
- 2: 11 20 % decrease
- 3: 21 30 % decrease
- 4: 31 40 % decrease
- 5: 41 50 % decrease
- 6: 51 60 % decrease >> corresponds to the EU's goals for 2030 to reduce CO2 emissions for new vehicles by 55 % compared to 2021
- 7: 61 70 % decrease
- 8: 71 80 % decrease
- 9: 81 90 % decrease >> upper limit corresponds to the EU's goals for 2050 to reduce CO2 emissions from traffic by 90 % compared to 2021
- 10: 91 100 % decrease >> corresponds to the EU's goal to reach net zero by 2050

The Sustainability Impact Score can be calculated using the KPI tool. To calculate a Sustainability Impact Score, enter a baseline carbon footprint from 2023. Then use the Carbon Footprint Tool to calculate a fictitious carbon footprint by switching one or more vehicles to electric vehicles. Enter the fictitious carbon footprint. The tool will calculate the Sustainability Impact Score.

COST-BENEFIT FEASIBILITY SCORE

The Cost-Benefit Feasibility Score corresponds to the EUR saved from energy or fuel consumption per CO_2 kg avoided. It assesses the financial feasibility of the chosen solution compared to its environmental benefits. It is based on the CO_2 emissions from the carbo footprint tool and national averages for fuel and energy costs. The assumed mileage for diesel and gasoline cars is 9.1 and 7.8 l per 100 km, respectively (Destatis 2025). The assumed energy consumption for electric vehicles is 15 kWh per 100 km (Ferner 2023). Further, for all territories, we used the average fuel costs on March 24th, 2025, as proxy (Tolls 2025). For Hungary, we approximated the costs of one liter of gasoline with 1.49 EUR and of diesel with 1.53 EUR. For Croatia, we approximated the costs of one liter of gasoline with 1.77 EUR and of diesel with 1.67 EUR. For Croatia, we approximated the costs of one liter of gasoline with 1.51 EUR and of diesel with 1.52 EUR. Electric vehicle recharging is approximated with 0.5 EUR per kWh for Hungary, 0.55 EUR per kWh for Italy and 0.28 EUR per kWh for Croatia (European Commission "Electric vehicle recharging prices").

The Cost-Benefit Feasibility Score can be calculated using the KPI tool. The data from the baseline analysis is already provided for each territory and service. Use the carbon footprint tool to switch one or more







vehicles from gasoline or diesel to electric. Make sure to enter the CO_2 emission per vehicle in the KPI tool. Enter both your location- and market-based CO_2 emissions for each vehicle you want to consider. The tool will calculate all intermediary solutions and finally the cost-benefit feasibility score per vehicle as well as the total Cost-Benefit Feasibility Score per service and per territory.







E. KPIs TO EVALUATE THE RESULTS OF THE GREEN MOBILITY SOLUTION

REDUCTION OF CO2 EMISSIONS

This KPI calculates the CO₂ emissions in kg per service contact and compares the emissions before and after implementing a green mobility solution and engaging in green mobility activities.

 $\frac{kg\ CO_2\ emissions\ in\ T}{number\ of\ service\ contacts\ in\ T} - \frac{kg\ CO_2\ emissions\ in\ T+1}{number\ of\ service\ contacts\ in\ T+1}$

The Reduction of CO_2 Emissions can be calculated with the KPI tool. Enter the CO_2 emissions per service or per municipality for years T and T+1. Enter the number of service contacts of per service or per municipality for years T and T+1. The tool will calculate the KPI.

EMPLOYEE GREEN SOLUTION USABILITY SCORE

The Employee Green Solution Usability Score (EGSUS) assesses how social service employees—particularly drivers—experience newly introduced green mobility solutions such as electric or hybrid vehicles and digital fleet tools. This KPI focuses on practical usability, daily work support, and perceived environmental value from the employee's or volunteer's perspective, recognizing that user satisfaction is a critical success factor for long-term adoption.

The EGSUS enables project partners and stakeholders to quantify and interpret driver feedback using a standardized survey format. It supports decision-making regarding vehicle types, infrastructure needs, and training efforts while capturing potential barriers or concerns in everyday operation.

Target Group

The primary target group of the EGSUS consists of drivers employed in social service organizations who operate vehicles as part of their daily professional routines. Their feedback provides essential insights into whether new sustainable mobility solutions are compatible with real-life service delivery, especially under time-sensitive and route-based constraints typical in the sector.

By evaluating driver experiences, the EGSUS helps identify both strengths and practical obstacles of new technologies, ensuring that operational realities are taken into account in the upscaling of sustainable solutions.

EGSUS Survey Items and Scoring Methodology

To collect standardized feedback, drivers are asked to rate the following statements using a 7-point Likert-type rating scale (1 = strongly disagree, 7 = strongly agree). The items reflect dimensions such as ease of use, confidence, comfort, task support, infrastructure accessibility, route efficiency, and perceived ecological value:

I find the vehicle easy to operate.

I feel technically confident when using the vehicle.

The vehicle provides a comfortable driving experience.







The vehicle supports me in performing my daily work tasks.

The charging infrastructure is reliable and easy to access.

I can perform my routes just as efficiently or more efficiently with the new vehicle.

I feel that using this vehicle contributes to environmental protection.

Evaluation and Interpretation of the EGSUS

The final EGSUS is calculated as the mean of all 7 items, resulting in a value between 1 and 7.

Score Range	Interpretation
6.0 - 7.0	High satisfaction - strong alignment with operational needs
4.0 - 5.9	Moderate satisfaction - solution is usable but may need adjustments
< 4.0	Critical range - issues likely to affect long-term acceptance

This scoring framework supports ongoing optimization and allows for comparison across pilot sites and vehicle types within our project.

CHANGE IN AVERAGE KM PER DAY PER OPERATOR

This KPI specifically measures the impact of the mobility manager and green mobility activities, for example re-routing. It is expressed as a percentage change.

$$\frac{km \ per \ day \ per \ operator \ in \ T - km \ per \ day \ per \ operator \ in \ T + 1}{km \ per \ day \ per \ operator \ in \ T} * 100$$

The Change in Average km per Day per Operator can be calculated with the KPI tool. Enter the km travelled (either based on your records or calculations) for years T and T+1. Enter the number of operators in years T and T+1. Finally, enter the number of days on which the service was operated in years T and T+1. The tool will calculate the absolute Change in Average km per Day per Operator as well as the percentage change.







F. KPIs TO EVALUATE THE MARGINS FOR IMPROVEMENT

BREAKDOWN AND MAINTENANCE RATE

The Breakdown and Maintenance Rate is expressed as a percentage of operational time and tracks how much operational time is taken up by vehicle repairs or maintenance.

$$\frac{\textit{non-operational days of vehicle}}{\textit{total pilot days}}*100$$

The Breakdown and Maintenance Rate can be calculated using the KPI tool. Enter the non-operational days of the vehicle you want to investigate during the pilot period. Enter the number of days of the pilot period. The tool will calculate the KPI.

COST PER SERVICE CONTACT

The Cost per Service Contact compares the cost effectiveness of the new, green mobility solution to the old solution. The KPI can use either only fuel or energy costs to operate the vehicles for the service or the total operational costs of the vehicles by additionally considering tax, insurance, maintenance and other costs associated with operating the vehicle. Each service and municipality should at least calculate the Cost per Service Contact with the fuel or energy costs.

Enter the costs associated with the vehicle you want to investigate on a yearly basis. If you only have data for one month, for example, simply scale the costs up to reflect a whole year. Enter the number of yearly service contacts, again, you could scale up. The tool will calculate the KPI.







G. KPIs TO EVALUATE THE SCALABILITY AND APPLICABILITY OF THE CHOSEN SOLUTIONS TO OTHER SERVICES

ADOPTION READINESS INDEX

The Adoption Readiness Index (ARI) is a composite evaluation tool designed to assess how easily a green mobility or fleet management solution - developed and tested in the context of social service provision - can be adopted and scaled by other organizations in similar contexts.

The ARI combines key dimensions relevant to real-world adoption: economic feasibility, infrastructural requirements, user acceptance, and legal compatibility. It serves as a practical guide for project partners, decision-makers, and external stakeholders to evaluate the scalability and replicability of the pilot solutions beyond the original setting.

The index ranges from 4 to 20 points, with optional normalization to a 1-10 scale to ensure comparability across different indicators used in our project.

ARI Dimensions and Scoring Framework

The ARI is built upon four core dimensions that collectively reflect the most critical factors influencing the adoption of sustainable solutions. Each dimension is accompanied by a guiding question and a 5-point scoring system, allowing evaluators to assess adoption potential in a structured and comparable way.

Dimension	Guiding Question	Scoring Guidance (1-5 scale)	
1. Cost Feasibility	Is the solution financially viable for small or medium-sized service providers?	1 = prohibitively expensive5 = low-cost or easily affordable with minimal investment	
2. Infrastructure Needs	Does implementation require major infrastructural changes or special equipment?	1 = major infrastructureinvestments required5 = minimal or no newinfrastructure needed	
3. User Feedback	How positively do operational users perceive the solution (e.g., drivers, dispatchers)?	1 = strong resistance or negative perception5 = highly positive feedback and easy adoption	
4. Regulatory Fit	Is the solution aligned with local/national laws and regulatory frameworks?	1 = significant legal barriers5 = fully compliant, no regulatory issues	
Interpretation of Total Score			
Score Range Readi	ness Level Implication		
4-8 Low A	doption Readiness Major challenges to scale; u	nlikely to replicate without redesign	







Score Rang	e Readiness Level	Implication
9-14	Medium Adoption Readines	ss Transferable with moderate adaptation or support
15-20	High Adoption Readiness	Strong potential for scaling and replication with minimal barriers

Target Group

To ensure the practical applicability of the ARI, it is essential to involve the perspectives of those who are directly responsible for strategic and operational decisions in social service organizations. This target group includes individuals in leadership, technical, or operational roles who are responsible for making strategic decisions about the implementation of new technologies or solutions. Their perspective is critical for understanding adoption potential and transferability of project results. In our project this includes fleet and operations managers, executive directors or senior managers of social service providers as well as strategic project partners.

OPERATIONAL FLEXIBILITY SCORE

The Operational Flexibility Score (OFS) assesses how well a green mobility or fleet management solution can be applied across different types of social service operations. This includes tasks such as medical home visits, food deliveries, mobile care services, and administrative trips. The KPI provides a structured way to evaluate the versatility and adaptability of the solution beyond the specific pilot scenario.

By measuring operational flexibility, the OFS helps stakeholders determine whether a tested solution has broader relevance for social service organizations with diverse logistical and operational profiles. It supports decisions regarding scalability, investment efficiency, and cross-sectoral applicability.

Target Group

The target group for this KPI includes operational managers, coordinators, and strategic partners who understand the practical requirements of different service types within their organization. Their input is essential to judge the extent to which the tested solution meets the varied demands of daily service delivery.

Typical respondents include:

- Service coordinators responsible for route planning and scheduling
- Mobility or fleet managers with oversight of vehicle allocation
- Pilot site managers involved in day-to-day implementation
- Department leads familiar with the organization's range of social services

OFS Items

Respondents are asked to indicate their agreement with the following statements on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree):

- 1. The tested mobility solution is compatible with various service types we provide (e.g., medical visits, food deliveries).
- 2. Only minor operational changes are required to use this solution in different service areas.







- 3. Our team can easily adjust routes and schedules when using this solution.
- 4. The solution allows sufficient flexibility to respond to sudden changes (e.g., urgent visits, cancellations).
- 5. This solution can be expanded to other departments or locations without major reconfiguration.

Scoring and Interpretation:

Total Score = Mean of all 5 items \rightarrow OFS (1-7)

Score Range Flexibility Level		Interpretation
6-7	High Flexibility	Broad applicability; strong candidate for upscaling
4-5.9	Moderate Flexibility	Usable with some adaptation; context-dependent
< 4	Low Flexibility	Limited to specific settings; significant redesign needed

INVESTMENT PAYBACK PERIOD

The Investment Payback Period calculates how long it takes for cost savings to offset the investment in a new, green mobility solution. The initial investment is either the cost of buying a new mobility solution or the cost of renting or leasing a new mobility solution over the whole rental or leasing period. The Investment Payback Period considers all yearly costs of the old mobility solution and the new mobility solution, calculates the savings achieved with the new mobility solution and compares the savings to the initial investment. The yearly costs are made up of the fuel or energy costs and could additionally consider tax, insurance, maintenance and other costs.

To calculate the Investment Payback Period, enter your initial investment. If you rent or lease a mobility solution, enter all costs for the solution that will accumulate over the whole rental/leasing period. Enter your yearly costs for the old mobility solution. Enter your yearly costs for the new mobility solution. You could use the intermediate solutions from the Cost-Benefit Feasibility Score as proxy for the yearly costs of the new mobility solution, if you do not yet have enough data. The tool will calculate the KPI.

COOPERATION IS CENTRAL







H. REFERENCES

Destatis - Statistisches Bundesamt (2025). *Mileage and fuel consumption of household's cars*. Retrieved April 28, 2025, from https://www.destatis.de/EN/Themes/Society-

 $\label{thm:constraint} Environment/Environmental-Economic-Accounting/transport-tourism/Tables/mileage-fuel-consumption. \\ html$

European Alternative Fuels Observatory (n.d.). *Electric vehicle recharging prices*. European Commission. Retrieved April 28, 2025, from https://alternative-fuels-observatory.ec.europa.eu/consumer-portal/electric-vehicle-recharging-prices

Ferner, T. What's the Consumption of an Electric Car? Measuring and Managing Energy. Cardino. Retrieved April 28, 2025, from https://www.cardino.de/en/blog-posts/consumption-of-an-electric-car Tolls (2025). Fuel prices in Europe. Retrieved April 28, 2025, from https://www.tolls.eu/fuel-prices







I. ANNEX 1: EXEMPLARY CALCULATIONS SUSTAINABILITY IMPACT SCORE

The exemplary calculations for the Sustainability Impact Score were calculated for scenarios in which the most used vehicle and the two most used vehicles were replaced with new green mobility solutions. First, we calculated new carbon footprints using the Carbon Footprint Tool under the assumption that either the most used vehicle or the two most used vehicles would have been replaced with an electric vehicle. Second, we entered this new data from the Carbon Footprint Tool into the KPI tool to obtain the exemplary Sustainability Impact Scores. As the Carbon Footprint Tool differentiates between a location-based and market-based approach to calculate the carbon footprints, the following exemplary results also differentiate between location-based and market-based results. We assumed 100 % green electricity for the new green mobility solutions.

Territory	Service Provider	Scenario	Location-based	Market-based
Hungary	Szombathely, Palos	Changing most used vehicle	2 (reduction of 15.90 %)	2 (reduction of 18.94 %)
Hungary	Szombathely, Palos	Changing the two most used vehicles	3 (reduction of 30.19 %)	4 (reduction of 35.98 %)
Hungary	Szombathely, Fehe	Changing most used vehicle	7 (reduction of 66.61 %)	7 (reduction of 68.70 %)
Hungary	Szombathely, Fehe	Changing the two most used vehicles	10 (reduction of 95.59 %)	10 (reduction of 98.55 %)
Italy	Bergamo, Ass Pellicani	Changing most used vehicle	2 (reduction of 20.03 %)	3 (reduction of 26.19 %)
Italy	Bergamo, Ass Pellicani	Changing the two most used vehicles	5 (reduction of 41.22 %)	6 (reduction of 52.73 %)
Italy	Bergamo, CDD	Changing most used vehicle	3 (reduction of 22.52 %)	3 (reduction of 28.25 %)
Italy	Bergamo, CDD	Changing the two most used vehicles	5 (reduction of 50.74 %)	7 (reduction of 61.68 %)
Croatia	Klis	Changing most used vehicle	3 (reduction of 25.87 %)	4 (reduction of 40.19 %)
Croatia	Klis	Changing the two most used vehicles	4 (reduction of 37.16 %)	6 (reduction of 51.49 %)







J. ANNEX 2: EXEMPLARY CALCULATIONS COST-BENEFIT FEASIBILITY SCORE

The exemplary calculations for the Sustainability Impact Score were calculated for scenarios in which the most used vehicle and the two most used vehicles were replaced with new green mobility solutions. First, we calculated new carbon footprints using the Carbon Footprint Tool under the assumption that either the most used vehicle or the two most used vehicles would have been replaced with an electric vehicle. Second, we entered this new data from the Carbon Footprint Tool into the KPI tool to obtain the exemplary Sustainability Impact Scores. As the Carbon Footprint Tool differentiates between a location-based and market-based approach to calculate the carbon footprints, the following exemplary results also differentiate between location-based and market-based results. We assumed 100 % green electricity for the new green mobility solutions.

Territory	Service Provider	Scenario	Location-based	Market-based
Hungary	Szombathely, Palos	Changing most used vehicle	2 (reduction of 15.90 %)	2 (reduction of 18.94 %)
Hungary	Szombathely, Palos	Changing the two most used vehicles	3 (reduction of 30.19 %)	4 (reduction of 35.98 %)
Hungary	Szombathely, Fehe	Changing most used vehicle	7 (reduction of 66.61 %)	7 (reduction of 68.70 %)
Hungary	Szombathely, Fehe	Changing the two most used vehicles	10 (reduction of 95.59 %)	10 (reduction of 98.55 %)
Italy	Bergamo, Ass Pellicani	Changing most used vehicle	2 (reduction of 20.03 %)	3 (reduction of 26.19 %)
Italy	Bergamo, Ass Pellicani	Changing the two most used vehicles	5 (reduction of 41.22 %)	6 (reduction of 52.73 %)
Italy	Bergamo, CDD	Changing most used vehicle	3 (reduction of 22.52 %)	3 (reduction of 28.25 %)
Italy	Bergamo, CDD	Changing the two most used vehicles	5 (reduction of 50.74 %)	7 (reduction of 61.68 %)
Croatia	Klis	Changing most used vehicle	3 (reduction of 25.87 %)	4 (reduction of 40.19 %)
Croatia	Klis	Changing the two most used vehicles	4 (reduction of 37.16 %)	6 (reduction of 51.49 %)







K. ANNEX 3: DATA COLLECTION

The data collection will be organized by UPAS. Unless reliable data from logbooks or accounting is available for each year, we recommend data collection for two weeks every quarter. UPAS will remind project partners of the data collection each quarter and send out e-mail reminders with data collection sheets attached. The project partners, especially municipalities and service providers should dutifully fill out the data collection sheets and send them back to UPAS. UPAS will store and aggregate the data from the different data collection periods within one calendar year and will send the aggregated data to project partners for KPI calculation with the KPI tool.

To mitigate risk in the data collection, for example misunderstandings due to language barriers, UPAS will provide the data collection sheets in English and in the local languages of the municipalities and service providers. Additionally, UPAS will remind project partners of the data collection at least one week before the data collection period starts. The data collection period is four weeks long and municipalities and service providers will have to collect data for two out of the four weeks. Thereby, we mitigate the risk of data not being collected due to vacation periods or sick leave. The municipalities are charged with facilitating data collection by the service providers. The municipalities should decide which data they can collect themselves and which data needs to be collected by the service providers.

After each quarterly data collection period, UPAS will send out reports of the collected data to all project partners.

Data	Collection Period	Collection Date
Carbon Footprint 2023 (Baseline Analysis)		In the past
Fictitious Carbon Footprint for Different Scenarios	1	As needed
Km Travelled 2023 (Baseline Analysis)	One year	In the past
Km Travelled	One year, based on Carbon Footprint or logbook	Starting July 2025
Number of Operators*	One year	Starting July 2025
Number of Operational Days*	One year	Starting July 2025
Number of Service Contacts*	One year	Starting July 2025
Pilot Days	Three months	Starts one month after new mobility solution is implemented
Non-Operational Pilot Days	Three months	Starts one month after new mobility solution is implemented
Fuel/Energy Costs per Vehicle*	One year, based on Carbon Footprint or logbook	Starting July 2025







Tax per Vehicle	One year	Starting July 2025
Insurance per Vehicle	One year	Starting July 2025
Maintenance per Vehicle*	One year	Starting July 2025
Other Costs per Vehicle*	One year	Starting July 2025
Initial Investment in the Mobility Solution	/	One month after new mobility solution is implemented
Employee Green Solution Usability Score	/	Quarterly, starting one month after new mobility solution is implemented
Adoption Readiness Index	/	Quarterly, starting one month after new mobility solution is implemented
Operational Flexibility Score	/	Quarterly, starting one month after new mobility solution is implemented

Note.

^{*} If reliable data, for example from logbooks or accounting, for each year is not available, we recommend to track the data over a period of two weeks every quarter.