SUMPS FOR BSR

Enhancing Effective Sustainable Urban Mobility Planning for Supporting Active Mobility in BSR Cities

PILOTS' IMPLEMENTATION MONITORING METHODOLOGY FOR PANEVĖŽYS CITY MUNICIPALITY

Interreg Baltic Sea Region

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SMART GREEN MOBILITY
SUMPs for BSR

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INTRODUCTION

For the project SUMPs for BSR - Enhancing Effective Sustainable Urban Mobility Planning for Supporting Active Mobility in BSR Cities (hereinafter – SUMPs for BSR project), Panevėžys city municipality is planning to:

- Organize awareness / habit building campaigns: events to educate and attract attention towards sustainable commuting
- Install racks for bicycles and scooters near 10 selected schools in the central & highly dense areas in Panevėžys city municipality
- Evaluate SUMPs for BSR project interventions' results (external experts & stakeholders' collaboration to evaluate the process & results, make suggestions for SUMP update).

This methodology is aimed to provide clear guidance for effective data collection methods, sufficient data collection plan and initial further collected data evaluation steps.

Scheme below shows overall monitoring process and indicates what aspects of monitoring have to be outlined in the following methodology:

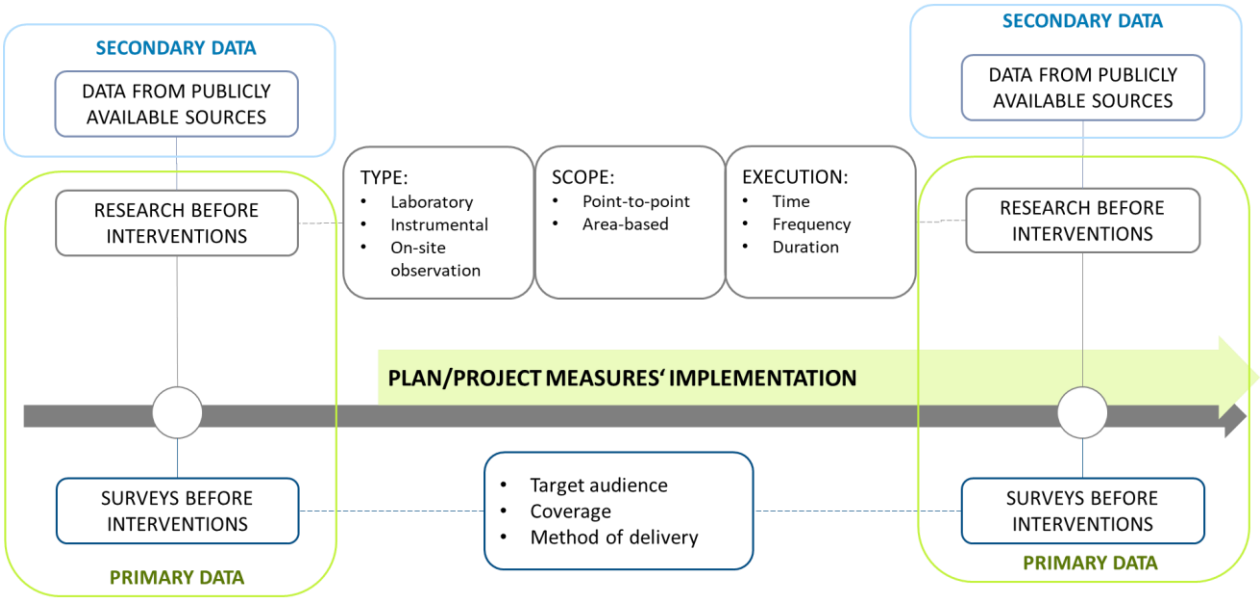


Figure 1. Basic monitoring process

Panevėžys city municipality is going to implement two pilots during SUMPs for BSR project – Data Pilot and Rack Pilot. Rack pilot implementation consist of two different parts:

- Organisation of awareness / habit building campaigns: events to educate and attract attention towards sustainable commuting;

- Installation of racks for bicycles and scooters: Research and creation of small infrastructure for positive change towards sustainable commuting.

Data pilot, awareness / habit building campaign organisation and installation of racks for bicycles and scooters are very different and therefore have three different monitoring methodologies developed.

1 DATA PILOT MONITORING

Data pilot evaluation is aimed at identification of **data collection gaps and challenges** the city is facing in monitoring of SUMP and various related projects implementation. For these following indicators are set:

- Available data (what indicators are available, when and how they are being monitored);
- Data to be collected during Data pilot (set of indicators, monitoring methodology for Rack pilot implementation);
- Data that needs to be collected (indicators, which should be monitored based on SUMP and recommendations for monitoring).

Data collection for these indicators will be done two times:

- Before Rack pilot implementation (2024 spring);
- After Rack pilot implementation (2025 autumn).

Data for these indicators should be obtained from publicly available sources (secondary data), Panevėžys' SUMP and this project outcomes (data to be collected during Data pilot is provided in this methodology, chapter *3.1 Indicators for data collection*).

2 AWARENESS / HABIT BUILDING CAMPAIGN MONITORING

During Rack pilot implementation two awareness/habit building campaigns are planned with the aim to educate and attract attention towards sustainable commuting (in 2025 spring and 2025 autumn). To monitor overall change influenced by these campaigns, following objectives must be carried out:

- Assess changes in awareness and knowledge;
- Assess changes in attitudes and perceptions;
- Assess changes in habits.

Monitoring is planned only through surveys with the very clear target group – participants of these particular campaigns. To effectively monitor **changes in awareness levels and mobility habits among participants** of sustainable commuting campaigns, pre-event and post-event questions are planned. In this particular monitoring survey questions are the indicators.

Pre-event questions can be presented to the participants in different formats, depending on the final campaign format and agenda. Following formats are recommended:

- Posters with stickers for voting before/during event;
- Interactive questions before/during event through internet platforms, such as MENTI, Slido or similar.

Pre-event questions' list:

1. Have you heard about sustainable commuting before? *(Y/N)*
2. What forms of sustainable commuting are you familiar with? *(Check provided options that apply)*
3. How would you rate your current knowledge about the environmental impacts of commuting? *(Check level of knowledge, 1 – knowledgeable at all – 5 – very knowledgeable)*
4. How important do you think it is to use sustainable commuting options? *(Check level of importance, 1 – not important at all – 5 – extremely important)*
5. What are the main barriers that prevent you from using sustainable commuting options? *(Check provided options that apply)*
6. What is your primary mode of transportation for your daily commute? *(Check from provided options)*
7. How often do you use sustainable commuting options (public transport, bike, walk, etc.)? *(Check from provided options)*

Post-event questions should be presented in online-survey format to the registered participants after the event.

Post-event questions' list:

1. Did you learn anything new about sustainable commuting during the event? *(Y/N)*
2. How would you rate your current knowledge about the environmental impacts of commuting? *(Check level of knowledge, 1 – knowledgeable at all – 5 – very knowledgeable)*
3. Has your perception of sustainable commuting changed after attending the event? *(Check change of perception, 1 – much more negative – 5 – much more positive)*
4. How important do you think it is to use sustainable commuting options now? *(Check level of importance, 1 – not important at all – 5 – extremely important)*
5. What is your primary mode of transportation for your daily commute now? *(Check from provided options)*
6. How often do you use sustainable commuting options now (public transport, bike, walk, etc.)? *(Check from provided options)*
7. Have you encountered any barriers to using sustainable commuting options after the event? *(Check provided options that apply)*
8. If you have adopted new sustainable commuting habits, what motivated you to make this change? *(Check provided options that apply)*

3 RACK PILOT IMPLEMENTATION MONITORING

Rack pilot implementation consist of instalation of racks for bicycles and scooters near 10 selected schools in the central & highly dense areas in Panevėžys city municipality. This is the **main and biggest part of whole monitoring and evaluation process for SUMPs for BSR project** in Panevėžys city municipality; and has multiple steps as shown in the process map below:

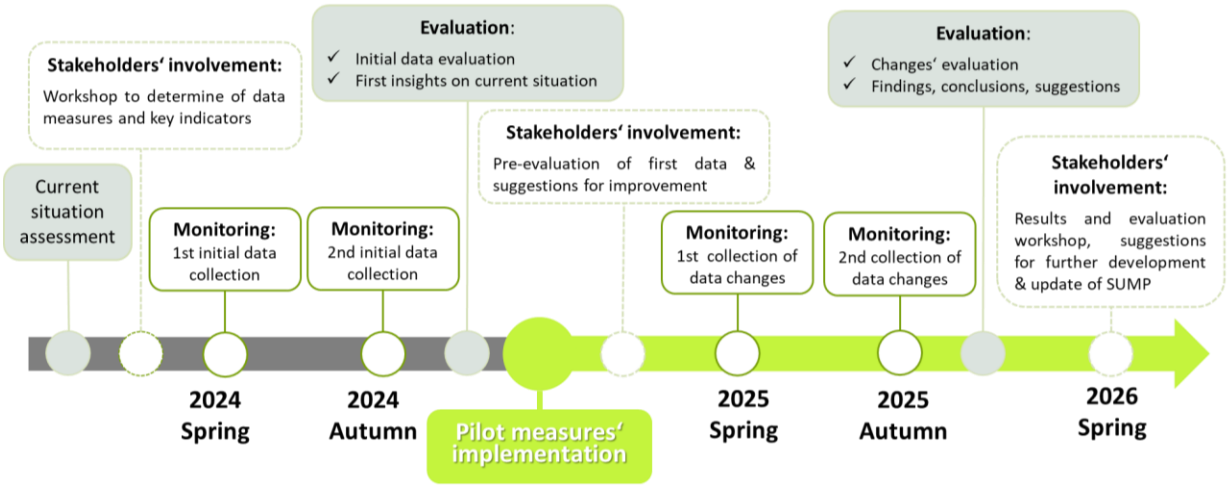


Figure 2. Rack pilot implementation in Panevėžys city municipality monitoring and evaluation process

As seen in the process map presented above, 4 data collection activities are planned – two before implementation, and two after. These activities consist of both primary and secondary data collection, however current situation assessment showed, that due to limited monitoring locations and delayed data publication time it will be impossible to use available secondary data (both on national and on local level) for implementation effect and impact evaluation. This data is planned to be included into the monitoring only to assess natural city dynamics.

Taking into account that planned interventions are small-scale and implemented in different parts of the city, they potentially won't work in a complex way and only **individual effect/impact will be monitored** and evaluated.

There are **four different data collection methods** selected for this monitoring:

- Available data collection from publicly available sources;
- Surveys;
- On-site observations;
- On-site instrumental research.

More detailed methodology on each of the methods (except on already available data collection) is provided next.

3.1 Indicators for data collection

Indicators for data collection are divided into three categories:

- **Result indicators:** Results of implementation of actions (amount of new infrastructure);
- **Effect indicators:** Outcomes of these results (changes in flows, modal split etc.);
- **Impact indicators**: Impact on other areas (changes in pollution levels, changes in population opinion, etc.).

Rack pilot implementation monitoring aims to:

- Assess changes in modal travel distribution;
- Assess changes in transit traffic flows;
- Evaluate the experience of the users, the level of satisfaction;
- Assess changes in the level of awareness of the users (population awareness of sustainable mobility, multimodal travel, etc.).

Based on these aims, professional expertise, good practice examples and stakeholders' input, collected during 1st stakeholders' workshop, following set of indicators is developed:

- **Result indicators:**
  - Bicycle racks, pcs.*
  - Scooter racks, pcs.*
  - Bicycle and scooter charging points, pcs.*
  - Bicycle repair stations, pcs.*

  **Draft list, it will be updated when procurement processes for rack pilot will be finished*

- **Effect indicators:**
  - Pedestrian flows, pers./h
  - Cyclist flows, pers./h
  - Scooter flows, pers./h
  - Car flows, veh./h
  - Modal distribution of trips to school, %
  - Occupancy of bicycle racks, %
  - Occupancy of scooter racks, %

- **Impact indicators:**
  - Noise level, Db
  - Travel time, min.
  - Perception:
    - ✓ Level of satisfaction with interventions, points
    - ✓ Level of feeling of safety in cycling/scooting to school, points

- ✓ Level of traffic safety for cycling/scootering to school, points
- ✓ Level of comfort (infrastructure aspect) for cycling/scooting to school, points

- Pollution level**
- Traffic accidents' rate**
- Infrastructure for active modes**
- Car ownership rate**
- Rank in Environmental ranking of municipalities**

***Data to assess city dynamics not related to pilot implementation*

3.2 On-site observations and research methodology

On-site observations and research activities will be done in 10 locations (see the scheme provided below) near each school where racks are planned to be installed. These interventions are closely related to education system functioning; this is why it is essential to implement research activities on ordinary school day.

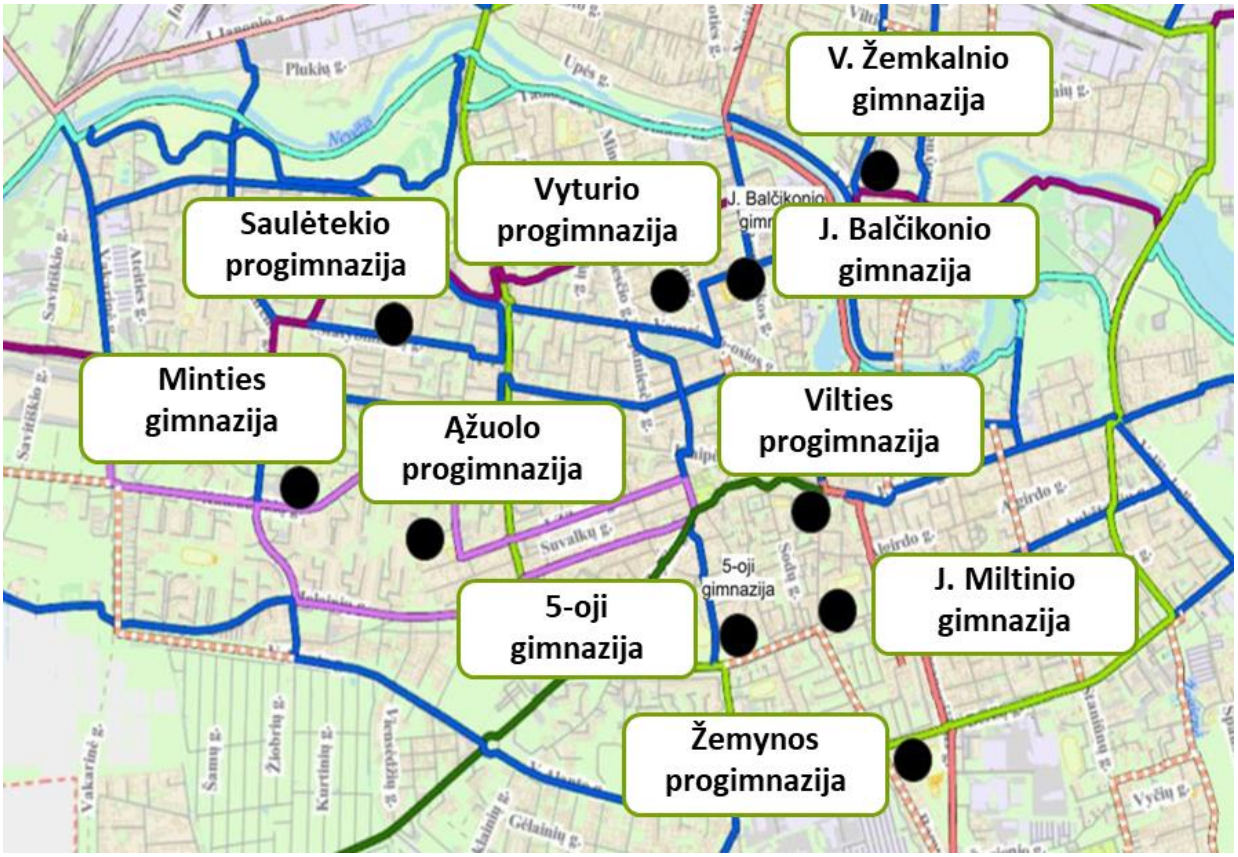


Figure 3. On-site research locations/data collection points

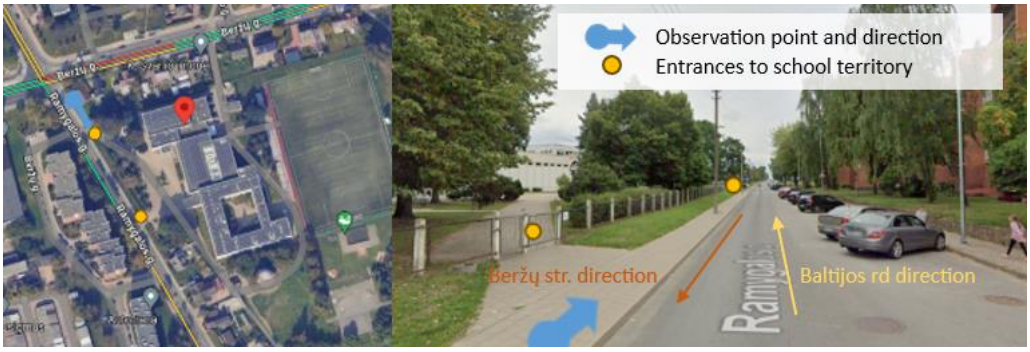
In the table below all the information on methods obtain following data during on-site observations and research activities is presented:

Data	Location	Timeframe	Duration	Other conditions
Flows	One point near each school	7:30 – 8:00 AM	10 minutes	✓ For each school the same time slot has to be used during further research activities ✓ Point for data collection for each school is selected individually with an aim to assess the indicative traffic flow for this location and particular school
Noise level	One point near each school	7:30 – 8:00 AM	1 minute	✓ Measurements will be done using NIOSH Sound Level Meter app ✓ For each school the same time slot has to be used during further research activities ✓ Point for data collection for each school is selected individually, near the entrance of the school ✓ Measurements have to be done when only usual background noise is present (no loud talking near, no construction works etc.)
Existing infrastructure	On school territory	-	-	✓ Condition of existing infrastructure has to be documented as well
Occupancy of existing infrastructure	On school territory	During 2 period or later	5 days	✓ Occupancy is observed for 5 working days to see the tendencies ✓ Bicycles and scooters parked not in racks are also counted

Observation sheets for each location/school are prepared in Lithuanian (please see Annex 1). Each sheet contains:

1. Name of the school and address
2. Place to fill in the observation data and time
3. Scheme with observation point location and named directions for easy fill

Example:



4. Table to fill in the observation results:
    - Flows in distinguished directions:
        - Cars
        - Buses
        - Motorcycles/mopeds
        - Bicycles
        - Scooters
        - Pedestrians
    - Noise level

Data collection on existing infrastructure and its occupancy is planned to outsource for school management. Following tables will be provided to schools to fill out:

No.	Date	Bicycles, pcs.	Scooters, pcs.
1			
2			
3			
4			
5			

3.3 Surveys' methodology

2 different surveys to assess mobility behaviour of a) students and b) school staff are planned to be distributed. Established sample – at least 10 % of students/staff from each of the participating schools. Established duration of the survey – 3 weeks.

Main aim of the surveys is to gather mobility behaviour data from different target groups, such as primary school children, students that can drive and etc. Sample size can be modified for 2nd data collection, if results are not sufficient.

Surveys will be prepared in google forms and the links provided to schools' administrations. Surveys for students are planned to be distributed through TAMO – online tool for communication with parents. In sufficient sample won't be reached in 1 week, surveys on paper sheets might be distributed in classes.

Questionnaire (for both students/their parents and staff):

1. How do you (your child) usually arrive at school?
    - ✓ *On foot*
    - ✓ *By bicycle*

- ✓ *By scooter*
- ✓ *By public transport*
- ✓ *By car*
- ✓ *Other (option to insert other answer)*

2. Please indicate how long your/your child's typical journey to school usually takes:
   - ✓ *Up to 5 min.*
   - ✓ *5 – 10 min.*
   - ✓ *10 – 15 min.*
   - ✓ *15 – 20 min.*
   - ✓ *20 – 25 min.*
   - ✓ *25 – 30 min.*
   - ✓ *More than 30 min.*
3. Please rate the level of feeling of security when walking or cycling/scooter to school?
   From 1 (very unsecure) to 5 (very secure)
4. Please rate the level of feeling of traffic safety when cycling/scooter to school?
   From 1 (very unsafe) to 5 (very safe)
5. Please rate the level of comfort (in terms of infrastructure) for cycling/scooting to school
   From 1 (very uncomfortable) to 5 (very comfortable)
6. How would you (your child) go to school under ideal conditions?
   - ✓ *On foot*
   - ✓ *By bicycle*
   - ✓ *By scooter*
   - ✓ *By public transport*
   - ✓ *By car*
   - ✓ *Other (option to insert other answer)*
7. What would encourage you (your child) to cycle/ scooter to school? *(Open question)*
8. Please rate the level of satisfaction with implemented measures *(question will be included after the pilot implementation)*

Questionnaire for students/their parents will have one additional question to indicate the class/grade the students is attending.

4 BASELINE FOR FURTHER EVALUATION

Following draft form for collected data is proposed:

School name										
Indicator	Unit	Data collection method	Monitoring before pilot implementation			Monitoring after pilot implementation				Overall change, %
			1st monitoring result	2nd monitoring result	Change, %	3rd monitoring result	Change, %	4th monitoring result	Change, %	
Result indicators										
Effect indicators										
Impact indicators										