



# PROSPERITY



## TRAINING TOPIC SUMMARY

### Monitoring and Evaluation of SUMP's and their measures

Responsible Author(s): Tom Rye | ENU

Responsible Co-Author: Nazan Kocak | ENU

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# 1 Introduction

**Training topic:** Monitoring and evaluation – Assessing the impact of measures and evaluating mobility planning processes

**Main trainers for topic area:** Prof Tom Rye and Dr Nazan Kocak, Edinburgh Napier University

Monitoring and evaluation (M&E) activities are used to provide information to planners and decision makers to identify problems, potential successes or need for readjustment of a SUMP and its measures. M&E is an essential part of a SUMP in order to keep track of the planning process and measure implementation to understand what works well and less well, and to build the business case and evidence base for the wider application of similar measures in the future.

The basis of the M&E process is collecting, monitoring and evaluating data about the progress of the SUMP and the effect of its measures before, during and after their implementation.

The aim of the training in PROSPERITY on M&E is to provide guidance on the process and best practice applications to plan and carry out M&E for those cities lacking the experience, funding and/or institutional co-operation to successfully carry out M&E activities. The purpose of this document is to summarise the content of the face to face training sessions on M&E so that someone unable to attend the training sessions is still able to learn about the topic from the project's specialist trainers on the subject.

## Learning Objectives

- 1) Understanding the importance of monitoring, evaluation and appraisal
- 2) Familiarising with objectives and targets that are commonly used in SUMP
- 3) Gaining knowledge and understanding in setting targets and ways to measuring them
- 4) Understanding challenges faced in M&E and being able to overcome them

## 2 A basic definition of monitoring and evaluation (M&E)

### 2.1 Monitoring

Monitoring is an assessment of what has happened to a measure planned in a SUMP or to an outcome resulting from a SUMP – for example, if it was planned to build 10 km of bike path, whether they were actually built; or if the aim was to increase bus passenger numbers by 10% in the first year of a SUMP, whether this occurred. By measuring the situation before measure implementation and after, it is possible to monitor such factors.

### 2.2 Evaluation

Evaluation investigates the reasons **why** a change observed by means of monitoring actually occurred. Consequently it is more complex than monitoring. For example, bus passenger numbers may indeed increase by 10% but understanding why they did so is more difficult – for example, it could be because the buses have been improved as part of the SUMP, but it could also be because the economy went into recession and fewer people were able to afford to

travel by car. If measures that were planned to be implemented as part of the SUMP were not implemented, it is very important to understand why, but it may be difficult to do so because those responsible for implementation may not want to explain the situation.

## 2.3 Appraisal

Appraisal is related to monitoring and evaluation but it looks at a measure before it is implemented and tries to predict what the measure will achieve and therefore whether it is worth doing (it is sometimes called *ex ante* evaluation). This is a very complex area that often relies on expensive and time-consuming transport models and a method called cost-benefit analysis. Whilst these methods are very scientific in their way, they are by no means perfect and in particular will always make measures that make people travel more slowly look rather bad (so, traffic calming for example); and they are not always very good at predicting effects where a lot of new transport infrastructure is provided, or where transport capacity is taken away (e.g. where a road is closed). Such appraisal is important for very large investments, like a big new road or a new tram, but for smaller investments that can be done in small pieces, it may be easier and give a truer picture of the measure's impacts to experimentally implement it (traffic calm one street) and monitor and evaluate the actual effects.

## 2.4 Benefits of monitoring and evaluation

Monitoring and evaluation if properly carried out helps:

- Improved project management and tracking achievement of objectives – whether what is planned is actually implemented.
- To develop greater knowledge of cause and effect relationships (for example, whether making buses faster gets people to change from car to bus).
- Data to better guide future decisions and investments.
- Learning in general.

# 3 Basic requirements for M&E in SUMP

## 3.1 Don't try to gather too much data and don't let concerns about a lack of data hold up the rest of the SUMP

A key point about monitoring and evaluation in SUMP, especially if it is the first SUMP in your city, is that it does not have to be too detailed. You should not be too concerned about obtaining absolutely perfect data nor about having a very large number of indicators and targets (real examples later on in this paper and in the presentation show how many targets and indicators other cities have used). Even if you/your city has only 10 indicators and 5 targets in its first SUMP, this is almost certainly going to be more monitoring and evaluation than your city has ever done before (if it is your first SUMP) and therefore you will understand more about what your transport policy is achieving, and why, than you ever have done before.

There is a danger that the development of the SUMP is slowed down by a very long data gathering stage during which nothing else is done. This is not necessary. Experience from France and Britain, where SUMP have been obligatory at various points in time, shows that

the whole process (not just data gathering) does not have to last longer than a year. Thus it is important that data gathering for monitoring and evaluation is done quickly, is a limited exercise, and is done alongside other aspects of the SUMP rather than before them. For example, problem identification and objective setting can be done at the same time or even before monitoring data is completely gathered. To illustrate this point, think about the key areas of motor vehicle congestion in your city: you will know where these are without doing large numbers of traffic counts. The traffic counts will serve only to show how many vehicles are contributing to the congestion.

### 3.2 Relationship to SUMP objectives

Monitoring and evaluation must measure performance against the objectives of the SUMP. So, for example, in the (likely) event that the SUMP includes an objective to improve local air quality, it is crucial that in some way the SUMP M&E framework measures air quality. (To do this requires some air quality monitoring equipment preferably capable of measuring concentrations of particulates and Nitrous Oxides. If your city has no such monitoring equipment at the moment, then one portable monitoring station will be enough. If you have at least one existing monitoring station, use this for your first SUMP.) The monitoring and evaluation indicator here should be the concentrations of these pollutants.

**Targets** might be considered for some – **but not all** - indicators. This means a change in the indicator that your SUMP aims to achieve. The most likely target for local air quality is to meet the EU standards for nitrous oxides and particulates since these are legally binding. Having a target like this one can be useful to show what the SUMP has achieved (if the target is met) and to focus effort on meeting the target. On the other hand, it is risky, since it may not be met even if every measure in the SUMP is implemented. Such a target is called an **outcome target** since it relates to the ultimate change that the SUMP is trying to bring about. An alternative in some cases could be an **output target** which refers to what the SUMP will implement. An example of such a target for air quality would be: to make our local bus fleet 100% CNG (compressed natural gas) by 2020. This is less risky since it is in most cases something over which the public authorities have direct control.

The powerpoint slides from the training event show a number of possible targets that could be set in relation to a number of possible objectives, and how the data for the indicators and targets could be gathered. The emphasis in these examples is on simple ways to measure performance. These slides are worth reading through and then you could consider in relation to the objectives of your own SUMP some possible targets and how you would gather the data for them.

### 3.3 Process evaluation

It is important to spend some time within the City authority and with other organisations responsible for implementing SUMP measures (e.g. bus companies) to consider how well the implementation of measures went, what was learned, how users reacted, and how the measures and their implementation could be improved in future.

## 4 Two major problems in M&E

### 4.1 “We don’t know what measures will achieve”

It can be difficult to know how to set targets if you don’t know what measures will achieve. Possible ways around this are outlined in the presentation. Output targets can be useful as they are less risky and so easier to predict that they will be implemented. Setting a target that relates to your ambitions, rather than to what you know you can achieve, can sometimes get people to make more effort and put in more resources than they would if there were not such an ambitious target (this was the case for road safety targets in Britain in the late 1990s and 2000s, for example). Using a model can be helpful sometimes although be very cautious about what the model can really predict, if you are planning to make major changes to your city’s transport system. There is a SUMP Roadmap tool developed for the European Commission and available via the PROSPERITY website (and via separate PROSPERITY training event material) that can help you to get an idea of what your measures together are likely to achieve in terms of certain indicators, and you can then set targets in relation to these probable achievements. Finally, looking at what measures have achieved elsewhere can be useful.

### 4.2 Problem 2 – “we have no data”

There is often a fear in cities that have not done a SUMP before that they need a lot of data to inform the process. This is not the case. For example in England in 1999 all municipalities were required to develop a SUMP, in less than a year. Most of these municipalities had no recent transport model, nor did they have household travel survey data, and the most recent census was from 1991. Nonetheless, they developed SUMPs that had an effect on travel behaviour. For monitoring and evaluation they relied on simple methods such as:

- Small sample sizes in surveys.
- Roadside counts once or twice a year around city centre for mode share.
- Queue counts once or twice a year at key junctions for congestion.

It is useful to look at the presentation slides that show the monitoring and evaluation approach used in Ljutomer (Slovenia) and Nottingham (England) to show how simple approaches can work.

## 5 Conclusion

We hope that this set of notes and the presentation are useful and help you to learn something about M&E that you can apply in your own city’s SUMP. Sources of more detailed information are in the table below. If you have questions, please address them to Tom Rye [t.rye@napier.ac.uk](mailto:t.rye@napier.ac.uk) or Nazan Kocak [n.kocak@napier.ac.uk](mailto:n.kocak@napier.ac.uk) (note that the PROSPERITY project ends in August 2019 and so after that date we cannot guarantee to answer although we will do our best).

## 6 Available training materials

There is already a very large amount of training material available from earlier EU projects on monitoring and evaluation. This is summarised, with sources, below.

Source	Content & Description
EU ELTIS Guidelines	<p>Official EU Guidelines 'Developing and Implementing a Sustainable Urban Mobility Plan'. Explains the whole SUMP process, including M&amp;E and includes best practice examples</p> <p><a href="http://www.eltis.org/guidelines/sump-guidelines">http://www.eltis.org/guidelines/sump-guidelines</a>)</p>
EU Ch4llenge Manual on M&E	<p>User Manual</p> <p>Monitoring and evaluation: Assessing the impact of measures and evaluating mobility planning processes (51 pages, 2016)</p> <p><a href="http://www.eltis.org/sites/eltis/files/sump-manual_monitoring-evaluation_en.pdf">http://www.eltis.org/sites/eltis/files/sump-manual_monitoring-evaluation_en.pdf</a></p>
EU Ch4llenge Online Course "Monitoring and evaluation in sustainable urban mobility planning"	<p>Full online learning material. Originally offered as a moderated course as part of the EU CH4LLENGE project. Based on the manual above, includes 6 units and several modules</p> <ul style="list-style-type: none"> <li>▪ Unit 1: Introduction</li> <li>▪ Unit 2: Background and context</li> <li>▪ Unit 3: Designing the monitoring and evaluation process</li> <li>▪ Unit 4: Choosing suitable indicators and data for monitoring and evaluation</li> <li>▪ Unit 5: Presentation and evaluation of results</li> <li>▪ Unit 6: Conclusion</li> </ul> <p><a href="https://www.mobility-academy.eu/course/view.php?id=56">https://www.mobility-academy.eu/course/view.php?id=56</a></p>
CHALLENGE Monitoring and Evaluation training material from Dresden workshop	<p>Several presentations about specific cases in France, Germany and UK as well as general presentations on indicator development and relating targets and indicators to objectives</p> <p><a href="http://www.epomm.eu">www.epomm.eu</a></p>
Euromed Training on SUMP Ljubljana 2013	<p>Session on monitoring and evaluation, including setting targets in relation to objectives. Includes structured interactive exercise on selecting targets, indicators and relating these to objectives, as well as gathering data for indicators; plus actual examples from real SUMP as to how municipalities have done this in practise</p> <p><a href="http://www.euromedtransport.org/En/training-on-sustainable-urban-mobility-plans-sump_15_234_9_59#?">http://www.euromedtransport.org/En/training-on-sustainable-urban-mobility-plans-sump_15_234_9_59#?</a></p>