TRAINING

Monitoring and Evaluation in SUMP's

Prof Tom Rye | Edinburgh Napier University
Introduction to Training

• Who’s who?
• What are the participants’ expectations of this training?
• What is the goal of this training and what do we want to achieve?
• What will be done in this training?
Session Structure

- Basic definition of monitoring and evaluation (M&E)
- Where it fits in to SUMP process
- Why have targets in SUMP?
- Different types of targets
- Setting targets
- Measuring targets
- Examples
Part 1

• Basic definition of monitoring and evaluation (M&E)
• Where it fits in to SUMP process
Why monitor, evaluate and appraise?

- Monitoring - what happened
- Evaluation – why it happened
- Appraisal – what will happen, is it worth doing
- Benefits of monitoring and evaluation:
  - Improved project management and tracking achievement of objectives
  - Helps us learn
  - More knowledge of cause and effect relationships
  - Data to better guide future decisions and investments

SUMP Monitoring and Evaluation process

Image source: City of Dresden, CH4LLENGE
For learning material on all aspects of SUMP see:

Eltis

The SUMP concept
Guides and learning materials

SOLUTIONS webinar: Sustainable Urban Mobility Plans (64 mins long)
At this point we view a general video about SUMP to see where M&E fits in.

Sustainable urban mobility plans M&E
https://www.youtube.com/watch?v=1jLvvoT2_B0
EU Eltis Urban Mobility Observatory

Monitoring and evaluation as key components of Ghent's SUMP (Belgium) 1:23 mins long

Source: https://www.youtube.com/watch?v=UAXUA8VdbBk
Other available EU resources on M&E

• EU CH4LLENGE project - http://www.sump-challenges.eu/kits

Online Course "Monitoring and evaluation in sustainable urban mobility planning"

Available in nine languages*: Croatian, Czech, Dutch, English, French, German, Hungarian, Polish and Romanian
Things we might monitor, evaluate and appraise

Monitoring: what

- Changes in awareness, attitudes, perceptions, behaviour, or whether something happens/exists as result of SUMP (measure)

Evaluation: why/how

- Why did no-one use our measure (thing we did/built)?
- How (well) did we implement the new measures? Could we have done so better?
- Why do many more people use this measure than we predicted?

Appraisal: what if

- How many people will use the new station? What benefits do we expect it to deliver – and so is it worth building?
Basic requirements for M&E in SUMPs

• Must relate to objectives
  – E.g. Improve local air quality
• Must include indicators
  – Quantified change in local air quality
• Should relate to target(s) for some objectives
  – Output: Make our local bus fleet 100% CNG by 2015
  – Outcome: Meet EU target for local air quality in existing hotspots by 2015
  – Note though – not all objectives will necessarily have targets

• Should cover process
  – How did we work to achieve this objective? What went well? What didn’t? How could we do better in future?
Exercise 1 on monitoring, evaluation and appraisal
(30 mins plus reporting)
Exercise 1 - Instructions

Group exercise (3-4 people in a group)

1. Monitoring: think of 2 measures you might implement in a SUMP. What might you want to monitor in terms of changes in awareness, attitudes, perceptions, behaviour related to that measure. How would you gather the data?

2. Evaluation: think of 2 different measures. How would you find out (what data would you gather and how):
   - Why no-one used the measure?
   - How (well) you implemented the new measures and whether you could have done so better?
   - Why more people use the measure than we predicted?

3. Appraisal: think of one further measure that you haven’t yet implemented. What benefits do you expect it to deliver? Is this enough to make it worth implementing?

4. Finally – in your own SUMP or transport planning at your City – what do you monitor and evaluate at the moment? Why did you choose these things?
Part 2

• Why have targets in SUMP-s?
• Different types of targets
• Setting targets
• Measuring targets
Why have targets?

• Objectives – what the SUMP should achieve
• Typical objective: SUMP should reduce local air pollution
• How do we judge whether objective achieved? Set a target

Set targets to:
• Satisfy legal requirements e.g. EU targets for local air pollution - by 2015 keep annual average PM2.5 concentrations <= 25 µg/m3
• Get different bodies to work together e.g. Vision Zero for road safety
• Something to aspire to e.g. 10% trips by bike in Scotland by 2020
• Because it’s what we can achieve (pragmatic target)
Two key types of targets

Output targets

• E.g. by 2019, we will have installed 30km of bike lane
• We will have traffic calmed 50 km of streets

Outcome targets

• By 2019 cycle mode share will have doubled
• By 2019 we will have reduced numbers of people killed and seriously injured on our roads by 40% compared to 2010
Exercise 2 on your own monitoring, evaluation and appraisal
(25 mins including reporting)
Exercise 2 - Instructions

Group exercise (3-4 people in a group)

1. In your own SUMP or transport planning at your City – what do you monitor and evaluate at the moment? How did you decide on these?

2. What data are you required to gather by national government or EU? How do you gather it, how do you report it?

3. If you have consultants working on your SUMP – what M&E data are they gathering? Will that work carry on after they finish?
Some typical SUMP objectives and possible targets – *with comments*
Objective: Improve accessibility for disabled people

Output
• 100% of signalled pedestrian crossings to be fully accessible to disabled people by 2019

Comment
• Set target related to budget
• Measure existing situation!

Outcome
• Increase percentage of disabled people who perceive accessibility to be improving by 3%/year

Comment
• Use small (100 person) survey to measure existing and every year
Objective – improve city centre economy

Output
• 100% of city-controlled parking in city centre priced to encourage short-stay (shoppers)
• 2 new park and ride sites implemented within 4 years

Outcome
• % of citizens satisfied with street quality increases by 3%/year
• % of empty shops in city centre falls by 5% per year
Objective – improve quality of life

Output
• Pedestrianise 4 key city centre streets within 4 years
• 50% of city streets – 30kph zones within 4 years
• Parking target also relevant

Outcome
• % of citizens satisfied with street quality increases by 3%/year

Comment
• Base on small (200 person) annual survey
Problem 1 – “we don’t know what measures achieve”

How can you set targets if you don’t know what measures will achieve?

1. Set output targets
2. Consider your ambitions!
3. Look at experience of measures implemented elsewhere
   - www.eltis.org
   - www.leeds.ac.uk/konsult
4. Use Roadmap tool
5. Build a model (good for some measures)
6. Bear in mind – measures together achieve less than sum of individual measures
Problem 2 – “we have no data”

1. Set simple targets
2. Have few targets
3. Mix of output and outcome targets
4. Use simple data gathering - examples:
   - 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
Exercise 3 Belgrade SUMP
(30 mins including reporting)
Exercise 3 – Belgrade SUMP objectives

Overall Objectives SUTP Belgrade

- Decoupling economic growth and the demand management with the aim of reducing environmental impacts
- Halving road transport deaths by 2015 compared to 2000
- Achieving sustainable levels of transport energy use and reducing transport greenhouse gas emissions
- Reducing transport noise both at source and through mitigation measures to ensure overall exposure levels minimise impacts on health
- Reducing pollutants emissions from transport to levels that minimise effects on human health and/or environment
- Achieving a balanced shift towards environment friendly transport modes to bring about a sustainable transport and mobility system

Source: TIS.pt, 2012
Exercise 3 - Instructions

1. Each group of five people takes one objective from the Belgrade SUMP objectives
2. Develop one output and one outcome target for your objective, but without specifying a baseline or an absolute outcome target, but rather a %/year progress towards the objective
3. Discuss how you could work out whether these targets were realistic. Decide on two indicators for measuring the progress of each of your targets, and how you would gather that data, assuming that at present no such data are gathered.
4. Strike a balance between minimising data collection costs and reliability of the data.
5. If you have a SUMP in your city – what targets do you have and how did you decide on them?
Break
Part 3

- Experience of indicators and targets in real life SUMP
Edinburgh SUMP

LTS (SUMP) aims to:

- Support a sustainable and growing local and regional economy;
- Improve safety for all road and transport users;
- Reduce the environmental impacts of travel;
- Promote better health and fitness; and
- Reduce social exclusion
## Edinburgh SUMP Targets

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support a sustainable and growing local and regional economy</td>
<td>No target</td>
<td>Congestion Traffic volumes Connectivity by rail and air to other cities</td>
</tr>
<tr>
<td>Improve safety for all road and transport users</td>
<td>40-50% reduction in all casualties, ped, cycling and walking casualties by 2010 on 1994-98 average</td>
<td>Perceptions of security on public transport Number of killed and seriously injured people on the roads</td>
</tr>
<tr>
<td>Reduce the environmental impacts of travel</td>
<td>Meet EU standard for NOX and PM10 by 2010</td>
<td>Improved bus and taxi emissions standards</td>
</tr>
<tr>
<td>Promote better health and fitness</td>
<td>Mode share target for walking and cycling</td>
<td>% of trips by different modes for different trip purposes</td>
</tr>
<tr>
<td>Reduce social exclusion</td>
<td>No target</td>
<td>Increased public transport accessibility to major services and employment centres Increase use of specialised transport services Increase availability of low floor buses and stops they can use</td>
</tr>
</tbody>
</table>
### How Edinburgh gathers that data

<table>
<thead>
<tr>
<th>Indicator</th>
<th>How it is measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Congestion</td>
<td>1. Traffic counters measure queues at key junctions</td>
</tr>
<tr>
<td>2. Traffic volumes</td>
<td>2. Traffic counters</td>
</tr>
<tr>
<td>3. Connectivity by rail and air to other cities</td>
<td>3. Journey times and services to key cities</td>
</tr>
<tr>
<td>5. Improved bus and taxi emissions standards</td>
<td>5. Bus company data; taxi-licencing data</td>
</tr>
<tr>
<td>6. Increased public transport accessibility to major services and employment centres</td>
<td>6. Bus frequencies at key locations</td>
</tr>
<tr>
<td>7. Increase use of special transport services</td>
<td>7. Public service records of passengers carried</td>
</tr>
<tr>
<td>8. Increase availability of low floor buses and stops they can use</td>
<td>8. City’s own records on bus stops improved. Bus company fleet data.</td>
</tr>
<tr>
<td>9. % of trips by different modes for different purposes</td>
<td>9. National household survey, sample boosted for city</td>
</tr>
</tbody>
</table>

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**CiViTAS**

Cleaner and better transport in cities

**P R O S P E R I T Y**

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**THE CiViTAS INITIATIVE IS CO-FINANCED BY THE EUROPEAN UNION**
Real targets - Ljutomer, Slovenia

- Outmigration reduces to zero by 2020
- Balanced modal split by 2020 (on estimated baseline)
- Zero deaths and half injured by 2020 compared to 2010...
- 10% trips by public transport 2020
- Double cycling to work to 20% by 2020
The EU Sustainable Urban Mobility campaign Do the Right Mix awards for ‘monitoring and implementation to improve SUMP’s’ in 2014

**Bremen (Germany) - winner!**
Bremen was the winner due to early provision of tools for monitoring and evaluation, strong stakeholder involvement during evaluation, as well as cooperation with peer cities and international cooperation.

**Dresden (Germany)**
Dresden is another leader due to its high quality systematic framework for monitoring and evaluating its SUMP; careful selection of indicators and provision of tools used. It considered assessment of SUMP measures and the planning process itself. All SUMP planning bodies and partners are being consulted and provided feedback during the process.

**Gent (Belgium)**
Gent has a reputable SUMP practice over the last 30 years. Its monitoring and evaluation process was informed by its outstanding collection of data. Monitoring and evaluation results were fed back into the planning process to adjust measures.
### Gdynia, Poland, first SUMP – 25% of its indicators shown here – too many?

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Unit of measurement</th>
<th>Description</th>
<th>Category</th>
<th>Initial value (2015)</th>
<th>Target value (2018)</th>
<th>Measurement method / data source</th>
<th>Relation to a specific objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual motorisation rate in Gdynia</td>
<td>pas. cars/1,000 people</td>
<td>Number of passenger cars/1,000 inhabitants</td>
<td>STRATEGIC</td>
<td>542 (2015)</td>
<td>550</td>
<td>City Hall</td>
<td>scenarios, Objective 1, 2 and 3.</td>
</tr>
<tr>
<td>Transport mobility of Gdynia’s inhabitants</td>
<td>number of trips per business day</td>
<td>Average number of trips per inhabitant per business day, excluding trips on foot</td>
<td>STRATEGIC</td>
<td>1.65</td>
<td>stable or slightly increased</td>
<td>ZKM Gdynia</td>
<td>scenarios, Objective 1, 2 and 3.</td>
</tr>
<tr>
<td>Accidents with pedestrians</td>
<td>case</td>
<td>Number of pedestrians injured in accident</td>
<td>key</td>
<td>53</td>
<td>decreased</td>
<td>the Police</td>
<td>1.1.</td>
</tr>
<tr>
<td>Share of pedestrian traffic in trip distribution</td>
<td>%</td>
<td>Number of pedestrian trips at the distance of more than 500 m/ total non-pedestrian trips on the day before the survey</td>
<td>key</td>
<td>10.9%</td>
<td>increased</td>
<td>ZKM Gdynia</td>
<td>1.1.</td>
</tr>
<tr>
<td>Share of the bicycle traffic in trip distribution</td>
<td>%</td>
<td>Number of bicycle trips on the day before the survey/total non-pedestrian trips on the day before the survey</td>
<td>key</td>
<td>1.8%</td>
<td>3%</td>
<td>ZKM Gdynia</td>
<td>1.3</td>
</tr>
<tr>
<td>Cycling system density</td>
<td>km/ km²</td>
<td>Length of the cycling system related to the surface of Gdynia</td>
<td>auxiliary</td>
<td>0.42</td>
<td>increased</td>
<td>ZDiZ report</td>
<td>1.3</td>
</tr>
<tr>
<td>Middle school students obesity rate</td>
<td>%</td>
<td>Percentage of overweight or obese middle school students</td>
<td>auxiliary</td>
<td>[data only for middle schools]</td>
<td>decreased</td>
<td>the Health Department</td>
<td>1.1., 1.3</td>
</tr>
<tr>
<td>Traffic calming</td>
<td>%</td>
<td>Length of roads in 30 km/h zones/ total length of roads in Gdynia</td>
<td>key</td>
<td>15.4%</td>
<td>20%</td>
<td>ZDiZ report</td>
<td>1.3., 1.4</td>
</tr>
<tr>
<td>Improved road traffic safety near education facilities</td>
<td>case</td>
<td>Number of schools and preschools near D and L-rated roads with limited speed zones</td>
<td>key</td>
<td>19</td>
<td>24</td>
<td>ZDiZ report</td>
<td>1.4</td>
</tr>
<tr>
<td>Management of parking in the city centre</td>
<td>case</td>
<td>Number of parking places in Śródmieście and Kamienna Góra</td>
<td>auxiliary</td>
<td>5966</td>
<td>maintained or slightly reduced</td>
<td>ZDiZ report</td>
<td>1.4</td>
</tr>
</tbody>
</table>
Targets in SUMP Ljubljana – very tough – aspirational?

2011*

2015

2020
## Real targets – Nottingham UK 2006-11 SUMP

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target</th>
<th>Measured by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut congestion</td>
<td>At least 5 bus routes in city to reduce journey times by 5 mins each by 2011 (2004 base)</td>
<td>Bus timetables</td>
</tr>
<tr>
<td>Improve accessibility</td>
<td>7 bus routes fully accessible by 2011 (2005 base)</td>
<td>Survey of buses and stops on routes</td>
</tr>
<tr>
<td>Local economy</td>
<td>85% of new housing built on re-used land by 2011 (2004 base)</td>
<td>Monitoring planning system</td>
</tr>
<tr>
<td>Quality of life</td>
<td>67% of people using bus at night feel safe with whole journey, by 2011 (2004 base)</td>
<td>Annual survey of 600 bus passengers</td>
</tr>
</tbody>
</table>
Reviewing achievements: York

Achievements 2001-2006:

- Bus patronage growth of 45%
- Peak-hour urban traffic lower than 1999 levels
- A high quality Park & Ride service
- A 10% increase in non-car modes for trips to the city centre at peak times
- Over 20% reduction in road accidents

Communicating progress to public

SOCIO-ECONOMICS

**DKK 1.22**
Gain to society per extra km travelled by bicycle in Copenhagen

**DKK 1.13**
Cost to society per extra km travelled by car in Copenhagen

HEALTH BENEFITS OF CYCLING

**30%**
Reduction of mortality for adults who cycle to and from work every day

**1.7 BILLION**
Value of health benefits from cycling in Copenhagen (DKK)

**FIVE TIMES MORE BICYCLES THAN CARS**
2012 Copenhageners owned approximately 650,000 bicycles and 125,000 cars, corresponding to 5.2 bicycles for each car

**4 OUT OF 5**
All of Copenhagen have access to a bicycle

Primary mode of transport for trips to work or education in the City of Copenhagen, 1996-2012

Excerpts from the Copenhagen Green Accounts 2012 report.
Image source: City of Copenhagen
Part 4
Challenges in M&E in SUMPs
Challenges in M&E for SUMP:

• Convincing people that it’s worth doing
• Resources – people and money – to do it
• Having too many indicators & targets
• Right balance between output and outcome targets
• Data availability
• Rigour of data collection
• Process evaluation – how to do it?
• The more we do it, the more work it causes us
Exercise 4 on M&E Challenges

(20 mins plus reporting)
Exercise 4 - Instructions

Considering what you have learned today work through these challenges in groups for 20 mins and decide how you would resolve them. Report back for 3 mins/group.

- Convincing people that it’s worth doing
- Resources – people and money – to do it
- Having too many indicators & targets
- Right balance between output and outcome targets
- Data availability
- Rigour of data collection
- Process evaluation – how to do it?
- The more we do it, the more work it causes us
Part 5
Wrap Up, Conclusions, Feedback
Conclusions

✓ Don’t get too stressed by monitoring and evaluation
✓ Keep it simple especially for first SUMP
✓ Important to have some targets BUT
  • Don’t try to have too many
  • Don’t worry if they are not based on absolutely robust data
✓ Data gathering - not as complicated as you might think
Feedback

• Did the training meet your expectations?

• What inspired you most?

• Will the knowledge gained help you in your M&E activities?
REFERENCES
Projects | Initiatives | Handbooks
There are plenty of resources available

European Platform on SUMP | www.eltis.org/mobility-plans
CIVITAS PROSPERITY | www.sump-network.eu
CIVITAS SUITS | www.suits-project.eu
CIVITAS SUMP's-Up | www.sumps-up.eu
ADVANCE | eu-advance.eu
CH4LLENGE | sump-challenges.eu
ENDURANCE | epomm.eu/endurance
EVIDENCE | evidence-project.eu
Poly-SUMP | poly-sump.eu
Urban Transport Roadmaps | urban-transport-roadmaps.eu
CIVITAS e-course on public involvement | www.civitas.eu
CIVITAS PROSPERITY is a member of the European Platform on Sustainable Urban Mobility Plans and produces a number of technical reports and other strategies to provide insights on SUMP s.

Find out more at eltis.org/mobility-plans and www.sump-network.eu

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