Urban Nodes
Impact Assessment Tool

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Session E2: Tools for data gathering, appraisal and simulation: SUMPs-Up presents highlights from the CIVITAS Tool Inventory

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Aim and Purpose of the methodology

- The tool was developed for the study “How to improve the efficiency of the transport system in urban nodes” on behalf of DG MOVE (2016)
- The aim of the project was to identify cost-efficient and benificial measures in urban nodes of the TEN-T core network, which improve connectivity and remove bottlenecks
- The tool should assess infrastructure measures/projects as well as policies against high level objectives
  - Cost-efficiency
  - Impact on the transport system (accessibility, safety)
  - Impact on quality of life, environment
- The tool was tested by stakeholders of four urban nodes in 2016

Key features of the tool

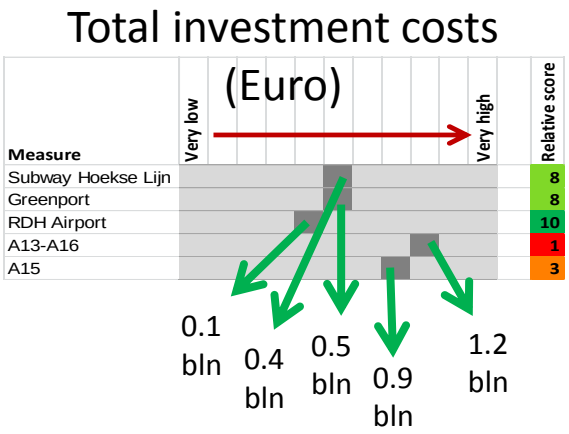
- The tool takes into account
  - the huge variety of perspectives and interests of stakeholders
  - the variety of measures, from hard core infrastructure to smaller measures
  - existence of different – sometimes conflicting – policy objectives (accessibility, safety, environment, quality, interaction)
  - different budgets
  - stakeholders wish for as much simplicity as can be attained without sacrificing quality
  - integration need of objectives
  - Ranking of cost-effective measures and policy packages according to their contribution to high-level objectives

Definitions of high-level objectives

- **Accessibility** – refers to the ease of reaching destinations expressed in travel time, travel costs and/or travel distances for different modes
- **Environment** – the way the urban environment is influenced by air pollution (e.g. CO_2) and/or noise;
- **Safety** – concerns material damage, injured and fatalities;
- **Quality** – this is where the soft factors enter the analysis. This concerns measures such as image, comfort, social cohesion, etc.
- **Interaction** – the way in which a transport policy measure relates to other measures. Does it strengthen or weaken another measure.

9 steps to get a list of ranked policies and measures

1. Determine the interaction between measures in the package;
2. Determine benefits and costs of measures;
3. Determine the other quantifiable measures;
4. Determine qualitative effects;
5. Match scores per measure ;
6. Decide on weights of effects/objectives;
7. Perform MCA;
8. Perform sensitivity analysis;
9. Discuss & optimize packages;



Measure	Subway Hoekse Lijn	Greenport	RDH Airport	A13-A16	A15	Totale score		Relative score
Subway Hoekse Lijn		0	1	0	0	1		3
Greenport	0		0	0	0	0		8
RDH Airport	0	1		1	0	2		10
A13-A16 motorway	0	1	1		0	2		10
A15 connection	0	1	0	1		2		6
Totale score	0	3	2	2	0	7		

Aspect	Weight
Costs	22.0
Accessibility	30.3
Environment	13.7
Safety	13.4
Quality	15.8
Interaction	4.8
Total	**100.0**

Measure	Costs	Accessibility	Environment	Safety	Quality	Interaction		Total score
Subway Hoekse Lijn	8	8	10	10	8	2		46
Greenport	8	6	6	10	8	4		42
RDH Airport	10	1	5	1	10	5		32
A13-A16	1	10	1	1	1	5		19
A15	3	8	2	10	5	3		31

Lessons learned

- The method incorporates a stakeholder dialogue
- Comparing infrastructure options is possible
- Input data are not always available or available in required formats
- Electronic discussion tools helps to structure the discussion and can lead to an agreement which policy package suits the stakeholders best
- Explanation of method and measures beforehand is needed
- Result is prioritization, not judgment! Measures are not bad in itself when they rank low. But compared to others they score less well.
- Stakeholders need to be chosen from a wide audience
- Outcome of the method is robust, not sensitive to different weights

Rotterdam Stakeholder Workshop | Photo: Böhler 2016

Thank you for your attention!

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The Urban Nodes Assessment Tool is available on http://civitas.eu/tool-inventory/