

Verkehrswissenschaften, Institut für Verkehrsplanung und Straßenverkehr, Lehrstuhl für Verkehrsökologie

2nd Czech-Slovak Conference Brno, May19th, 2016 What does the newest research bring for the development of Sustainable Mobility in Urban areas?

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Sustainable transport development in urban areas: WHAT should cities do and HOW should they do it?

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Situation

- 1. Transport is important for the population and the economy
- 2. Transport does create costs and problems: roads, cars, fuels, congestion, noise, pollution, accidents, climate change ...
- 3. What should we do? More, faster, private? Less, slower, public?
- 4. "You cannot build your way out of congestion and pollution"
- 5. In transport, there are always dynamic reactions and feedbacks
- 6. Just a small example



TU Dresden, transport ecology



TU Dresden, transport ecology

History: Phase II

Los Angeles 1930, Dresden and Praha and Brno and Bratislava 2000 +





TU Dresden, transport ecology

History: Phase II





TU Dresden, transport ecology



TU Dresden, transport ecology

History: Dynamic responses





Agenda I, "more is better": To a point!

First: In the beginning more roads and more traffic mean: More development, more money, more happiness

The city with the most highways, most cars, most traffic is the best!

But: The number of needs covered (trips) stays about constant But we have more engines, longer distances, more energy Benefits for the fast/rich, costs (exclusion) for the slow/poor

More pollution, more noise, more accidents, more damage

The city with the most noise, pollution, accidents, CO2 is the best?

No! Growing marginal costs means sinking marginal benefits!

More is better? The optimal point!



What is the objective of all movement?



Result: Separate between access and traffic

mobility/access: need, cause, reason, purpose (*"*end")

traffic: instrument to allow for access ("means")

What would you like to have in your city? Pick a wish:

 Guarantee needs satisfaction for all: Access (mobility)
... with less resources, les money, less time, less pollution, less accidents, less climate change, less area comsumption, less noise, less waste ... less traffic!

satisfying access needs with less traffic

Today: Sustainable Development SD

Sustainable development is development

- that meets the needs of the present generation
- while allowing future generations to meet their own needs

In Transport:

- ... mobility needs of the present (population): access
- ... with less money, fewer resources, less waste, less pollution, less separation, fewer climate change ...

satisfying access needs with less traffic

Now: What does newest research tell us?

Step By Step

Within ERA-Net Project Stepping Stones

<u>What makes</u> <u>urban transport</u> <u>planning and policy</u> <u>less un-sustainable</u>



IBDiM: Road and Bridge Research Institute (Poland)



NL, SE, PL, UK, DE

http://transport-era.net/



Welcome to Era-net Transport

What is ENT

Era-net Transport (ENT) has evolved since 2004 into a service platform for Programme Owners and Managers, providing the required framework for initiating and implementing transnational research and innovation funding collaborations.

Our mission

At Era-net Transport we work together on the basis of trust and we aim to benefit from each other's strong points. We proactively bring together different European research parties involved in transport industry. Our collaborative cross-border consortium brings together a range of knowledge and viewpoints to create a sustainable transport (r)evolution.





News

The latest from the world of Era-net Transport

Results Steppings Stones Conference Online!

During the Stepping Stones Final Conference in Krakow September 17th and 18th, transport

http://transport-era.net/

Stepping Stones: Final Conference

Era-net Transport and the Research Consortia of: SHAPE-IT, Step-by-Step and GPS, in collaboration with The National Centre for Research and Development and Krakow University of Technology organised the final conference of Stepping Stones.

Stepping Stones: How to make Mobility Patterns More Sustainable 18th-19th September Krakow (Poland)

Recommendations

Recommendations Step by Step (doc, 40 kB)

Recommendations GPS (docx, 4,1 MB)

Recommendations Shape-It (docx, 44 kB)

Presentations

Presentation Step by Step (ppt, 2,1 MB)

Presentation GPS (pptx, 3,3 MB)

Presentation Shape-It (pptx, 1,7 MB)

Presentation Policy Integration (Shape-it) (pptx, 190 kB)

Presentation Era-net (RWS) (ppt, 3,2 MB)

Presentation Polish National Centre for Research & Development (ppt, 2,6 MB)

Presentation Munich (Martin Schreiner) (ppt, 15 MB)

Presentation Recommendations Parking (GPS) (pptx, 1,1 MB)

Images European Mobility Week Cracow (ppt, 5,6 MB)



31 cases 15 cities

Metropolitan region	Case	Code	Country	Type of Intervention
Amsterdam	Car Sharing	A1	NL	Transport concept
	Amsterdam West	A2	NL	Attitude
	Westpoort	A3	NL	Transport concept
Rotterdam	Spitsscoren	B1	NL	Demand
	Mobility Management	B2	NL	Demand
Breda	Lifestyle	C1	NL	Attitude
	Positive Drive app	C2	NL	Attitude
Dresden	Job Ticket	D1	D	Demand
	Infineon	D2	D	Demand
	VEP2025+	D3	D	Transport concept
	Commuter network	D4	D	Transport concept
Berlin	Slow modes	E1	D	Transport concept
	Car sharing	E2	D	Transport concept
Munich	New residents	F1	D	Attitude
	Increasing bicycle use	F2	D	Transport concept
Freiburg	Eco friendly license	G1	D	Demand
	Car free living area	G2	D	Attitude
Tübingen	Mobility manager	H1	D	Demand
Stockholm	Congestion charges	11	S	Demand
	LundaMaTs	12	S	Demand
Gothenburg	Congestion charge	J1	S	Demand
	Free pass for commuters	J2	S	Demand
Malmö/Lund	No ridiculous car trips	K1	S	Attitude
	Lundalänken	К2	S	Transport concept
	LundaMaTs	КЗ	S	Transport concept
Warszaw	P+R	L1	PL	Transport concept
	Increasing bicycle use	L2	PL	Attitude
	Bus lanes	L3	PL	Transport concept
Cracow	City Bike	M1	PL	Transport concept
Wroclaw	Integrated Cycling Policy	N1	PL	Attitude
Manchester	Greener Journeys Behaviour Change Lab	01	UK	Attitude
	Cycle Centre Proposals	02	UK	Transport concept

Amsterdam: CarSharing (at 200 cars/1000 inhabitants) Rotterdam: Spitsscoren: ",buy the right to use a car" Dresden: SUMP VEP 2025+ Berlin: increase bicycle use programm München: Radlhauptstadt ("bike capital Munich") Freiburg: Vauban – new living quarter Tübingen: mobility manager for companies Stockholm: congestion charge Malmö: "no ridiculous car trips" Warszawa: parking garages Wroclaw: bicycle plan (plus 20 more cases)

SUMP: http://www.mobilityplans.eu/





How to measure "success"

- ... depends on whom you ask ...
- "Success" has many ingredients: We selcted five of those
 - 1. Creating a process?
 - 2. Overcoming barriers?
 - 3. Monitoring and evaluation?
 - 4. Reaching the objectives?
 - 5. Continuing the process?
- In-depth interviews with city experts
- Three degrees of success: 0 or 1 or 2 points

"success" from 3,5 to 9,5 points



25

type of measure is not important



Results of our research

- The "Spider in the web" is crucial: A responsible actor (or network of actors), well connected, people can trust in him
- Project type and size are not relevant
- Identify appropriate windows of opportunity (program/pilot)
- Be patient: SUMP Cycles! Success may come with the 3rd SUMP
- M&E is absolutely essential (positive/negative/process)
- Responsibility and resources (budget!) must come together
- Mayor needs to make it a personal concern
- ALWAYS: Push&Pull Packages: More attractive what you want to have, less attractive what you do not want to have

Finally: HOW?

Then: All cities are different from one another! Success towards sustainable development depends on the situation

- maybe "success" in City A is "no success" in City B
- maybe in city A "success" today is "no success" tomorrow

Success can never be defined for all circumstances

- if the trend is wrong, success is to block or slow down
- if the city is uncertain, show positive future and discuss
- if the trend is right, "sit down and wait" is no success
- if the trend is right, success is to speed up the process

Conclusion: HOW to maintain such a process?

Separate mobility from traffic from access: We want to have more mobility, but not more traffic: More traffic is the wrong goal!

Then: Get a network of actors with many supporting friends What these people decide is best!

LESSONS:

- •Do not only think about WHAT to do?
- •Think much more about HOW to initiate and maintain processes

