



Smart mobility, beyond technological innovations: mobility governance for smarter cities and smarter citizens

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Introduction: Smart Mobility - original concept

Use of Information and Communication Technologies (ICTs) to improve the **functioning** of mobility systems, enhancing their **efficiency**, improving their competitiveness.

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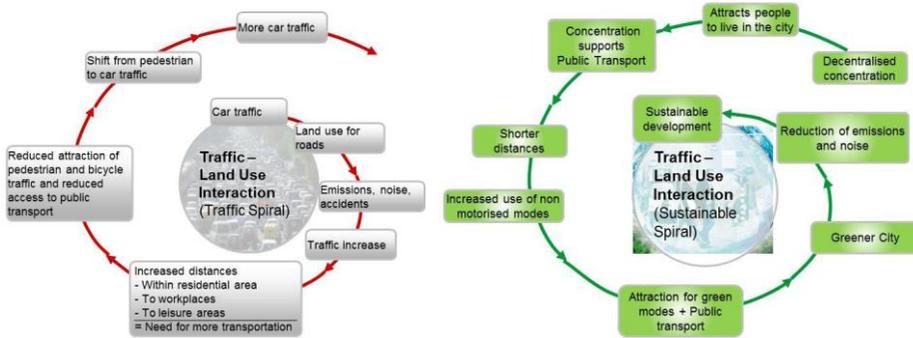
Introduction: Need for radical change and innovation



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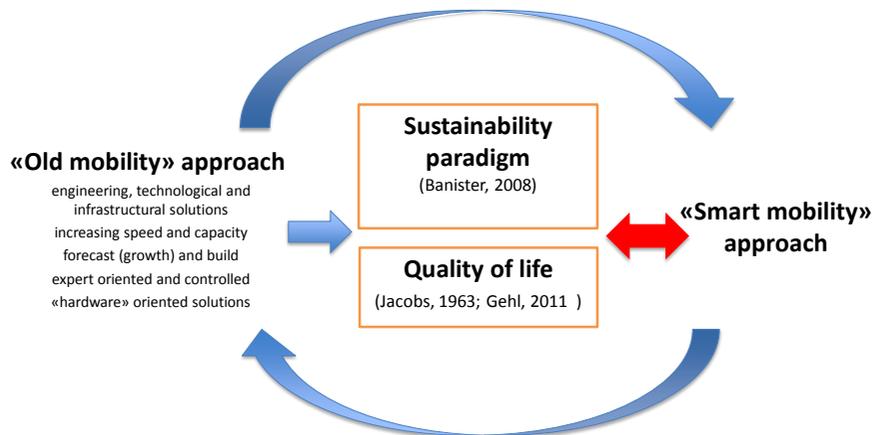
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Introduction: Need for radical change and innovation



Source: dr. Uwe Reiter, Quantitative methods in Sustainable Urban Mobility Planning, SUTP conference Beograd 2013

Introduction “old mobility” vs “smart mobility” approaches



Research aims: Smart mobility beyond technology

- to address the positive, integrated, and sustainable future for urban transportation **requires more than technology**
- to address the need for **cross-disciplinary** and **collaborative** approach that supports planning, transition and implementation of a 'smart mobility' for **quality of life** and **sustainable** urban mobility

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EVOLUTION OF SMART MOBILITY CONCEPT

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Smart mobility the techno-centered approach

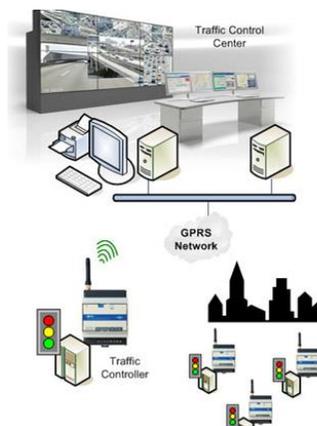
- **ICTs** represents the keystone for building up the Smart Mobility
- Relate the infrastructure of smart cities to their operational functioning and planning through management, control and optimisation (domain of both large and small ICT companies)
- Innovations (infrastructures, vehicle and services) looking at **citizens as end-consumers**

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Smart mobility the techno-centered approach

i.e. ITC traffic controllers
(Antwerp TM supercomputer)



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“Smart mobility” The consumer-centered approach

- technologies are just “enabling tools”, but insufficient to make “smart” an urban context, only by themselves
- optimizing consumers mobility behaviour through the ITCs (behavioural aspects)
- reflecting the needs of the users

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“Smart mobility” The consumer-centered approach

i.e. mobility apps for users information

NMBS/SNCB app



Do you have a smartphone and do you regularly take the train? Then this free application will certainly come in handy!

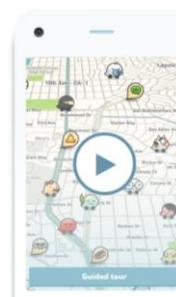
Free real-time train information

In the NMBS/SNCB-app, you will find:	iPhone	Android Phone	Windows Phone	Andere
Travel advice*	X	X	X	X
Real-time train information**	X	X	X	X
Real-time rail information	X	X	X	X
Buy ticket	X	X	-	-
Message in case of delays/track changes via PUSH	X	X	X	-
Message arrival (alarm function) via PUSH	X	X	X	-

Get the best route, every day,
with real-time help from other drivers.

Waze is the world's largest community-based traffic and navigation app. Join other drivers in your area who share real-time traffic and road info, saving everyone time and gas money on their daily commute.

WAZE. OUTSMARTING TRAFFIC, TOGETHER.



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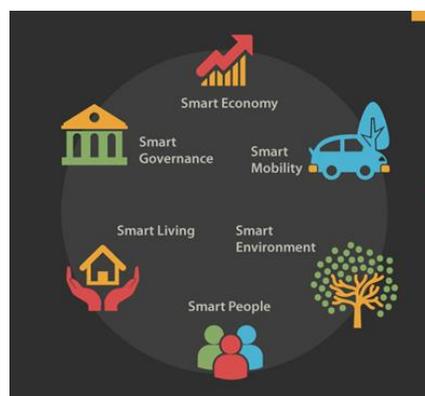
A “SMARTER” INTEGRATED APPROACH: MOBILITY GOVERNANCE FOR SMARTER CITIES AND SMARTER CITIZENS

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A «smarter» integrated approach

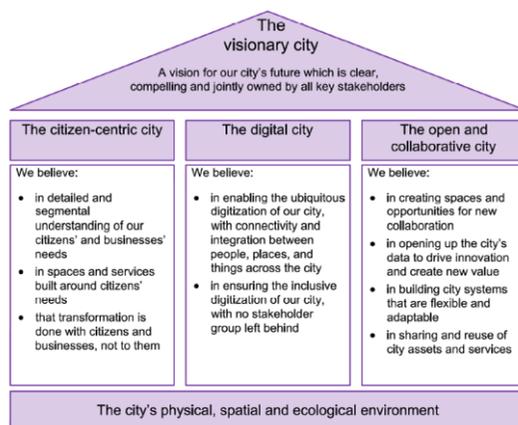
- Smart mobility as one of **6 axes of the Smart City**
 - “smart mobility” NOT traffic oriented optimization measures, but
 - Cross-sectorial approach



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A «smarter» integrated approach



Source: British Standard Institution (2014) Smart city framework – Guide to establish strategies for smart cities and communities

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A «smarter» integrated approach: guiding principles

1. Visionary city
2. Citizen- centric city
3. Digital city
4. Open and collaborative
5. Physical, spatial and ecological environment

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A «smarter» integrated approach: pilots

Visionary city
Citizen- centric city
Digital city
 Open and collaborative
Physical, spatial and ecological environment

i.e.
 MAAS Mobility as a Service
 Helsinki



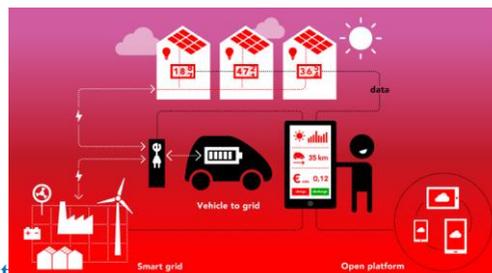
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A «smarter» integrated approach: pilots

Visionary city
 Citizen- centric city
Digital city
 Open and collaborative
Physical, spatial and ecological environment

i.e.
 Vehicle2grid
 Amsterdam



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A «smarter» integrated approach: pilots

Visionary city
Citizen- centric city
Digital city
Open and collaborative
Physical, spatial and ecological environment

i.e.

Brussels Mobil2040



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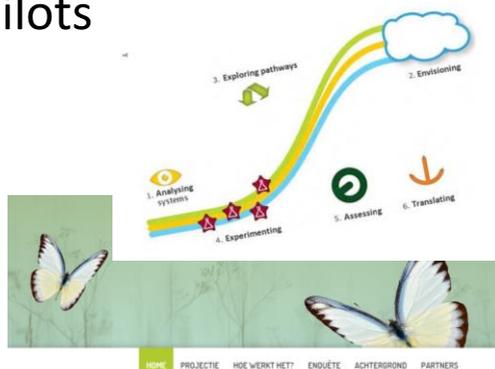
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A «smarter» integrated approach: pilots

Visionary city
Citizen- centric city
Digital city
Open and collaborative
Physical, spatial and ecological environment

i.e.

Transition arena Lab van Troje
Ghent



M-SCORE IN PROJECTIE

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FINAL THOUGHTS

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Final thoughts: what makes Smart Mobility “smarter”?

- To improve local **quality of life**
- To create a **sustainable** mobility
- To provide new ways in which problems of poverty, social deprivation, and poor environment might be addressed.

Source: Batty, M., Axhausen, K. W., Giannotti, F., Pozdnoukhov, A., Bazzani, A., Wachowicz, M., ... & Portugali, Y. (2012). Smart cities of the future. *European Physical Journal-Special Topics*, 214(1), 481.

Source: British Standard Institution (2014) Smart city framework – Guide to establish strategies for smart cities and communities

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Final thoughts: what makes Smart Mobility “smarter”?

What:

- **quality of life** that a Smart Mobility has to ensure through the integration between **technological and social** innovation (Kanter and Litow, 2009)
- **sustainability** (Banister, 2008)

How:

- creating the conditions of a continuous **process of learning and innovation** (Campbell, 2012).
- linked and **integrated**: attention is paid to the connections and not just to the parts” (Kanter and Litow, 2009)

Final thoughts: what makes Smart Mobility “smarter”?

- Smart TLU transport + Land use planning
 - for accessibility and equity
 - for the quality of places
- ICTs for mobility + human aspects
- Responding to different types of people and mobility needs + collectivity
- Cross sectorial and multimodal, diversity, synergistic + simplicity
- «software» + «orgware» + «hardware» oriented solutions
- Multi-level participation and collaboration + coordination
- Business led development + citizen control-interaction

Final thoughts: what makes Smart Mobility “smarter”?

How the smart future will look and feel in our cities?

In it's streets and places? What time will be this places?



LINK
street as a
movement conduit

**Design objective:
save time**



PLACE
street as a
destination in its
own right

**Design objective:
spend time**



Sources: Kevin Lynch, 1972, Peter Jones et al., 2009

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Let's talk

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