



AUTONOMOUS VEHICLES VS. SHARED AUTONOMOUS VEHICLES

A Multi-Criteria Multi-Stakeholder Approach

B. Antonov, Ph. Lancelleur, M.
O'Connor, Université Paris Saclay
N. Faul, ITE VEDECOM

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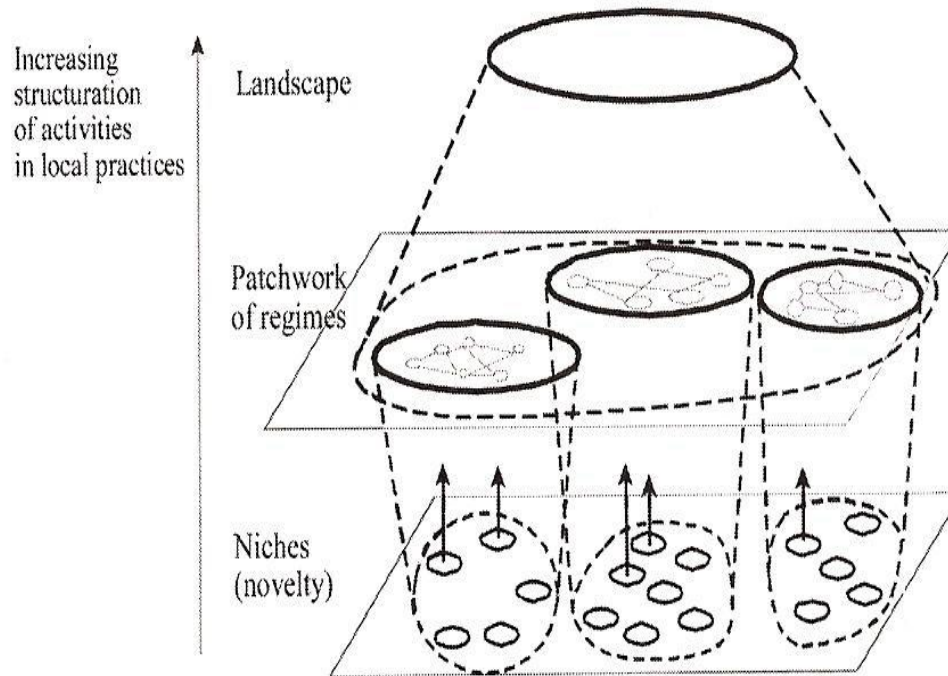
SUMMARY

- Megatrends and pressures on mobility systems
- Multilevel perspective on sustainable mobility niches
- Shared Mobility and Self-Driving Technology
- Research Question
- Literature Mobilised
- Case Study Territory and Scenarios
- Multicriteria Multistakeholder Approaches
- Conclusions

MEGATRENDS AND PRESSURES ON MOBILITY SYSTEMS

- Urbanisation
- Digitilisation
- Ageing Population
- Peak Driving
- Internet of Things
- Big Data
- Connectivity

MULTI-LEVEL PERSPECTIVE ON SUSTAINABLE MOBILITY NICHES



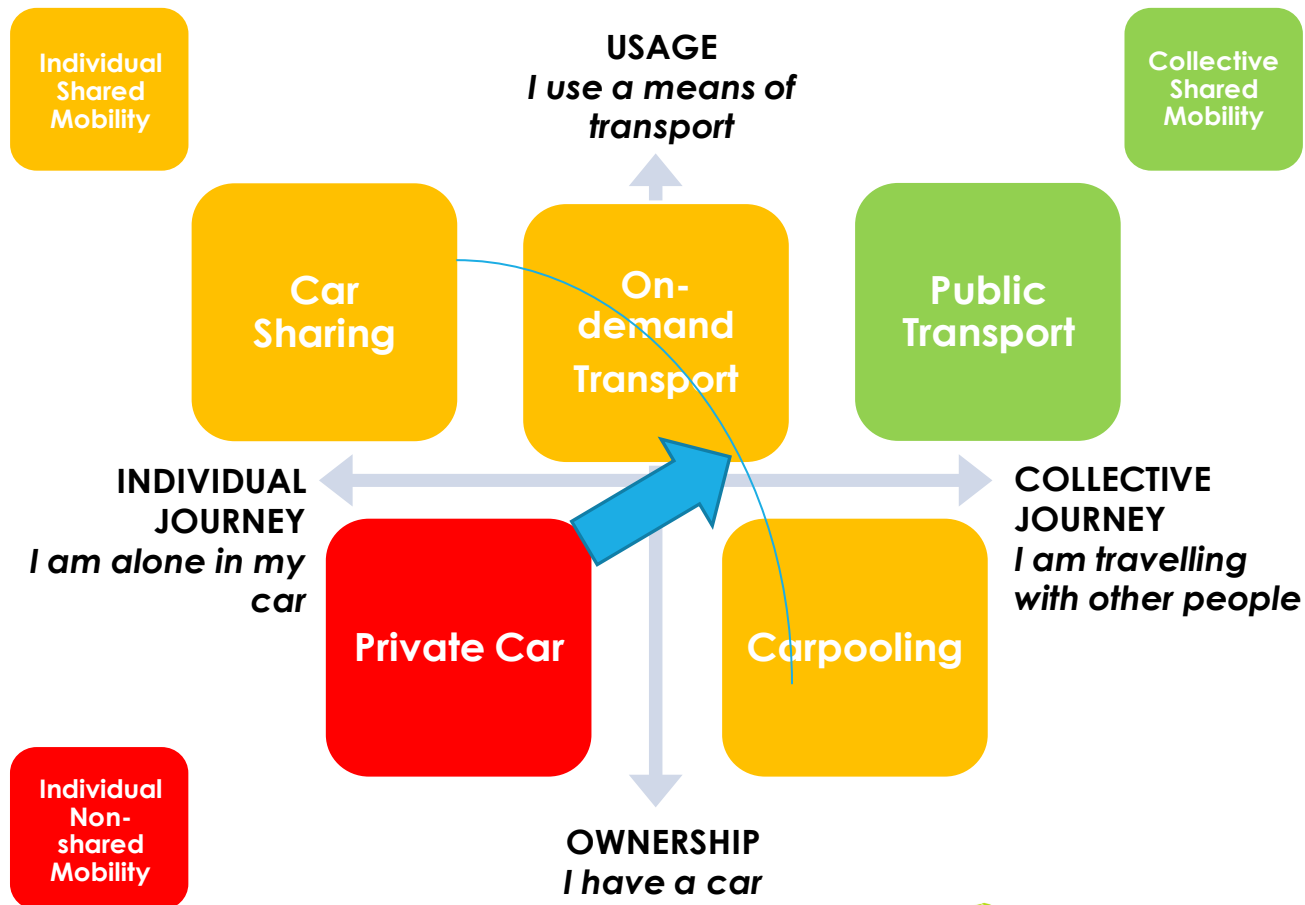
Multiple levels as a nested hierarchy (Geels 2002, 1261).

Megatrends,
Culture, Consumer,
Business & Policy
Patterns

Convergence of
car and public
transport
regime

New Players,
Sharing Economy,
Electrification,
Automation

SHARING MOBILITY



AND SELF-DRIVING TECHNOLOGY



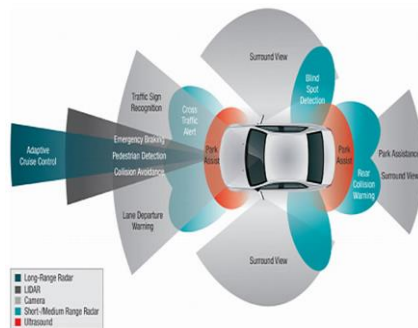
DATA



TRUST



COOPERATION



RESEARCH QUESTION

- What participatory tools can we therefore provide in an attempt to drive consensus between the often conflicting demands of stakeholders on the issues of the debate as well as on the pathways of implementation of autonomous or shared autonomous vehicles in their complex and uncertain landscape?

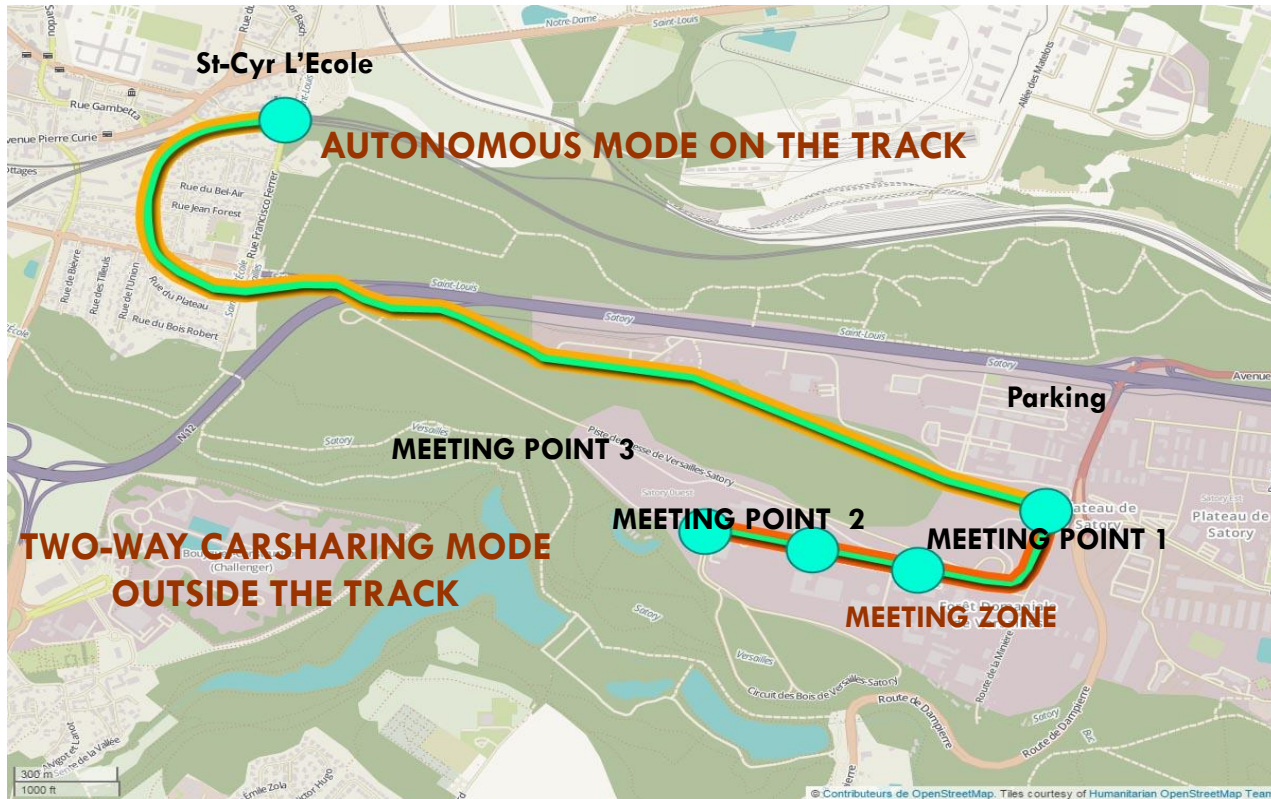
LITERATURE MOBILISED

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- Dijk, M. (2010), *Innovation in Car Mobility – Co-evolution of Demand and Supply under Sustainability Pressures*, Doctoral Thesis, Maastricht University
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- International Transport Forum (ITF), *Urban Mobility at the Crossroads: social megatrends, tech options, policy choices*, José Viegas, Secretary-General, ITF, Joint Seminar “Transport for a Changing World”, Seoul, March 2014
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SATORY AREA



THE SCENARIOS



THE B4U TOOL — A TOP-DOWN APPROACH

People

Poverty Reduction

Promotion of
Diversity

Sense of Place

Liveable City

Planet

Energy

Materials

Climate Change
Resilience

Air Pollution

Profit

Value Creation and
Attractiveness

Project
Performance

Process

Leadership

Stakeholder
Engagement

Political Climate

Project Team
Quality

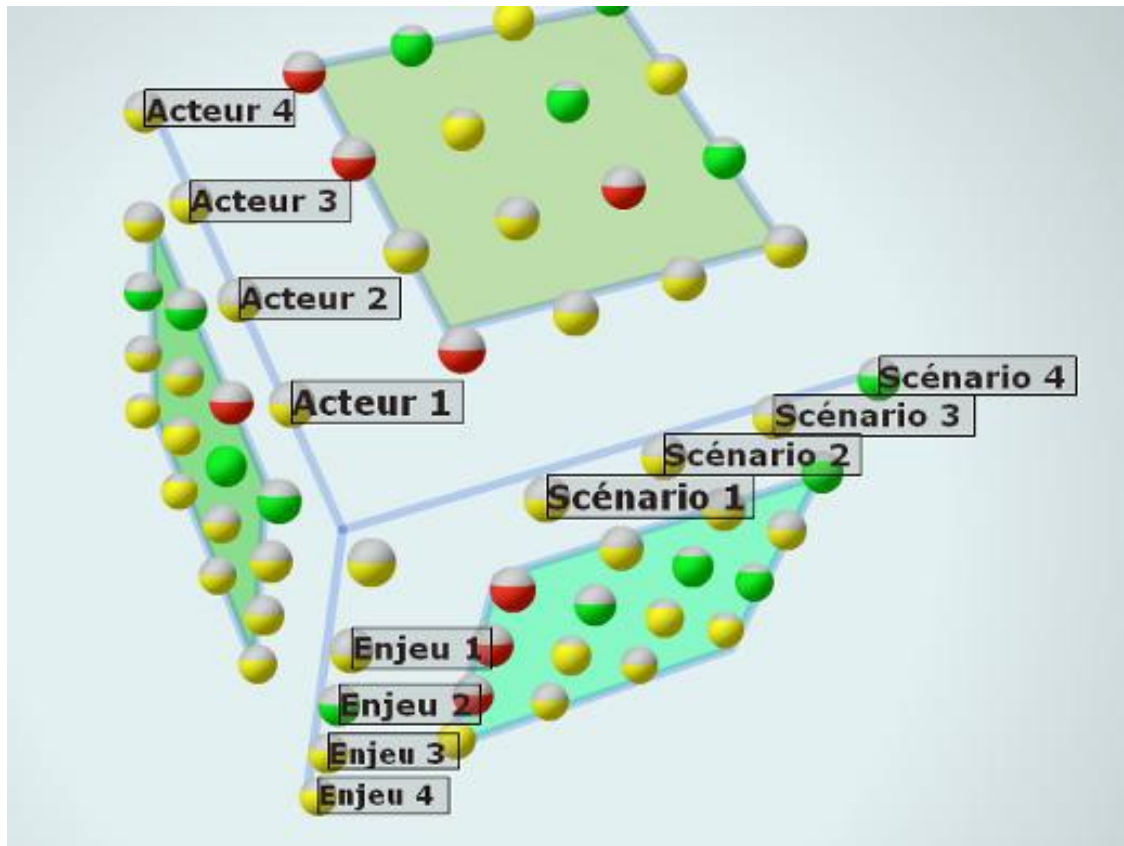
Professional
Implementation

Propagation

Innovation
Characteristics

Scalability

THE KER-DST TOOL — A BOTTOM-UP APPROACH



CONCLUSIONS

- B4U Tool fairly robust on Process and Propagation top-goals, needs to be improved in order to address People, Planet and Profit top-goals for a mobility project
- KER-DST adapted to a multi-stakeholder multi-criteria deliberation problem of territorial mobility
- M4U – a tool combining B4U and KER-DST features has been designed to include five top-goals – People, Planet, Profit, Governance, Transport and 22 sub-goals.



**THANK YOU
FOR YOUR ATTENTION**

Borislav Antonov

Borislav.antonov@gmail.com

+33 6 42 58 09 66