AUTONOMOUS VEHICLES
VS. SHARED AUTONOMOUS VEHICLES

A Multi-Criteria Multi-Stakeholder Approach

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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

Megatrends, Culture, Consumer, Business & Policy Patterns

Convergence of car and public transport regime

New Players, Sharing Economy, Electrification, Automation

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

**INDIVIDUAL JOURNEY**
I am alone in my car

**OWNERSHIP**
I have a car

**COLLECTIVE JOURNEY**
I am travelling with other people

**INDIVIDUAL MOBILITY**
- Car Sharing
- On-demand Transport

**COLLECTIVE MOBILITY**
- Public Transport
- Carpooling

**NON-SHARED MOBILITY**
- Private Car

**SHARED MOBILITY**
- Usage
  - I use a means of transport
AND SELF-DRIVING TECHNOLOGY

DATA + TRUST = COOPERATION
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

- GRALE (2012), Editions Le Moniteur Droit et gestion des collectivités territoriales – Transports et politiques locales de déplacement
SATORY AREA
THE SCENARIOS

AUTONOMOUS MODE ON THE TRACK

TWO-WAY CARSHARING MODE OUTSIDE THE TRACK

MEETING ZONE

MEETING POINT 1

MEETING POINT 2

MEETING POINT 3

Parking

St-Cyr L’Ecole
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

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