

Appraising the impacts of automated vehicles: the results of scenario testing for urban areas

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Focus

Impacts of developments of autonomous vehicles on cities

Aim

- Evolve scenarios for future market launch of autonomous vehicles
- Appraising the impacts of autonomous vehicles in cities
- Identify/develop control capabilities for public (local) authorities: regarding market launch
- Identify/develop control capabilities for public (local) authorities: regarding impacts

Determining factors

technical reliability mobility preferences acceptance

benefits for the driver/user business models insurance

changes to the infrastructure sharing concepts liabilities IT security

extent of connectivity emotions: driving/car ownership legal framework

framework for sustainable mobility economic efficiency electric mobility

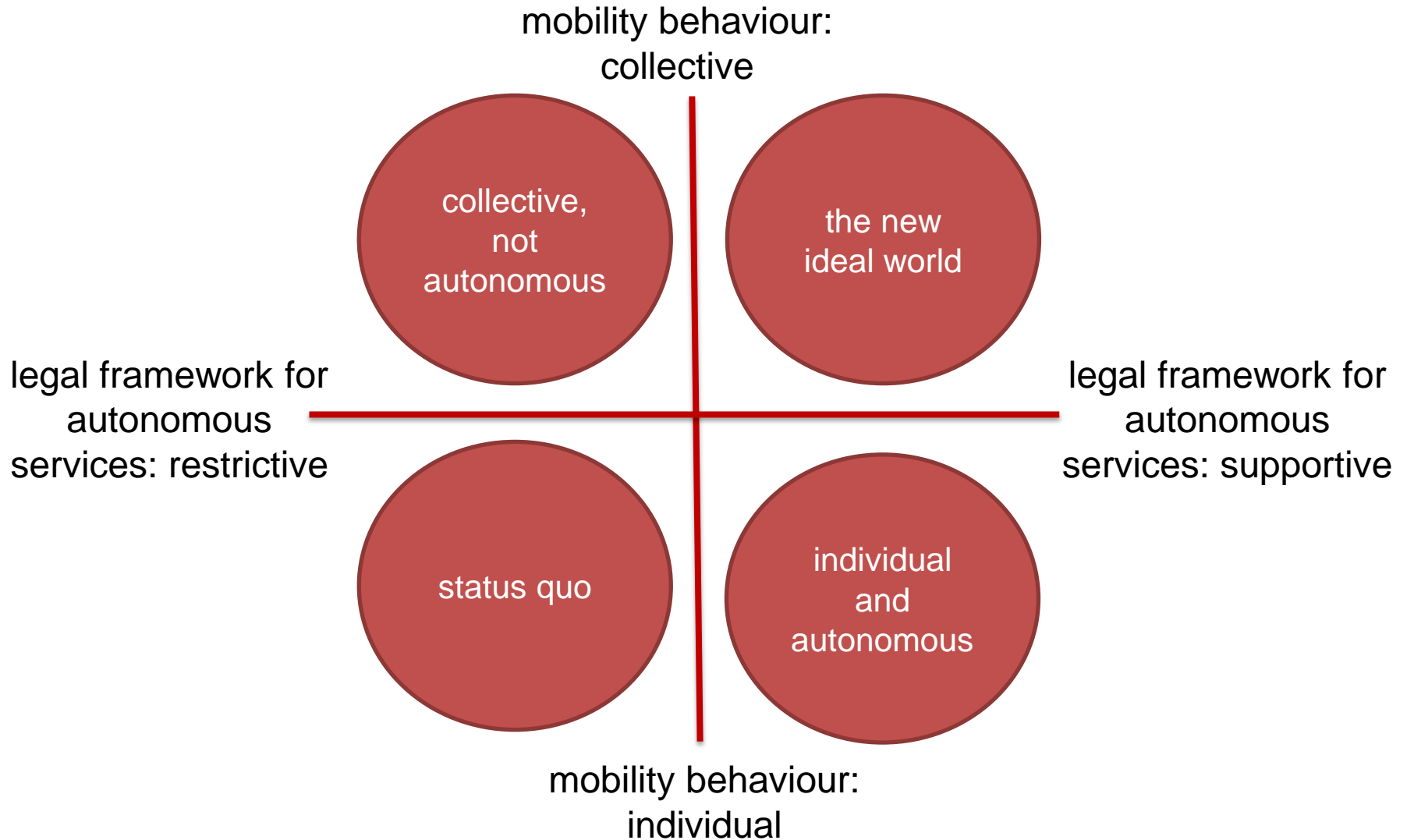
public/collective autonomous transport ecology urban development

regulation rules for collective transport costs local strategies

mobility behaviour lifestyle change

high uncertainty of the impact
high certainty of an impact
uncertainty of the impact but
high certainty of an impact
mostly influential for the
scenarios

Forming the scenarios



Results and Consequences

Chances

reduced space for traffic and parking

increased safety

social participation/assure mobility

extension of off-peak times

traffic management

possible use of travel time

Risks

new supplier displaces local public
transport operator

infrastructure development required

increased traffic/induced traffic

IT security

possible use of travel time

urban sprawl

Recommendations for Actions

- occupy proactive the market: local public transport operator already established as mobility supplier
- take part in pilot projects
- regulation needed
- increase awareness of shared services

Conclusions

- different relevance for the various fields (private car users, taxis, delivery, public transport)
- scenarios indicate possible final states, do not consider transition period
- negative impacts in all scenarios considering autonomous vehicles
- worst case scenario autonomous/individual: individual/individual car use
- public transport as a service: organisation and operator in question
- different forms of vehicles depending on the purpose
- required debate: overall benefits vs. overall disadvantages



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