

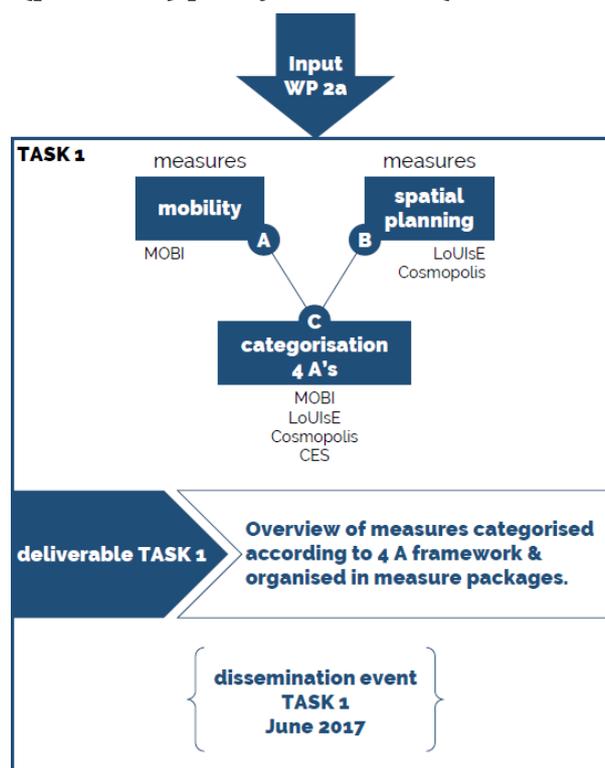
BSI Chair: Companies and Sustainable Mobility: The Company Car Debate and Beyond WP2AB proposal

Potential Future Scenarios for company mobility (in light of global trends and projected demand evolutions)

In this Work Package we will study policy measures, their (potential) impact and implementation related to future mobility policy focusing on sustainability. Based on the results of the previous Work Packages, we thus concentrate on measures like - among others - low emission zones, subsidy frameworks for electric vehicles, integration of external costs for all modes, spatial design measures, etc.

1. Topics and methodology

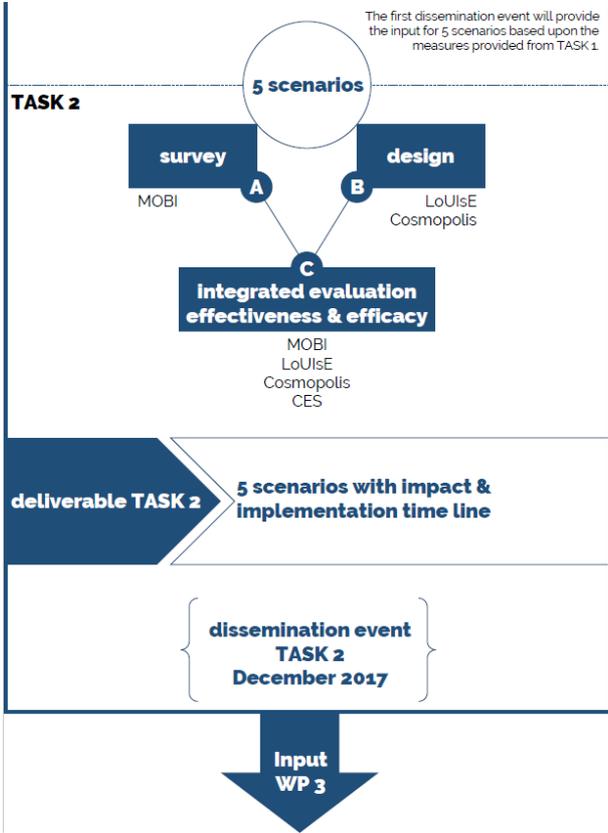
a. Description of (potential) policy measures (MOBI + LOUISE + COSMOPOLIS):



In the first part we start with a thorough literature review in order to obtain a state-of-the-art overview of sustainable (company) mobility policy measures and urban design best practices, their implementation and impact. Concerning the implementation, especially the boundary conditions of the measure will be taken into account, as well as results in terms of effectiveness and efficiency in highly similar contexts to Belgium/Brussels. With respect to the impact, the focus

will be on the gains in terms of external costs, i.e. a reduction in emissions, pollution (air and noise), accidents and congestion (Van Lier et al., 2012). Based on our detailed knowledge about the Belgian and Brussels (company) car park composition (Marion et al., 2015) and the current mobility policies, the feasibility of the measures and their expected impact is assessed. A series of spatial measures and best practices will arise from the WP 2a report framing trends and best practices at the crossroad of urban planning and sustainable mobility. All measures are then classified according to their expected effect (classification according to Macharis (2015): Awareness, Avoidance, Act & shift, and Anticipation) in order to define different measure packages. The mutual dependence and interaction of the measures within the respective packages is evaluated so that an attainable implementation timeline can be defined.

b. Integration of policy measures into (more) coherent packages. (MOBI + LOUISE + COSMOPOLIS + CES):



In the second part the above mentioned measure packages are combined into different scenarios, which can serve as input for Work package 3. We will zoom in on specific scenarios after a stakeholder consultation round.

We will explore and compare scenarios for sustainable mobility in the Brussels metropolitan region. In terms of mobility, a number of scenarios will be included in a survey for employers (company mobility managers) and employees. The outcome of the survey will allow to estimate the impact of the measure packages on company mobility. Spatially, the scenarios will be unfold following a multi-scalar research by design methodology. The research by design will test how measures can be spatially implemented at regional scale, neighbourhood scale and in public space details. The drawings will be a tool to assess the potential of each measure in the Brussels context and to communicate those scenarios to a large audience.

2. Description of research teams

a. MOBI

The Mobility, Logistics and Automotive Technology Research Centre (MOBI) is nested at the Vrije Universiteit Brussel (VUB). MOBI is led by Prof. dr. Cathy Macharis & Prof. dr. Joeri Van Mierlo. It is internationally recognised for its vast experience and expertise related to vehicles power train design, battery research, environmental assessments, socio-economic evaluations and standardisation. The Battery Innovation Centre (BIC), a division of MOBI, is the Belgian expertise centre for research and development of energy storage systems for traction and stationary applications. MOBI has extensive expertise in evaluating the sustainability of logistics systems and in examining ways of reducing externalities in logistics. MOBI's main experience in this field covers research on intermodal transport, city logistics and sustainability impact assessment. Researchers at MOBI investigate the driving forces behind mobility choices at the level of the individuals and different groups of the society by analysing data on travel behaviour. The multidisciplinary team of over 50 specialists addresses the challenges that the transport value chain faces, by integrating engineering, economic, social and environmental sciences and policy issues. The following people at MOBI will be involved in this project: Prof. dr. Lieselot Vanhaverbeke, operations research and research methods; dr. Maarten Messagie, team leader environmental LCA, dr. Imre Keseru, team leader urban mobility; and Nils Wuytens, research associate urban mobility.

b. Cosmopolis

The Cosmopolis Centre for Urban Research is a research centre within the Department of Geography of the Vrije Universiteit Brussel and is dedicated to research and teaching in geography, spatial planning and urban design. Committed to pursuing both academic and practice relevant research, Cosmopolis actively engages policy makers, governments, citizen networks and other urban partners to transform knowledge into action. Over the last fifteen years, Cosmopolis has continuously grown in size and is now an established centre of urban research situated in the heart of Europe. Cosmopolis has extensive experience in the analysis of urban policies and urban development, ranging from local policy-oriented projects in Brussels to EU-funded research. Today, Cosmopolis is a team of four tenured professors and approximately fifteen researchers with different disciplinary and national backgrounds. Cosmopolis has been an interdisciplinary group from the very beginning, partly due to the diverse backgrounds of its members (ranging from geography and planning to architecture, sociology, philosophy and cultural studies), but also as a result of its key role in interdisciplinary networks (such as the international MA's 4Cities and Polis and the UAB Urban Studies Network / Stadsplatform). Researchers publish extensively in international peer-reviewed urban studies journals, but a lot of attention is also paid to local involvement in citizen networks, engagement with policymakers, and opinion making. Prof. dr. Kobe Boussauw, affiliated with Cosmopolis, will advise this work package.

c. LoUIsE

LoUIsE – Laboratory on Urbanism, Infrastructure and Ecologies is a research centre of the Faculty of Architecture of the Université libre de Bruxelles. Urbanism is the main research focus for LoUIsE, but its preoccupations go well beyond this discipline to take on environmental, infrastructural, and transport issues concerning cities and urban territories in the larger sense. Affiliated members are convinced it is flows, networks and infrastructures that make up the global framework from which urbanism's contemporary territories are organized. The activity of LoUIsE takes shape first and foremost through research made in the context of the realization of doctoral theses and postdoctoral fellowship, financed by the National Scientific Research Fund (FNRS) and by the Brussels Innoviris research institute. Next to this basic activity of fundamental research, LoUIsE also actively participate in ongoing debates on the development of the Brussels-Capital Region. Since 2010, Louise co-organises]pyblik[dedicated to the training of skills in the creation of public space and the biannual Brussels Architecture Masterclass (Rework 2012, End of Line 2013, Bridges 2015). Since 2015 LoUIsE is a partner of the Metrolab Brussels transdisciplinary laboratory for applied and critical urban research, formed by UCL and ULB, and funded by ERDF-Brussels 2014-2020.

d. CES

The Centre d'Etudes Sociologique (CES) collaborates since 2011 with Brussels Mobility on the consolidation of the Mobility Observatory of the Brussels-Capital Region. The objective of this Observatory is to strive towards a common diagnosis on key issues related to urban mobility in Brussels and its stakeholders. This research project has resulted in the publication of four Notebooks (Lebrun et al., 2012, 2013, 2014; Strale et al., 2015) and a forthcoming fifth one (Brandeleer et al., to be published in 2016). Furthermore, our team is currently working on a sixth publication on work/school related travel behaviour. Other works and publications include travel practices studied through national surveys; the measure of accessibility; the history, organization and impact of transport systems; the role of specific technical tools in shaping transport policies; etc. The following people at CES will be particularly involved in this project. Prof. dr. Michel Hubert, sociologist, who has been working for a long time on several issues of transport and mobility and is also Chair of the Centre interuniversitaire d'étude de la mobilité – CIEM, Thomas Ermans, geographer (familiar, in particular, with working with the Banque Carrefour de la Sécurité Sociale), Céline Brandeleer, political scientist, Philippe Huynen, sociologist and data analyst and Kevin Lebrun, geographer.

3. Coordination method and planning:

The research agenda will be spread across 12 months (1st March 2017 – 28th February 2018). MOBI will coordinate this WP.

We plan to have a kick off meeting in February 2017 in order to launch the different teams involved. After that, we plan to gather every three months to present the research advancement for each topic.

We will also pay attention to the advancement of the other work packages (mainly WP1 and WP2a) to prevent overlap but also to share results ensuring coherence of the whole research project.

4. Stakeholder inclusion and dissemination strategy:

Stakeholder inclusion is considered an important asset in our research project as stakeholders represent a source of data and feedback (through discussions, meetings, interviews...). Two general meetings are set up from the start. The first one will take place around June 2017 during which feedback on the first research results (state-of-the-art) will be asked so that scenarios can take stakeholders' remarks and suggestions into consideration. The second general meeting could take place in December 2017 to present the full report of our research, to a broader audience.

Bibliography

Aerts J. & Moritz B., End of Line : Combining housing, facilities and transport infrastructure in Brussels, Brussels, LoUIsE & SteR, 2014.

Macharis, C. (2015) Bedrijven en duurzame mobiliteit. Presentation BSI Chair, December 2015.

Marion, G., Messagie, M., Vanhaverbeke, L., Van Mierlo, J. (2015) Onderbouwing van 2020- doelstellingen voor het aandeel van milieuvriendelijke voertuigen (elektriciteit en CNG) in Vlaanderen. Project report for Vlaamse overheid Departement Leefmilieu, Natuur en Energie, 49p.

van Lier, T., De Witte, A., & Macharis, C. (2012). The impact of telework on transport externalities: the case of Brussels Capital Region. *Procedia-Social and Behavioral Sciences*, 54, 240-250.

Vanin, F. & Panayotopoulos D., Bridges : Connections where lines become urban spaces, Brussels, LoUIsE & SteR, 2016.