Foreword

More than 30 years of European Union (EU) funded transport research is behind us. A treasure of knowledge and empirical tests and demonstration activities has been built up. Giant steps forward have been taken to make the European transport system seamless with more capacity; vehicles are greener, smarter, faster, safer; infrastructures more lasting and safer. However, each step forward has been followed by two backwards, or so it seems. The very same technologies brought in their wake and triggered further new demand and supply for transport, the effect of which is bigger than the gains from the research projects. And so the transport sector, one of the very few, has seen its eco-footprint increasing.

The big beneficiaries of the research results have been the private sector car manufacturers, rail industry, shipbuilders, logistic companies, to mention just a few. The public sector saw only that transport had become more and more of a liability, a societal cost. Yet, it remained passive. It had long considered that technological progress would benefit the industry with a knock-on effect on society as a whole – the results of many years of research would one day be brought together by an invisible hand. The public sector, therefore, did not involve itself. The degree of its participation of about 15 per cent in EU-RTD projects related to urban transport. In contrast, 60 per cent of the partners of a typical consortium were from the same stakeholder group: academics. The project SUGAR provides an extensive analysis of projects on urban transport and confirms this situation. Further, lack of an integrated vision, fragmentism, lack of leadership, citizens' awareness are primary consequences of the technology-driven projects with a passive public sector.

The EU Commission came, finally, with a response, launching the Horizon2020 EU-RTD programme, a paradigm shift in transport research. It recognised that technology solutions are a double-edged cutting sword and that acceptance and implementation of innovative solutions are not a matter for a few but require the cooperation of all of us. A real societal challenge. This changes the focus of research, to address primarily the actors and factors determining the outcome of a project, to find the balance between individual gains towards collective societal consensus on

how a combination of innovations, incentives, legislation can support the livable society.

As a consequence, a new analysis model is required, raising different questions and providing different answers. In other words, a new way of thinking, different from the way we have been thinking over the last 30 years or so, when we created today's problems. This book suggests that more than ever the public sector needs to be proactive and show entrepreneurship. It must kick-start the bargaining process with the relevant actors within a long-term vision. Knowing the limitations and opportunities, being able to identify the opponents and protagonists will strengthen the ability to plan and implement a working strategy. It may call for contingency planning to cover risks and uncertainty.

The book, following the above-mentioned paradigm shift, demonstrates that we need new decision support systems to support this shift.

In the final years of the Seventh European Framework Programme (FP7), the Straightsol project applied the analytical tool "MAMCA", which was developed some years before by Cathy Macharis. MAMCA stands for Multi Actor Multi Criteria Analysis and it focuses on actors and factors that determine the outcome and implementation of a research project. In other words, the focus is on identifying constraints and barriers, interests and stimuli to determine ways and means to make a project relevant and acceptable for society, adapting the project on the basis of the analysis where necessary. This kind of analysis should not be made once a project comes to an end, but from the beginning. Knowing the limitations and opportunities, being able to identify the opponents and protagonists will strengthen the ability to plan and implement a working strategy. It may call for contingency planning to cover risks and uncertainty. This is rarely found in projects and is the cause of lack of follow-up or implementation. MAMCA, in contrast, anchors projects in a wider societal context with respect for all people's values. Given that currently research projects have no or very limited "after-life", the MAMCA tool is of great interest to many other European co-funded research projects in urban transport.

Only by combining paradigm and mind-set shifts will we be able to successfully solve societal challenges. Society is not an administrative matter for a few but entails the cooperation of all of us.

Joost De Bock, 28 December 2017