On our framework to evaluate the deployment of CMaaS

Bhavana Vaddadi is a PhD researcher with a background in Urban Planning and design with Urban Transport as a major.

Mia Xiaoyun Zhao is a senior researcher at ITRL with a background in transport system analysis, ans is currently involved in various projects at ITRL.

In this interview, Bhavana and Mia share some of their thoughts on their most recent publication:

"Measuring System-Level Impacts of Corporate Mobility as a Service (CMaaS) Based on Empirical Evidence"

In order to make ITRL's research more accessible to both the industry and the public, we asked a range of questions designed to give an overview of Bhavana's and Mia's paper and inspire you to learn more.

"By providing CMaaS, employers are able to improve the work-related travel experience of their employees and at the same time promote sustainable transport!"

What is the article about?

The paper is about studying the impacts of Corporate Mobility as a Service (CMaaS). CMaaS is a packaged mobility service offered by a company to its employees for commuting or travel purposes within and to and from work, in the form of for example e-bikes and electric cars. Nowadays we notice that many people experience commuting as time-consuming, consider public transport unreliable, or that they rely on their own private car. This is a non-ideal situation and employers would like to change that. By providing CMaaS, employers are able to improve the work-related travel experience of their employees and at the same time promote sustainable transport to reduce the company's carbon footprint!

In this research study, we evaluated the impacts of CMaaS from various angles. In these types of projects quite often the mistake is made that very few perspectives are taken into account. In those cases for example only an individual point of view or only the business models perspective are included. In this research we try to overcome that shortcoming and incorporate all stakeholders. We consider all stakeholders' own unique perspective, and furthermore assess the dependencies between them. You can say we approach the problem from a systemic point of view.

What are the main results?

We developed a framework where one can identify the relation between the range of aspects under CMaaS that can help companies and authorities to make better decisions in developing, implementing and operating the service. Although in this study we piloted the framework in one specific environment, the framework is widely applicable. We use several Key Performance Indicators (KPIs) to assess the performance, and those can quite easily be customised. Examples of a KPI are the number of trips, the travel cost or the perceived travel value. These KPIs are all backed up with data sets, so you would need some reference data if you would like to add a KPI.

Another finding is that it is crucial to create an incentive for employees to use the new transport services. People need to be encouraged to move from their comfortable, flexible cars into this new, unknown but also more sustainable option. These incentives could be financial, as public transport credit for example, such that the use of sustainabe transport is promoted even more. But the main point here is that in order for the new system to work, employers should realise that people are only eager to adopt the new service when they perceive the services to be more flexible, accessible and efficient.

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How would you say that the research could make a positive impact on society?

It is investigating how the services can be implemented and how to motivate people to use more sustainable modes of transport. We think that this creates a positive push. The more you do that, the more people get used to sustainable transport modes inside and outside the company environment. That is exactly what this research wanted to prove! It not only entails benefits for the company and the employees, but also entails societal benefits to a larger scale. So hopefully we will be able to encourage upscaling the use of the framework, letting it aid others in the decision making process about implementation as well.

What further research could this lead to?

Firstly, it would be interesting to see how this same evaluation framework could be used to assess other MaaS (Mobility and accessibility Services), for example integrated with public transport or living area, work hubs, etc. These services are equally complex and face similar implementation problems, so the developed framework could very well be used to aid in those analyses as well.

Secondly, due to lack of data on a larger scale, we were not able to evaluate impacts at the societal level. It would be interesting to see other researchers use this framework to simulate the possible impacts of upscaled CMaaS likeservices on a city or a regional level. Two research questions can be studied further – what happens when many large companies adopt CMaaS like services? And what type of impacts could it have on the city and the transport system?

What should industry be paying attention to in regards to the article?

That offering CMaaS would not only be a tactical move in terms of propaganda and the image that a company wants to convey, but that implementation of CMaaS would also bring more employee satisfaction and larger cost-benefit ratios. And in the end of course economic benefits as well! It is just so important to look at the whole system, and take into account all the dependencies between the different actors in the system – and not only assess one minor part. Other studies acknowledge this as well, that lessening the burden of commuting would have effects in so many positive ways, you just have to know how to rightfully approach it and the potential benefits will come true!

> "Implementation of CMaaS not only entails benefits for the company and the employees, but also entails societal benefits to a larger scale."

What is the take home message of the paper?

We are dealing here with immense complex systems and it is important to take into consideration all necessary levels and perspectives in the systematic approach. Otherwise, we will risk to be partial in the system level analysis and create incomplete knowledge and even mis-leading guidance for decision-making. Our framework took multi-levels to show the system dynamics and contribute to bridge the gap in understanding the impacts of MaaS and promote MaaS as a sustainable mobility solution.