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Abstract for a Panel Session

New mobility concepts in the context of demographic change and re-urbanization processes

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Abstract

Like in many industrialised countries significant demographic change is ongoing in Germany. This has consequences for transport and mobility as transport systems have to be adapted to the requirements of a changing society, for example, with more people of higher age. In parallel, processes of re-urbanization are emerging: Currently, the population of major cities experiences (slight) growth and suburbanization diminishes. Furthermore, car ownership seems to have reached its peak, thus, in some population groups the importance of car ownership and use might be decreasing. And lastly, at least in some niches, a sharing economy seems to emerge. Together, these processes bear the potential for the diffusion of new mobility concepts that allow shifts towards a more sustainable daily mobility.

In this panel session, we analyse the acceptance of such novel sharing and mobility concepts in the context of demographic change and re-urbanization. In the first presentation by *Uta Schneider*, results from an indepth-interview study with families from urban areas focusing on the specific requirements for new mobility concepts and car-sharing are presented. *Elisabeth Dütschke and Anja Peters* will identify and analyse consumer groups varying in their likelihood to use car sharing based on a large representative sample from urban areas in Baden-Württemberg. The presentation by *Anja Peters and Daniel Hanss* will introduce research on potential target groups for integrated mobility concepts. The specific interests of the target groups in such concepts and their preferences will be presented. *Martin Kagerbauer and Tim Hilgert*

will present results of the German Mobility Panel on changes in travel behaviour for younger and older population groups, e.g. increasing multimodal travel behaviour, and will identify user groups for car-sharing on this base.

Overview of panellists presentations:

1. Uta Schneider: "The demands of families in regard to car-sharing concepts and integrated mobility services"

2. Elisabeth Dütschke and Anja Peters: "Why are individuals likely to choose car-sharing? An empirical analysis from urban centres in Baden-Württemberg"

3. Anja Peters and Daniel Hanss: "Interest and expectations of car-sharing-users regarding integrated multi-modal mobility concepts"

4. Martin Kagerbauer and Tim Hilgert: "Changing travel behavior in the context of demographic change"

Abstracts of panellists presentations:

1.

The demands of families in regard to car-sharing concepts and integrated mobility services

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Car-sharing systems and integrated mobility services can contribute to reduce car usage and ownership. However, these new mobility concepts seem to not (yet) fit the mobility requirements and behaviour of families with children: Compared to other population groups families use the car more often and own more cars on average; similarly, they are less likely to use public transport.

In this paper the acceptance of integrated mobility services and car-sharing concepts is analysed for families with children via an indepth-interview study (guideline-based family interviews). Furthermore, the families documented their car use and use of car-sharing systems in mobility diaries. The sample consists of 42 parents in 22 families with at least one child under 18 years of age. The study area is constituted by three cities (<100.000 inhabitants) in Germany.
The results show that five (car-free) families use car-sharing regularly. Car-sharing is used for the purpose of shopping or leisure; some families also went on holidays with a car-sharing vehicle. The non-users others exhibit a good knowledge of car-sharing providers in their neighbourhood and support the idea of car-sharing. However, most of them do not consider a future use of car-sharing. Reasons most often cited are the complex logistics (reaching the car-sharing stations with children, organizing child seats), inflexibility compared to owning a vehicle and the need to travel regular journeys by car. In the presentation further evaluations with regard to car-sharing and integrated mobility services will be outlined.

2.

Why are individuals likely to choose car-sharing? An empirical analysis from urban centres in Baden-Württemberg

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In this paper we analyse what makes car-sharing attractive to a representative sample of citizens in urban regions in Baden-Württemberg (N = 1798). The survey was developed based on earlier work by the authors which includes a segmentation into four groups according to the likeliness of adoption thereby drawing on Rogers' diffusion of innovation theory. Furthermore it included items on socio-demographic characteristics, likeliness of adopting EVs or car-sharing, usual modes of transport, beliefs about and attitudes towards car-sharing. The sample includes nearly 5 % of individuals currently using car-sharing and a similar number intending to use it in the near future (4.4 %). Another 20 % shows high interest while the majority does not (72 %) thereby challenging the view of a quick change to a sharing society in mobility. Further analyses look into the factors related to differing levels of adoption likelihood. Results point out that e.g. the perceived compatibility with daily life is highly relevant.

3.

Interest and expectations of car-sharing-users regarding integrated multi-modal mobility concepts

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Integrated mobility concepts can help reduce individual motorized transport and car ownership and are therefore increasingly important for mitigating transport-related problems and reaching sustainable development goals. Some cities are already developing and testing first concepts for integrating different transport means. Possible future concepts could include standardised booking and invoicing systems with a pre-paid function or monthly bills and make it possible to access every mobility service via a one-stop-shop. Still, there are many open questions with regard to user acceptance as well as actual needs and preferences of potential target groups in urban and rural regions. In order to shed more light on these issues, we conducted an online survey. One issue with surveys among potential consumers of new technologies is that they may find it difficult to express valid attitudes, preferences and intentions regarding concepts that are still rather unfamiliar to them. We addressed this issue by conducting the survey among car-sharing users, because it could be assumed that they were already familiar with mobility concepts and able to express their needs, preferences and intentions. Based on the data, we present car-sharing users' interest in integrated mobility concepts and their preferences for specific solutions. In addition, conclusions for the further development of integrated mobility concepts will be discussed.

4.

Changing Travel Behavior against the Background of Demographic Changes

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Travel behaviour in industrialized countries has changed in the last decades. Although, at least in Germany, average travelled kilometres per person and day with all transportation modes is more or less at the same level, we are able to identify changes in different age groups. Nowadays, young adults travel as much as their corresponding age group did ten to twenty years ago. At the same time, they travel less by car and use public transportation more frequently. Contrariwise, today elderly people travel more than decades ago and use cars more frequently. This trend will be further going on since the high share of the population who grew up with a car (born in the 60s) is going to enter the elderly people group (above 60 years old) within the next years.

Moreover, in travel surveys like the German Mobility Panel we analyze an increasing multimodal travel behaviour, meaning, that people use different modes for their trips according to their actual needs. They do not tend to use only one mode as the majority did decades ago. Due to higher availabilities of different transportation modes, people use the most comfortable and suitable mode for the specific situation. This results in a more flexible travel behaviour which is also influenced by new services like car or bike sharing as well as the usage of different mobility services (e.g. travel information apps).

Ongoing research focuses on these opposing trends: How will travel behaviour of young people change when starting a family? Will coming elderly people still use the car as major mode or will they also tend to be more flexible?