

Interdisciplinary research on focal themes



Focal themes – the details

Mobility design shapes the interaction of the user with a mobility system. The key idea is to enable user-oriented and environmentally-friendly intermodal systems. Design serves as the integrating tool, because the decisions on the design affect how people interact with the mobility system and influences users' experiences. Here, mobility is viewed holistically as something that is both a need and an ability to move around in a given space. This presumes that mobility design has a systemic thrust, an approach that calls for the bundling of different types of mobility-related expertise. It follows that we should view mobility design as an interdisciplinary task.

Mobility Hubs

Places of intermodal connectivity

Hubs play a central role in mobility systems with an intermodal focus that create efficient, attractive and environmentally-friendly solutions for individual mobility needs by relying on the easily accessible combination of walking, cycling, public transport, and car sharing: The task of hubs is to connect the various mobility offerings. To facilitate user orientation comprehensive information and guidance systems are needed for the transitions between these mobility offerings, whereby these must also reach out into the urban space itself. It is also vital that greater importance be attached to those symbolic and emotional factors influencing people's sense of safety and wellbeing. Design concepts will be developed on the basis of various hubs and typical situations such as waiting or changing between mobility forms, and then tested in the Rhine-Main region.

Active Mobility

Cycling and walking in urban space

Cycling and pedestrian traffic are essential elements of sustainable mobility systems. How can urban and mobility spaces be organized in such a way that people are motivated to engage in active mobility? So that cyclists and pedestrians enjoy moving in urban space, feel relaxed and can find their way safely? In this context fresh thought must be given to the design and role played by dedicated cycle streets. There is a need to rethink how urban space is sub-divided and what priorities are assigned to the various modes of transport. In addition, a very effective means of assessing aspects such as amenity quality and sense of safety is to closely observe the active mobility of families with children.

Augmented Mobility

Designing digital access

The digital, internet-based information and communication space is increasingly superimposed on physical mobility space. As a result, media-based interactions are possible beyond the specific place; in this regard the mobility system can be considered augmented. project-mo.de is working on linking digital gaming and the real mobility experience: How can sustainable mobility behavior be fostered through gamification strategies and a motivating interface design? The aim is to create an active, mobile user experience, which includes the selected form of transport and the associations connected with it. The overlaying of the analog and digital world through virtual reality (VR) creates new mobility spaces that can be experienced in an immersive and active manner. In this way users' feedback can be integrated as early as the design and planning stage.

Mobility Systems

Moving around in intermodal transport networks

Several elements come together in mobility systems namely mobility demand, the transport infrastructure and the mobility services on offer. An environmentally-friendly, intermodal mobility system includes pedestrian and cycle traffic, the offerings of the public transport system but also sharing schemes. The challenging aspects are to ensure networking, visibility, ease of use and intelligibility of such an intermodal mobility system. How can the design of a sustainable mobility system create positive mobility experiences? How can user needs and wishes be better taken into account?

project-mo.de

the mobility design project

Funded as LOEWE research cluster by



➤ Objectives

How can the needs of various users be integrated into the design of new, sustainable mobility services?

This is the question project-mo.de addresses by conducting interdisciplinary research into concepts for planning and designing mobility spaces, infrastructure, processes and products. The focus is on personal mobility within the respective transportation system and its infrastructure. The needs of various users are integrated into the design of mobility services and on this basis specific design methods evolved. Design research concentrates here mainly on the emotional factors involved when people avail themselves of services – with the aim being to favorably influence user attitudes and behavior. Regional stakeholders and users are actively consulted in this process. Finally, design guidelines are developed that focus on the overall structure of the mobility system rather than individual products and services in order to promote sustainable infrastructures and multimodal mobility chains.

These objectives can only be achieved in an interdisciplinary research cluster that bundles the expertise of various fields. project-mo.de is funded as the LOEWE research cluster “Infrastructure – Design – Society” and can thus lay important foundations by bringing together scholars from five disciplines to explore the design requirements for a new, networked and multimodal mobility system in the Rhine-Main conurbation: Design at the HfG Offenbach University of Art and Design, transportation planning at the Frankfurt University of Applied Sciences, social science mobility research at the Goethe University Frankfurt, architecture/urban design and multimedia technology at the Technical University Darmstadt.

These skills and insights will be brought together in our joint work on the focal themes of mobility systems, mobility hubs, active mobility and augmented mobility.

➤ At a glance

Funding body • Hessen State Ministry for Higher Education, Research and the Arts

Funding program • LOEWE research cluster

Research focus • Mobility Design
(Infrastructure – Design – Society)

Partners • HfG Offenbach University of Art and Design, Frankfurt University of Applied Sciences, Technical University Darmstadt, Goethe University Frankfurt

Associated partners • RMV – Rhine-Main Regional Transport Association, HOLM – House of Logistics and Mobility, ivm – Integrated Traffic and Mobility Management Rhine-Main

Homepage • www.project-mo.de

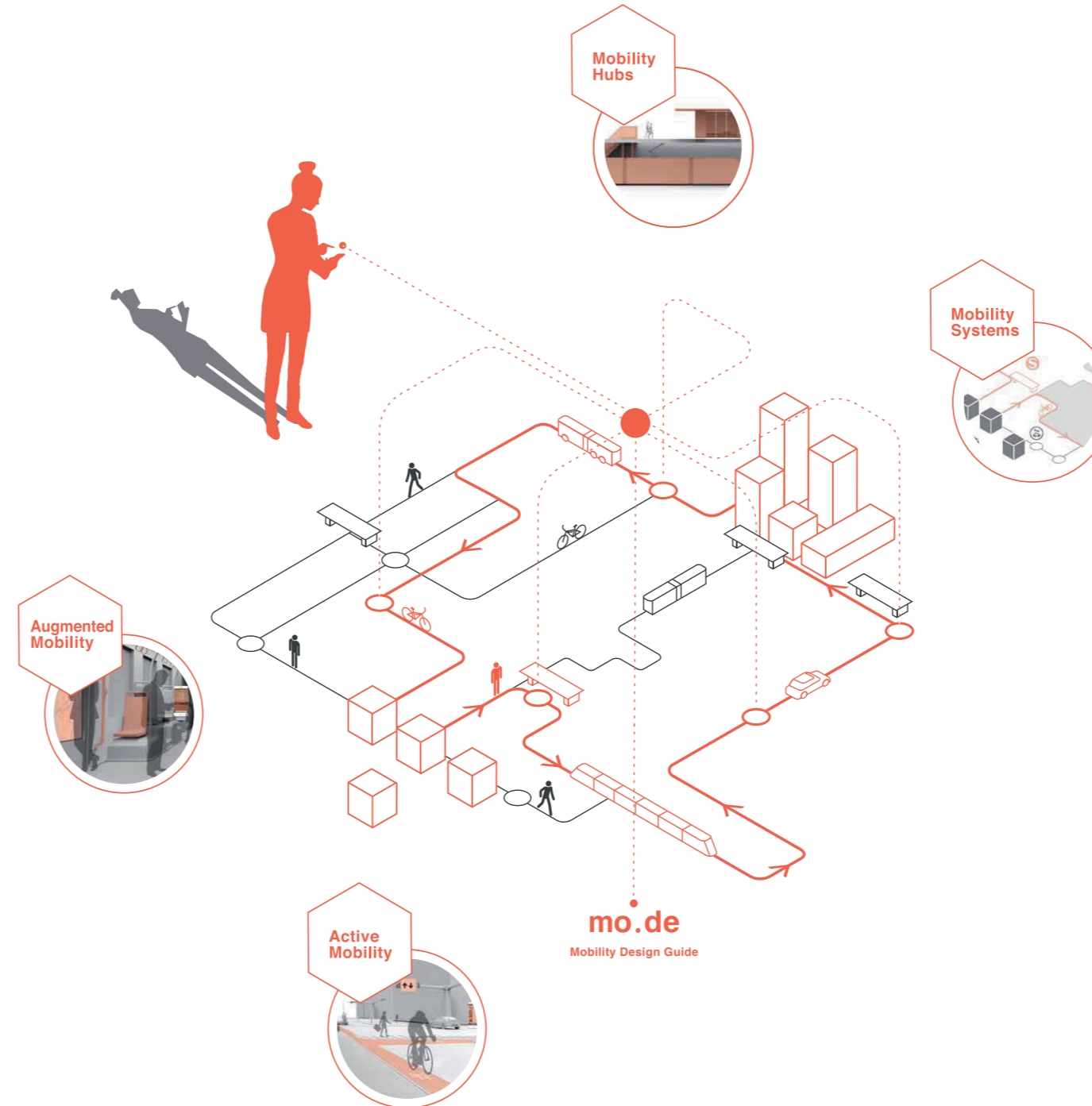
Duration • 01/2018 – 12/2021 **Volume** • EUR 3.6 million

Objective • The project systematically explores the design requirements for a new, networked and multimodal mobility system in the Rhine-Main conurbation.

➤ Background

The future lies in new forms of mobility: Instead of owning a car it will be easy to use a broad array of different forms of transport. Digital and platform-based services will control intelligent mobility systems in which we can move “smoothly” from one place to another using various types of mobility. These services will take into account our individual wishes and needs, and will be not only economic but also comfortable and sustainable. It is also essential that we not only feel safe in the various mobility spaces, but also at ease – an immense challenge for the design of transportation products, spaces, processes and systems. Design is a key factor here, as it addresses complex mobility systems holistically and by providing a clear user focus contributes to a greater acceptance of inter- and multi-modal mobility offerings. This is what project-mo.de takes as its starting point in order to systematically explore the design requirements for a new, networked and multimodal mobility system in the Rhine-Main conurbation. The project is being funded as the LOEWE research cluster “Infrastructure – Design – Society”: Between 2018 and 2021, the Hessen State Ministry for Higher Education, Research and the Arts is making available almost EUR 3.6 million from the LOEWE research funding program. Lead-managed by HfG Offenbach, academics will work on joint issues there together with colleagues from Frankfurt University of Applied Sciences, Goethe University Frankfurt and Technical University Darmstadt.

➤ Mobility experience – sustainable and connected



➤ Get in touch

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