

Designing and Researching Intermodal Mobility

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The implementation of intermodal mobility—the interlinking of diverse forms of mobility along a single route—initiates a revolution in mobility technology that is based on the principles of networking and sharing. Environmentally sustainable and intelligent mobility is becoming technically more feasible as users are able to access the internet en route, linking digitally supported intermediary platforms; transport resources that are shared collectively are simply more efficient. From a user perspective, all these mobility options—walking and cycling, bus or rail, shared automobiles—should be conceived as an interconnected, intermodal mobility system that needs to be flexibly adaptable to individual mobility decisions. Only design can convey the significance and value of these new, progressive modes of mobility to users with immediacy and while they are moving. What is necessary, therefore, for purposes of design work is a systemic perspective that bears in mind all components of the mobility system: from bicycle racks to transport vehicles, and all the way to station concourses. Each of these individual elements communicates to users forms of access to the mobility system as a whole, including its linkage with digital information and communication. The task of design is to mediate between the human individual and the mobility system to have a positive impact on user experience. Design optimizes access while enabling identification (the »Offenbach model«).

Accordingly, the focus of design research is on the quality of the mobility experience of users during their interaction with the intermodal mobility system. In order to arrive at well-founded assessments of the impact of design decisions, dynamic two-dimensional visualizations are utilized on the basis of transport system data to develop mobility scenarios, which are in turn tested and evaluated in virtual-reality test situations. With the integration of various user groups (participatory design), this research approach allows us to conceptualize fundamental and empirically grounded design approaches. The results can then flow into the development of design guidelines and concepts. A further resource for design research is the development of concepts in relation

to concrete problematics that anticipate desirable developments, which then become possible through the design artifact. Fundamental, always, is a systematic approach that consistently conceptualizes the intermodal mobility system as a dynamic system that is configured through active use by mobile individuals (connective mobility). The design artifact, then, is to be understood as a mediating element within the larger mobility system. A particular challenge for designers of intermodal mobility systems is the configuration of mobility hubs. For environmentally friendly mobility, particular attention must be devoted as well to the considerable importance of nonmotorized mobility (active mobility). And emerging together with the formation of a digitally supported information and communication space, not least of all, is an extension of the mobility system (augmented mobility), one that opens new perspectives for designing modes of interaction between the human individual and the mobility system, which in turn require further investigation.





