

mobil.TUM 2024 – The Future of Mobility and Urban Space, April 10-12, 2024

## Experimental and participatory governance of mobility hubs in urban sustainable transitions

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Keywords: *multimodal, mobility hubs, participation, experiments, inclusivity, governance*

This work addresses the following topic(s) from the Call for Contributions:  
(Please check at least one box)

- Placemaking to integrate urban spaces and mobility
- Promoting sustainable mobility choices in metropolitan regions
- Governing responsible mobility innovations
- Shaping the transition towards mobility justice
- System analysis, design, and evaluation
- other: \_\_\_\_\_

### Extended Abstract

#### Problem statement

The socio-ecological transformation requires a shift towards more environmentally friendly and inclusive modes of urban mobility. One important driver of sustainable mobility transitions is the expansion of multimodality, which allows people to time-effectively and smoothly use different mobility modes, e.g., driving a shared bike after a tram ride. Mobility hubs are dedicated and well-visible physical locations where people can switch between different modes of mobility, such as public transport and shared mobility services. Currently, many European cities developing and implementing mobility hubs face challenges like contested redistribution of public space, infrastructure conversion, fragmented stakeholder constellations with different interests and needs, and, not least, the great depth of intervention in people's daily routines. In other words, implementing mobility hubs can provoke active and often controversial public debate. On the other hand, mobility hubs can only serve as an offer; they depend on citizens' acceptance and active usage to be successful. In particular, the needs and barriers of vulnerable users need to be taken into account to create inclusive mobility hubs usable for all.

#### Research objectives

Participation can not only create legitimacy and acceptance for different policy outcomes but also integrate different perspectives into the planning and implementation process located on the input or procedural stage of the policy cycle. First, research on shared mobility, for instance, shows an unequal distribution of more male and well-educated users with comparatively high incomes. At the same time, other potentially vulnerable non-users do not profit from these mobility services but suffer from negative externalities such as blocked sideways (e.g. from parked shared scooters). In order to take into account the diverse requirements of potential users of a mobility hub, participatory elements are of central importance. Secondly, research shows an underrepresentation of vulnerable-to-exclusion groups in participation formats. Vulnerable users are individuals who encounter difficulties and barriers to using mobility services based on different characteristics such as gender, income, physical or mental conditions, and others. Moreover, these characteristics are often intersectionally intertwined or can reinforce each

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other. In this paper, we aim to examine the following research questions: How can participatory governance help increase democratic integration and inclusivity of mobility hubs? What criteria can be used to examine participatory processes?

### **Methodological approach**

Theoretically, this paper operates with a participatory and experimental governance lens. Participatory governance emphasizes the active involvement of citizens at various levels (local, regional, national, supranational), in different forms and venues (including on-site meetings and online formats) and assumes a dynamic relationship between the participating stakeholders and citizens and the organizers, often in the form of public authorities. We understand experimental governance as an instrument to promote or accelerate innovation by testing and developing new types of solutions, technologies, and services. Based on these theoretical considerations, we describe and elaborate on the SmartHubs democratic integration ladder that conceptualizes different stages of participation. We especially emphasize the role of vulnerable-to-exclusion groups in participation formats. The democratic integration ladder varies from no involvement to appropriate representation of stakeholder interests, to deliberate engagement of stakeholders to integration of different knowledge to social learning as the highest stage of the ladder (see Geurs et al. 2023).

In practice, we examine if and how various participation processes lead to a higher outcome on the integration ladder, thereby implicitly enhancing the acceptance and legitimacy of the planning and implementation, and creating more inclusive and usable mobility hubs. In the context of the European research project SmartHubs, researchers conducted participatory stakeholder workshops, experimental design games played with residents and other local stakeholders, and co-creative workshops with digital pillars in four living labs across European cities (Vienna, Munich, Rotterdam-The Hague, and Brussels). Living Lab Reports, as well as internal documentation on these experimental participation processes, serve as the empirical base for this paper. Additionally, we conduct a qualitative content analysis on the local sustainable urban mobility plans (SUMP) and other policy documents to gain further knowledge regarding mobility planning and participation and stakeholder involvement in the local case studies.

### **(Expected) results**

The paper enriches current academic literature with additional empirical results from the mobility sector and helps systemize participation formats according to the democratic integration ladder. Additionally, the results from the four Living Labs will be contextualized using local and regional mobility policies. Thus, the results are embedded in a multi-level context of local governance arrangements. We contribute to a better understanding of how to evaluate participatory processes in local and regional contexts, especially regarding vulnerable-to-exclusion groups. The results extend the growing academic literature on participatory governance within the mobility sector and offer practical knowledge for further participation processes across European cities.