Urban future-making: Professional agency across time and scale

Research Training Group (RTG 2725)

HafenCity Universität Hamburg (HCU)
Technische Universität Hamburg (TUHH)
Universität Hamburg (UHH)

Research Programme

The overall investigative objective of the research training group is to develop a comprehensive account of the strategies used by professionals involved in urban future-making. Research will take into account the specific conditions in which experts and administrators assume agency as intermediaries and potential future-makers in our contemporary society, confronted with the materiality of existing buildings and infrastructures while responding to new urgencies and societal quests for shaping more sustainable futures. To meet this objective, the research programme is organised into three distinct project groups, which we call "tracks". The tracks are both a *conceptual* tool for structuring research interests and an *organisational* tool for structuring disciplinary and interdisciplinary conversations. Thus, whereas track 1 focuses on the perspectives of the social sciences and track 3 on those of the built environment disciplines, track 2 builds on systematic dialogue between reflection-oriented and solution-oriented disciplines. At the same time, the participating researchers of each track assume rotating responsibility for curatorship of collective activities over the span of the three years.

In terms of research interests, the three tracks have the following foci:

(1) **Track 1 (framings):** the first research track examines how the current urgency to act in the light of future challenges is framed discursively, as well as how this is negotiated in public, policy and professional debates, and how it is institutionalised in new governance and regulatory frameworks. The key objective is thus to analyse the diverse (e.g. discursive, institutional, political) structures and mechanisms that generate urgency and frame individual and organisational agency related to the future of the urban built environment.

(2) **Track 2 (strategies):** The second track analyses how actors in relevant professions engage in designing, planning and engineering transformative change in urban settings. The key objective is to investigate strategies through which experts and administrators involved in various roles concerning the future of the urban built environment respond to evident urgencies, deal with uncertainties and negotiate the temporal and scalar tensions inherent in their professional activities and decision-making processes.

(3) **Track 3 (interventions):** The third track investigates the methodologies and decision criteria to better inform urban interventions in the light of new urgencies and shifting professional values and normativities that challenge established routines and solutions. The key objective is to elucidate the methodologies through which experts and administrators (can) intervene and implement more responsible and reflexive solutions to shape the future of the urban built environment.

Furthermore, running transversal to the logic of the three tracks is the empirical common ground of the research areas and doctoral research projects. This encompasses three types of empirical phenomena: *labs, architectures* and *infrastructures*. Labs, architectures and infrastructures are currently mobilised and addressed in urban future-making in important ways as sites, objects and vehicles of purposeful decision-making that aims at bringing about transformative change in mobility systems, energy provision and material use. The organisation of the research programme based on these three phenomena provides for coherence and structures the interdisciplinary dialogue; it is meant to serve as a heuristic to allow for a systematic empirical investigation of professional agency that is equally open to contributions from the social sciences and built environment disciplines. Thereby, labs, architectures and infrastructures are understood to be marked by distinct spatio-temporal modes of action: the lab being traditionally marked by restricted access and short time spans of experiments; architectures being understood as artefacts with limited boundaries and projected lifespans; and infrastructures being thought of as networked across cities and long-lived. However, in response

to the changing boundary conditions of urban future-making discussed above, i.e. new digital technologies, new organisational forms and new values, these temporal and scalar logics are currently being reconfigured, with multiple and largely unexplored consequences for professional agency. This opens fruitful ground for empirical investigation:

Labs have traditionally served as sites and tools for experiments, confined to a certain enclosed environment. When specifically related to the built environment, they have typically allowed for testing new materials and technological solutions in design, planning and engineering with restricted time and budgets, and also with restricted access and actors/users. With labs as integral parts of contemporary urban future-making, this traditional meaning is changing: the urban lab is now the key arena for disruptive deliberation through experiments, using digital tools and various forms of co-creation (Halpern et al., 2013; Bulkeley et al., 2019). When transferred from the pristine scientific laboratory to the contaminated urban mess, the experiment moves from the laboratory to the field. The experiment in the urban field strives for immersion, foregrounds contingency and aims at situative learning. How to institutionalise these experiments and upscale and outscale innovative solutions, however, is open to debate (Schneidewind and Scheck, 2013; Turnheim et al., 2018).

Architectures have traditionally been understood and designed as clearly bounded artefacts and singular elements of the built environment. They were projected to have specific lifespans, clearly defined functions and users who were assumed to follow typical patterns of use (Cupers, 2013). As part of contemporary urban future-making, architectures are mobilised in new ways: Boundaries between material and immaterial components and physical and virtual conditions are understood to be fluid (Burry, 2020). Design methods emphasise multiplicity, with a particular focus on the interplay between permanent morphologies and preservation, on the one hand, and flexibility, adaptability and temporary use of architectures on the other (Gausa et al., 2003; Bögle et al., 2014; Fusi, 2019). This implies combining a sustainable long-term use of built structures with possibilities of constant renewal by technical appliances and finishing. Supported by digital tools and novel forms of architectonic robots and simulations, designers, planners and engineers can also interact with users. The latter are thus given an increasingly active role in adapting architectures to future demands.

Infrastructures have traditionally been conceived as the large-scale and long-lasting hardware of cities (Hård and Misa, 2008). They were understood to provide basic services based on standardised needs and the modern ideal of the networked city. Such normative assumptions have been challenged over the past decades (Coutard and Rutherford, 2018). In contemporary strategies of urban future-making, infrastructures are transformed in various ways, as large-scale material networks are complemented with digital and immaterial platforms that operate through radically new temporalities and at multiple scales. Particularly in non-European but also in European contexts, hybridised, improvised and bottom-up types of infrastructure provision have emerged. Moreover, the existing (and aging) material infrastructures need to cope with new requirements, such as lowering carbon emissions, and these demand employing new (digitalised) possibilities to optimise and organise maintenance futures (Gehlen and Schießl, 1999; Gertz et al., 2018; Kapteina and Mayer, 2019). This goes hand in hand with the entrance of new players in providing infrastructure and urban services (Kellerman, 2019; Sadowski, 2020b).

The following matrix (table 1) gives an overview of how the different empirical phenomena are addressed in the research programme. Labs, architectures and infrastructures are investigated under the reflexive, analytical and action-oriented conceptual lenses of the three tracks. This means that a given phenomenon or object of analysis can be observed and studied under the different analytical lenses of framings, strategies and interventions. Track 1 asks against which background labs, architectures and infrastructures are mobilised in urban future-making; track 2 examines how this mobilisation is done; and track 3 develops corresponding methodologies for interventions. As a result, rather than a rigid and unambiguous grid, the matrix inspires dialogue and comparison across themes, methodologies and disciplines. Each field of the matrix is guided by overarching questions, presented in table 1. This is followed by an explanation regarding the international profile of the programme and a detailed explanation of the research tracks and project areas.

Table 1: Overview of research questions according to tracks and empirical phenomena

	TRACK 1: FRAMINGS	TRACK 2: STRATEGIES	TRACK 3: INTERVENTIONS
LABS	How are labs framed as new sites and vehicles of urban future-making, what are the roles of professionals and civil society, and which contestations mark these discourses and narratives?	How are labs performed in strategies of urban experimentation, how do actor constellations and governance structures change, and what tensions arise between short-term experiments and long-term planning under real-life conditions?	How can labs serve to develop new and experimental methodologies of intervention in the built environment, and how can professionals use them for outreach to the public?
ARCHI-TECTURES	How are architectures framed as targets, instruments, and outcomes of urban future-making, how is this framing negotiated in professional and public discourses, and how is it reflected in regulatory frameworks?	How are architectures mobilised to respond to changing time and scale horizons in urban transformations, how does this mobilisation incorporate novel forms of interplay between natural resources, humans and technologies, and what are the consequences for the built fabric?	How can design tools make use of digital technologies in order to respond to shifting professional values and normativities, and how can this be translated into effective regulations?
INFRA-STRUCTURES	How are narratives around new (digital) infrastructures framed in urban future-making, what kind of transport and mobility futures are constructed, and how do these narratives affect regulatory competencies of public institutions?	How are infrastructures transformed in order to bring about transformative change, how is digitalisation used to expand infrastructures temporally and spatially, and which governance arrangements and learning processes characterise these shifts?	How can decision-making around the maintenance and planning of infrastructures be improved in the face of organisational shifts and with the use of digital monitoring?

In terms of regional focus, the organisation of the research programme is open to and also deliberately meant to foster investigations in and across different geographical contexts. Rather than limiting the doctoral projects to a specific regional focus, the programme thus aims for a strong international profile. While European contexts will most probably be prevalent, we will encourage dissertations that cut across European and non-European contexts or that investigate non-European case studies. Comparative methodologies in urban research and, particularly, comparisons between cities in the Global North and South, have gained particular prevalence over the past two decades (McFarlane, 2010; Robinson, 2011; Peck, 2015). This work, together with studies on policy mobility and city-to-city learning (McCann and Ward, 2012; Wood, 2015; McCann, 2017) as well as the global circulation of ideas in design, planning and engineering (Healey, 2012; Faulconbridge, 2013; Rapoport, 2015) will provide important conceptual and methodological foundations. The decisive criteria for defining a regional focus will be the key relevance of cases and/or projects for the research questions of each track. Relevant expertise of the supervisors with regard to specific cities and regions will also be considered. In addition, the feasibility of realising international and particularly non-European case studies, particularly concerning doctoral researchers affiliated with track 3, will also be taken into account.