

Urban future-making: Professional agency across time and scale

Research Training Group (RTG 2725)

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Tracks and research areas

Track 1: Framings of urban future-making

Overall content and aim

Track 1 aims to depict the *framework of agency*. It does so by, first, providing a reflexive lens on the key *mechanisms* through which urgencies are produced and become priorities, and, second, by examining key *frames, narratives and discourses* by which professionals – embedded in wider networks of actors, organisations and institutional structures – seek to respond to particular challenges of urban future-making. The track investigates frames and discourses concerning labs, architectures and infrastructures, conceived as sites and vehicles for new ways of urban future-making.

Project areas, questions and connected thesis topics:

Labs:

The key research interest is to unravel new framings and discourses around experimental urbanism as a mode of urban future-making via bottom-led or participatory planning and design. Thus, a first project area investigates **labs as a means to anticipate key urgencies and provide adapted frameworks to respond to the central emergencies** of our time, such as climate change, environmental health calamities and so on. Indeed, labs are justified as bottom-led and participation-oriented modes of planning and design. They are advocated as vehicles to embed questions of environmental justice, intersectionality and the inclusion of different voices into governance and planning practices. Yet, **labs are also perceived as possible sources of controversies and contestations**. Therefore, a second and related project area examines issues of **conflict and legitimacy related to experimental urbanism**. On the one hand, the involvement of citizens as co-creators (and not just as customers) potentially yields locally appropriate solutions and provides for procedural legitimacy. On the other hand, experiments can contribute to reducing the urban arena to a demonstration site that allows an accelerated scaling of local projects into standardised products and universal programmes. Thus, how can issues of procedural and substantive justice, but also legitimacy, responsibility and accountability, be dealt with when it comes to urban experiments?

Architectures:

The key object of interest here is how conceptions and narratives about the built environment are changing, due to factors such as the pervasive nature of digitalisation, the fluidity of time-space relations and the hybridity of socio-ecological relations that characterises cities. Thus, a first project area analyses **emerging narratives around hybrid architectures** which incorporate physical and digital spaces. Such narratives are exemplified for instance in the concept of the city as a platform ecosystem, where urban space is viewed as a ubiquitously instrumented, self-adjusting, “real-time city”. The emergence of new narratives brings new responsibilities and requirements for professionals and has implications for regulatory frameworks. Therefore, a related area of concern deals with how **norms, planning and urban design codes, but also protocols and rules** that determine levels of digitalised data access, are co-constructed and contested between professionals and other actors such as policy officials, private players and civil society networks. Finally, futurist planning theories have begun to reflect on **cityscapes as made for a variety of human and non-human species**. This involves revising established dichotomies of cities and nature. Thus, what are the new and emergent conceptions about architectures and data ecologies? How are these conceptions co-constructed and negotiated, and what are the implications in terms of regulatory frameworks? How can new conceptions of architecture and planning that overcome anthropocentric limits be fostered?

Infrastructures:

Of key interest here is the emergence of new frames and narratives concerning infrastructures. On the one hand, data are becoming infrastructures or are changing the functioning, scales and scopes of existing infrastructures. On the other hand, the urgent need for lowering carbon emissions requires coming to terms with the materiality of existing infrastructures and changing the perspectives from which transport and mobility systems are designed. A main project area concerns the study of **urban transport futures as they are constructed and prefigured in discourses and narratives**. This includes understanding negotiations between divergent narratives formulated by different social actors and their chosen methods to achieve more sustainable futures. Thus, emphasis is placed on how professionals need to mediate between very different time frames and expectations stemming from civil society networks, such as ecological initiatives, but also from public officials and vested interests in the mobility and urban transport sectors. What is the impact of these narratives in influencing and transforming spatial planning frameworks? A further project area revolves around the **pervasive nature of digital infrastructures, analysing their new governance conditions, with new rules and protocols, and issues of inclusion and exclusion in data access**. Data are analysed as serving as a site of contestation between urban actors and the providers of digital platforms. How do these processes undermine public institutions' competencies by both limiting access to data and exceeding public regulation?

Analytical apparatus and methodology

The track will make use of analytical and methodological frameworks from social science disciplines. It privileges qualitative and grounded methods of investigation based on single or comparative case-study analyses, participant observation, organisational ethnography and urban anthropology. The track welcomes both European and non-European case studies; this is also in line with the provenances of participating researchers and their affiliations.

Track 2: Strategies for urban future-making

Overall content and aim

Reflecting the second research objective, track 2 investigates the ways in which key scalar-temporal tensions are addressed by experts and administrators through particular *strategies* that generate ideas and co-develop solutions for the urban built environment. Hence, track 2 complements and operationalises track 1 in that it intends to go deeper in the analysis of *forms* and *scopes* of agency. Thus, labs, architectures and infrastructures are investigated in this track as strategic devices mobilised to respond to urban urgencies.

Project areas, questions and connected thesis topics:

Labs:

The key object of interest is to understand what happens when experiments are performed in urban environments as small-scale or short-term strategies to instigate larger-scale effects and facilitate longer-term urban change. Thus, a first project area studies the contradictions and missing links between **urban experiments as a controlled arena** that allows the incubation and prototyping of novel solutions **and their translation and "scaling" in the contaminated urban mess**. Are design experiments (e.g. 3D modelling, digital fabrication) effectively scalable, and how do they support the transfer between the digital and physical worlds? And how can more complex actors' networks, urban contingencies and situated learning be dealt with? A second project area examines **urban transition strategies via experimental and temporary changes** within the urban structure. Examples are pop-up cycle paths developed by civil society actors and embraced by urban professionals, or real-world laboratories as a special form of urban future-making in which professionals collaborate with science and civil society in creating transition knowledge. Connected to this, a focus is also on urban experiments as bottom-up or grassroots strategies to deliver key urban services, for instance, through socially innovative grassroots-organised water delivery systems. Key questions concern how these experiments allow for changes in governance of urban services that can be scaled up across contexts, providing scope for inter-scalar policy learning. Yet, in strategy-making by means of experimental urbanism, contestations and conflict may arise. This is addressed in a third project area, which investigates the **conflicting temporalities of (participative) experimental urbanism**. Which legal disputes between regulatory levels arise? And how are questions of legitimacy and justice around decision-making for unknown futures resolved?

Architectures:

A key object of interest concerns the interplay between different time and scale horizons in urban transformations, e.g. between temporary projects or forms of “real-time” smart city planning and long-term ambitions. Shifting scale horizons of urban interventions also relate to the emergence of new actor constellations with regard to interventions in the urban fabric, exemplified for instance by the entry of technology corporations as developers of smart cities. Here, a project area of particular interest is a systematic account of the **hybridisation of actor constellations in urban development** and of the impact this hybridisation has on professional standards, practices and learning processes. Thus, how do urban development strategies and planning instruments deal with contradictions between time frames as well as scales of transformation? New hybridities also refer to novel forms of interplay between natural resources, humans and technologies in design strategies and production processes, able to combine maintenance and conservation with constant adaptation of the built fabric. Consequently, a second project area concerns **strategies for more adequate urban design processes** that combine a better preservation of historical heritage and physical materials with a rapid and constant adaptation of buildings and spaces to changing urban conditions. Thus, research will also deal with issues of resource optimisation and material cycles. What are effective strategies to improve the life-cycle management systems of built structures in cities? How do norms play a role in this?

Infrastructures:

Broadly, the key object of interest is to explore infrastructures and mobility systems as instruments of transformative change, spurred by new lifestyles, enhanced digitalisation and smart energy consumption requirements. Thus, a key project area investigates **infrastructure and transport policy as an arena of rapid change** due to demands for emission reduction, with tensions between local and national levels, new constellations of actors due to new participants, both from the private sector (start-ups, etc.) and civil society (NGOs, etc.), and the evident challenge to effectively align strategies across different scales. Thus, the city becomes an arena where energy transition strategies are tested, for instance in the form of socially innovative delivery systems organised from the grassroots, such as energy communities. How do these strategies achieve changes in governance of urban services and develop new energy mixes that can be adapted for other contexts and scales, including inter-scalar policy learning? Focusing on change and transition, another project area sheds light on **governance strategies for infrastructure futures**, questioning the role of the existing socio-material organisation of transport and examining new arrangements to organise responsibilities in infrastructure governance. What governance arrangements are able to effect transformative change in infrastructure systems? What is the role of “contextual” conditions, such as the agency of civil society networks or of disruptive forces such as pandemics or environmental crises, in bringing about change? A related project area examines the **role of digitalisation in governance strategies for infrastructure transitions**. Indeed, it is still unclear how digital tools can take different variables into account in the reconfiguration of mobility systems, including collective participation and user practices.

Analytical apparatus and methodology

Research in this track will apply and, when appropriate, integrate quantitative and qualitative methods of analysis respectively characterising solution-oriented and reflection-oriented disciplines. Solution-oriented disciplines involve methods such as life-cycle management of materials, buildings and infrastructures; transport infrastructure modelling and planning; and design and construction techniques and prototypes. In given project areas and theses, these methodological apparatuses will be complemented and/or confronted with social-science-oriented methods. Projects will be mainly based on in-depth or solution-oriented analyses of single cases but will also allow for comparative perspectives.

Track 3: Interventions in urban future-making

Overall content and aim

Track 3 draws key lessons around *methodologies* and *solutions* for urban interventions that can inform practices used by experts and administrators dealing with urban future-making. Methodologies and solutions refer, e.g. to (improved) decision-making criteria, and to informed planning and design approaches that can better incorporate scale and time tensions into urban interventions. Thus, in this track, labs, architectures and infrastructures become vehicles for outscaling innovative interventions through improved methodologies.

Project areas, questions and connected thesis topics:

Labs:

Of key interest in this track are the potentials and limits of urban labs as vehicles for new intervention methods in the built environment. Thus, in a first project area, **participation and experimentation are set in relation to the engineering design process** (such as digital design tools, parametric design, BIM and models in the design process). While engineering solutions are typically tested in closed environments, this area asks how to turn the engineering design process into a more open and inclusive type of experimental setting. Can built environment professionals effectively reach out to a wider set of actors to inform and improve the architectural and engineering design and implementation processes? Alongside this, another project area investigates **new experimentations in contemporary design tools and methods**, related to events such as workshops (e.g. “Bauforum”), expos and coordinated planning processes (e.g. Basel-Klybeck), but also to production processes (such as green architecture or digital fabrication). Key research questions relate to how these experimental modes of design and planning can inform methodologies and provide adequate solutions for urban interventions.

Architectures:

A key project area concerns **lessons for effective interventions that reduce energy consumption in existing building stock**. Often, lowering carbon emissions in the built fabric means taking drastic decisions about maintenance and preservation versus change and transformation. This involves taking into account technical and expert knowledge, but also relying on wider norms and values concerning preservation versus radical change. A second project area therefore deals with the **role of consolidated norms and standards** in decisions about whether to preserve or instead transform the existing building stock. How do building norms allow for change and innovation and how do they restrict? This also relates to durability and energy optimisation in building structures: What are or could be the interests of professionals and other actors (in the private sector, for instance) to reduce consumption of building materials and/or change norms accordingly? Decarbonising interventions do not only concern the fixities of built structures. On the contrary, they should take into account the urban fabric as a whole, including the design of open spaces. Thus, a further research area looks at how **open space design can expand into the urban fabric**, opening up innovative opportunities for decarbonisation and initiating more sustainable practices.

Infrastructures:

A key project area relates to issues of **heritage preservation or restoration concerning large-scale transport infrastructures**, such as tunnels or bridges. A key question is how to incorporate different values and decision criteria in engineering interventions concerning the conservation or abatement of heritage infrastructures, ranging from technical criteria to value-led and cultural criteria. How can new forms of monitoring, such as digital monitoring, incorporate these values and criteria? Consequently, how can decision-making around the maintenance and planning of infrastructures be improved with the use of digital monitoring? A second important project area asks how to develop **more effective impact and process monitoring and evaluation in transport planning**, beyond the conventional scenario approaches that fail to incorporate valuable criteria related to climate change adaptation and impact.

Analytical apparatus and methodology

This track mainly mobilises the expertise of solution-based disciplines. Yet this expertise is supported by methodological frameworks of social science disciplines, which help to build a reflexive approach to the agency of professionals. The track starts from the methodological framework of solution-oriented approaches and works towards extending this framework by both drawing from the analytical toolbox of the social sciences and widening the time and scale horizons of decision-making.