

Places matter: examining the overlooked geographies of smart city transitions

Summary

The Academy of Architecture and Urban Studies at Tallinn University of Technology (TalTech) invites applicants for a 4-year PhD position in the field of Urban Innovation and Smart City Development. The PhD candidate is expected to apply qualitative research methods to develop new insights into the unfolding, assemblage, and governance mechanisms of smart city transitions, but with a focus on the Global South and small urban contexts - the overlooked geographies of smart city transitions. This PhD position is full-time and fully funded. Funding for this PhD Project is provided by the Horizon 2020 European project FinEst Twins (Funded under: H2020-EU.4a, Overall value: €32 million, Duration: 2019-2026). The PhD position is part of this prestigious European project, which aims at establishing a new multidisciplinary Smart City Center of Excellence in Estonia and is the result of a joint venture between Tallinn University of Technology (Estonia), Aalto University (Finland), and Forum Virium Helsinki (Finland). Hosted at TalTech, the Smart City Center of Excellence will boost smart city research and translate scientific results into real-life innovations, by supporting the design, experimentation, and scale up of user-driven smart city solutions to urban challenges. In order to achieve this aim, the Center will mobilize all leading smart city actors and stakeholders in Estonia and facilitate the establishment of innovation partnerships with the counterparts from the Helsinki region, in an effort to capitalize on the scientific research, innovation and entrepreneurship potential of the Finnish-Estonian macro region. The Center will also establish solid collaborations with existing world-leading smart city centers. The four-year PhD position at TalTech will make it possible to conduct research under the supervision of experienced professors and researchers working in the field of smart city transitions. The proposed project is highly international, and the successful candidate will have the possibility to engage with a broad network of leading universities and research centers which are already collaborating with the supervisory team. These collaborations include representatives of Massachusetts Institute of Technology, University College London, Copenhagen Business School, City University of Hong Kong, The University of Edinburgh and Erasmus University Rotterdam, just to name a few.

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| Research field: | Building and civil engineering and architecture |
| Supervisor: | Prof. Dr. Luca Mora |
| Availability: | This position is available. |
| Offered by: | School of Engineering Department of Civil Engineering and Architecture |
| Application deadline: | Applications are accepted between September 01, 2021 00:00 and September 30, 2021 23:59 (Europe/Zurich) |

Description

Smart city development exposes the coevolutionary nature of technology and society, as well as the systemic character of innovation. Bringing new technologies into society is not sufficient to improve urban sustainability. For this goal to be achieved, a sociotechnical transition path must be created through complementary actions, whose cumulative effects make it possible to replace a stabilized technological trajectory with a new configuration that works. During this transformation process, that we call *smart city transition*, the sociotechnical systems of an urban environment are subject to multi-dimensional changes which enable the introduction of smart city technologies into the built environment. These changes set in motion a dynamic learning environment, on-site experimentation with sociotechnical innovations for smart cities, institutional reconfiguration processes, and other complementary changes which support the wider adoption of smart city technologies and make it possible to solve issues of technical and social adaptation.

Smart city transitions have become a key subject matter of investigation in urban development studies. However, an excessive north-centric focus has grown in smart city research, which has also shown a strong preference for the examinations of smart urbanism in large cities. The proliferation of smart-city-related visions and debates of urban futures in the Global South has been largely overlooked. And among the overlooked geographical areas we also have small urban communities, such as small towns and cities, villages, and city districts. Recognizing the relevance of this gap, the Smart Cities Marketplace – a community supported by the European Commission who brings together cities, industries, SMEs, investors, researchers and other smart city actors – has launched the “Small Giants” initiative,

which offers access to action-focused thematic networks by which smart city solutions can be developed tailored to the common needs of smaller cities. In-depth cross case analysis of smart city initiatives taking place in these overlooked geographical areas and comparative research that contrasts smart city developments in different contexts is still significantly underdeveloped.

By building on current research connecting policy mobility discourses to smart city transition approaches, this PhD Project will investigate smart city transitions and the sociotechnical developments which characterize this complex transformation process by focusing attention on the geographical entities which have been neglected – partially or completely – within the mainstream smart city literature. By connecting theorizing in smart city research, transition management and system innovation studies, human geography, spatial planning, and critical urban scholarship, this PhD Project will help develop an evidence-based interpretation of how smart city transitions unfold in overlooked geographical contexts and what patterns, regularities (or differences) and stylized mechanisms surface.

Responsibilities and tasks

The PhD candidate shall produce new insights into the conceptualization, unfolding, assemblage, and governance mechanisms of smart city transitions in the Global South and small urban contexts. The PhD project will be conducted by adopting a qualitative research design. Examples of data collection and processing techniques that could be considered in the framework of the study include, but are not limited to, interviews, surveys, focus groups, participant observation, computer-based content analysis techniques for thematic coding and clustering. The research activity shall be theoretically grounded. The PhD candidate shall be responsible for identifying and connecting the relevant theoretical backgrounds and for ensuring that satisfying theoretical and practical contributions are produced through the research process. In addition, the PhD candidate shall be responsible for selecting the most appropriate tools and methods for conducting the research activity and detailing the design of the research project. The PhD candidate is also expected to disseminate the results of the research activity by producing journal articles and through the participation to research seminars, conferences, and lectures.

Requirements

The applicants are required to fulfill the following requirements:

- A university degree (M.Sc.) in disciplines related to urban studies. Given the interdisciplinarity of the proposed project, consideration will also be given to applicants whose degrees are related to anthropology, business and management, development studies, economics, human geography, international relations, psychology, public administration, and sociology. We strongly encourage applications from candidates familiar with the above-mentioned qualitative research methods and techniques. Previous experience in the use of qualitative data analysis software (such as Atlas.ti, Leximancer, QDA Miner or others) would be appreciated. Prior contributions or interests related to smart city research and experience in mixed methods are not fundamental requirements, but they would be appreciated.
- Proven ability to carry out independent research and to work as a part of a broader team. In addition, the PhD candidate is required to have a strong interest in the presentation and publication of scientific results in high-quality scholarly journals.
- Good command of the English language (speaking and writing).

The successful PhD candidate is expected to work full time for a duration of 4 years as a part of the Academy of Architecture and Urban Studies.

The PhD candidate is also required to fulfil the requirements of Tallinn University of Technology PhD Program. Additional funds will be provided for research trainings, conferences, and international mobility.



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