Sustainable smart city transitions in the education sector: the case of higher education institutions

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, with a specific focus on higher education institutions.

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

The COVID-19 pandemic has severely hit national education systems, raising awareness of the urgent need to increase system resilience through smart city transition processes. Lockdown and other social distancing measures have caused the largest disruption to learning processes in recent history, with a massive closure of schools, universities, and other higher education institutions. Consequently, education services have been suspended worldwide and the almost universal response to this crisis has been an immediate shift to online education. But this hasty digital transition has exposed the unsustainability of education systems and its incapability to embrace the benefits of digital technology while fulfilling the promise of education for all.

In accelerating the need to digitalizate education systems, the pandemic has exposed the many challenges that obstacle sustainable digital transformation processes in this sector. In examining the policy responses to school closures, for example, OECD describes the creation of online learning platforms to support students, their families, and teaching and learning workforce as an almost universal reaction in both developed and developing countries. However, the demand for remote learning has exacerbated existing digital divides within and across countries; most children, youth, and young adults in low- and middle-income countries still lack access to broadband connection and digital devices. Therefore, they will always be at risk of being left behind. Also, initial studies confirm that all users, no matter their role, have all been struggling with the rapid transition to online learning, due to different needs for training. In addition, relevant questions have surfaced around what changes to existing business models, regulatory frameworks, and governance systems should be enacted to ensure the long-term sustainability of digital education programmes.

In the light of the existing knowledge gaps and urgent need for innovation, the PhD Project will investigate smart city transitions and the sociotechnical developments which characterize this complex transformation process by focusing attention on the education sector. 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 higher education institutions and what patterns, regularities (or differences), and stylized mechanisms can be sourced from existing cases, in an effort to inform future policy and practice.

Responsibilities and tasks

The PhD candidate shall produce new insights into the conceptualization, unfolding, assemblage, and governance mechanisms of smart city transitions in education systems. 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 Architecture. We strongly encourage applications from candidates familiar with 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 experience in conducting creative work in the field of architecture and/or research activity linking architecture to sociotechnical transitions in higher education institutions.
- 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.

To get more information or to apply online, visit https://taltech.glowbase.com/positions/384 or scan the the code on the left with your smartphone.