

Smart and Connected Cities and Communities Minitrack (Introduction)

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The complex nature of cities and communities and the rapid population increase in the last decades has encouraged city governments to implement Information and Communication Technologies (ICTs) to reform city governance models.

In some places, it resulted in a more collaborative and participative approach, allowing municipalities and urban communities to face new challenges in an efficient way. In other cities, ICT was implemented in a top-down manner, and focused on economic or political goals rather than participation or co-governance. This provoked criticism and concerns over privacy, increased surveillance, and lack of control over algorithms, data management or other smart solutions. Learning from both positive and negative examples of ICT implementation allows us to better understand tradeoff and opportunities related with rise of smart communities and connected cities.

A smart and connected community can be conceptualized as one that synergistically integrates intelligent technologies with the natural and built environments, including infrastructure, to improve the social, economic, and environmental well-being of those who live, work, or travel. Building on the notion of community informatics, smart communities can be seen as enabling and empowering citizens and supporting the individual and communal quests for wellbeing.

Although the literature is rich in references to smart cities and communities, this is still a developing and fuzzy concept that is not used consistently. Despite the different definitions and studies, there seems to be agreement on the fact that smart cities and communities is a multidimensional and multifaceted concept that goes beyond the mere use of technology and infrastructure.

In addition, considering the technology as a necessary condition to become smart, it is not the only one. City administration and community management,

information integration, data quality, privacy and security, institutional arrangements, and citizen participation are just some of the issues that need greater attention to make a community smarter today and in the near future.

The literature on smart cities and communities is fragmented, particularly in terms of the strategies that different cities and communities should follow in order to become smarter. What most of the literature does agree on is that there is no one route to becoming smart and different communities have adopted different approaches that reflect their particularities.

Also, the advent of emerging technologies such as artificial intelligence, open government, open data, big data, blockchain, chatbots, sensors and so on, have opened new avenues for reforming smart governance in the urban and communities' contexts, which fosters new research on this area.

In this minitrack we focus on ICT as an important tool for both policymakers and communities in modern cities, which needs to be better understood in terms of consequences of its fast-paced implementation, to avoid unintended negative effects on quality of life and human rights. While the smart city idea incorporates ICT to enhance the quality and performance of urban services, its critics point out that technological development should not be a goal, but a tool to achieve better conditions for all residents. In this process citizens' needs and preferences should remain the driving values.

Similarly, in research concerning smart cities and connected communities, we should remember about the need to study and theorize the consequences of technological developments in the context of urban policymaking as well as citizens' needs and quality of life.

To address those two issues, both the political and social consequences of ICT implementation remain the focus of this minitrack. This includes the often-

overlooked citizens perspective analyzed through the 'right to the city' lens, defined by Lefebvre as freedom to make and remake our cities according to principles of democracy, equality and social justice.

The four papers included in this minitrack represent different methodologies, theories, conceptualizations, and assessments of smart and connected cities and communities. Together, they offer a platform for discussion of emerging and innovative research in this area as well as on practical tools for professionals involved in the design and implementation of smart cities initiatives.

In the first paper of this minitrack, "Examining Experiences Concerning Goals Pursued and Smart Dimensions to Develop in Cities on their Path to Become Smart. The Case of Costa Rican Cities", authors Isabel Cristina Pereira Piedra, Manuel Pedro Rodríguez Bolívar and Laura Alcaide Muñoz analyze the opinions of the ICT managers from local governments concerning the initial stage of cities undergoing smart transformation. While analyzing Costa Rican cities, authors focus on the technological implementation strategy that the municipalities are using. Their findings describe technological strategies that can be used to facilitate the implementation of smart solutions in cities, as well as enable the achievement of the desired results.

In the second paper, "A Comparative Analysis of Seven Smart City Development Projects: Institutional, Economic, Technical, and Policy Perspectives", the authors Jeongbae Choi and Carlos E. Caicedo argue for the use of a multifaceted, and contextualized approach to smart city development by unpacking how individual smart city initiatives have planned and implemented diverse projects based on their distinct environments, stakeholders, and goals. The authors evaluated and compared the institutional, economic, technical and policy characteristics of seven smart city initiatives to demonstrate three principal implications in smart city development: a) different project models in terms of leadership and governance styles, adoption of smart city applications, planning and management strategies; b) differences stemmed from the multifaceted interactions that link environment, stakeholders, and goals; and c) the crucial role of knowledge management in ensuring the accumulation and transferability of organizational and policymaking infrastructure within and between smart city initiatives.

The third paper is entitled "Intellectual Disability, Digital Technologies, and Independent Transportation – A Scoping Review". Its authors, Mugula Chris

Safari, Sofie Wass, Silje Haugland and Elin Thygesen seek to identify and map existing research on digital technologies supporting the independent transport of people with intellectual disabilities. Their findings show that digital technology support has a positive impact on independent transportation and therefore has the potential to help achieve goals connected to inclusivity, safety, and sustainability. Authors also point out to the existing barriers to progress, resulting from societal attitudes and structural obstacles that people with intellectual disabilities face. While aspects of how digital technologies can assist in overcoming the complexities connected to transport were not addressed in the studies, this scoping review can be a starting point for novel discussions. Authors also define important knowledge gaps relevant for planning further research in the field.

Finally, in the paper "Building Climate Resilience in Smart Cities Using Open Data Service", the authors Viljam Ahdekivi, Hadi Ghanbari and Matti Rossi seek to understand how smart cities can achieve climate resilience. Conducting an exploratory field study and using the urban climate resilience framework as a theoretical lens, they suggest that smart cities can leverage the potential of open data and citizen engagement to reach climate resilience, because building urban environment to face climate emergency requires structural changes in governance and grassroots participation. However, to effectively collect and use open data, privacy and security concerns must be addressed to increase citizen trust and create a positive cycle of participation.

These four selected papers advance the goal of this minitrack by helping to build on our understanding of the foundations of smart cities and communities as a study area and as a political and technological practice priority. Through these efforts to better understand the challenges of becoming smarter and the impact of these initiatives on citizens right to the city, the papers contribute to analytical and practical developments and trends in urban innovations. More specifically, they deepen our understanding of governance elements and the importance of multi-stakeholder collaboration in data collection and application for the development of smart cities and communities, including the design of collaboration tools and digital ecosystems. They also call our attention to the challenges of scaling-up smart city pilots and developing initiatives towards smart cities implementation and smart community development.

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