

Smart and Connected Cities and Communities Minitrack (Introduction)

Mila Gasco-Hernandez
University at Albany, SUNY
mgasco@ctg.albany.edu

Manuel Pedro Rodríguez
Bolívar
University of Granada
manuelp@ugr.es

Taewoo Nam
Sungkyunkwan University
namtaewoo@skku.edu

Communities around the world are entering a new era of transformation in which residents and their surrounding environments are increasingly connected through rapidly-changing intelligent technologies or smart technologies. This transformation, which has become a top priority for city governments and communities, offers great promise for improved wellbeing and prosperity but, also, poses significant challenges at the complex intersection of technology and society.

Although literature is rich in references to smart cities and communities, this is still a developing and fuzzy concept that is not being consistently used. Despite the different definitions and studies, there seems to be agreement on the fact that a smart community is a multidimensional and multifaceted concept that goes beyond the mere use of technology and infrastructure. Although technology is 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. In addition, the literature on smart cities and communities is fragmented, particularly in terms of the strategies that different cities and communities follow in order to become smarter. There is no one route to becoming smart and different territories have adopted different approaches that reflect their particular circumstances.

The seven 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 subject.

In the first one, “Impact of Governance Structure Characteristics of Public-Private Partnerships on Smart City Project Success: Evidence from a Multi-case Study in China”, Luning Liu, Jingrui Ju, Yuqiang Feng, and Qing Hu explore the opportunities and

challenges of building smart cities through public-private partnerships (PPP) in China. By conducting and analyzing interviews with officials and personnel from public, private, and hybrid organizations involved in smart city projects, the authors propose a framework that includes two key components of the success of smart city initiatives (data integration-oriented and citizen service-oriented performances), four key governance structure characteristics of PPP that enable smart city success (top-level planning by the local government, government-dominant infrastructure construction, hybrid organizational platform as a general contractor, and deep involvement of numerous private partners), and two key considerations for establishing the governance structure of a PPP model (communication-related and relation-related costs).

In the second paper, “A Framework for Understanding and Classifying Urban Data Business Models”, Shane J Mcloughlin, Abhinay Puvvala, Giovanni Maccani, and Brian Donnellan develop a framework for understanding and classifying Urban Data Business Models (UDBM) by analyzing 40 publicly funded and supported business model experiments that address pressing city challenges under one initiative (Organicity).

The third paper, “Public Libraries as Anchor Institutions in Smart Communities: Current Practices and Future Development”, discusses the role of public libraries in building smart communities. Shannon Mersand, Mila Gasco-Hernandez, Emmanuel Udoh, and Ramon Gil-Garcia, its authors, analyze innovative practices in public libraries across the United States and argue that they already show the potential of public libraries to become catalysts for smart and connected communities. Together, the innovation presented in the paper represent an opportunity for governments and communities to engage and a new way to think about public libraries as very important actors in smart community initiatives.

“Study of Individual Differences in the Behavior of Technology Users in the Context of Urban Mobility” is the fourth paper of this minitrack. In it, Marcia Cassitas

Hino and Maria Alexandra Cunha investigate how individual differences influence the behavior of urban mobility service technology (women) users in the context of Brazil. By using qualitative structured interviews, questionnaires, and demonstrations, the authors show the influence of individual characteristics, and present five distinct behavior profiles: the safe and technological woman; the discreet and basic woman; the woman experiencing self-discovery; the practical and decisive woman; and the free and independent woman.

In the fifth paper, “In the search for the ‘smart’ source of the citizen’s perception of quality of life in European smart cities”, Manuel Pedro Rodríguez Bolívar analyzes European smart cities in terms of their contribution to quality of life (QLF). His findings indicate that citizens perceive that smartness increases QLF. Yet, those perceptions are mainly focused on the outcomes rather than on the process to obtain such outcomes.

Katharina Ebner, Patrick Mattes, and Stefan Smolnik are the authors of the sixth paper, “Are you responsible for traffic congestion? A systematic review of the socio-technical perspective of smart mobility services”. As the title reads, the authors address smart mobility services from both a technical and a socio-technical perspective and describe the challenges related to the involvement of road users. They call for more research on smart mobility services that account for long-term user involvement that can positively influence road users’ practices and routines.

Finally, the last paper, “The bright and the dark side of smart lights: The protective effect of smart city infrastructures”, investigates the protective effect of smart street lighting on public safety. In particular, using a comprehensive dataset on the crimes committed in downtown San Diego (California) during May 1st, 2017 and April, 30th 2018, Cristina A. Mihale-Wilson, Patrick Felka, and Oliver Hinz investigate the crime rates before and after the installation of smart lights in the area. The results of the empirical analysis suggest that smart lights have a statistically significant negative impact on crime and that their installation increases the safety of citizens.

These seven papers all contribute to the minitrack’s goal by helping to build on our understanding of the foundations of smart cities and smart communities as a study area and as a practice priority. Through the efforts to better understand the challenges of smart cities and smart communities, the impact of these

initiatives as well as the orchestrated interplay and balance of smart governance practices, smart public administration, smart communities, smart resources and talent leverage in urban, rural, and regional spaces facilitated by novel uses of ICT and other technologies, the papers contribute to analytical and practical developments and trends.