8-10-2022

Empowering Citizen-Centric Innovation for Effective Smart City Initiatives: A Location Intelligence Perspective

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TREO Talk Paper

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Abstract

The world population continues to inhabit and move toward urban areas. This global population shift has dramatically changed the notion of a modern city even from a few decades ago. Many cities have turned to digital technologies in response to rapid growth and demographic changes. Such technologies rely on sophisticated sensor networks (van Zoonen, 2016; El-Haddadeh et al., 2019), infrastructure modernization (Khatoun & Zeadally, 2016), and advances in efficiency and sustainability (Sakurai & Kokuryo, 2018) to ensure outcomes related to a higher quality of life (Gascó-Hernandez, 2018).

Researchers have examined participatory government and location intelligence in the context of smart cities. We expand on this work by exploring a) how citizen sensing methods can provide dynamic location-based data collection, b) how interactive location analytics can foster citizen engagement and participation, and c) how geo-visualization can improve citizen awareness. Citizen sensing is a method of deploying citizens and mobile devices to collect essential data for smart cities. Citizen engagement and participation determine how to include citizens in smart city decision-making. Citizen awareness addresses how smart cities can impart essential information to their citizens.

Smart governance, such as public participation in decision making, policies and regulation, and urban digitization, can empower citizen-centric innovation. Similarly, citizen-driven initiatives, including participation in public life and an affinity to contribute to their social fabric, also lead to innovation. Therefore, our work will utilize a case approach by capturing the perspectives of official representatives and citizen groups. Moreover, our study will rely on semi-structured interviews with individuals representing municipalities in various countries (e.g., Brazil, Columbia, Germany, and the United States).

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