Personas, the Pandemic, and Inclusive, Synthetic, Smart City Planning

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ABSTRACT

In the era of COVID-19, planners, and more broadly, city administrators and policy makers, have learned to cope with the accelerated pace of change, the broad band of uncertainty, and the need for rapid decision-making strategies. In the context of ever more diverse communities and greater reliance on technology as an effective response to the social and public health challenges of the pandemic, "smart" cities harness distributed communication and service delivery technologies to enhance the quality of urban life. The voices of citizens from marginalized and under-served populations, such as older adults and people with disabilities, are vital to the development of inclusive smart cities. In this paper, expanding an inclusive policy design approach is proposed that uses 'personas' to actively engage those citizens.

KEYWORDS

Citizen Engagement, Inclusion, Older Adults, People With Disabilities, Personas, Policy Innovation, Smart Cities, Technology

1. INTRODUCTION

The COVID-19 pandemic is at once a global social, governance and economic crisis (Levy, 2021; Maffettone & Oldani, 2020), and a prolonged lesson in the importance of systemic responses that engage citizen stakeholders (Dominguez, et al., 2020; Engelbrecht, et al., 2021). Several challenges have become clear for planners and policymakers: the accelerated pace of change, the broad band of uncertainty, and the need for rapid decision-making strategies (Costa & Peixoto, 2020; LoGiudice, et al., 2020). It has also become clear that crucial stakeholder involvement in coping with these changes involves more diverse communities (Brouselle, et al., 2019; Shin, et al., 2021). Smart cities, undergirded by information and communication technologies ICT) and other ambient technologies such as mobile devices and the Internet of Things (IoT) have the potential to yield sustained benefits to the aspirations, service and resource needs of all citizens, provided that they are able to participate in the policy design process (Ju, et al., 2018; Wanderley & Bonacin, 2019). If anything, COVID-19 has underscored the importance of smart cities as a response to many of the challenges brought by the pandemic (Jaiswal, et al., 2020; Webb & Toh, 2020). Innovative smart city strategies and policy

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approaches benefit from the civic participation of all citizens (Bricout, et al., 2021), including older adults and people with disabilities (Zanwar, et al., 2021) with the stakeholders on the ground best suited to engage with vexing urban problems in a balanced, value-based fashion (Cairns & Wright, 2020; Mehdi, 2020). For older adults and people with disabilities specifically, COVID-19 has led to sudden and stark social isolation due to health and safety concerns (Castillo, et al., 2021; Zasadzka, et al., 2021). COVID-19 has had a disproportionately negative effect on the health of people with disabilities and older adults compared to the general population, with both groups being at greater risk for health problems. Underlying social disparities and social isolation have further exacerbated the direct and indirect ill effects of the pandemic (Kimura, et al., 2020; Totsika, et al., 2021).

During COVID-19 off-the-shelf technology was rapidly deployed to allow for continuity of operational, administrative, and governance functions. Technologies developed using universal design approaches have demonstrated effectiveness in supporting the inclusive employment of people with disabilities, both commercially available (i.e., off-the-shelf) as well as intentionally developed as assistive technologies (Damianidou, et al., 2019). However, key constituencies have not always been considered in the development and deployment process, owing to the rush to maintain work in the uncertain environment; whether in terms of technology access (Woyke, 2019), or in planning (Pineda and Corbun, 2020). The opportunity to make smart cities more accessible and inclusive, can be realized if planners, policy makers and administrators adopt more innovative approaches to develop policies addressing use and deployment of emerging technologies that facilitate citizen participation and engagement. This is particularly the case during the COVID-19 period which has pushed access many services online. Information based communication technologies used in smart cities, such as social media, virtual reality, and teleconferencing rapidly adopted in mainstream life, can also enhance the social connectedness and health of older adults and people with disabilities (Castillo, et al., 2021; Zasadzka, et al., 2021), particularly when supported by inclusive planning approaches such as 'personas'.

'Personas,' are a tool consisting of imagined (constructed) "characters" that reflect a composite of shared individual or group traits (Schultz & Fuglerud, 2020; Thayer, 2014). Personas can enhance the 'smart' engagement of citizens, capturing their social beliefs, dignity and capacity for action, thereby providing the means of capturing underrepresented voices in a multidimensional profile (Wilson, et al., 2018). Personas can assist planners in a co-design process for developing accessible, inclusive urban environments, closing the citizen engagement gap. Personas are typically developed using a combination of naturalistic observations, records, speeches, and interviews while employing a user-centric design that puts the focus on individual needs rather than technological imperatives (Weber-Hottleman, 2021; Silva & Teixeira, 2019; Subrahmaniyan, et al., 2018). Personas can help inform users' decision making, (Petsani, et al., 2020). Exploiting the persona method in the times of COVID-19 is best achieved by carefully selecting accessible technologies that enable virtual communications, user-centered design, and testing in service of persona development. It is also facilitated by ensuring sufficient digital literacy on the part of the users (people with disabilities and older adults), and the resources to participate. The multi-disciplinary team must take on some of these responsibilities, particularly around providing participation resources, education to bridge digital literacy gaps, and vetting the usability of the communication technologies

Technology affordability can be an issue for people with disabilities and older adults. While the cost of innovative assistive technologies may put them beyond reach for some, many technologies of accessibility have become common in routine devices and relatively affordable. Another tack to increase affordability is to adapt costly mainstream technologies for use in a disability context; for example, adapting mainstream mobile communication devices, thereby driving down cost, while also increasing accessibility (Barlott, et al., 2016). Hence, the adaptation of lower cost existing, off-the-shelf, or mainstream technologies may be one answer to the challenges of cost-prohibitive innovative technologies for these populations. In a complementary fashion, inclusive planning and policy making may help to address these gaps, for example making information accessible in public

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