Jomard Publishing

CONTEXTUALISING THE SMART CITY FOR SUSTAINABILITY AND INCLUSIVITY

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Abstract.   The concept of Smart Cities is emerging as a novel way to solve numerous urban issues through highly specialized technology. Geared towards profitability, technology and service providers are marketing Smart City technologies, which contributes to the rapid adoption rate of the concept. However, the emergence of Smart Cities is raising questions relating to ethics, sustainability and inclusivity. There is an urgent need to recalibrate the Smart City concept to respond not only economic prospects but to equally contribute to the livability of cities.

The world is urbanising at an alarming rate and is stressing on natural resources. As cities expand in population, opportunities to economically exploit an increased labour force present itself. However, this unfortunately, in most cases, also equate to an expansion in size which causes numerous problems; including an overdependence on automobile and fossil fuel consumption (Newman *et al.*, 2017). This leads to an unhealthy and unsustainable lifestyle.

Even though the challenges cities face are not unknown, contemporary urban concepts are surprisingly seen to promote solutions that are not responsive and adaptive to local challenges (Mehaffy & Salingaros, 2015). Instead, they promote highly visual narratives void of fundamental theoretical and pragmatic values. There is a surge of varying ideological interpretations and an increasing number of theoretical models highlighting green, inclusive, safe, resilient motives; however, each more confusing in logic than the other (Allam, 2012).

The increasing misconception that modernity and urbanism predominately translate in high end visual renderings is dangerous as it highlights models with attractive narratives that disconnects users to their real world (Salingaros, 2013). Those often share the vision of an urban life in high tech scenarios; disconnected to their surroundings. The increased difficulty with such practices is not only the lack of added value to their immediate context, but also the blind adoption through the translation and transference to other cities.

This blind and quick adoption of 'modern' concepts is unfortunately explained by the need for countries to demonstrate geographical leadership. As political mandates only amount to a couple of years, politicians and decision makers adopt quick solutions to increase the economic performance without much regard to long term liveability levels.

In today's information age, we are often succumbed by the marketing of ideas of perceived progress, where organisations and governments tally an image of an increased wellbeing to practices from a disparate world. This practice is gaining ground in regions that need it the less; countries that fight to achieve a higher economic income, and often cities, and regions that are failing to provide social needs (Allam *et al.*, 2018; Allam & Newman, 2018a; Allam & Newman, 2018b). This is often seen in emerging economies where there is a misconception that contemporary practices will boost the economy, and in turn somehow render a more vibrant, sustainable and liveable urban fabric. Placing the economy over society is a dangerous compromise made by politicians as a desperate act of building a national brand primarily built around the notion of crafting a more adapted to the business world.

Current political models are not adaptable to the sustainability and liveability of cities, as each incoming politician will strive to boost the urban economy in ways that differs from her predecessor. This failure to achieve continuity in policy equally translates to the lack of implementation of projects, which hinders urban development. Interestingly, countries with strong political regimes, like Singapore, have been seen to boost urban development and the economy while rejuvenating the urban fabric to ensure high liveability standards (Gamer, 1972). However, this model can equally be argued to be non-democratic and may be exploited by greedy politicians; like in the case of President Robert Mugabe of Zimbabwe (Bracking, 2009). The question of technique (including governance models) then arises.

Context and technique are thus two dimensions that need to be observed in the planning and implementation of urban projects and concepts. While a technique that is quickly adopted without contextualisation may reap attractive economic gains, the societal fabric may witness noticeable downfalls in the long term. Salingaros (2013) demonstrates this argument by highlighting how the lack of contextualisation, and connection, of 'modern' architectural buildings to its surrounding impact on human sensibilities.

The unfortunate trend of overemphasising economic gains is thus detrimental to society, but the exchange of goods (including resources) and services are the currency on which nations survive. In a drive to positively impact on GDP, which is often the marker of progress in politics, politicians are quick to place economy over society. However, the emphasis on economy in disfavour of society is counterproductive (McGaffneya *et al.*, 2018) as a decrease in liveability levels will eventually subsequently impact on economic productivity. As shared by Roberts (2017), a healthy society has a direct correlation with the performance of cities and countries. Both economy and society thus go hand in hand, and in fact the economy should be seen as a subset of society.

As such, there is a need to craft products calibrated to local needs and to local identities. The novel idea of Smart Cities, through its ability to use technology to connect people with information has the potential of doing this. However, it has been used as an economic tool of branding to further support pillars of trade: through high-tech goods and services. Technology and service providers have hijacked the concept and fed the global economy tirelessly, and cities as consumers have been blind victims of consumerism.

The branding built on the heavy use of technology promises an increase in performance and efficiency in urban management. The promise of increased economic return while contributing to the quality of life of urban dwellers has contributed

substantially to the rapid rate of acceptance of Smart Cities. The marketing moreover has been wise: what's the alternative of Smart Cities? Nobody wants Dumb Cities.

However, there are commendable aspects in the careful integration of technology in cities. There are Smart City models (Allam, 2017; Allam & Newman, 2018a) that ensure the careful integration of human dimensions while encouraging the use of technology. Allam and Newman (2018b) even shares how ensuring the inclusion of societal dimensions in Smart Cities can be the catalyst for financial injection in urban fabrics. This kind of approach can be replicable in different contexts, but the authors warn that careful calibration needs to be done to ensure benefits to both economic and societal dimensions.

In the adoption of Smart City concepts, emerging countries face another dichotomy: that of the lack of capacity to develop technologies that are often sought in such concepts. They then often turn to technology and service providers for supply. In the wake of this, Smart City concepts must not be led by technology or service providers as they are ultimately geared towards profit making. Smart Cities must transcend economic motives to include concepts of liveability; which includes the dimension of sustainability. This can only be done at country and policy level. There is also the underlying and urgent need to further study of biological entities of cities; guiding us towards the need for concepts of urban metabolism, coupled with models of inclusive governance. The use of technology can help towards this as there is an increasing amount of data at our disposal which can further our understanding on the various components of the city.

As Smart Cities revolve around the concept of Internet of Things (IoT), the collection of data can bring numerous added possibilities in the understanding of complex urban environments. The principles of Urban Coherence (Salingaros, 2000) as well as the additional works of Salingaros (1998; 1999; 2008; 2014) regarding how to build more cohesive urban systems can benefit greatly to this process. However, as we engage further in a connected and digital world, ethical concerns may arise as the emerging need of digital privacy will be a primary component affecting the liveability of cities. Urban Governance must be sensible to this and to further ensure inclusive and adaptive environments, Salingaros (2018) points to the need to couple digital tools with identity.

From a perspective of time, cities have witnessed, and adopted, the emergence of numerous planning concepts: Modern, Sustainable, Resilient, Eco, Low Carbon and Knowledge cities (de Jong *et al.*, 2015). Each of those have emerged as response to specific global challenges supported by a race towards economic prosperity. The economic dimension can be seen as constant variable navigating through the various concepts; and service providers have swiftly shifted from one to the other in the aim to increase profitability as they tap into emerging demands from consuming cities. Today, the Smart City is seen as the new novel concept that can solve the numerous challenges of our time. While it does bring numerous tools that can indeed help our urban fabric, a careful integration is required; demanding careful and sensible attention to human needs. A responsive model is needed to the addressing the current numerous urban challenges through an inclusive and holistic concept. If not, tomorrow we may see the emergence of another global trend: The Fragmented City.

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