

## Chapter 2

# Do Smart City Solutions Contribute to the Achievement of the Sustainable Development Goals? Case of Istanbul

**İhsan İkizer**

*Nişantaşı University, Turkey*

### **ABSTRACT**

*Sustainable development and smart city have been two key concepts that are mentioned and referred to in any discussion on our cities. Today, more than half of the people live in cities, and the problems that we face in urban areas ranging from climate change to transportation, from waste management to communicable diseases, threaten the future of our cities and next generations. The Sustainable Development Goals (SDGs) were adopted by the world leaders at the UN Summit in 2015 in order to save our planet, our generation, and next generations. As the problem is global, the solution needs to be global; and as the problem is a result of multiple actors, the solution needs to be provided by the collaboration of multiple stakeholders. Smart city has emerged as a concept that offers several solutions to the urban problems, which also overlap with most of the targets listed in the SDGs. In this chapter, the contribution of smart city technologies to the achievement of the SDGs is analysed through the in-depth case study of Istanbul, a mega city with a population of around 16 million.*

### **INTRODUCTION**

Sustainable development has been an indispensable concept in many disciplines ranging from economics to public administration nearly in the last thirty years. As the years pass, the destructive effects of climate change and environmental degradation are being felt more than ever, and especially policy makers realize that it is not a conceptual or theoretical issue far from the practical life, but a bitter reality.

DOI: 10.4018/978-1-7998-7785-1.ch002

## ***Do Smart City Solutions Contribute to the Achievement of the Sustainable Development Goals?***

Many important steps have been taken till now in order to ensure that our economic development does not endanger the needs of the future generations, and it does not harm social and cultural development of communities. Among these steps, maybe the most significant one is the Sustainable Development Goals (SDGs), which were adopted by the Heads of States and Governments in the United Nations (UN) in 2015. Although there is no mandatory mechanism that enforces the implementation of the SDGs, the central governments have pledged to achieve them, and some of them have presented their national reviews that indicate their progress.

The problems that are referred in the 17 SDGs have not been caused by just one country, or different levels of governments, or business community, or consumers. Multiple actors in multiple countries have carried the stones that have led to the gigantic challenges that we face today. Therefore, the solution, or in other words the achievement of these 17 SDGs requires joint and coordinated action of the entire world, which means local, regional, national and global partnership among all stake holders, i.e. statutory bodies, NGOs, business community and science community. Partnerships organised at different levels are expected to ensure the participation of people, who are also responsible actors as consumers. After all, these goals have been set for the peace and prosperity of people of this generation and next generations, and awareness among people about the SDGs is a key factor to the success.

Among these actors, local governments emerge as extremely eminent actors for two reasons: more than half of the world population live in cities, and they are the closest statutory bodies to people. It is not realistic to expect full achievement of the SDGs without the active engagement of local governments, as nearly two third of the 169 targets of the SDGs fall directly under the realm of local governments (Sustainable Development Goals and Habitat III: Opportunities for a successful New Urban Agenda, 2015). Although, it is central governments that have designed the SDGs, and monitoring the progress of countries is conducted by the representatives of central governments at ‘High-level Political Forum on Sustainable Development (HLPF)’, local governments are expected to be active actors in the implementation of the SDGs, next to central governments, together with other stake holders.

In order for local governments to be effective actors in this challenging task, principles of good governance as well as translation of the SDGs and the targets into local context seem to be essential. Different cities with different size, development level, needs and features naturally have different strategies to achieve the localised SDGs. However, smart city technologies emerge as significant tools to be integrated into localised strategies for accelerating the achievement of the SDGs, especially the SDG 11, which is on sustainable cities and communities. The need for more effective and efficient use of information and communication technologies in cities has been better comprehended during the Covid-19 pandemic. Today, in many large urban areas, local governments use these technologies in various fields from transportation to waste management, in order to make their cities smarter, healthier and more sustainable. Istanbul, the largest city in Turkey, and a city that is bigger than more than 130 countries in the world, with a population of around 16 million, is among the cities where smart city technologies are being increasingly used day by day. In this chapter, the case of Istanbul will be analysed in terms of its smart city applications, and the contribution of these applications to the SDGs will be analysed. The chapter will start by setting the context of the SDGs and the concept of smart city, which will be followed by the discussion on the positive correlation between smart city technologies and sustainable development. The final part will concretize the discussion on the link between these two concepts through the case of Istanbul.

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/do-smart-city-solutions-contribute-to-the-achievement-of-the-sustainable-development-goals/290123](http://www.igi-global.com/chapter/do-smart-city-solutions-contribute-to-the-achievement-of-the-sustainable-development-goals/290123)

## Related Content

---

### Planning Mobility on Transboundary Shrinking Towns

Luciano Alfaya, Patricia Muniz, David Wilkes, Antia Martinez and Camilo Fernandez (2020). *International Journal of E-Planning Research* (pp. 61-77).

[www.irma-international.org/article/planning-mobility-on-transboundary-shrinking-towns/261849](http://www.irma-international.org/article/planning-mobility-on-transboundary-shrinking-towns/261849)

### Performance Evaluation of the National Housing File (FNL) for the Development of E-Governance in the Housing Sector in Algeria

Ouahiba Belhocine, Kahina Amal Djiar and Meriem Lagati (2019). *International Journal of E-Planning Research* (pp. 60-73).

[www.irma-international.org/article/performance-evaluation-of-the-national-housing-file-fnl-for-the-development-of-e-governance-in-the-housing-sector-in-algeria/239856](http://www.irma-international.org/article/performance-evaluation-of-the-national-housing-file-fnl-for-the-development-of-e-governance-in-the-housing-sector-in-algeria/239856)

### Counter-Mapping Practices in Land Regularization Through Geoinformation Technologies: The ÉPURA Group Experience in Cuiabá, Brazil

Andrea Figueiredo Arruda, Cristina Delgado Henriques and Claudio Santos de Miranda (2021). *Methods and Applications of Geospatial Technology in Sustainable Urbanism* (pp. 389-417).

[www.irma-international.org/chapter/counter-mapping-practices-in-land-regularization-through-geoinformation-technologies/276115](http://www.irma-international.org/chapter/counter-mapping-practices-in-land-regularization-through-geoinformation-technologies/276115)

### Towards Sustainable Land Management: State-of-the-Art in Land Use Policies of Nepal

Reshma Shrestha, Purna Bhadur Nepali and Tanka Prasad Dahal (2021). *Examining International Land Use Policies, Changes, and Conflicts* (pp. 351-369).

[www.irma-international.org/chapter/towards-sustainable-land-management/266008](http://www.irma-international.org/chapter/towards-sustainable-land-management/266008)

### Radar as a Key to Global Aeroecology: Essentials of Technology and Development Milestones

Alexey Noskov (2022). *Handbook of Research on Sustainable Development Goals, Climate Change, and Digitalization* (pp. 482-505).

[www.irma-international.org/chapter/radar-as-a-key-to-global-aeroecology/290499](http://www.irma-international.org/chapter/radar-as-a-key-to-global-aeroecology/290499)