Chapter 1
The Role of Smart City Solutions on the Road to Smart Territories: Smart Solutions to Urbanization Problems

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ABSTRACT

The concept of a smart city has emerged with the help of developing technologies against population growth, increasing urbanization rates, and rapidly depleting resources. The integration of information and communication technologies, which are the basis of the concept of a smart city, with the urban planning processes and effective use of region-specific resources are essential for the sustainability of cities. The creation of the Smart Territories, which will be the lead of smart, sustainable cities, is also directly linked to such intelligent solutions to urban problems and smart citizens. Because it is vital to be a self-sufficient structure that does urban planning by considering climatic data and develops solutions with data mining within the framework of local needs, the importance of solving the priority urban problems such as environmental management, efficient use of resources, and sustainable urban transportation with the help of rapidly developing information technologies should be emphasized on the road to smart territories.

INTRODUCTION

The world population, which is around 7 billion today, and expected to reach 9.7 billion in 2020 and 7.8 in 2050. The increase is expected to be higher due to the developing countries. In parallel with this, the population of the city increased rapidly and exceeded 3 billion and the ratio of the total population to 47%. The number of cities in the world and the number of people living in cities increased more than...
doubled from 1975 to today. In 1950, 30% of the world’s population lived in cities, while in 2010, 52% of the world’s population was living in cities. However, the number of metropolitan cities in the world is expected to reach 36%. According to the surveys, it is predicted that the rate of people living in cities will be doubled every 38 years (Ateş, 2019, p. 42).

With these rapid advances, the needs of cities emerged to invest in information and communication technologies with the aim of creating smart solutions by using their limited resources efficiently and to restructure their spatial planning processes by reducing the carbon footprint of the cities with sustainable transportation and energy policies (Ateş, 2018, p. 12).

This process, defined as the smartization of cities, requires the inhabitants to adapt to the process and a quality of life that meets their expectations. This goal will be achieved by looking at the city holistically and producing smart solutions to problems and needs. In this context, the formation of smart territories based on interconnected and integrated territories has become a serious necessity.

This situation reveals how important technically equipped smart cities connect socially and provide information exchange between them. The main impulsions of smart cities are human capital/education, social and relational capital, and environmental interests. In this context, developing social learning and knowledge transfer capabilities and territorial innovation systems should also be integrated. The interaction between these actors and forces determines the success of a city on its path to intellectual development (Lombardi, Giordano, Farouh, & Yousef, 2012).

The establishment of territorial governance mechanisms in the process of building smart cities for the future of cities and countries is a crucial point. Therefore, the obstacle to be overcome is to transform the concept of the smart city into the idea of a more extensive smart zone, thus, to provide transforming these isolated actions into an integrated system of action. In this context, this study aims to present the roadmap of sustainable smart territories through redefining the concept of the smart city as a process that feeds on urban solutions that are sensitive to local features, not reductionist.

The chapter, which was put forward by primary and secondary resource research, field analysis, and evaluation method, emphasizes the importance of the social connection of physical spaces with this aspect.

The study explores the complementary aspects of smart city strategy. It explains how environmental management, efficient use of resources, sustainable urban transport, and social participation tools can be used to achieve urban innovation. By developing these sub-concepts, in which context they will contribute to the formation of interconnected smart territories has been discussed. The main argument here is that the innovation opportunities offered by the policies and practices under the concepts of intelligent environment-smart life will have a positive effect on the formation of smart regions.

**BACKGROUND**

Today, the changing structure of the cities has brought a new flow of information. Every person and all kinds of institutions located in the city have become structures that provide continuous data to this information flow. Rapidly developing technology has supported this high information flow and started mediating to transform it into urban benefit and developed the necessary infrastructure and applications. These infrastructure and applications increase the innovation potential of cities that offer better areas of communication and collaboration, real-time information, and information management tools. Correct directing of this evolution, determining the needs by collecting data, creating solutions in which the