Chapter 9
Understanding Smart City Solutions in Turkish Cities From the Perspective of Sustainability

H. Filiz Alkan Meshur
Selcuk University, Turkey

ABSTRACT

The purpose of this chapter is to analyze the concept of smart city and its potential solutions to correct urban problems. Smart city practices and solutions have been investigated through the lens of a sustainable perspective. As the general practices in the global scale were examined, particular focus has been directed to smart city practices in Turkey and applicable suggestions have been developed. A number of cities in Turkey rank the lowest in the list of livable cities index. Consequential to the rapidly rising population ratios, the quality of provided services declines; economic and social life in cities are adversely affected and brand images of cities are deteriorated. With the implementation of smart city practices, such problems could be corrected, and these cities could gain competitive advantage over their rivals. The key component of this smart administration is to most effectively utilize information and communication technologies during each single step of this process.

CONCEPTUAL FRAMEWORK

According to recent projections, the global population in year 2050 will soar to 10 billion of people half of which will be populated in cities. It is nevertheless a potential spot of concern that such rapid increase in global population ratio would bring with itself a range of problematic issues. As widely agreed, depletion of limited resources would inevitably lead to scarcity of resources for the prospective generations. Although population ratio is on the decrease in developed states it is continually on the rise in underdeveloped states which correlates to the acceleration in the population rates of deprived classes. In parallel with the enhanced pressure towards cities the economic, social and sub-structural problems have been increasingly multiplied (Figure 1).

According to the United Nations' World Urbanization Prospects report of year 2015, six out of every ten people are expected to live in urban areas by 2030 and this rate will increase to 66% in 2050 (Figure 2).

Smart City Concept and Features

Urbanization leads to narrowing of the spaces opened for both the expansion of urban areas and for other uses since the requirement of finding new areas for the cities and those who come to settle in the city. Moreover, this considerable energy consumption and carbon monoxide gives rise to gases such as greenhouse gases to affect the environment. For this; both ecological and technological to the cities (smart cities) are needed (Ayber, 2016).
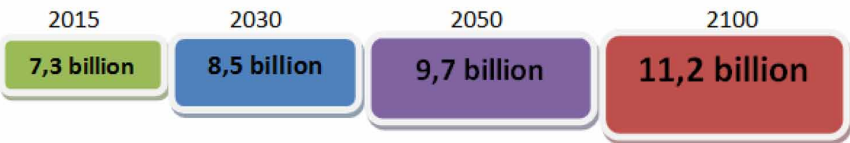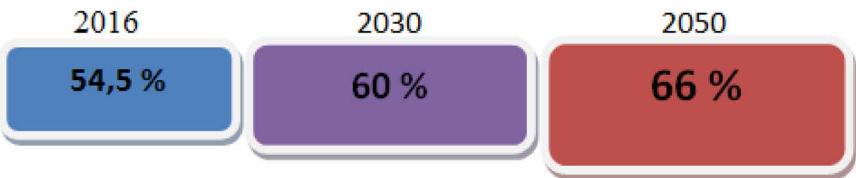
Figure 1. World Population (UN, 2015)

2015	2030	2050	2100
7,3 billion	8,5 billion	9,7 billion	11,2 billion

Figure 2. The ratio of people living in cities (UN, 2016)

2016	2030	2050
54,5 %	60 %	66 %

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