

## **Smart City**

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### **Abstract**

Most of the world's population today lives in cities. By 2030, the population of the cities around the world is expected to grow from 3.3 billion to 5 billion people. In Israel, about 6 million people live in urban areas.

Due to resource constraints, there will be a problem in the future to provide all the services to the residents. To continue to serve and improve the standard of living of the growing population, it is necessary to develop smart cities. The Smart City aims to make optimal and sustainable use of all resources, while maintaining an appropriate balance between social, environmental and economic costs. In the Smart City, maximum use is made of ICT to improve the functioning, management, and supervision of the variety of systems and services, with an emphasis on saving energy, water, land and other natural resources.

The main categories that define smart cities include the quality of the environment, energy, water and wastewater, transportation and traffic, information and communication systems, quality of life, government, economics, human resources, housing and land use, homeland security, and emergency preparedness. The degree of preparedness of the city for the collapse of the municipal systems, whether as a result of state security or natural disasters, should also be taken into account.

In order to manage and promote the issue in Israel, the Smart City Administration was established two a half years ago, at the initiative of the Ministry of Energy. The Administration will have a representative of each government office and each office will have a team to work on the issue. The Administration will determine where resources will be invested and which projects will be promoted.

There are many advantages in promoting smart cities in terms of national benefits: creating competitiveness, promoting the business sector, improvement of living standards, proper utilization of resources, and the like. There are examples of smart cities in the world, and a lot can be learned from their experience and achievements. Israel has unique conditions, which include an educated populace, widespread use of information systems, and the fact

that cities are not very large. However, Israel also faces quite complicated challenges, such as a severe shortage of land, a problematic security situation, and excessive concentration of the population.

In a debate, the Forum participants expressed the opinion that the proper planning of a City requires a holistic approach that coordinates the various branches. The city has to be looked at as a living organism, of which all the systems have to work in coordination with each other in order that it should continue to live. A wide variety of subjects has to be dealt with, as described above, and these pose serious challenges. For this purpose, a methodology of holistic thinking has to be developed and an extensive and inclusive thought process is required. The city has to be built as a body, with the work progressing at each stage, not in parallel but as a network with back and forth correlations. Such a process was executed in several cities worldwide, although the whole subject is still in its embryonic stages, and the Forum was informed about the successes and the problems solved. In all cases, intensive and smart use of ICT technology was made to improve the performance of the systems of education, health, infrastructure, safety and emergency preparedness, retail and trade, public participation, understanding of values, needs, culture, and the unique DNA of each city.

### **Recommendations:**

1. Setting the goals to which we should aspire begins with the first question to be answered: What is a smart city? What are the goals of the smart city? Is it efficiency? Improved services? Improving the health of the residents? Improving the level of education and happiness? Strengthening the sense of community? The Happy Planet Index instituted by the UN does not define business goals, but only where the residents are most content.
2. It is necessary to establish a think tank for processing a methodology of holistic thinking, to serve the development of the smart city. The Smart City Administration that was founded at the initiative of the Ministry of Energy to address the subject of "sustainability in the urban space" is an important first step in this direction.
3. It is important to learn from the experience of smart cities that has been accumulated worldwide. The work of David Boyd, who ranked a number of cities according to measures of innovation and sustainability, was presented to the Forum as an example.

4. It is proposed to implement a Smart City, in the first stage, on a small scale. This attempt will serve as a pilot. Perhaps it is advisable to start with a smart university campus as an "action research." Others claim that in the world, it was applied in large cities, since the professional abilities and financial means are found in the big cities.
5. In addition, it is important to examine the reference to the terminology of smart cities and to the methodologies behind it in the context of different types of localities, such as satellite cities, regional councils, cooperative settlements, etc.