State Comptroller and Ombudsman
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Government Preparedness for Implementation of Advanced Technologies in Local Municipalities - Smart Cities Initiative

Abstract

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Background

Many local municipalities in Israel seek to adapt to the digital age and use technology to develop the urban space, streamline their operations and improve service for residents. Alongside their benefits, the use of advanced technologies is fraught with real risks, some irreversible, in the areas of privacy, information security and cyber protection.

In recent years, the Israeli government has also recognized the importance of technological advances by local municipalities and the challenges inherent in making them 'smart', and has made several government decisions to advance the field of smart cities in Israel.

Key figures

90%
Of Israel's population lives in urban areas

257
Local Municipalities in Israel

95
Information Systems Administrators in Local Municipalities[1]

NIS 50 million
Allocated by the Ministry for the Development of the Periphery, the Negev and the Galilee for the "Smart Periphery" project

NIS 211 million
Allocated between 2015 and 2018 by Digital Israel Headquarters to Promote Smart Cities

NIS 82 billion
The aggregate budget of local municipalities in Israel in 2017[2]

1   Based on Interior Ministry data, as of February 2019.

2   The budget includes both regular budget and special budgetary allocations based on the data of the Central Bureau of Statistics.

Abstract

Audit Actions

From March to August 2019, the State Comptroller's Office examined aspects related to government preparedness for advancement of the field of smart cities and implementation of the central government decisions on the issue. The audit was conducted at the Ministry of Social Equality and the Directorate of 'Digital Israel', the Ministry of the Interior and the Israel National Cyber Directorate at the Prime Minister's Office. Supplementary examinations were conducted at the Privacy Protection Authority, at the Government ICT Authority, the Ministry of Construction and Housing, the Ministry of Economy, the Ministry of Development of the Periphery, the Negev and the Galilee, the Standards Institute, the Survey of Israel, the Home Front Command, the Ministry of Communications, the Federation of Local Authorities and the municipalities of Be'er Sheva and Haifa.

The Situation Reflected in the Audit Findings

Lack of integrating authority: Many government offices and public bodies are working to implement advanced technologies in local municipalities. Sometimes there is duplication in their activities or the activity is done without coordination between them, for example regarding the required standard.

Communication arm for local municipalities: Unlike the government sector in which the governmental communications authority operates, the local government does not have an integrating and binding central body operating in this area. In its absence, it is difficult to take advantage of economies of scale inherent in the large number of local municipalities, when conducting negotiations with various suppliers, to conduct tenders that will provide technological solutions for all municipalities, to ensure that the technologies used meet the standards required, to learn from the experience of other municipalities and to adapt the solutions to residents of various municipalities.

Establishing a National Policy: The decisions made by the government to promote the smart cities in Israel do not constitute an overall plan at the national level where there is mapping of the existing situation, defining the desired situation in this field, and identifying challenges and opportunities in the near and far future. Recently, the Ministry of the Interior and the National 'Digital Israel' Initiative team have begun taking action to formulate a national strategic plan for digitization in local government.

Risks related to privacy protection, information security and cyber protection aspects: The responsibility for dealing with cyber events rests with the local municipalities, each tackling the challenges and risks according to its capabilities and awareness of the importance of the issue. In practice, some local municipalities are not prepared to deal with cyber attacks. The Privacy Protection Authority, the National Cyber Directorate and the Ministry of the Interior are taking action to help, but this does not adequately address all the risks.

- 👎 **Establishment of a control and supervision center against cyber threats:** In the government sector, there is a control and supervision center for dealing with cyber events, but such a center does not exist in regard to local government, despite the need for one.

- 👎 **Promoting a broad initiative for establishment of basic digital infrastructures:** Until July 2019, a significant portion of the National Digital Israel Initiative commitments to local municipalities pursuant to a call for proposals for 2018 - 2020, were not actualized. Of the total budget of about NIS 44 million, only about 3.4 million (8%) were in fact paid to local municipalities; of the 231 municipalities that received a commitment for budget support within the aforementioned request for proposasl, only 49 (21%) went through with their proposals.

- 👎 **Government decision - Haifa as a model for "cyber-protected smart city":** In January 2017, the Government decided to launch a model of "smart and cyber-protected city" in Haifa. To that end, it was determined that within nine months, the National Cyber Directorate, together with the Ministry of Social Equality, would formulate an integrated strategic plan in the field of smart and cyber-protected cities. As of July 2019, actions to promote the issue have been carried out, but the plan has not been finalized.

👍

Preparing for cyber events: Given the emerging cyber-challenges and threats, the State Comptroller's Office commends the recent actions of the Ministry of Inte-rior, the Directorate of the National 'Digital Israel' Initiative and the National Cyber Directorate to review and promote the establishment of a system for monitor-ing cyber events taking place in local municipalities in order to ensure their continuity of function.

Main Audit Recommendations

💡 It is proposed that a general government body be put in place to ensure that the activities of the government ministries and various public bodies to implement advanced technologies in local municipalities are done comprehensively, in a prudent manner, and with coordination, cooperation and pooling of resources. This may help to avoid duplication, improve the work of government ministries and ensure a high and uniform standard in various areas.

💡 The State Comptroller's Office recommends that the Ministry of the Interior, in consultation with the Center for Local Government, the Directorate of the National 'Digital Israel' Initiative and the Government ICT Authority, examine whether there is room for a central body to deal with digitization and communication issues in local municipalities, which would either be similar to the governmental ICT department or operate within its framework.

💡 It is proposed that each of the entities - the Ministry of the Interior, the Privacy Protection Authority and the National Cyber Directorate - carry out a risk assessment that will help formulate policies to reduce the risks in the areas of privacy protection, information security and cyber protection. It is also proposed that the aforementioned risk mitigation policy be incorporated into the National Strategic Plan for Digitization in local government that is currently being formulated by the Ministry of the Interior and Digital Israel.

💡 The State Comptroller's Office recommends that the Directorate of the National Digital Israel Initiative examine with local municipalities what difficulties and barriers make it difficult to fulfill their obligations under the request for proposals framework. It is also proposed that the Directorate examine whether the best model for promoting the implementation of advanced technologies in local municipalities is indeed the publication of requests for proposal and the distribution of budgets to all municipalities.

Summary

The picture that emerges from this audit report necessitates governmental examination concerning the involvement of the central government in promoting advanced technologies in local municipalities. The need for outlining a vision, goals and the key directions for action that will determine where the State and local munici-palities are headed in this area is clear. This is especially so, given the limited territory of the state of Israel and the assessment that its population is expected to double and even triple in the coming decades, and given the gaps between various local municipalities and the importance of exploiting existing advantages in this area for generating long-term processes for positive change.

Major challenges in implementing advanced technologies in local authorities

Procurement and bureaucracy processes that are not adapted for technology implementations

Lack of inclusive factor for making adjustments and duplication prevention

Lack of sufficient recognition of the potential of digitization among the authorities' seniors

A Rise in the standard of living Expectation of the residents to receive advanced services

Differences between authorities in prioritizing the implementation of advanced technologies

Socio-economic disparities between authorities and within authorities

Lack of professional support for local authorities

Lack of standardization for advanced technological processes and tools

Budget shortage

Difficulty in recruiting high-quality technology personnel

According to the Ministry of Interior's data, adapted by the State Comptroller's Office

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