weRamallah: Smart City Initiative

Award Scheme   Guangzhou Award

Sustainable Development Goals   Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

Summary

Five years ago Ramallah Municipality has launched one of its most distinctive projects "Ramallah Smart City: freedom through technology" which has broken many restrictions imposed on Ramallah residents due to the political and security context. Despite all limitation on the usage of technology in the Palestinian territories, Ramallah Municipality was able to reform the city master plan with retrofits and upgrades that uses ICT to deliver efficient citizen benefit services

Background and Objective

The first phase improved the city ICT infrastructure to insure the success of emerging smart city services, then defined an integrated city management framework. The second phase launched last year integrate related processes and services across the city by smart technology to enable the provision of more advanced services. The third phase that should be launched soon will see the creation of many new B2B and B2C models making use of smart city infrastructures to provide improved services. This has thus far shown impressive results in different aspects including economy, governance and transparency, quality and accessibility of services, responsiveness to emergency situations, education, tourism, and cultural activities. Through this initiative, Ramallah municipality was able to revolutionize its data management system, significantly improve quality of services, create a more collaborative relationship with the citizens across income levels and age groups, and innovatively overcome challenges posed by the complex political and security context under which citizens of Ramallah live. BACKGROUND INFORMATION This is an independent initiative by Ramallah municipality. However, the initiative has been endorsed and supported by the Ministry of Telecommunication& Information Technology (MTIT) and the Ministry of Local Government (MOLG).MTIT is a member of the steering committee of the project and the MOLG is supportive to the project and it adopted some of its outputs (namely the GIS component) and is working on disseminating it to other local councils in the West Bank and Gaza Strip under a national GIS initiative. The governmental support gives sustainability and potential for application to other municipalities in Palestine since Ramallah has become a model in this field. ORIGINS As an institution that is concerned with providing services to the public, one of its strategic objectives is to improve quality of services and accessibility. Moving to an e-municipality has been a major goal in this regards. However, a main obstacle to releasing this goal is the Israeli restrictions on importing and introducing 4G in the West Bank and Gaza. Thus many citizens do not have stable internet connection to be able to use the e-municipality services. The restrictions on the freedom of movement of Palestinians including citizens of Ramallah, and the spontaneous and unannounced sieges and blockades on the city, restricts Palestinians from outside the city and school students from reaching their schools and citizens from reaching to the municipality and receiving the services. The idea of the project came to overcome these problems and allow citizens to receive services of the municipality at any time without need for personal presence at the municipality and also allowing student to continue their education despite all restrictions on movement. Thus the idea started with providing free Wi-Fi services in the streets of Ramallah and free internet access inside the Municipality facilities and parks. Then the rapidly evolved to include other core component like the smart schools, GIS system, electronic services, etc. The project aims at enhancing relations and communications with the local community, providing quality services 24/7 without a need in some many types of services for personal presence of the citizens, provide information to the public on the activities and public events organized by the municipality, and get the feedback of citizens on the services provided by the municipality. The project also provides tools and applications that allow for updating data directly from the field and enhance the quality and inclusiveness of the databases of the municipality concerning buildings, infrastructure and residents , and thus provide reliable information for the purposes of planning and decision making, mainly through the GIS component of the project. Since Google earth is restricted in the West Bank, the project provides an alternative for navigation. The project also included installing cameras at major intersections and providing live streaming. The cameras were very useful during emergencies and snow. It helped individuals and investors develop applications for visitors, like e-payment for parking spots. The project is a great example for public-private partnership and collaboration between the central and local governments. Although it was originated upon an initiative by the municipality, its implementation was done through partnership and cooperation with private sector especially telecommunication sector, in addition to experts from academia and PITA (Palestinian Information Technology Association of Companies). Central government was also involved in the project through membership of the MTIT in the steering committee of the project and the MOLG adopted the GIS component as a national model and working on disseminating it to other municipalities. Additionally, international donors, like GIZ and USAID, were involved in providing financial support. The implementation relied mainly on local human resources with partnership with the private sector and with the support of central government and international donors. However, the idea was developed solely by Ramallah Municipality's staff.

Outcomes and Impacts

The project has achieved major measurable impact more than what initially anticipated. This can be demonstrated through the number of hits on the municipality website, the increasing number of citizens using the municipality e-services. Additionally, there has been an upsurge in private sector investment in technology sector in Ramallah, as demonstrated in the number of application developed by private sector companies and individual investors relying on some aspects of the project. Also there has been significant increase in the number of citizens participating and attending public events organized by the municipality (mainly because of the advertising capacities of the project) and the increase in the number of advertisements using the digital screens that have been erected in certain parts of the city as part of the project. Because of the infrastructure provided by the project, the municipal council decided to hold at least one session of its weekly meetings live which allows citizens and stakeholders to watch the entire session and thus increase transparency of the work of the Council. Internal policies and procedures have been significantly reengineered to be compatible with the new databases and technological tools. For example, each department at the municipality has an application on the GIS which has become part of work flow and documentation procedures. The municipality now does not accept applications that are not electronic, in order to facilitate processing of application and tracking and timely response. Other GIS applications are used to report incidents and complaints and track them. The project has contributed to the promotion of the city of Ramallah. Twining agreements have been signed with several Arab and international cities to collaborate and exchange experiences on of smart city applications. Ramallah is now a leading city on technology and smart applications and e-services that inspires other cities in Palestine and beyond. Ramallah city has been invited to participate in many international events to present its unique experience and success stories. This international reputation was culminated in electing Ramallah to deputy chairperson of UCLG-MEWA Committee on Smart Cities(2014-present).Because of the some components of the project, Ramallah city was awarded several prestigious international awards, including Special Achievement in GIS Award (SAG) from ESRI for exceptional application of geospatial technology in Ramallah Municipality. Ramallah is now looked upon as the model that should be followed by other Palestinian cities.

Innovative Initiative

The idea of the project is considered a revolutionary idea within the Palestinian context. The MTIT supported the project and is working on disseminating it to other municipalities in the West Bank. The idea of the project is original. There is no similar experiences that use Wi-Fi in the same way because of the restrictions on 4G in the West Bank. The status of freedom of movement in the Palestinian context is unique and thus the solutions were to a large extent innovative and unique. The project is part of the strategic plan of the municipality for the coming 5 years. A substantial part of it has already been implemented and the municipality has a clear plan for the implementation of the remainder parts of the project. The implementation of the project faced (and still faces) tremendous challenges. A major challenge is the outdated legal framework applicable in the West Bank which has major gaps like the lack of e-signature law, cyber-crimes law, and e-payment law. The Israeli authorities delay and sometimes prevent the import for certain technological equipment. The Israeli Occupation in general prevents the maximum utilization of technologies (4G, Fiber between cities, google maps …)

Conclusion

This initiative has broken many restrictions imposed on Ramallah residents due to the political and security context. Despite all limitation on the usage of technology, including the banning of 4G in the Palestinian territories, Ramallah municipality was able to use available technology to accessibility to and the quality of its services, and use ICT to integrate dimensions of smart utilities, smart mobility, smart environment, smart education, smart living, smart health, smart planning and smart governance. In full cooperation with private sector and central government, the Municipality has implemented the 1stphase of the project by employing the city fiber network to turn all main streets of the city into a Wireless Access Zone (broadband via Wi-Fi across Ramallah), provide free access to municipal services 24 hours everywhere in Ramallah, and provide free Wi-Fi within the facilities of the municipality (buildings, OSS, libraries, recreational centers, gardens, parks,…).In particular, the following activities has been accomplished: All 14 municipal facilities have been connected together using fiber network, The major streets of the city turned into a Wireless Access Zone providing free access to municipal services 24 hours and limited free Wi-Fi to citizens and visitors , All municipal buildings and public gardens provide free Wi-Fi to visitors, Live streaming from major intersections across the city, Technology Infrastructure for technology-based teaching-learning system in all seven public schools in the city, Supplying one of these schools with conductive enabling environment to become the first "Smart School" among Palestinian public schools, Several interactive GIS applications have been developed, Detailed project plan for Enterprise Resource Planning Software has been approved to convert the municipal services to e-services. This has thus far shown impressive results in different aspects including economy, governance and transparency, quality and accessibility of services, responsiveness to emergency situations, education, tourism, and cultural activities. The second phase of the project, which is already underway, includes spreading the Wi-Fi coverage to all streets of the city including sub streets and utilizing more applications and tools to increase effectiveness and quality of services (for example installing sensors on waste containers for fast collection and recycling of filled ones). The project will also continue to encourage private sector and innovators to come up with innovative applications and initiatives to better utilize the smart city. RELEVANCE TO SUSTAINABLE DEVELOPMENT GOALS Goal 1: End poverty in all of its forms Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable Target 3: Participatory, integrated and sustainable human settlement planning and management