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# Creating an Information Society in Developing Countries: Lessons Learned from the Case of Palestine

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## Abstract

This paper presents the results of tracing and evaluating the process of building of an ICT strategy initiative that meant to orchestrate the Palestinian efforts in harnessing ICT into an effective tool for socio-economic development. It describes the process, the pillars, and the pitfalls in the efforts led by the governments in making a long term plan for ICT. The paper presents the outcomes of the research efforts that were carried out by a group of researchers who investigated the formation process of the strategy. The researchers traced the building endeavors through utilizing various methods and techniques ranging from focus group meetings, to individual interviews with stakeholders, and semi-structured interviews with all stakeholders, in addition to questionnaires, surveys, and observations of on-going activities.

The investigation has revealed that the creation an information society in developing countries is a sophisticated and long term process that entails the involvement of all major players, under the direction of a resourceful government. The building process of the society should follow an indigenous bottom-up approach that has its agenda revolving around society development. The study has additionally revealed that the leading team should seek out the right formula in addition to the implementation apparatus that are capable of materializing the preset goals in the way to make these technologies successful development drivers.

## 1. Introduction

Since the dawn of history Information and knowledge lay the foundations for development and prosperity for countries and individuals alike. ICT speeds up the diffusion of knowledge among large portions of the populations. It also provides platform for human interaction that seamlessly crosses borders. ICT advances have exceptionally boosted human capabilities in information processing, and knowledge harnessing. ICT is one of the fastest growing sectors nowadays, and the production, storage, and transfer of information are becoming the basis of any successful enterprises or institutions, and governments alike. ICT enables globalization which obliges companies, governments and civil agencies, to react more quickly, and operate more efficiently than they have done in the past.

ICT have become the center of debate in socio-economic development circles since early 1990s, which marks the beginning of information and knowledge age. ICT is known to be the

fastest rising industry during the past five decades, and its scene for upcoming expansion is emerging to be equally soaring [Freeman, and Perez, 1998, Willinger and Luschovitch 1988, National research Council 1988, 1994]. Developed countries are now heavy users of IT; emerging and developing countries are following in their steps [King et al. 1992].

In the developed societies, ICT has been the central driving force behind their progress; however their ICT use and development are seen as a natural evolution in the course of history as these countries have led the transition from industrial to information and knowledge age. Developed nations have early recognized the economic and social implications of ICT so it turned out to be the heart of their national development policies seeking an advanced position for their local industries in the global market. ICT are now interleaved in the social and economic life of these countries [King, et al 1994]. A trend of government intervention in IT innovation across countries appears to be accelerating (Kaul 1987, Rahim and Pennings 1987, Bhalla and James 1988, Kraemer et al. 1992). However there is a substantial dispute about whether governments should lead the efforts to promote information technology diffusion, and if so, how it should happen (Land 1990, Odedra et al. 1990).

Developing countries are trying to catch-up through set of actions such as making significant increase in spending for IT, releasing relevant legislations and laws, promoting ICT use and services among different government agencies, and so forth, in the hope of not being left behind in the global struggle for competitiveness.

National IT policy has become a center of debate since the beginning of the information age early 1990s. The debate rages between those who claim that national policy should act only to facilitate the ICT private sector taking the lead (Nelson, 1993; World Bank, 1993) to those who argue that broad government guide will achieve faster, wider, and more comprehensive progress (Schware, 1992; Kraemer and Dedrick, 1994a;; Dedrick and Kraemer, 1995).

Government intervention has been categorized as either being pro-production or pro-use or enabling to other production sectors (Flamm, 1990; Kraemer, Gurbaxani and King, 1992). Each alternative has its own compelling arguments, making the question of policy making somewhat confusing (John L. King and Kenneth L. Kraemer 1995). In most developing countries national leaders are encouraged to take a strong stand on ICT, but there is no clear evidence on how to proceed, and this is why most of the developing countries are still seeking the right formula in their endeavors to encompass ICT, (R. Heeks, 1999a, Bedi Arjun, 1999).

According to Heeks, high percentage of the ICT initiatives in third world countries either entirely or partially failed when applied to public sector reform (Heeks, 2002). There were different views that tried to explain his findings, but one of the most respected ones is related to the social and organizational contexts that do not help integrating these technologies in the national policies and daily lives of the people, (Heeks, 1999b; Yahya, 1993; Mansell and Wehn, 1998).

ICT usage in the Arab world is still at low level both in private and public institutions, (Goodman and Green, 1992; Danowitz, Nassef, and Goodman, 1995). However, the lowest use of IT in these countries is in decision-making procedures amongst the public sector institutions.

## 2. Research Motivation and Methodologies

Motivated by developed and emerging countries experiences and accomplishments, most developing countries perceive an opportunity in ICTs, and therefore exerting extra efforts to seize it. The two phased information society summit held in Geneva and Tunisia in 2003 and 2005 successively, created an ICT hype that pushed most countries to rush their efforts in planning and initiating programs to cope with the ICT enabled development wave. Many of the developing countries were motivated by the commitments made by international donor agencies, and the hypothetical development pledges; like poverty reduction, illiteracy eradication, and healthcare improvement in what is known as the Millennium Development Goals (MDGs). Developing countries vary in their approaches both in methodologies and scale to seize the potential benefits of ICTs. However, most of developing countries have responded to this call through building what is later called the ICT national strategies or E-strategies (Siau & Long 2006). Palestine, as an occupied country and split in two geographical alienated territories: West Bank and Gaza Strip, has no control on their borders, has no sea or air ports, and with very scarce natural resources, thus relying heavily on foreign aids and donations. The PNA recognized the exceptional benefits in ICT to push its domestic economy, and minimize the effects of Israeli military restrictions on movement, and help communicating with the rest of the world. Palestinians seek freedom in cyber space, through ICT, as they are unable to achieve it physically on the ground.

Palestine is a young nation with 50% of its population below the age of 15, with highly educated population whose literacy rate is 92% the highest in the Arab world. For more information on the Palestinian society refer to table 1. Successive governments within the Palestinian National Authority (PNA) encouraged by donor agencies and the international community's, started to focus on ICT as one of the main economic drivers and employment segments. Motivated by the fact that the ICT industry does not require major initial investments and that ICT products and services are not bounded to the Israeli military measures of closures or lack of control over borders, the PNA set the stage to build its ICT national strategy.

Table 1: Development indicators as revealed by the Palestine Central Bureau of Statistics (PCBS 2008)

Population	4,011 M
Below 15 yrs age	45.7%
Population Growth	3.4%
GDP	4.5 B US\$
GDP growth rate	-12.3%
GDP per capita	727 US\$
High tech export	20 M US\$
Foreign direct investment	150 M US\$
Poverty rate	60%
Unemployment rate	50.6%
Literacy rate	92.6%

Enrollment tertiary education	25.95%
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The PNA through the Ministry of Telecommunications and Information Technology (MTIT) successfully mainstreamed ICT as part of its national development strategy over the past decade. This paper will review the Palestinian experience in planning and deploying their ICT strategy, while evaluating its success in achieving its preset goals and in its contributing to the development endeavors within the society. The paper will also try to identify weaknesses of the strategy, both in approach and guiding principle. The overall issue the paper will try to highlight is the exploration of the real gap between planning and implementation levels that prevent developing countries from actual utilization of the benefits that are presented by ICT.

In a research as such, which deals with complex and emerging issues it is recommended to use multi techniques and employ several approaches that encompasses both qualitative and quantitative schemes. Multi-method approaches are recommended by social scientists when investigating compound, multi-stakeholders national initiatives. As of our research, almost all official documents and related publications were thoroughly reviewed. Government officials, MTIT ministry personal, and members of the national team were interviewed in a semi-structured interviews. Projects stemmed out of the initiative were evaluated in view of the declared goals of the strategy.

### 3. Palestine ICT Landscape

Before the Oslo Agreement which led to the creation of the PNA in 1994, Israel was in full control of the ICT sector, and there were only few ICT related activities such as small companies and shops selling hardware and electronics equipments. The telecommunication network was fully controlled by the Israeli military authorities. Soon after its establishment the PNA took responsibility of the telecom network, and then lead the development of the sector and its activities through the foundation of the ministry of Telecom which was later dubbed the Ministry of Telecom and Information Technology (MTIT) in 2003.

Soon after the PNA was established demand for ICT services dramatically mounted, mostly coming from the government itself, the private sector, the NGO sector, and from universities. That period also witnessed the opening of many banks, the start-up of new businesses, and the ICT sector started to show significant growth by the end of 1995. The first Palestinian ISP was created and Internet became commercially accessible to individuals, companies and universities. Some development indicators are given in table 1.

By 1997, the Palestinian telecom sector was fully privatized with the creation of Paltel, the Palestine Telecommunications Company, which built a complete digital network connecting the West Bank and Gaza and offers a wide range of services such as standard fixed telephone lines, leased lines, ISDN and in 2005 they launched broadband data services through ADSL connections. Currently Industry estimates put the value of the ICT sector in Palestine, at \$250 million in annual sales, with 25% being attributed to software. These figures do not include Palestine Telecommunications Company (Paltel). Currently, there are approximately 150 ICT companies and large number of small computer stores in the West Bank and Gaza. See table 2 for more ICT indicators as of the year 2008.

Table 2: Some ICT indicators as revealed by the Palestine Central Bureau of Statistics (PCBS 2008)

IT employees	5,200
ICT sector annual sales	250 Millions US\$, 25% software
Main Telephone lines	350,800
Cellular Subscribers	1500,000
Internet Penetration (Growth)	15% (314.4%)
Internet users (Broadband ADSL)	400,000 (50,000)
Palestinian families acquire PC	32.6%
Families access the Internet	15.8%
Families acquire landline phone	50.2%
Families with mobile	81.0%
Families with TV set	93.0%
Computer literacy	51.2% (55% males, 47 females)
ICT private sector	150 companies

Until 2009 the regulatory framework guiding the telecom sector in Palestine was based on the Post and Telecommunications Law No. 3 of 1996. The regulator and policymaker for the telecommunications sector is the ministry of Telecommunication and Information Technology - MTIT. The law assigns the Ministry the responsibility for granting permits and licenses to network operators, setting tariffs, encouraging investment, monitoring and protecting consumers' interest, and enforcement. Currently there are attempts to draft a new Telecom law, but it is hindered by the political stalk. As of 2008 new Telecom operators were granted licenses, in mobile, in Voice over IP, and in broadband services, but still none of them is launching services.

PNA is attempting to launch some initiatives in ICT for development, such as the Palestinian Educational Initiative (PEI), which was launched in sponsorship of the World Economic Forum. PEI has targeted the ICT utilization in the PNA educational system, training, and improving the learning processes through developing web-based contents. PNA is also putting extra efforts to enhance the internal processes within the government bodies through automating their internal operations.

#### 4. Palestine ICT national strategy in Nutshell

The National ICT Strategy for Palestine emerged as a result of an 18 month long project conducted under the auspices of the Ministry of Telecommunications and Information Technology in accordance with a counsel of ministers' decision issued in 2004. The planning process sought to address the uncoordinated activities in implementing sustainable ICT enabled

development strategy in Palestine. Key-parties -from public and private sectors, civic institutions and universities- of the Palestinian society participated in the articulation of the strategy through workshops, brainstorming sessions, consultations, and discussions. All endeavors took place in light of the Arab strategy for creating information society and the declaration of principles ensuing the information society summit (Geneva 2003, Tunisia 2005) and in synchronization with present and future needs of the Palestinian society. ICT strategy for Palestine selected the following stimulating statement as its vision: *Building a Palestinian information society that facilitates information access to all and adopting IT as a basic means of moving the Palestinian people forward and achieving its goals in all facets.* This strategy, which is meant to serve as general guidelines for the efforts to develop Palestinian information society, passed through the subsequent phases.

#### 4.1-The SWOT Analysis

The SWOT analysis involves the scanning of Strength, Weaknesses, Opportunities and Threats of the entire environment in regards to use and produce ICTs. Strengths and weaknesses are internal to the setting, while opportunities and threats that are external to it. The SWOT analysis provides information that is crucial in matching the country resources and capabilities to the comparative environment, in which it operates. As such it is an instrument in strategy formulation and selection. The outcome of the SWOT analysis as conceived by the strategy team is described below:

**Strengths:** the most prominent strengthening aspect in regards to ICT lies in the human capital in Palestine as the population is young and among the highest educated people. The government adoption of free market policy and the stimulation of a broader participation of the private sector in the economic development by the government are among the items to be mentioned. The government opening of dialogue among all stakeholders including the private sector, civic society, and the academic sector are also among the strengthening items. To a lesser extent, the Participation of Palestinian expatriates in the national economy and the transfer of expertise, knowledge, and investment capital may have some values when appropriately exploited.

**Weaknesses:** Palestine as a country under occupation for decades, have many weakening aspects where the Israeli occupation and the consequent loss of sovereignty over the different kinds of resources and the lack of stability that discourages private sector to invest. Occupation creates unstable political and security situation, incomplete and ineffective lawful environment, low institutional performance and unavailability of public plans, lack of transparency, and widespread of corruption, and inability for long term planning. Other issues which are less related to occupation are the weak in the ICT infrastructure as a result of monopolistic regime dominated the telecom operation in the country. The lack of skillful human resources, Scarcity of scientific research and development and lack of pervasiveness of the culture of innovation, and the low income and standards of living of the Palestinian citizens, are weakening factors to be mentioned.

**Opportunities:** Open Arab and international market for Palestinian products, global interest in the development of the Palestinian economy, progress in the peace process and the ensuing increase in development might be considered to some extent as opportunities that worth of looking at.

**Threats:** Tumbling of the peace process, escalated tension and instability, failure of donor institutions and countries to live up to their obligations towards the development of the Palestinian society, degradation of the economy, PA's lingering to pursue reform and fight corruption, are major threats to the success of the ICT strategy as revealed by the official document.

## 4.2-Internal Brainstorming and Discussion

The MTIT has called on key stakeholders' activists to provide their own thoughts on the ICT strategy in writings. University professors, ministries and private sector representatives submitted valuable contributions adopted as preliminary documents for further debates. Consequently, MTIT has formed a steering committee of all stakeholders to oversee the whole process. The committee held several meetings in the MTIT premises in Ramallah where the roadmap of the strategy was set. Meetings and seminars were organized, and made open for public participation. The major players in ICT in Palestine took the opportunity to present their views in a participatory approach throughout these programs which extended over more than two months. Throughout this stage, the status of ICT in Palestine was intensely analyzed from various perspectives. The program also helped in publicizing the strategy project and ensured wider participation in forthcoming activities.

## 4.3- The Articulation of Strategic Pillars

Stakeholders and activists from the entire ICT spectrum participated in a workshop set to determine the bold strategic pillars of ICT in Palestine. The participants defined the ICT needs and problems, and then used that to identify the sought after solutions as strategic pillars. The official strategy document consisted mainly of five pillars that were categorized as the strategic themes of the whole initiative. A brief description of each is given below.

- **The government role:** The strategy calls for the government to lead the national efforts through issuing laws, legislations, and policies to organize the sector activities and to create an enabling environment to encourage investments by the private sector. Most importantly, the document calls upon the government to create an independent regulatory body to institutionalize the sector different activities. Besides the document demand the government to work to intensify efforts to launch the electronic government project as is the case with many neighboring countries. The strategy demanded the government to launch a national database or information center for healthier planning in the future. One of the urgent calls the document made for the government is to work to liberate the national information space, represented by the allocated spectrum, which is being occupied by Israel, and to have an independent telecom and data network especially with regards to direct international access.
- **Infrastructure development:** This pillar has requested to build a robust and a secure telecom infrastructure that will help in building a Palestinian information society. To that end the government has been requested to create a competitive environment and end monopoly. The government has been also asked to issue licenses for more mobile operators, and broadband service providers.
- **Human resources development and encouraging innovation:** The Palestinian society is considered young and therefore the future of the country including the ICT sector is



dependent on the potential, awareness, level of education of its youth. The document has called to increase the dose of ICT education to the different fractions of the society, including school kids, university students and the public at large. Increasing quantity, quality, and skills of qualified ICT specialists. Among other issues that the document has pointed to is the focus on scientific research and development, including the delicate issue of technology transfer. The document further called for the development of electronic learning, or e-learning as a support for the traditional learning system.

- **Development of a vibrant ICT industry:** ICT industry including the creation of content based industry must be given the necessary attention lest for us to be mere consumers of ICT coming from foreign countries as we are consumers of technologies of industry and publishing of that content.
- **ICT as a means to economic and social development:** The accomplishment of the thriving objective sought from the information society is realized through offering alternative solutions to problems of the society based on ICT which is the cornerstone for building the information economy and thereof has an important role in boosting sustainable development, increasing job opportunities, and fighting poverty.

## 5. Analysis of the ICT strategy

The purpose of this section is to investigate how successful was the development of the strategy in view of best practices and the consideration of strategic issues affecting ICT deployment in the development discourse of the Palestinian society.

In general, the study shows that the Palestinian Authority under the guidance of MTIT has exerted considerable efforts in formulating a plan to guide the sector and to define its strategic goals. Below is an attempt to evaluate the different sections of the strategy, based on considerations and practices during the course of developing the ICT strategy.

Before drafting the strategic goals, the team completed the SWOT analysis phase of the ICT environment. SWOT analysis came across internal strengths and weaknesses, and external threats and opportunities, however, the articulation of this section came out of brainstorming sessions rather than on collected statistics and quantitative studies performed on the environment as revealed by the planning team. This section to the best practices should come out of analyzing relevant data in order to precisely define these issues. Statistics and quantitative data were the assets to articulate a comprehensive plan that utilizes strengths, avoid or remedy weaknesses, make the most of opportunities and avert threats. A SWOT analysis that comes out of realities will be much more effective in recognizing realistic and workable projects in generating swift impact, and touchable achievements, which are needed to create momentum towards achieving the more challenging goals. In this regards it is useful to mention that nations and societies should perceive ICT in four distinct phases:

- Firstly; random or undirected consumption, where in this stage, people get acquainted to the technology without well defined or preset goals for their use.
- The second phase is the one in which ICT is purposely used to leverage private businesses and the production sectors, and government services.

- The third phase is to direct ICT to empower people's life, increase their productivity, and consequently improves efficiency of institutions and the nation as a whole.
- The fourth phase is to focus on ICT as a production sector, and to improve quality and quantity of ICT products for export.

Keeping these stages in mind would be very helpful for the planning team for building a vibrant ICT strategy for a developing nation. The planning team should define the phase in which the country is in, and try to set up a smooth transition from one phase to another. It is very hard to imagine a society that can focus on ICT product export without passing through the stage of large scale consumption.

The strategy clearly defined five strategic pillars that were supposed to be carried out in parallel. It is very crucial to define the relationship among these pillars, as some of them are dependant on achieving progress in others. For example, ICT cannot be used to improve social, health, and cultural services without robust infrastructure along with affordable prices. In other words, the cause and effect relationship should clearly be outlined among the pillars, and the thorough comprehension of the relations that tie these pillars with each others, are central in drafting the right action plan to achieve the preset goals.

According to the vision defined by the ICT strategy, it was bluntly declared that the overall goal of the ICT strategy was to craft a Palestinian information society, through ubiquitous access to information to all people regardless of their social status, location or gender, and to exploit ICT as a means to empower the Palestinian society. This vision should be positioned within the context of the society, and should be harnessed to meet the imperative development priorities of the society. Founding a society as such dictates the creation of an atmosphere that goes in line with the following guidelines. Firstly, large portion of the society should possess the basic competences that enable them to utilize ICT in their work in particular and in their daily practices in general. Secondly, the creation of a vibrant information society requires the existence of centers of excellence that are capable of executing nationwide ICT projects and initiatives. The centers of Excellence should be resourceful, and capable of executing a nationwide research and development initiatives, and capable of orchestrating the related laws and regulations when seen needed. The centers of excellence should also work to establish a national database that facilitates decision making processes from one side and offers services to institutions and the society on the other side. Thirdly, the availability of suitable information infrastructure that makes available to the population efficient and seamless interaction towards the utilization of such databases while enhance their productivity. Fourth; there is nothing more important, the government can do, than the creation of an enforcing, stimulating and dynamic legislative and organizational environment. Creating the legal environment by decreeing or modernizing laws, regulations, and conventions are necessary to lay the foundations for the sought information society. Palestinian endeavors within the above mentioned context were still lacking, as the majority ICT activities were governed by a law that was 13 years old, and all efforts to update it reached a dead end.

The creation of the information society should not be a goal by itself, but it should be seen as a vehicle to achieve development and prosperity. This is realized through employing the information society to empower the nation basic foundations, for example, the individuals' knowledge and competencies, the history and culture, government institutions, private sector, and the civil society. Adopting the information society as a vehicle to empower the Palestinian

people means that this society should work to offer alternative solutions to urgent problems and crises encountered by the nation. For example, the scattering of Palestinians in discontinuous geographical regions, the lack of awareness of the international community with the fundamental rights of the Palestinian people, the unemployment, and poverty problems. Defending the Palestinians rights and working to change the image of Palestinian fighting for freedom should be central to any ICT national strategy. This requires the setting up of a well-defined plan aimed at promoting a Palestinian national content and online substance presence. Unfortunately, nothing has changed on this front since the launch of the ICT strategy. The amount and the quality of the content were not affected by the launch of the strategy, as revealed by many media and content watchers.

After all, the creation of the information society, and the implementation of the projects needed, requires provision of the needed financial, technical and institutional resources without which there will be no chance in succeeding in these kinds of endeavors.

## 6. Discussion

This section is meant to assess the degree in which the strategy has covered the basic elements needed to build the information society and the degree of its effectiveness in addressing local needs of the Palestinian society.

The strategy detailed the infrastructure needed to setup the Palestinian information society. It also described monitoring and evaluation schemes to quantify the degree of its success. The document also came across the process of gradually raising the qualifications of the population to use ICTs and increase their awareness in the significance of ICT in improving their life and better prepare them for the future. However, to give these components the needed resources to thrive, there had to be national source-full institutions, in the form of centers of excellence, that take the responsibility to launch projects on national level, and that would complement the role of the government and the academic institutions in campaigning for the information society. Without these centers there will only be an ethos of information technology, but with serious deficit in making these technologies successful development drivers. The presence of these leading resourceful centers will better join the scattered endeavors, and work as the true missing compass that coordinates the efforts for achieving the targeted development goals. The scheme might start with one center, as a pilot, and then employ the experience accumulated in introducing other centers that are more dedicated in employing ICT in the business, culture and media, management and other areas. One of the central tasks that might be allocated to these centers is to build specialized information systems to computerize processes in ministries and government agencies, in order to make them more effective through ICT-centered solutions.

A basic remark that is worth mentioning is on the methodology. The style in which the Palestinian ICT strategy was built has witnessed excessive employment of templates derived from regional and international agencies recommendations. We believe that the approach in building the ICT strategy has not followed a professional practice, which stems out of the urgent needs of the country. The structure of the ICT strategy is to a large extent standard, encompasses of traditional pillars that did not reflect on the unique status of the Palestinian society. Planners should keep in mind that countries differ in their context, nature, resources, and policy making mechanisms, which make ICT strategy templates ineffective practice to a certain extent. ICT strategy for Palestine needs a high degree of customization, and

contextualization, but still in harmony with regional and international agencies recommendations. The need is for indigenous plan, not an exogenous one that tries to force the national settings in international templates. Moreover, the ICT strategy, cannot be derived as a standalone plan, but needs to be an integral part of a wider and more comprehensive development plan the encompasses all facets. National planners draft a comprehensive development plan for the whole nation and derive an ICT plan in accordance. ICT strategy must be an integral part of a broad development strategy, so that ICT can be effectively utilized to address the fundamental development challenges of poverty reduction, employment creation and sustainability. It is to be recognized that the challenge to make ICT a powerful tool for development is a complex process.

Analyzing the way how the planners and the community at large interacted with the strategy, one would notice that even though the strategy has been articulated, nevertheless the mentality and the stakeholders' mindsets have not changed accordingly. Practices have shown that the adoption of ICT tools and solutions alone will not promote growth and development if it is not combined with training, capacity building, organizational, management and operational changes that try to make use of these technologies. An ICT strategy that strive to change a society into an information-based one will have slim chance to succeed, if people, especially policy makers and managers, continue to act and react in the same traditional way, as if these tools were not there. It is true that technologies changes at a higher pace than people can absorb, but incremental and sustainable changes are needed to leverage the society to the sought information-based one.

Strategies are planned and designed by ICT specialists and enthusiasts, who hold positive standpoint of ICT. Those planners have slight or no clue of what and how the public in general would perceive and view those tools. That creates a gap between the decision takers and the executing bodies in relation to moving from the planning to the implementation level. As there where was no seamless flow of information between the management hierarchies, especially the planning and executing bodies, there happened to be a discontinuity in the management chain that created impediment in achieving the preset goals. Additionally, some of the government officials who are responsible for setting the ICT policy in motion lacked the right mindset, knowledge and experience in how to create the right atmosphere for its evolution.

It is worth noting that in this particular case most of the ICT developments are accredited to the private sector, even those changes that were noticeable at government agencies. Therefore, the lack of coordination between the government and the private sector, in developing a vibrant sector will not be an easy task as efforts will be scattered. Having no or low trust and coordination between the government and the private sector will work to hamper the development of a stimulating sector.

ICT effect will be more pronounced when high penetration of ICT is achieved among the different factions of the society. National strategies should focus of leveraging of mobile, Internet, and local content development through locally subsidized initiatives and stimulating regulations to help boost penetration and achieve magnified impact. According to many studies, exponential impact from ICT will be pronounced when a penetration level of 40% is reached in mobile and Internet. It has been reported by many research reports that upon the reach of a penetration level around 40%, exponential growth in penetration starts to occur, and the stimulating impact get enlarged at very fast pace, due to the network externality

effect. Network externality has been defined as a change in the benefit or surplus that an agent derives from a good when the number of other agents consuming the same kind of good changes, (S. J. Liebowitz, S. E. Margolis, 1996).

Major steps are needed to reinforce cooperation between all stakeholders. ICT initiatives should revolve around what development thinking views to be the most appropriate means to improve efficiency and effectiveness in government activities. It is noted that most ICT initiatives in the Palestinian case were driven by donor funds which created continuous struggle between the NGOs and PNA and in turn hindered the socio-economic development plans. The PNA should have taken the clear lead to translate goals into executable projects, and measured outcome.

## Conclusion

The process and methodology of building an information society within the Palestinian context, as a case of a developing society, were reviewed. It is to be recognized that information societies pass through distinct stages and it is important for each society to define the stage it is in, so that the strategy can work to transfer that society to a more advanced stage. This process is also critical to outline the fundamental pillars of the information society. Defining these pillars in addition to the relations among them is so crucial in building a viable information society. The understanding of the right relationships among the pillars will help prioritizing the strategy action plans and produce a more efficient way in realizing the preset vision.

The Information society vision, plan and initiatives should be positioned within the context of the society, and the development process should be harnessed to meet the imperative development goals of the society. One of the most important tools that is needed to realize the build of the information society is a resourceful national network of centers of excellencies, that is capable of executing a large scale research and development initiatives. This network takes the lead to create the legislation environment, the database, the management and leadership qualifications, and capable of influencing the decisions makers for the benefit of building the information society. A high profile champion is needed to lead the efforts in strategizing ICT through routes including the issue of laws, policies, coordination, and most importantly implementable initiatives. The government should seek to advance the development of a robust infrastructure, the development of human resources through education, and the focus to develop a viable content industry, and thus exert a focused and continuous effort to use ICT as catalyst for economical and social development.

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