Developing e-Government in Afghanistan

Abdul Mujeeb Mohmand  
Ministry of Commutation & IT  
Mohammad Jan Khan Watt MCIT,  
Kabul, Afghanistan  
Tel: +93-799-312457  
mujeeb.mohmand@mcit.gov.af

Aimal Marjan  
Ministry of Commutation & IT  
Mohammad Jan Khan Watt MCIT,  
Kabul, Afghanistan  
Tel: +93-700283338  
aimal.marjan@mcit.gov.af

Amirzai Sangin  
Ministry of Commutation & IT  
Mohammad Jan Khan Watt MCIT,  
Kabul, Afghanistan  
Tel: +93-210-1100  
a.sangin@mcit.gov.af

ABSTRACT
Use of Information & Communication Technology (ICT) in government activities has become a common phenomenon in recent years. In the late 1990s, ICT introduced a unique concept—electronic government (e-Government)—in the field of public administration. (1) With rapid development of Information and Communication Technologies (ICT) and increasing awareness of the benefits of Electronic Governance, ICT-enabled transformation of governance processes become part of national development strategies in the developing world. Particularly, Electronic Governance programs are increasingly aligned with core development objectives strategically utilized to tackle major development challenges like the United Nations Millennium Development Goals (MDGs) (2). In this paper, we present the developing e-government in Afghanistan. First, we present Afghanistan and its National Development strategy. And then we recommend what role can e-government play in national development and Ministry of Communication and IT Current status, at last we present one of the important part of this paper developing e-government strategic plan.

Keywords
E-Government role in development and current status in Afghanistan.

1. INTRODUCTION
Electronic Government is the use of ICT to achieve better government (OECD, 2003): improve efficiency and effectiveness of the government, increase capacity for delivering quality public services, etc. Similarly, Electronic Governance can be defined as the use of ICT to achieve better governance: increased participation of citizens in policy-making, greater transparency and accountability of government decision-making, etc. While still in its early stages of development, a clear definition of e-government has yet to emerge. (4) A recent joint research initiative for the study of e-government sponsored by the United Nations Division for Public Economics and Public Administration and the American Society for Public Administration defined e-government as "utilizing the internet and the world-wide-web for delivering government information and services to citizens." (5) According to the World Bank, e-government refers to governmental use of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other agencies of government. (6)

Interest in e-government in general, and in electronic service delivery in particular, is best viewed as a response to the growing fragmentation and complexity of government. It has become fashionable to conceive of government as a set of "information silos" that establish barriers that inhibit access to information. (7) E-government, at least in the eyes of public service users, promises to dissolve these barriers. (8) This can produce several benefits, including reduced corruption, increased transparency, greater convenience, revenue growth, and empowering people to participate in political processes that affect their lives directly. In short, use of ICT in government facilitates an efficient, speedy, and transparent process for disseminating information to the public and other agencies, thus enhancing government administration performance. (9)

Electronic Governance development is subject to many surveys carried out by academic, international and private organizations. These include the surveys by the United Nations Department of Economic and Social Affairs (UNDESA); Centre for Public Policy, Brown University; Accenture; and Waseda University. The UNDESA survey arguably offers one of most authoritative assessments of the national Electronic Government development. An evaluation of these surveys (Shareef et al. 2008) revealed six main dimensions of assessment: 1) online services; 2) human development; 3) e-participation; 4) ICT infrastructure; 5) e-leadership - CIO; and 6) promotion and legal frameworks. At the same time, a number of organizations carry out assessment of various aspects of national governance. Among them, the World Bank's Governance Indicators (World Bank 2009) are applied to over 190 countries to assess: 1) voice and accountability; 2) political stability and absence of violence; 3) government effectiveness; 4) regulatory quality; 5) rule of law; and 6) control of corruption. In this paper at first we present general information regarding Afghanistan and second National development strategy of Afghanistan and then we
recommend what Role can e-government play in national development of the country, and then we explain current status of ICT in Afghanistan and its challenges, and at last we go through developing e-government strategic plan and e-government on going projects in ministry of Communication and information technology.

2. ABOUT AFGHANISTAN
Afghanistan is largely a rural country; it has around 34 provinces and 380 Districts with four major cities – Kabul, Kandahar, Heart and Mazar-I-Sharif. Jalalabad is another major city and serves as the transit to Pakistan. Kabul as a city has seen its population grow 200% to almost 3 million, the population of the country is 30 million and its total Area is 647,500 km² according to a 2009 estimate. Its major Languages are Pashto, Dari, Uzbek and Turkmen and the literacy rate is (28.1% of the total population, 43.1% Male and 12.6% Female) (from AIMS).

The return of refugees from neighbor countries, caused that a high number of educated people returned in search of better opportunities to work in their motherland and plus they brought back skills and knowledge. Much of the growth in the IT industry in Afghanistan can be attributed to the returnees. Continuous war for two decades had stopped the development of public communications network, and much of the current status has been achieved in eight years since the fall of the previous Taliban rulers.

Population: 30 million (estimate UNESCAP 2009)

<table>
<thead>
<tr>
<th>Language</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pashto</td>
<td>42%</td>
</tr>
<tr>
<td>Tajik</td>
<td>27%</td>
</tr>
<tr>
<td>Hazara</td>
<td>9%</td>
</tr>
<tr>
<td>Uzbek</td>
<td>9%</td>
</tr>
<tr>
<td>Aimak</td>
<td>4%</td>
</tr>
<tr>
<td>Turkmen</td>
<td>3%</td>
</tr>
<tr>
<td>Baloch</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
</tbody>
</table>

Table.1. (a) Population of each Nation of Afghanistan from Total 30 Million. And Figure. (b) The same

3. National Development Strategy

3.1. Security: Achieving nationwide stabilization, strengthen law enforcement, and improving personal Security for every Afghan. Security across the country is essential for effective governance, private sector development, economic growth, poverty reduction and the safeguarding of individual liberty. The strategic objective under this pillar is to ensure the security of state, people and property through the implementation of an integrated and sustainable defense, security and law and order policy. The Government has developed a National Security Policy to be implemented through the Security Sector Reform (SSR) program. This will strengthen and improve Coordination among the Afghan National Security Forces (ANSF), ISAF/NATO and CSTC-A.[3]

3.2. Good Governance, Rule of Law, and Human Rights
Strengthen democratic practice and institutions, human rights, the rule of law, delivering of public services, and government accountability Improving democratic governance, rule of law, justice and human rights remain vital to supporting our national vision, including poverty reduction and sustainable high rates of economic growth. The ANDS strategic objective for this sector is the establishment of a stable Islamic constitutional democracy where the three branches of the State function effectively and inclusively, are held accountable, and uphold the rule of law and basic human rights. The Government aims to provide good governance and measurable improvements in the delivery of services. To achieve these goals it will: (i) establish, reform and strengthen government institutions at the sub-national levels with an emphasis on transparency and competent, results-based management; and (ii) reform legislative processes, including the holding of free and fair elections. The Government will act as a policy maker, regulator, enabler and not a competitor, of the private sector.[3]
3.3. Economic and Social Development.
Reduce poverty, ensure sustainable development through a private sector-led market economy, improve human development indicators, and make significant progress toward achieving the MDGs. The Government is committed to policies conducive to a private sector-led market economy that delivers high, Sustainable economic growth. Within the ANDS, the Government’s key poverty reduction initiative will be to Support the private sector as the most efficient vehicle for increasing employment and incomes. At the same time, the Government recognizes the need to target resources at the poorest and most vulnerable groups, to be achieved through fiscally sustainable and transparent income transfer policies. Since 2002, the Government has also placed a high priority on attempting to provide health and education services to all Afghans. These policies will continue to be strengthened, in order to improve human development indicators significantly across Afghanistan.[3]

3.4. Education Development: The Government aims at having a well-educated nation. Since 2002, the Government has invested heavily in the education sector and has attained progress toward the ultimate goals of educating all of Afghanistan’s children, reducing illiteracy, and creating a skilled labor force. The Government is committed to meeting the Millennium Development Goals, and the primary education objective for the ANDS is to keep Afghanistan on track for their timely attainment. The Government aims to increase literacy, improve quality of education, expand the capacity of the education system to absorb more students, increase equal access to education for all, improve opportunities for and quality of higher education, and expand the capacity and improve the quality of vocational education and skills building.[3]

3.5. Health and Nutrition: By all measures, the people of Afghanistan suffer from poor health. Afghanistan’s health indicators are near the bottom of international indices, and fear far worse, in terms of their health, than any other country in the region. Life expectancy is very low, infant, under-five and maternal mortality is very high, and there is an extremely high prevalence of chronic malnutrition and widespread occurrence of micronutrient deficiency diseases. The top priority of the health sector is to address priority health issues through a universal coverage of a Basic Package of Health Services (BPHS). The Government will continue to implement the BPHS and will strengthen the referral network that links patients into the hospitals that provide the Essential Package of Hospital Services (EPHS). Specifically, the Government will focus on strengthening reproductive health services, particularly in the areas of safe motherhood and family planning; improving the nutritional status of mothers and children; and controlling communicable diseases, recognizing their adverse impact on the health of all Afghans. To support these specific health interventions, the Government has developed a comprehensive program of institutional development for health services, designed to organize, manage and monitor the national health system to reduce inequity and improve efficiency, effectiveness, quality of care and accountability at all every levels. [3]

3.6. Counter-narcotics: One of the major objectives of the ANDS is to lay out a strategy for the elimination of the narcotics industry, which represents a formidable threat to the country, the region, and beyond. The Government is committed to halving the total area under poppy cultivation by 2013, as measured against 2007. The Government’s plan for 1387 (2008) includes the eradication of 50,000 hectares of poppy fields. Those who are engaged in the narcotics industry are opposed to any gain in the Government’s legitimacy or stability for the country. They provide funding for terrorist activities and fuel corruption. The National Drugs Control Strategy (NDCS) is the Government’s main response to the fight against narcotics.[3]

3.7. Anti-corruption: The perceived high level of corruption is a major roadblock for the development and better governance. The ultimate objective of the Government’s anti-corruption strategy is of a public administration that operates with integrity and accountability to provide an enabling environment for economic and social development, based upon the rule of law, impartiality in political decision making, the proper management of public resources, the provision of efficient services and the active engagement of civil society and the private sector. The Government’s anti-corruption strategy and roadmap are focused on achieving clear progress in reforming public administration and judicial systems as well as implementing measures in the counter narcotics strategy.[3]

3.8. Information and Communications Technology (ICT)
The ANDS strategic goal for this sector is to provide equitable access for 80 percent of the country and for most populated areas to be covered by 1389 (2010). The priorities of the ICT sector will be to finalize the Fiber Optic Cable and Copper Cable Network projects, expanding access to high-speed data services throughout the country, and extending mobile phone coverage. The implementation of national ICT legislation, to create an enabling environment for the development of the sector, will be necessary to stimulate further private-sector investment. The ICT Council, through the Ministry of Communication and Information Technology (MCIT), will work to expand government capacity, improve governance, and reduce corruption, by pursuing moves
toward e-government. The private-sector is expected to make additional large investments in the telecommunication sector. [3]

The development of the energy sector is a key precondition for reducing poverty and strengthening private sector and rural development. The ANDS strategic objective for the energy sector strategy is the provision of reliable, affordable energy based on market-based private sector investment and public sector oversight by investing in Afghanistan’s own sources of energy. Core targets over the medium-term for national development include: (i) electricity will reach at least 65 percent of households and 90 percent of non-residential establishments in major urban areas and at least 25 percent of households in rural areas; (ii) at least 75 percent of the costs will be recovered from users connected to the national power grid; and (iii) a strategy for the development and use of renewable energies [3].

3.10. Agriculture and Rural Development.
The ANDS strategic objective for agriculture and rural development strategy is to attract private sector investment to transform agriculture to a high-value commercial agriculture sector as a source of growth and expansive means of livelihood. The Government will implement a coordinated agricultural and rural development program targeting two broad goals: (i) poverty reduction and (ii) the provision of alternative livelihoods. The Comprehensive Agriculture and Rural Development (CARD) Sector Strategy articulates a road map for the way forward in which poverty reduction through economic regeneration is the central objective. The overall focus is to support the poorest and most vulnerable segments of rural society. Of great importance, with increasing efforts towards poppy eradication, the rapid expansion of largely agricultural based activities will be more essential than ever to limit the numbers of marginal small holders falling below the poverty line. Investments to generate alternative livelihoods will be key in this regard. Most farmers are engaged in subsistence or near-subsistence agriculture, and many farming families remain food insecure and therefore face risky livelihoods often combined with chronic debt. As a result, the country’s vulnerability to natural disasters and food shortages has increased. The Agriculture and Rural Development Strategy sets out a series of programs designed to achieve improved quality of life for rural citizens – one in which food security is assured, basic services are provided, incomes increase with households actively engaged in legal activities, employment opportunities expand and where people live in a safe and secure environment. Activities are usefully grouped into two main components a comprehensive Agriculture and Rural Development and the Agricultural and Rural Development Zone (ARDZ) initiatives

3.11. Urban Development.
Effective management of the rapid urbanization process will make a significant contribution to the recovery of the country. Through the ANDS PDP process, eight major City Development Plans were developed. The ANDS strategic objective is to increase ensur access to improved services and affordable shelter, while promoting sustainable economic growth through the implementation of the National Urban Program, which includes the National Land Policy and the City Development Plans [3]

The culture and media sector vision is (i) to foster the continued expansion of a free and lively media that is independent and accessible to women and men throughout the country; (ii) to preserve and protect the cultural heritage of Afghanistan; and (iii) to foster cultural creativity. Major goals for this sector include the documentation of unregistered historical monuments and archaeological sites and the restoration and protection of vulnerable locations; the adoption of new media legislation to support independent and open media; the expansion of media throughout the country; and the continuation of efforts to recover stolen artifacts through international and bilateral relations [3].

3.13. Gender Equity
An important precondition for the success of Afghanistan’s development goals is the reversal of women’s historical disadvantage in Afghan society. The Government’s vision is a peaceful and progressive nation where Women and men enjoy security, equal rights, and opportunities in all spheres of life. The Government is committed to fulfilling its obligation to women’s development as embodied in the Constitution, the MDGs, the Afghanistan Compact, and international treaties. The ANDS provides a framework for mainstreaming gender interventions across sectors so as to address women’s position in the society, their socio-economic condition, and access to development opportunities. The implementation of the strategy for gender equity is a shared responsibility among government entities at the national and sub-national levels. The Ministry of Women’s Affairs, as the lead agency for women’s advancement, will be strengthened to enable it to take on the role of coordinating and monitoring the outcomes of Government interventions.[3]

The environment is a cross-cutting issue that underpins the entire social and economic development framework for the country. The Government’s chief goal regarding the environment is to improve the quality of life for the people of Afghanistan through conservation, protection, and improvement of the country’s environment, as well as to ensure the sustainability of development efforts for future
generations. As a top priority, the Government will strengthen the capacity of the National Environmental Protection Agency (NEPA) to perform its regulatory, coordination, and oversight functions, and the capacity of line ministries to actively address environmental Considerations in their program designs. Another short-term priority is to make operational and fully deploy the Environmental Impact Assessment (EIA) system, jointly by NEPA and line ministries, which will allow for the adequate monitoring of the environmental impacts of development projects.[3]

4. Current Conditions & Challenges

Of Country

No other nation has faced, simultaneously, the range and scale of far-reaching challenges with which Afghanistan is now in and must contend with. Today, the country remains devastated with a large part of the human, physical and institutional infrastructure destroyed or severely damaged. Afghanistan faces widespread poverty; limited fiscal resources which impede service delivery; insecurity arising from the activities of extremists, terrorists and criminals; weak governance and corruption; a poor environment for private sector investment; the corrosive effects of a large and growing narcotics industry; and major human capacity limitations throughout both the public and private sectors. Meeting the challenges of recovery and rebuilding of a country that can provide the basis for sustained economic development would take many years and require consistent international support.

Social and economic development will not be achieved unless insecurity that exists in some parts of the country is reduced markedly. Despite the efforts by Government and the international community to end terrorists and extremist activity, security has steadily deteriorated since late 1384 (2006). The stabilization of Afghanistan, especially in the south and south-east, remains a necessary but insufficient pre-condition for ANDS implementation. The success and sustainability of the ANDS depends on the ability of Afghanistan to assert the rule of law across the country. However, this requires the establishment of central and sub-national governance structures capable of delivering basic services to all citizens.

The difficulties in maintaining security contribute significantly to two closely related issues: increasing corruption in the public sector and the rapid growth of the narcotics industry. The narcotics economy seriously undermines the potential for growth in the licit economy and generates large amounts of illicit money to fund terrorist activities and encourage corruption in the public sector. The country must also address serious shortcomings in the delivery of basic social services, particularly education and healthcare. Literacy rates remain low, particularly in rural areas and among women. The health standards of the Afghan people are also among the lowest in the world. Spending on healthcare per person is only about one quarter of the amount spent elsewhere in the region [3]

5. WHAT ROLE CAN E-GOVERNMEN PLAY IN AFGHANISTAN NATIONAL DEVELOPMENT?

Basic concept of e-government is optimal use of ICT in governance, and ideal government is: Citizen centric, service oriented Inclusive and holistic, Efficient and Responsive, Transparent and participatory and democratic ....etc. Is an ideal government possible? Yes we can approach an ideal government through the use of Technologies

![Optimization of a Governance System](image1)

![System Optimization Curve](image2)

Figure 1. (a) Optimization of e-governance system and (b) is system optimization curve.
## Traditional vs. E-Government

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>E-Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Resources</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Cost of Service</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Speed of Service</td>
<td>Months/day</td>
<td>Hours/Minutes</td>
</tr>
<tr>
<td>ROI</td>
<td>Low</td>
<td>High (payback or years)</td>
</tr>
<tr>
<td>Participation</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Transparency</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

**Table 4.** Comparison between Traditional government & E-government

![Table Comparison](image1)

### Figure 2. (a) Comparison of Transparency, participation and use of Resources, (b) Cost of Transactions and (c) speed of service delivery.

#### 5.1. e-Gov Role in Security

Terrorists are taking advantage of the physical isolation of many communities to forcibly hold them back from integration into Afghan society; several ICT projects (like TDF, DCN, VCN) will provide the basic connectivity to eliminate this obstacle to progress. Another aspect is the storage and processing of authentic people and physical data of the county, which will reduce the opportunities of producing false and fake information.

#### 5.2. e-Gov Role in Governance and Rule of Law

With the implementation of e-Government and e-Democracy the rule of law will be strengthen.

#### 5.3. e-gov in Education:

Use of ICT by the government in the education, health care, and environment sectors can also prove beneficial. In education, it can increase literacy rates significantly. Web-based education and e-learning have emerged as handy tools for distance learning. Both video and computer conferencing have made it possible for students in remote rural regions to have access to teachers anywhere in the world. The Digital Revolution also has had a major impact on the delivery of health care. It allows for an efficient exchange of information, such as patient's records and medical diagnosis, between health professionals, which improves the quality of health care. Government can use information technology applications for effective management and monitoring of environmental resources. This would enable authorities to take appropriate actions in case of emergencies. It would also prove helpful in such areas as air and water quality monitoring, pollution warning systems, public environmental information services, and environmental emergency management.
systems for floods, forest fires, and other natural disasters.

5.4. e-gov in Health: The telemedicine and e-Health will enable Afghans living in far and remote areas of the country to benefit from the health facilities in metropolitan cities of the country and the rest of the world.

5.5. e-gov in Social Protection: Through having national wide data bases with people data on it, it will enable the citizen as well the government to securely host, process and produce the authentic data about individuals thus reducing the tempering of people data. Thus no entity will abuse any one with the false testimonials in the society.

5.6. e-gov in Agriculture and Rural Development: Information technology also can empower rural people by providing them with both access to information and the tools for analyzing it. In agriculture, for example, systems technologies can help farmers in the area of crop management by providing information concerning planting date selection, water use and management, pest and disease control, and harvest management. The Land Information System, to cite a specific example, provides information concerning markets, food pricing, imports and exports, tariffs and quotas, underproduction and overproduction as well as information on soil, hydrology, and rainfall that support planning activities at various administrative levels.

(10) Availability of such information in a timely manner would assist farmers in making decisions that would ensure increases in productivity.

5.7. e-gov in Economic Governance and Private Sector Development

It is always important to have the right information (facts and figures) in the right time to make a good economical decision. Most of the time the economical data in Afghanistan are missing, thus discouraging the FDI and economic growth. Bureaucracy is another factor of this discouragement, ICT can play vital role through the implementation of different MIS, the private sector development and economical governance will foster.

5.8. e-gov in Gender Equality: Mobile and Electronic commerce will make it possible for women to work at home and be commercially viable without offending cultural sensitivities.

5.9. e-gov in Counter-Narcotics: Well connected societies are the lesser victims of narcotics and terrorism besides low employment is another breeding factor for terrorism, ICT will connect afghan society and will create job opportunities and facilitate ground for entrepreneurship.

5.10. e-gov in Anti Corruption: E-Governance and other e-Enabled services will reduce the corruption chances. If information is shared among all, then it is less prone to force any entity for corruption.

5.11. e-gov in Regional Co-operation: Fiber optic, national data centre, local content development, regional data repositories, regional cyber crime, regional data interconnection and such others are all good examples of regional cooperation which will be furnished by ICT.

5.12. e-gov in Environment: Telephone services and the internet reduce the need to travel, which saves expenditures on gasoline and eliminates harmful emissions.

6. CURRENT ICT & E-GOVERNMENT

STATUS IN AFGHANISTAN

6.1. Current ICT in Country:

Modern telecommunications technology arrived in Afghanistan in 1930 with a small exchange built in Kabul. The network was gradually expanded to five additional urban areas via copper wire but this infrastructure had been decimated by 23 years of conflict and under-investment since the mid-1970s. At the beginning of the transitional government in 2002, the infrastructure was negligible and services were extremely limited. Wealthy people could afford to use satellite Phones (at a cost of US$5 per minute) and those less fortunate either traveled to neighboring countries to place a call or to post a letter. But in reality, the majority of Afghans were simply isolated without communications. In early 2003, Afghanistan had fewer than 15,000 functioning telephone lines for a population of approximately 25 million. This means a telephone penetration rate of 0.06%, among the lowest in the world. In addition to a shortage of basic telephone switching capacity, the local transmission network delivering last mile services, presented an even more difficult bottleneck. The cabling conduit, trunk cables and copper wires were also old or completely destroyed. Afghanistan did not have a functioning long distance network to provide national or international connectivity. The absence of transmission and switching facilities meant that citizens could only complete calls within their own cities and were Unable to reach any other parts of the country or the outside world. The government adopted the first modern policy for the ICT sector in October 2002, which was immediately posted to one of the first government websites. This initial broad policy statement was further refined and split into two separate policies – one for basic telecom infrastructure and regulatory principles, and a second for ICT applications and a vision for the Information Society in July 2003.[13]

The government has not veered from these policies and they remain in force to this day. Their principles have subsequently been given a statutory basis, in the form of the Telecom Law that was promulgated in December 2005.
(published in Official Gazette 787). The telecom infrastructure aspects are being implemented by ATRA, which was established in June 2006. The ICT applications aspects are being implemented via the ICT Council, which was established in May 2007. The transparent approach taken to the adoption of the policies and the consistency of the vision from design to implementation has produced rapid results. These results have been formally acknowledged in two documentaries films— the first produced by the World Bank, and the second produced by USAID in 2006. In addition, there have been numerous favorable articles published in the leading business media, including The Economist, the Wall Street Journal and the Financial Times. [13]

In line with the economic goals of the Government, to increase the present annual revenue per capita of USD 200 to between USD 500-700 in 5 years time, MoC’s strategy and policies will be to further develop the telecommunications market, maximizing the resulting positive impact on the economy. Key performance indicators for the Telecom and IT sector have been identified and the targets for the Year 2005, 2007 and 2009 for these indicators are given in the table below:

Table 5: (a) Ministry of Commutation and IT indicators of 2005 to 2009 and (b) Telecom Statistics end of 2009.

(b)

Figure 3: (a) Ministry of Commutation and IT Communication towers from 2002 – 2009 and (b) Mobile subscribers.

(a)

Figure 4: (a) Cost of National Calls in Afghani/Minute and (b) Cost of international calls in Afghani/minute.
Fiber optic Connection to neighbors

![Map showing fiber optic connections to neighbors](image)

(a)

Telephone Penetration 2007 percentage of the population

![Bar chart showing telephone penetration in various countries](image)

(b)

Figure 5: (a) Afghanistan Fiber optic connection with neighbors’ and. (b) Telephone penetration 2007 percentage of the population.[13]

6.2. ICT Policy Framework

The objectives of the MCIT have been rapid development of the ICT sector by having multiple operators providing world-class quality services at reasonable prices. In July 2003, the MCIT adopted its Telecommunications and ICT Policy with the aim to promote rapid telecom development through private sector investments. The Islamic Republic of Afghanistan firmly recognizes the importance of embracing telecommunications & ICT technologies to achieve the Nation’s development and reconstruction goals. The ICT Policy is fully compliant with the sector framework required by the World Trade Organization (WTO) by making the MCIT responsible only for policy, by establishing an independent sector regulator Afghanistan Telecommunication Regulatory Authority (ATRA) and by corporatizing Afghan Telecom as the first step to remove the government from the provision of services to the public. The Policy encourages private investment through the introduction of measured competition; established Afghan Telecom as a state-owned corporation with the right to accept private investment; and supports rapid expansion of telecommunications and Internet services at the local level. The policies recognize the use of ICT to provide healthcare, social services, and citizen’s services, promote systems that accommodate convergence of various technologies and networks by providing a favorable investment and taxation environment. The policies will enhance government effectiveness by using e-government technology and by establishing a national data centre, to promote effective ICT training courses foster the capacity to trade goods and services by electronic means.[13]

6.3. Current e-Government in country: The Ministry of Commutation and information technology has made great strides in the implementation of e-government. This will have significant contribution to efficiency in delivery of services. Processes which currently has several steps to complete. There is quick access to information which currently difficult and time consuming. This is because large databases with networked access will be created. Of significance is the access to various documents required in processing permits such as NID card, passport, and license and vehicle registration. In addition, application for jobs in the public service and access to results of national examinations is currently possible electronically. Thus implementation of e-government systems in the public sector will facilitate faster delivery of services.

Introduction of Information Technology into the public sector will provide new challenges. Furthermore, the shift into IT in the Public Sector will bring about profound opportunities for corruption. Introducing new technologies quickly for functional and fiscal purposes implies that risk assessment and control with regard to e-corruption is not adequate. Lack of installing proper controls and adequate safeguards in the computer systems has provided greater opportunities to IT literate staff to engage in electronic malpractices.

Current in government due to not having specific e-government strategy, and there is no contribution in government agencies, many projects and programs are repeating and reinvesting money

In Table 6. Key government agencies repeating projects are shown.
developing e-gov strategy, the program matadology was therefore Ministry of Commucation and IT, in 2008 started with international Institute of Technalogy[14]. At first we developed by UNU/IIST (United Nation University/International Institute of Technology). At the same time, the program aimed to strengthen the capacity of the public workforce in Afghanistan, covering a range of leadership, management and technical skills, to be able to lead, implement and benefit from the EGOV.AF Program. Thereafter, MoE developed the e-gov strategy, and the program was implemented. At first, we decided to have surveys from all government agencies and external stakeholders till to find the exact factors of development, and current government program and issues in all sectors, yes indeed it was not easy task to survey in country like Afghanistan because of many problems such as security, skills, environment and etc, to improve the capability and skills MICT and UNU/IIST e-government team scheduled weekly workshops and video conferences for all government agencies. In this strategic plan we also involved and train some lecturers from Kabul computer science faculty and some other universities, to have a good partnership in developing e-government strategy for Afghanistan.

National level survey Major parts were to understand all government agencies and external stakeholders issues (to which issue they give priority), there skill value, there interest and knowledge regarding e-government and etc. Still the project is underdevelopment and soon will present to senior government officials. The main objective and Aim of the project is to define an implementation strategy and a concrete government program to realize this strategy, towards the development of Electronic Governance in Afghanistan. The main object of the project is below.

**OBJECTIVES**

In line with this aim, the project has the following six objectives:

- **O1** Readiness Assessment - identify the state-of-practice and state-of-readiness for Electronic Governance in Afghanistan, including existing initiatives and studies;
- **O2** Research - identify relevant international best practices and adapt them to the conditions in Afghanistan, taking into account the results of readiness assessment;
- **O3** Strategy Development – agree on the vision for the future of Electronic Governance in Afghanistan and define a set of goals, strategies and targets to realize this vision, taking into account the results of the Readiness Assessment and Research activities;
- **O4** Program Development - define a concrete government program through which the goals and strategies defined during Strategy Development could be implemented.
- **O5** Human Capacity Development – raising the capacity of the public workforce in Afghanistan, covering a range of leadership, management and technical skills, to be able to lead, implement and benefit from the EGOV.AF Program;
- **O6** Organizational Capacity Development –raising organizational capacity of MICT to play the role of central coordinator of Electronic Governance in Afghanistan and particularly the EGOV.AF Program.
6.2.1. Other on going e-government projects in MCIT

1. NID Cards
   - License
   - Vehicle registration
2. e-Vote
3. e-health
4. e-passport
5. Land Titling
6. Customized Reception Disk
7. Electronic Document Management System
8. Establishing 80 websites for governmental organizations

6.2.1.1. NID (National identification) card.  
Afghanistan government has sought how to manage residents by using new telecommunication technology, and the Government is finally trying to solve it with NID system. This project is therefore implemented.

The two major affairs necessary to control the fundamentals of a nation are residential affair and land affair. Especially, residential affair is the first priority to manage a nation. Number, name, activities of residents, and moving residence can be a basis of various national administration such as taxation, crime control, health management, passport and immigration. Currently, PRD (Population Registration Directorate) under the Ministry of Interior Affairs is comprehensively handling numerous residential affairs and ID documents in Afghanistan. Now, PRD has a plan to replace individual ID with ICAO standard-based ID card as well as reform and set-up of residential affairs process to control 30 million residents. However, low population compared to vast nation’s area, poor communication infra and lack of government’s budget blockade normal resident affairs. In other words, there is no server / terminal at all and no computing work to improve efficiency of work other than simply collect and manage application for residential affairs. In terms of communication infra, there is no problem in Kabul, but there is only satellite network between Kabul and 34 provinces, and no Afghanistan network between provinces and 364 districts.

6.2.1.2. Electronic Document Management System
The Electronic Document Management System (EDMS) is one of the government department’s pilot projects. The EDMS is intended to computerize the majority of the paper management issues of the MCIT. The EDMS will work as like other majority of document management systems in the world, it will be equipped with options to deal with scanning of incoming letters (if necessary), recording of all documents, forwarding and distribution of internal mails and documents, digital signatures, document securities, document authenticities, and other related issues.

The potential cost-savings impact of Electronic Document Management System (EDMS) is rising as information hyper flow increases. Internationally, it is estimated that educated workers use 20 percent to 30 percent of their working hours managing document-based information outside automated systems, and we expect this percentage to grow. Within enterprises that do not bring internal and external content under control, the percentage of work time wasted by the average knowledge worker on document-related, and non-value-added tasks will increase to between 30 percent and 40 percent.

The focus of the EDMS project will be on the documentation department of MCIT; currently the majority of the incoming and outgoing documents go through documentation department.

An Electronic Document Management System (EDMS) will be a computer based system used for managing electronic and paper-based documents. An EDMS generally offers a means of checking documents into the system, searching for documents in the system, and version control. The system will also provide workflow and collaboration capabilities.

By implementing an organization wide document management system, Ministry of Communications and IT can save at least half of the time and money now spent on non automated document management. If the IDM system is fully implemented and professionally designed it can pay for itself within two to three years.

An EDMS should not to be confused with a Records Management (RM) system that is used to help with the long-term management of records, but it should also have this capacity, and will be more complex and professional as compared to RM. Document management systems provide storage, versioning, metadata, security, as well as indexing and retrieval capabilities.

7. CONCLUSION:

This paper highlighted the current development of Electronic Governance and ICT in Afghanistan and describes how e-government can be of a help in National Development. Electronic Governance can be a vital tool for building national competitiveness in war-torn Afghanistan, a landlocked and low-income country. Afghanistan is an Agricultural State, where more than 95% people are busy in Agriculture. The government can engage the citizens and civilian in this field by using information and technology .

To harness the potential and opportunities of Electronic Governance, Afghanistan needs to formulate a national Electronic Governance policy, strategy and action plans. This would bring together different ICT projects under way in the government into a holistic vision, towards creating partnerships among government organizations in public
service delivery, and public governance, based on integrated back-office systems, and relying on multi-channel delivery systems.

A top-level board to champion the development of Electronic Governance across the country is central to public sector reform and creating public value from ICT investment to citizens. Capacity needs to be built in IT strategic planning, IT project management and IT support. The role of ICT as a strategic tool has to be emphasized on organizational structures and Chief Information Officers should be empowered as senior strategists and leaders within public sector organizations.

Development of Afghanistan e-government will be the desire and spirit of the nation to embrace and benefit from modern technologies, combined with the leadership for public sector governance reform, we can conclude that the opportunities in creating value for citizens via Electronic Governance remain high. Electronic Governance strategies, effectively implemented, have the potential to unite this country of Agriculture, and gain synergies in uniform and equitable development nationwide.

REFERENCES

(1).Introduction e-government Bangladesh

(2) Electronics governance development in Maldives

(3) National development strategy of Afghanistan

www.nds.gov.af


(8) Bellamy, "From Atomation to Knowledge Management," 215.


(11) Ibid.


(13) www.mcit.gov.af