

**Islamic Republic of Afghanistan
Ministry of Communications**



**Information and Communication Technologies
(ICT) Policy**

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1. Vision

To enable Afghanistan to further benefit from Information and Communication Technologies (ICTs) by becoming part of the global information society while preserving Afghanistan's cultural heritage. To promote national goals as well as in order to achieve a tolerant and vibrant Afghanistan, Afghanistan will use ICTs to expeditiously improve Government and social services and foster the rebuilding process, increase employment, create a vibrant private sector, reduce poverty and support underprivileged groups.

2. Background

ICTs describes various technologies that make information and communication services available to a wide range of users. The term is used broadly to address a range of established and relatively new technologies, among which are the telephone infrastructure and broadcast media. An emerging and now critical use of some of these technologies is the Internet. Additionally, ICTs deal with the application layer, the systems that enable information to be collected and distributed, analysed and processed in a number of formats including text, images, sound and video.

Over the last few years, in order to take advantage of the opportunities afforded by ICTs within a policy framework, many nations have developed objectives and proceeded with the formulation of an ICTs strategy as a part of the overall national development plan. A step by step process including a coordinated and multi-pronged strategy is essential to achieve development of the sector. In this, education, investment opportunities and infrastructure availability play a major role. A dependable information and communications system is also essential for efficient management and operation in the public and private sectors. This includes areas such as internal government information, citizen's services, trade, banking, and international relations.

Recognising its critical importance, this document presents the objectives, policies and action plans for the development of the ICTs sector in Afghanistan. Afghanistan intends to use ICTs as a key, driving element for socio-economic development.

This Policy aims at building a society fully benefiting from ICTs. In view of this, a nation-wide ICTs infrastructure will be developed to ensure that information can be used by citizens to facilitate their endeavours and enhance democratic values for sustainable human development. In addition to this document, the Ministry of Communications (MoC) has published the *Telecommunications and Internet Policy*, which communicates policies more specific to the telecommunications sector.

3. Objectives

In order to build an Afghan society fully benefiting from ICTs, the MoC has defined the following objectives:

1. Wide adoption of ICTs in order to improve all aspects of Afghan life, including education, health, employment and access to information;
2. Growth of the local ICTs industry, in order to foster investment and employment generation in this area; and,
3. Use of ICTs to increase Government efficiency and to effectively deliver improved social services.

4. ICTs Policies

In order to accomplish the objectives defined above, the following ICTs Policies will be implemented in a fair and competitive environment:

1. **Government Services.** Recognising the importance of ICTs as a vital tool for improving Government services, the GoA will actively use ICTs to provide healthcare, social services, and citizen's services. The GoA will give particular attention to services to benefit underprivileged groups and the poor;
2. **Infrastructure & Convergence.** The importance of infrastructure development to Afghanistan can not be overstated. Recognising the convergence among telephony, data transmission and broadcast technologies and networks, the GoA while undertaking rehabilitation of existing infrastructure and the building of new infrastructure will promote systems that accommodate convergence of various technologies and networks and will promote the integration of technologies in order to maximise the use of infrastructure;
3. **Development.** Recognising that information and communication are vital to the development of all other sectors, the Government of Afghanistan (GoA) declares the ICTs sector a priority sector. This prioritisation includes designating the MoC as the leading Government entity responsible for ICTs and developing a National Information and Communication Technology Council of Afghanistan (NICTCA) described in Annex 1;
4. **Investment.** Keeping in view the important role that the private sector will play in the development of ICTs and to create an environment conducive to investment from the private sector, including foreign direct investment (FDI), the GoA will provide a favourable investment and taxation environment including but not limited to reduced import duties and taxes levied on profits;
5. **e-Government.** Recognising the importance of government efficiency the GoA will undertake computerisation of all central governmental entities by the year

1384 (2005). The GoA will enhance its effectiveness by using e-government technology and by establishing a national data centre;

6. **Education & Training.** Recognising the importance of building a skilled workforce capable of understanding, entering and benefiting from the digital age, the GoA through the MoC, the Ministry of Education, the Ministry of Higher Education and associated institutions will promote effective ICTs training courses at secondary and tertiary level and will build partnerships with the private sector to implement corporate training facilities; and,
7. **e-Commerce.** To foster the capacity to trade goods and services by electronic means the GoA will draft appropriate legislation and will establish the necessary mechanisms to create the sector including protecting the rights of consumers and the interests of providers.

5. Action Plan and Strategy

The following action plan expands the seven key ICTs Policies of the GoA and describes the steps necessary to implement the policies. The action plan will be further elaborated and updated by a yearly work plan and status report.

ICTs and Government Services

The tools that technology offer in the areas of healthcare, social services, citizen's rights and overall development will directly or indirectly be made available to underprivileged groups in order to build up a strong and democratic society. In addition, the role of women within families and communities makes their active participation in the development and use of ICTs essential. Women's particular role in these areas makes their knowledge of and participation in ICTs critical.

The GoA will ensure that initiatives will be established to make ICTs accessible to underprivileged groups, with special consideration given to women. Through the appropriate Ministries and Government departments, ICTs will be implemented in order to more effectively provide Government services in the following areas:

1. Health services. This includes the provision of health services face-to-face in local health centres and hospitals and health services provided "virtually" by specialists at a distance using e-medicine techniques. This also includes ICTs to make the provision of health services less bureaucratic, simpler to obtain and more universal.
2. Agriculture. Access to and information regarding commodity markets, including market prices of locally grown crops, weather data and other information are critical for farmers to raise their standard of living in today's increasingly global marketplace. The GoA will develop an agriculture information system (AIS), using ICTs to provide Afghan access to farmers in rural areas the information they need.

3. Administrative and social services. Access to Government administrative and social services is often time-consuming, or simply beyond the reach of people in rural areas. To achieve equal access to all Afghans wherever they live, the GoA will initiate actions to make all public government documents available through the Internet.

ICTs in Infrastructure and Convergence

The development of a modern, technically efficient and cost-effective infrastructure, both terrestrial and aerial, domestic and international is of critical importance to establish communication services in Afghanistan. ICTs have a critical role in the rebuilding process of the country's other infrastructure, as communication is an enabling factor and a pre-condition to the development and maintenance of roads, utilities, Government administration and social services.

As previously stated, the MoC has published the *Telecommunications and Internet Policy*, which communicates policies more specific to the telecommunications sector. This portion of the ICTs Policy focuses on infrastructure issues related to new, converging ICTs.

Information-based societies benefit today from ICTs that support the exchange of information across a large range of users and applications. The term convergence refers to the merging of differing technologies and networks allowing for the provision of advanced services. In addition to the provision of advanced services not possible before, the advantages of such systems are enhanced efficiency and cost-effectiveness over traditional mechanisms.

It is important to monitor communication trends within Afghanistan and promote the building of new infrastructure either directly compatible with or capable of future upgrades to accommodate convergence of various technologies and networks.

Hence, while fostering improvement of existing and implementation of new infrastructure, the MoC will ensure that appropriate policies be put in place that promote the adaptation of modern, converging technologies and networks. With this in mind, the GoA and MoC will undertake the following steps:

1. The MoC will promote these converging technologies and networks in order to maximise the use of infrastructure and advanced services;
2. In order to make data services equally accessible to urban and rural communities, the MoC will equip 50 percent of Post Offices with Internet terminals and enhanced communication capabilities by the end of 1382 (20, March 2004). These upgraded post-offices will function as tele-centres offering services including e-mail, high-speed Internet access, bill paying and e-banking.
3. Through academic as well as private initiatives, the GoA will promote basic and advanced research and development efforts regarding ICTs, with an emphasis on efforts focusing on issues relevant to the local ICTs sector. The GoA will ensure

that the highest level of academic and technical research and development can be undertaken in Afghan Universities in collaboration with universities abroad.

4. The GoA will encourage adoption of ICTs in the media and broadcasting sectors. The national radio and television stations will be equipped to enable them to make maximum use of converging technologies, offering both traditional and new media mediums, including the Internet, to reach their viewers/listeners.
5. The MoC will encourage service providers to offer value-added services allowing use of the same medium of communication for varied needs such as news, information and emergency support.

Recognition of ICTs as a Priority Sector

The following steps will be implemented to ensure that the ICTs sector will become a driving force in the development of the country and that ICTs advance appropriately throughout Afghanistan in the years following.

- 1) The MoC will be designated as the leading Government entity for ICTs. To reflect this, the designation of the Ministry will be changed to Ministry of Communication and Information Technology (MCIT) effective the end of 1382 (20 March 2004).
- 2) The MoC is charged with the promotion of ICTs and related services in the country. The MoC will pursue an effective and rapid development of ICTs in Afghanistan including development of policies and legislation in order to attract foreign investment and private participation in the sector, develop human resources, and the ICTs infrastructure and applications.
- 3) Recognising the importance of a transparent and open process to the development of ICTs, the MoC will develop a National Information and Communications Technology Council of Afghanistan (NICTCA). The Council's mandate will be to provide advisory services to the Government in all matters related to ICTs and to act as a coordinating focal point. The Council will initially be hosted and chaired by the Minister of Communications. The council will be operational by the end of 1382 and the MoC will publish guidelines for the efficient, transparent and open operation of the Council before that date. The initial task of the Council will be the formulation of a National Information and Communications Technology Agenda (NICTA), which will chart a path for the development of the country's ICTs sector.
- 4) In order to verify that progress has been made and to identify potential bottlenecks to the implementation of these policies, the NICTCA will conduct at least biennially an e-readiness Assessment (ERA), which will include a review of this Policy. The NICTCA will publish guidelines on the conduction of an ERA. The reports of the ERA will be made publicly available and will constitute the basis for future ICTs planning.

ICTs Investment Policies

The development of the country's ICTs capacity will be greatly accelerated and improved by the participation of the private sector and national and foreign investors. In order to obtain the level of investment required, the MoC in cooperation and agreement with other appropriate Ministries and Government institutions will establish a coordinated approach to foster investment in ICTs in the country.

- 1) In cooperation with the Ministry of Commerce and the Ministry of Finance, a favourable taxation regime for the ICTs sector will be developed. This taxation regime will consider import duties and taxes levied on profits of ICTs related equipment and services. Special tax incentives may be made available in a specific area such as within the limits of special economic zones or export-processing zones, including within the limits of an ICTs Technology Park described in Annex 2.
- 2) To encourage investment in ICTs related activities that may be particularly beneficial to the country, companies that operate in certain fields such as software development or ICTs education and training may be allowed additional tax benefits related to their investment in research and development.
- 3) In order to spur investment in and growth of the sector, an ICTs Technology Park will be established based in Kabul. This will host ICTs operators and companies engaged in the sector. The MoC will develop a detailed plan for establishment and operation of the Technology Park. It is envisioned that the Technology Park will, among other things, serve as a local business incubator providing facilities, access to management and operational expertise, and act as a conduit for venture capital funds. Furthermore, "virtual ICTs Technology Parks" located in regions of Afghanistan with similar benefits and tax incentives as described above will be promoted to give impetus to private investment in the ICTs sector on the local and regional level.
- 4) Current investment laws will be considered when developing ICTs related policies and legislation, and ICTs policies and legislation will be considered when developing future investment laws.
- 5) The NICTCA will present the state of ICTs in Afghanistan internationally at trade shows and conferences with a well-articulated, focused and comprehensive strategy and publish investment information through a specialised web site.

ICTs and Government Efficiency

As ICTs become more and more entrenched in all public functions, it is imperative that the GoA quickly employs e-government strategies to develop an efficient, cost-effective and transparent public sector while granting in the very near future access to information and services to citizens and the international community.

Through the MoC the GoA will establish:

Information and Communication Technologies Policy

1. A National Data Centre by mid of next year (1383), charged with the task to provide Ministries, administrative units and other Government departments critical services such as:
 - a. Networking and Internet Access;
 - b. Electronic Data Processing (EDP);
 - c. File storage;
 - d. Intranet hosting, web site hosting, common Government email; and,
 - e. Data and Network Security;Afghanistan Computer Centre, which is an entity used for the EDP of different government offices in the past will be come part of the MoC, and will perform as National Data Centre.
2. A Government Help Desk to quickly respond to maintenance needs related to the Data Centre infrastructure and services.
3. A Training Centre to improve the skills of public servants on ICTs applications and ICTs processes management. This Training Centre could be implemented using the Mobile Unit concept where one or more large buses are fitted as training centres and circulate periodically to train employees in Kabul and other major Government centres.
4. An Information Systems Manager for each Ministry and Department. These managers will be tasked with liaising between their units and the Data Centre, Help Desk and Training Centre.
5. In cooperation with other agencies a Network Security Plan to secure the ongoing functioning of voice and data networks and protect them against malicious internal and external attacks.
6. Establishment of e-government services through analysis of needs and requirements in terms of data infrastructure at the Government level.
7. The MoC will oversee the management of the .AF top level domain and the process of domain registration under it. In addition, through the data centre, the MoC will establish a common Internet presence for the Government. This will enable the Government of Afghanistan to be visible to the outside world in a coordinated fashion and avoid the common pitfall many other countries have experienced of a disjointed web presence. The MoC will directly manage the registration services of the .gov.af domain.

ICTs and Education

Education is universally recognised as key to spurring economic growth and alleviating poverty. For individuals, education enhances opportunities and improves socio-economic conditions. At a minimum, ICTs have a significant role in improving adult literacy rates. In an increasingly technology-oriented and globalising world, the use of ICTs has become a critical factor in enabling more people to gain an education, which in turn

ensures that a country's workforce is skilled and prepared to meet the challenges of development.

Education is a cornerstone of the development process because it directly involves individuals and communities and engages a range of actors from both public and private sectors. By emphasising ICTs in educational efforts Afghanistan can "leapfrog" some presumed stages of development, and be better prepared to enter the global economy of the 21st century.

The establishment of an ICTs infrastructure in Afghanistan is therefore essential to promoting education and its subsequent benefits. Together with the purchase and installation of computers and related equipment, ICTs can facilitate education and training. In turn, both distance learning, which has proven to be a highly cost-beneficial investment for developing countries worldwide, and in-service training to improve the skills and knowledge of the existing labour force will be facilitated.

ICTs is particularly critical in countries where large segments of the population (including women) are educationally disadvantaged and live in rural areas, as is the case in Afghanistan. For this reason, the GoA through the MoC, the Ministry of Education, Ministry of Higher Education and associated institutions will take steps to:

1. Develop ICTs curricula at both the secondary and tertiary levels, promote participation in related courses (such as computer science, multimedia, communications, and engineering) and develop teacher training and training-of-trainers courses in ICTs-related subjects.
2. Invite prestigious foreign universities to collaborate with Afghan universities in establishing ICTs research and development programs. This will include initiating the highest level of academic education, including but not limited to Ph.D. programs, in ICTs in Afghanistan.
3. Create opportunities through which students, in particular those in remote locations can be exposed to technology. These would include Mobile Internet Units, i.e. buses equipped with computers and Internet access that visit schools; Networking Academies that give students and teachers the skills to design, build, and maintain computer networks; and tele-centres that would be operational in schools during and after class hours.
4. Support opportunities for distance education, including the establishment of centres that provide access to international online courses. Distance education expands resources available to both students and employees and can compensate for a lack of trained faculty and supervisors.
5. Establish partnerships with the private sector to develop and provide ICTs training for business personnel.
6. Coordinate public agencies in the training of civil servants in ICTs skills and applications.

7. Enhance public access to information regarding ICTs and opportunities in the sector through educational radio programs, distribution of written materials where appropriate and establishment of kiosks at public locations (such as airports, Government offices, etc.).

ICTs in Commerce and Trade

The application of ICTs to commerce and trade (e-commerce) has transformed the global market environment and allowed operations not possible before. For a country such as Afghanistan it is important to initiate building the future framework for e-commerce while at the same time protecting local commercial initiatives and consumers rights.

Without an umbrella legislation and specific policies dealing with the flow of commerce-based information and transactions, Afghanistan risks either becoming marginalised or remaining only a buyer of other countries' services. The goal is to enable national enterprises and consumers to benefit from the same tools as enterprises and consumers in other, already developed countries. In order to achieve this, the GoA in cooperation with the MoC and the Ministry of Finance will:

- 1) Support the creation of a secure network for inter-banking payment system in electronic form. This will be done in conjunction with Central Bank initiatives and will also include preparatory elements to ensure that customer-oriented features and services (such as automatic teller machines and e-banking) can be rolled out in the near future.
- 2) Adopt e-commerce legislation. Examples and model laws, adopted by several countries exist. Foremost is the United Nations Commission on International Trade Law (UNCITRAL) *Model Law on Electronic Commerce* (1996-8). The introduction of this model law, which has been already adopted by several countries, states that it "will assist all States significantly in enhancing their legislation governing the use of alternatives to paper-based methods of communication and storage of information and in formulating such legislation where none currently exists."
- 3) Adopt basic digital signature legislation such as the UNCITRAL *Model Law on Electronic Signatures* (2001). This Law applies to the use of electronic [digital] signatures in the context of commercial activities.
- 4) Draft the necessary legislation to provide a legal framework for the protection of consumers, customers and investors with regard to ICTs.
- 5) Promote localised software development and adoption of a national standard for computerised character representation applicable to the languages of Afghanistan. In addition, the GoA will promote the use of open source software and applications where appropriate.

6. Budget Considerations

Funding necessary to implement the policies proposed by this Policy will be done through three major avenues:

1. Allocation of Government budget;
2. Grants and loans provided by the international community; and,
3. Private sector participation and partnership.

From a budgeting perspective the following considerations apply:

1. To the extent that the MoC provides ICTs related services directly to other Government Ministries, the GoA must make internal budget rebalancing for services rendered;
2. New budget lines should be created for all Ministries and Departments to accommodate ICTs related expenditures; and,
3. ICTs projects and services should be designed with long-term sustainability in mind.

Annex 1

National Information and Communications Technology Council of Afghanistan (NICTCA)

Operation of the Council. The Council will be self-regulated and its membership selected through expression of interest. It will consist of representatives from:

- a) The user community drawn from civil society organisations and Internet user groups;
- b) Government representatives from the office of the President and the Ministries of Information, Domestic and Foreign affairs, Security, Education, Finance and Public Health and Social Welfare and others as applicable;
- c) Private sector and the business community: representatives from the banking and financial sector including investors, IT industry, manufacturing and retail sectors (with strong interest in e-commerce), private Internet service providers, service industry (transport, etc.);
- d) Representatives of accredited NGOs and civil society organisations; and,
- e) Representatives from academia and other associations and educational institutions.

Annex 2

Establishment of a Techno-park

Objective

To create an environment in which established and emerging members of Afghanistan's business sector can operate, expand, collaborate, and thrive. To this end, the Techno-park will provide businesses with facilities based on relevant, needed information and communication technology (ICT), as well as consulting services. With firms conveniently located in close proximity to each other, the Techno-park will serve as a cohesive centre for business development and exchange.

Services and Opportunities

The future of high technology industries depends largely on producing innovative products and services at competitive prices. Even the best ideas will remain only on paper if the necessary conditions and a conducive environment do not exist. The time it takes to move a product to market is very short, and the window of opportunity does not remain open for long in today's competitive, global business environment.

Ensuring that Afghanistan has a strong cadre of qualified entrepreneurs requires that conditions for converting innovative ideas into commercial successes be developed and

implemented. As many developing countries have recognized, this process can be facilitated through the establishment of a Techno-park.

The primary mandate of such a facility is the promotion of entrepreneurship, employment, and a skilled labor force.

Serving Entrepreneurs

Afghanistan's emerging entrepreneurs are generally recent graduates from science and technology institutions who have innovative ideas for developing businesses. Technical experts from a range of public and private sectors and faculty from premier educational institutions also fall into this category.

Business Support Services

Resident companies will have onsite access to services provided by the Techno-park, all of which aim to foster and enhance the technological potential of businesses. The Park's Support Centre will assist firms in accessing and using video-conferencing links, advanced multi-media facilities, the Internet, and the World Wide Web (WWW).

The Centre will also provide advice on information technology and telecommunications products, access to experts and consultants, current information from colleges and universities, training, on-site technology audits, and information databases. In addition to the office services noted above, the Techno-park's facilities will include the following:

- Direct access to the Internet and the World Wide Web
- iSDX switchboard
- ISDN direct dial telephone lines
- Voice mail and call attend
- 24 hour access, 365 days a year
- Help desk
- Refreshment area
- Security services
- Off-street parking
- Raised floors