

A decorative graphic consisting of three blue circles of varying sizes and two thin blue lines. One large circle is at the top center, a smaller one is below it, and a very large one is at the bottom right. Two lines intersect at the top left and extend towards the circles.

# **FATA Information Technology Policy 2012**

This document was developed with the support of USAID  
funded FATA Institutional Support Project.

1

**Arif Khan**  
**7/7/2012**

# Contents

---

1. Executive Summary	3
2. Acknowledgments	5
3. Vision	6
4. Mission	6
5. Overall Objectives and Goals	6
6. Overall Strategy	7
7.FATA IT Policy Implementation Recommendations	9
8. Sectoral Applications	10
8.1 Develop High Quality Human Resource	11
8.2 Establish modern IT Infrastructure in FATA	17
8.3 Introduce E-Government in FATA	22
8.4 Government and private Sector Partnerships to develop and strengthen IT Industry	25
8.5 Improve Research & Development	30
8.6 Legislation, Regulations and Standards	32
8.6.1 Legislation	32
8.6.2 Regulations	33
8.6.3 Standards	34
9. Action Plan	35

# FATA IT Policy

---

## 1. Executive Summary

The world has become increasingly interconnected over the last decades. We live in an environment where the Internet and its associated services are accessible and immediate, where people and businesses can communicate with each other instantly. This Interconnectivity is deeply redefining relationships between individuals, consumers and enterprises, citizens and governments; it is introducing new opportunities but also new challenges and risks in terms of individual rights and privacy, security, cybercrime, the flow of personal data, and access to information. As a result, our economies and societies will undergo fundamental transformations. Mastering and leveraging these transformations to maximize the positive impacts that ICT can bring to the economy, society, environment, healthcare and governance are crucial for boosting economic development and well-being of a society.

One recent research shows that digitization (ICT) multiplies the impact of connectivity, creating substantial incremental value in terms not only of job creation and economic growth, but also of societal well-being and government transparency. Today, more than 70 percent of the world's citizens live in societies that have just begun their digitization journey. As the individuals and enterprises in these societies continue to progress in developing their own digitization capabilities, they will only increase and accelerate these economic and social benefits.

Recognizing the enormous potential of the ICT, Barrister Syed Masood Kausar, the Governor of Khyber Pakhtunkhawa decided to embark upon an ambitious journey to bring forth the benefits of ICT to the people of FATA, enabling them to use IT as a driving force behind socio-economic development of FATA with the aim of bringing the region at par with the rest of the country.

Currently, ICT infrastructure and interventions in FATA are close to non-existent, except

few non-functional computer labs in government colleges and a basic ICT infrastructure in FATA Secretariat located in Peshawar. This problem is further aggravated by the costs and extreme shortage of power in the FATA region.

Fostering investment in ICT-related services sector will require a reliable and improved ICT infrastructure, and a willingness to consider lowering the cost of access to the internet. Alternate sources of power have to be utilized to compensate for the extreme deficiency of power in the region.

Against this backdrop, the Government in FATA is considering a clear and focused set of policies to strengthen and revitalize several areas of public sector concern, and also seek avenues to improve private sector participation in the development of ICT industry in FATA. These include a comprehensive human resources development program, strengthening of key institutions, improving access to hardware and software, redefining the investment incentive framework, strengthening public infrastructure and reforming the regulatory environment regarding ICT.

This policy document has been prepared keeping in view all the requirements of FATA region and deliberations on the policies, objectives and strategies regarding Human Resource Development, ICT Infrastructure in FATA, e-Governance, Public Private Partnership in ICT and legislation/regulation required to foster ICT industry in FATA.

The time taken for ICT interventions to pervade the business world has shortened considerably. Thus, policy reforms and strategies require quick action if FATA wants to remain connected in this changing environment.

The implementation of the policy is dependent on the FATA IT Action Plan which is briefly stated in the report, however, it requires detailed scoping to spell out different programs and projects to be initiated to realize the ICT vision of the FATA Government.

# FATA IT Policy

---

## 2. Acknowledgments

On the directive of Honorable Governor of Khyber Pakhtunkhwa, the FATA Secretariat has given the responsibility to a USAID funded project “FATA Institutional Strengthening Project” (FISP) to formulate the IT Policy for FATA. It was envisaged that a participatory approach, deriving ideas and advice from a large pool of IT experts of FATA from all walks of life, will ensure a realistic policy. For this purpose FISP hired consultancy services and conducted two workshops inviting all the stakeholders across FATA (Government officials- Secretaries , Directors, Planning Officers, Senior Officials of Federal Ministry of Information and Communication Technology, Universal Services Fund, Senior officials of Telecom Operators, ,CEOs of IT Companies, Principals, Teachers, Students, Representatives from Civil society, Local NGOs etc). The first workshop was held in Peshawar on 28<sup>th</sup> March 2012, with the main objective of acquiring input from all the stakeholders and identifying the major areas of ICT Policy. The second workshop of senior officials and CEOs was held in Islamabad on 18<sup>th</sup> May 2012 to discuss the recommendations and output of the First workshop, which finalized the main components of FATA IT Policy.

FISP provided sponsorship and logistic support to produce this invaluable document for the development of FATA. The invaluable support of secretary Admin and Coordination FATA and secretary to the Governor KP is acknowledged here along with the support of different staff of FISP.

The FATA IT policy formation process was initiated by using Federal IT policy as a guideline and framework and some of its clauses have been included in this document.

# FATA IT Policy

---

## **3. Vision Statement:**

Harness the full potential of Information Technology for the development of FATA.

## **4. Mission**

Rapid development of the ICT infrastructure and creation of trained workforce for the opportunities being created in the region. Focus these efforts at transforming society into a prosperous and dynamic one that values and benefits from the creation and free flow of information and knowledge. Encourage and assist the entrepreneurial spirit, and make the fruits of this technology available to every resident of FATA.

## **5. Overall Objectives and Goals**

- a. Establish a modern, efficient and cost-effective IT infrastructure in FATA that provides equitable access to national and international markets
- b. Develop high quality human resource and extensive pool of trained IT manpower at all levels to meet local and regional demand
- c. Launch an e-Government program to promote widespread use of IT applications in government organizations resulting in improved efficiency and transparency in their respective activities. It will also improve access of citizens to different government services or information. Promote extensive use of IT applications in local private sector.
- d. Enable FATA government Institutions to act as facilitators and enablers, providing maximum opportunities to the private sector to lead the thrust in development of IT in FATA
- e. Provide business incentives for local and national investors to ensure the

development of FATA's IT sector, including the software, hardware, and service industries, and the use of its products.

- f. Develop an enabling legislative and regulatory framework for IT related issues
- g. Encourage IT professionals (locals and overseas Pakistani) to work in FATA and establish software houses and extend assistance to the local industry in the form of business from abroad.

The policy framework deals with the core areas. Each core area will be strengthened by its associated program that will be covered under the FATA IT Action Plan (FITAP). The FITAP would focus on grass root interventions in the core areas covered under this policy and build a sustainability model. The FATA IT Action Plan would be assessed annually in order to review the existing program for compliance with the policy, performance evaluation and identify any new programs to address deficiencies that would emerge in the core areas elaborated in the following sections:

## **6. Strategies**

- a. Establishing a coordinated program for the development of FATA Information Infrastructure (FII) backbone by initially deploying wireless broadband technologies like WiMax and Wi-Fi hotspots for quick and easy deployment and while high speed backbone of fiber optic network and high-speed gateways are being deployed across all FATA, with the collaboration and assistance of Universal Service Fund (USF) and other support from Federal government, national and international donors
- b. Restructuring the education system at all levels to respond effectively to the needs and challenges of the society in the current information age. Providing distance education and remote health services (Tele-medicine) by leveraging Information Technology.

- c. Establishing adequate institutional framework at FATA Secretariat and Agencies/Frontier Regions' to effectively accomplish the objectives of the IT vision and mission.
- d. Establishing IT awareness and advocacy machinery at all levels of government and encouraging private sector participation in exposing FATA residents to the benefits of IT
- e. Establishing IT Parks as incubating centers for the development of local IT market.
- f. Introducing the e-Governance concept in government by creating database management systems associated with Geographical Information Systems as a tool for effective planning & monitoring of government business and development initiatives across FATA.
- g. Bringing the government to the doorsteps of people by creating virtual for a and facilities to strengthen accessibility to government information. Increased interaction between the residents and the government would lead to improved transparency, accountability and efficiency in government processes

# FATA IT Policy

---

## 7. FATA IT Policy Recommendations for Implementation

The use of information and communication technology to foster investments, to make government business efficient and to ensure quick public service delivery requires a commitment to develop required infrastructure and produce requisite labor force and entrepreneurial environment to convert the resources into products and services and thus resulting in vibrant marketplace. Public policy thus becomes a key driver in creating a conducive environment for the development of ICT in the region.

While it is essential to announce an IT policy for FATA, it is equally important to put together an enabling process for its implementation, as following -

1. A high-powered committee with Governor as the chair and formation of core groups for implementing the policies of the government in respect of E-Commerce, IT enabled services, E- governance E-Education and Telemedicine ;
2. The Governor will also set up Information Technology Advisory Council under the Chairmanship of ACS FATA. This advisory Council would have representatives from the industry, government and academia. This Council will review the implementation of the IT policy and also advise the Governor and the FATA Secretariat on further improvements as may be required from time to time.

# FATA IT Policy

---

## **8. Sector Specific Applications**

To achieve the above mentioned goals the Government in FATA would endeavor to:

- 8.1 Develop High Quality Human Resource
- 8.2 Establish modern IT Infrastructure
- 8.3 Introduce E-Government
- 8.4 Develop and strengthen, in partnership with private Sector,  
and the IT Industry
- 8.5 Improve Research & Development
- 8.6 Legislation, Regulations and Standards

# FATA IT Policy

---

## 8.1 Human Resource Development

### 8.1.1 Policy Statement:

FATA will endeavor to develop competitive quality manpower in IT and related disciplines.

### 8.1.2 Objectives:

Ensure high quality and affordable IT Education and Training on international standards and certifications with the aim to build core IT competencies in human resource. This would allow sustaining IT growth in FATA and also exporting human resource down in the future. Under this policy, the Government would also take initiatives to bridge the gap between Academia and Industry.

### 8.1.3 Strategy:

- i. A working group will be established to advise on current and emerging Education, and Training needs.
- ii. Comprehensive plan for education and human resource development in IT shall be drawn up to meet the present and future needs of manpower. This plan would include Degree and Post Graduate Programs at the Higher Education level and would also focus on diploma level courses at the Intermediate and School levels.
- iii. Short courses that provide focused hands-on skills in specific IT areas where manpower is needed urgently, including operating systems, software and hardware, would be provided to fresh graduates as well as unemployed and under-employed youth.
- iv. Training and hiring of women in the IT sector would be facilitated and encouraged to help convert their employment opportunities into more fulfilling

ones and to utilize this largely untapped human resource. Women can become effective players in large numbers in all sectors of the software and telecommunications industry.

- v. Facilitate and encourage the use of IT by FATA residents with special needs to make them productive members of the society. Specialized solutions for handicapped residents would be invested in.

### **8.1.3.1. IT Training**

- i. Provide basic IT education to every student in schools and colleges by establishing Computer Labs with alternate power source.
- ii. Strengthen existing IT training institutions and encourage the establishment of new IT training institutes, update curricula, introduce new technologies through linkages with global IT firms, develop strong local faculties, and provide student scholarships.
- iii. Organize teacher's trainings on a top-priority basis to meet the growing demand for qualified teachers in IT and for upgrading their skills regularly. Customized training courses with incentives in shape of laptops on easy installments etc, would be introduced to train the trainers.
- iv. Establish facilities for distance learning (eLearning) and ensure effective Internet connectivity. This will provide opportunities for academically disadvantaged areas to leapfrog into the modern era. Campuses of Virtual University and other parallel institutions would be established starting from Post Graduate Colleges downwards. Community centers with better broadband facilities can generate learning interest in the community.

- v. To rapidly increase the annual production of IT manpower, launch a crash-training program. Encouraging and supporting institutions in private sector to adopt internationally acceptable standards of examination and certification of IT training programs through hand holding by the government in shape of incentives.
- vi. Develop Trainings material, content and expertise to impart training on the focus areas and other elements covered in this Policy.
- vii. Introduce mandatory IT literacy courses for all levels of employees in Government service. Make IT literacy a prerequisite for induction into responsible positions.
- viii. Make basic IT literacy as a separate item in the Government employees' promotion decisions.

### **8.1.3.2. IT Education**

Education determines, more than anything else, a country's prospects for human development and competitiveness. Fortunately, the information revolution offers some extraordinary opportunities in education. The following measures shall be adopted to avail these opportunities:

- i. The education sector is responsible for delivering skilled work force that is equipped with knowledge and tools needed by the marketplace. Appropriate policies and incentives for this purpose will be introduced including special incentives to IT teachers in pay scales, allowances, inland and foreign courses.
- ii. Establish computer labs, powered by alternative source of energy, in government schools and colleges equipped with trained teachers and up-to-date and relevant curriculum.

- iii. Make participation by rural and poor segments of society in IT education a strategic priority for social and economic development. The Government would introduce IT education in private sector schools through the FATA Education Foundation. IT literacy centers at the community level and at Madrass as will be established. Such education can be subsidized and even made free in deserving cases.
- iv. Launch a scheme for providing subsidized or low-priced computers and Internet connectivity to universities, colleges and schools through a public-private sector initiative.
- v. Set up electronic libraries to ensure economical and equitable access to world information. This will provide a database for reference purposes to all students.
- vi. Encourage educational facilities to computerize their registration, examinations, accounting, and other activities.
- vii. Encourage educational facilities to adopt computer assisted learning and other IT tools to aid in the teaching process.
- viii. Establish virtual class room education programs, using online, Internet and/or video facilities, to provide distance learning to a large number of individuals.
- ix. Include a compulsory, modern and up to date Computer Literacy module in the matriculation curriculum for high schools. Revise the computer science curriculum at Intermediate level to make it modern and up-to-date and to offer it at all science colleges. Make basic IT knowledge compulsory for all degree courses within the next 3 years.
- x. Offer degree programs in Computer Science (CS) and related areas of IT in the institutes in FATA, comparable to the ones in colleges and Universities in Islamabad, Lahore and Peshawar.

- xi. Develop a standardized curricula and teaching materials in co-operation with public and private educational institutions, using highest national benchmarks for reference.
- xii. Attract the best students by establishing scholarship funds for students who demonstrate certain academic excellence.
- xiii. Establish a HRD fund (HRDF) under a IT Board. This fund will be utilized to expand and improve the quality of IT education, strengthen existing IT educational institutions, upgrade IT infrastructure (including laboratories, connectivity, and teaching resources), develop faculty, attract visiting faculty of international repute, provide student scholarships, share pooled resources through distance learning programs, and develop linkages with other universities and IT firms. Apart from the government financing through expatriate Pakistani community, international donor agencies and other available sources would be mobilized.
- xiv. Enable FATA IT Board to have mechanism to influence in attracting and retaining qualified faculty at the FATA higher education institutions
- xv. Promote the setting up of IT institutes in public and private sector. Encourage collaboration between the government and the private sector, and elicit the assistance of various foundations, multinational companies, national and foreign universities, and other social and welfare organizations.
- xvi. Provide incentives to Pakistani universities to setup distance learning or resident programs in FATA.

#### **8.1.3.4. IT Curriculum**

The Government, in order to produce IT engineers rather than technicians, would develop a relevant, uniform, and modern IT syllabus for the primary, secondary and College level based on international standards and in consultation with academia and other stakeholders from the public and private sectors.

### **8.1.3.5. Outreach Programs**

Government would develop extensive outreach programs of IT education and training to citizens of FATA.

Government will encourage all Pakistani students, especially those with linkages to FATA, to spend few months of their time teaching different IT courses in FATA schools and colleges. This will reduce negative perception of FATA in the rest of the country and will also broaden the horizon of the FATA students.

# FATA IT Policy

---

## 8.2 Infrastructure

### **8.2.1 Policy Statement:**

The government in FATA, through Federal Ministry of IT and Telecom, would establish and develop a FATA Information Infrastructure (FII) 'backbone' by initially deploying wireless broadband technologies like WiMax and Wi-Fi for quick and easy deployment and later developing a robust fiber optic networks, high-speed gateways across all FATA as a gateway to the National and International IT Infrastructures.

### **8.2.2. Objectives:**

Develop World Class IT infrastructure and promote provision of affordable, reliable, modern and high quality IT facilities and services that will enable IT to contribute towards achieving FATA Sustainable Development goals.

### **8.2.3. Strategy:**

The local IT industry will need a suitable support infrastructure, specially broadband infrastructure. Broadband will be rolled out to suitable points in every tehsils initially by deploying wireless technology like WiMax and Wi-Fi which is easier to deploy, is cost effective and would fulfill the initial bandwidth requirement of FATA. Pakistani firms have extensive experience in deployment of such technologies. Pakistan has biggest WiMax deployment in the world. However, it must be followed with the fiber optic deployment throughout the region to compliment the WiMax infrastructure. Fiber optic can handle unlimited bandwidth, but requires more time and effort to deploy across FATA.

Establish IT parks and incubators, equipped with the modern facilities and matchless incentives to provide a controlled environment and a one-stop shop for prospective investors of the IT industry.

The recommendations presented below will facilitate establishment of such an infrastructure.

- a. A close relationship between the government and the private sector is critical for the development of the ICT sector.
- b. The Telecom industry shall be encouraged to expand their infrastructure throughout FATA with measures like providing back-stopping security to their existing and new Telecom Infrastructure. This will provide affordable, competitively priced telecom services, Internet connectivity for a larger community of users. Provisioning of bandwidth for education and software needs and commercial activities in the FATA region.
- c. Increase telephone line penetration rate by expanding the existing telecommunications network and providing new ones employing modern technologies in order to minimize the capital cost of expansion. The government will encourage private sector operators for supply of basic infrastructure and services.
- d. Barriers to the induction of new technologies (e.g. Wireless Local Loop-WLL) to the Private Sector will be relaxed in the FATA region to ensure the spread of communications in FATA.
- e. Develop an integrated, flexible, robust, and reliable transmission network that covers the entire region and is capable of voice, video, and data transmittal.
- f. The bandwidth rates, both domestic and international connectivity, will be rationalized to encourage the rapid launch of new Internet and software related services as well as new and needed services like distance learning, telemedicine, videoconferencing, etc. This will also provide a competitive edge to local companies

trying to break into established Pakistani and Afghan markets.

- g. Encourage telecommunication companies and carrier network service providers to develop and upgrade rural telecommunications facilities.
- h. Expand the scope of Universal Service Fund's (USF) activities to FATA. This will help in enacting and upgrading the rural IT and Telecom facilities.
- i. Encourage local companies to enter the telecommunication fields that are closely associated with the infrastructure needed for an information rich society.
- j. Expand connectivity using existing and new regional and global satellite and Optical Fiber links.

### **Internet**

The Internet is likely to continue to revolutionize the way people communicate and access information. Because it represents such a powerful communication tool, the environment in which the Internet operates must be understood and regulated differently from traditional communication media. Two general principles would be adopted if the Internet is to grow in FATA: (i) competition in Internet growth would be encouraged and (ii) unnecessary regulations would be avoided. To expand provision and use of the Internet in FATA , it is necessary to provide low-cost and reliable access to the international bandwidth, reliable local bandwidth connectivity, low-cost access to network equipment, widespread public access to networked computers, a base of educated and trained users and providers and support for the development of FATA Internet content.

- a. Create an environment that encourages competition even to the extent of provision of physical network infrastructure.

- b. Encourage PTCL and new carriers in the private sector to develop into backbone providers. If such telecommunication operators function as Internet access providers and/or content providers, they should do so through a subsidiary company. Moreover, income derived from other services of the carriers should not be used to cross-subsidize their Internet services. The Internet services thus provided by such subsidiary companies should be cost based to enable fair competition. This will ensure transparency and fair competition.
- c. Permit and encourage existing and future ISPs to provide Backbone and Peering services. Encourage them to setup different FATA-wide physical delivery and access mechanisms via IP Radio, Fiber, Microwave and WiMax.
- d. Make the licensing procedure as simple as possible, low-priced, and free of high royalty structures, as these costs are ultimately passed on to consumers which restricts growth.
- e. Establish robust and reliable Network Access and Peering Points both by the PTCL as well as the Private sector in order to locally route traffic on the Internet.

### **IP Delivery Mechanisms**

The rapid roll-out of new telecommunications infrastructure is critical to the rapid growth of the ICT industry in FATA. It is therefore important that any ICT policy framework encourages the development of 'alternative physical delivery mechanisms'.

- a. Wireless (WiMax and WiFi) technologies are a particularly important way of addressing local loop capability because of their rapid roll-out, greater reliability, and lower maintenance cost. To this end, specific frequency bands will be released for Packet Radio for the higher Spread Spectrum bands (since the 2.4 GHz is already choked) as well as the 20-40 GHz LMDS operations. Wherever Fiber can be deployed, it will be encouraged.

- b. A number of international satellite operators have already begun to provide high-speed Internet access. These services should be encouraged to overcome bandwidth limitations, not only in urban areas of FATA but also in the rural areas, for basic Internet connectivity. Satellite simplex Internet services being broadcast in nature will not require any license or clearance to operate.

Convergence of voice, data, and video transmittal has opened up new opportunities for quick access of users and operators. Cable TV is expanding very fast and infrastructure for it is being laid. Regulations are to be put in place to allow cable operators to offer Internet services in collaboration with licensed ISPs.

# FATA IT Policy

---

## 8.3 E-Governance

### **8.3.1 Policy Statement:**

The Government in FATA shall use IT to promote transparency, efficiency and effectiveness in public administrations and service delivery and strengthen relations with citizens of tribal areas.

### **8.3.2. Objectives:**

- a. Develop FATA e-government initiatives and services, at all levels, adapted to the needs of citizens and businesses, to achieve a more efficient allocation of resources and public goods. This would enhance transparency, accountability and efficiency at all levels of government
- b. To replace traditional governance with electronic governance.
- c. To create knowledge-based and Simple Moral Accountable Responsive and Transparent (SMART) governance.
- d. To maximize productivity and quality, eliminate waste and increase efficiency.
- e. To create an easy access to government information and to reduce the cost of service delivery.

### **8.3.3. Strategy:**

To embark on an aggressive program to improve efficiency and provide quality services to the citizens of FATA, information technology must be inducted at all levels of government. This induction and its effective utilization will also help in motivating others to follow suit, since the government has a large bearing on all segments of the

society. The e- government model for FATA in line with federal initiative is a significant task. It may take 3-5 years because of financial constraints as well as inadequate professional know-how to undertake system re-engineering of different government departments and use of IT. Fortunately the basic and robust IT infrastructure within the FATA Secretariat has already been established. A modular approach will be adopted to build different applications on the FATA Secretariat infrastructure to achieve the goal of e-government.

- a. In the government sector, at present, knowledge of IT is limited. The different departments and agencies are, therefore, technically at a disadvantageous position to take sound decisions in acquiring IT hardware, software applications, HR development program and operational support for their system.
- b. On the pattern of the Federal and provincial governments, the FATA government will create a “**FATA IT Board**” to plan, co-ordinate, and implement government IT projects. The Board shall be staffed with IT professionals. Special pay scales/contracts shall be introduced for IT professionals.
- c. A minimum of 2% of the budget shall be allocated for IT Services to different departments of FATA for developing IT applications and conducting training at all levels in their respective departments.
- d. Working Groups would be formed to create awareness in all Government organizations about the utility of computers and IT.
- e. IT literacy would be made mandatory for all future government employment, and a “special report” would be attached to the Performance Evaluation form for assessment of IT knowledge and utilization by government employees.
- f. The Internet and Intranet e-mail would be utilized for inter-office communication

(necessary security, digital authentication and legal cover would be provided to secure the validity of such communications) and the establishment would replace physical file system to computer based file system.

- g. FATA databases of economic activities would be prepared to provide facts for different policies framed by the government. These databases would be made accessible to the public through the Internet, in accordance with the Laws of Pakistan. This will lead to transparency in Government transactions and various bidding processes where procurements would be placed on the net for access by all citizens.
- h. Encourage and accelerate government-private partnership in establishing comprehensive databases.
- i. Ensure open and equitable access to databases. The databases to be used in the Government will be open and shall provide the utmost flexibility to integrate in to the existing environment and should ensure that the systems and software caters for future needs. This is also necessary in order to ensure that the region and the country is not exposed to the threat of a restriction of export from a single vendor.
- j. Access to databases shall be based on open Internet standards.

# FATA IT Policy

---

## 8.4. Develop and strengthen the IT Industry

### **8.4.1 Policy Statement:**

Keeping in view that the IT should be private sector driven, government shall engage joint venture investment with the private sector, in addition to the provision of an enabling environment for investment.

### **8.4.2. Objectives**

- i. To provide an enabling environment so that private ventures can flourish.
- ii. To Develop a favorable climate in FATA to promote export of IT Products, services (including Business Process Outsourcing) and knowledge-based industries
- iii. To generate employment through promotion of a vibrant and growing economy.
- iv. Create an environment where software and Information Technology companies can enhance the productivity of local public and private sector.
- v. Put in place incentives and capacity building measures so that locally deployed software and information systems are made to international standards and procured from indigenous software industry.
- vi. Develop a robust local language content generation
- vii. To establish joint Government/Private sector institutional framework for developing Advisory Standards and quality control.

### **8.4.3. Strategy:**

#### **8.4.3.1 Establishment of Technology Parks**

Information Technology Parks (ITPs) are needed to develop both the hardware as well as the software industry. These ITPs would be set up to provide one- window services

to IT companies that seek to engage in IT business in FATA. The ITPs would provide workspace, utilities, telecom, and other infrastructure facilities of international standard at low costs. Efficiently functioning ITPs will attract local, national as well as entrepreneurs from across the border.

- a. Encourage the private sector to setup such parks on BOT/BOO (Built Operate Transfer / Built Operate Own) Basis and do the same for IT Incubation Centers.
- b. Provide free land and security to the IT parks at the designated areas.
- c. Subsidize utility, infrastructure charges to the IT companies in IT parks.
- d. Plan IT Park projects in most main towns and some rural areas of FATA.

#### **8.4.3.2 Software Industry Development**

Developed local software industries will not only meet FATA's own needs, but will also serve as a training ground for capturing export market from across the border and larger central Asia. Key policy recommendations for developing the local industry are:

- a. Software development is a high growth industry and forms a major segment of the vast information technology market and will continue to do so in the future. A developed software industry with a focus on exports to Afghanistan (in addition to the local market) would mean better employment opportunities, reduced 'brain drain', foreign exchange earnings, improvement in per capita income, and higher standards of living leading to a better quality of life.
- b. The policy recommendations presented for this area, therefore, seek to promote local software development for local needs as well as export.
- c. Initiate Public - Private sector partnership programs with a view to access the Afghanistan market. Address the software with high value and maximum demand, e.g., ERP, ERM, CRM, e-business and e-commerce.

- d. Outsource Government software projects including mass Dataentry, Digitization and GIS projects to the Private sector. Preference will be given to local software companies in awarding such projects.
- e. Devise a phased plan for the private sector to take over a major part of the government's software development needs.
- f. In order to make this a reality, entry barriers and hurdles for local Software houses to bid for sizeable government IT projects shall be reduced. These shall be in the form of earnest money, bid bonds, holdbacks, etc. These would be reviewed and all Government departments to be advised of the new Policy. Secondly, a fair rate (software development rate) and equitable progressive payment methodology has to be ensured for sustainable software development and investment in R&D.
- g. For software work requiring expertise that is not locally available, engage national or foreign companies only if a local partner is involved to the extent where 15% added value is provided by the local company to ensure the transfer of technology.

#### **8.4.3.3 Incentives**

The government of FATA will need to invest in various fiscal and non-fiscal incentives to nurture, develop, and promote the use of information technology in organizations, to increase their efficiency and productivity. Most of the non-fiscal incentives have been discussed earlier. This section discusses the broad fiscal and some additional non-fiscal incentives required for IT awareness and promotion.

- a. 'IT industry' to be redefined as including Internet Service Providers duly licensed by Pakistan Telecom Authority (PTA), Data Network Operators duly licensed by PTA, Software Houses registered with Pakistan Software Export Board (PSEB), Call Centers registered with PSEB, IT Universities, IT Colleges and Training Institutes, System Integrators, Data Network Designers and Developers, IT/Software

Technology Parks, Data Entry Operations and Medical/Legal Transcription Companies, Tele Medicine Centers, Manufacturers of IT equipment, Research and Development organizations/ companies in IT field, Web Designing, Development and Hosting Companies. This classification will help these entities to get advantage of the subsidies that will be offered to the IT industry for its promotion.

- b. Establish a Venture Capital Fund in which government of FATA puts in 50% funds and private investors contribute the other half. The management of the fund is given to private investors (VC Fund Managers) with a scope to invest in different small ventures in FATA.
- c. Facility to provide low-interest loans and investment inequity for companies set up by enterprising and qualified people in software, hardware design, and human resource development, would be established.
- d. Encourage investments in all phases of IT businesses, like idea generation, start-up, growth ramp-up, and exit process.
- e. Encourage Banks to increase their footprint in FATA by providing them security protection and other incentives. For the purposes of Regulation, the Banking Tribunal's jurisdiction has already been extended to FATA and the Companies Act is awaiting approval of the President.
- f. Allow the nationalized banks, other banks, and investment funds to create an underwriting fund so that the public offer of IT companies can arrange for a portion of their capital to be underwritten.
- g. Assist and give incentives to private companies for acquiring ISO/CMMI and other certification for quality standards for the IT industry (e.g., subsidize 80% cost of such activities).

- h. Give special incentives to universities and companies for setting up their development and educational centers in FATA.
- i. Allow 100% depreciation for hardware, software, and other equipment in the initial three years of its use in the IT industry.

#### **8.4.3.4. IT Promotion & Awareness**

A massive IT promotion and awareness campaign should be undertaken. A strategy should be worked out and the structure for its implementation put in place. This will include:

- a. Provision of continued support and funds by Government of FATA for the participation in national IT/computer trade fairs, which is vital for the IT industry.
- b. Extensive usage of the electronic media to aid in the awareness drive. The drive would be aimed at enabling the citizens to utilize available data on official networks.
- c. Promote the use of IT by the FATA Secretariat, political administration of various Agencies/FRs, local Maliks and all other key figures who can influence public opinion at all public and private for a. Political Agents of concerned Agencies would be tasked to ensure that the departments under their control automate their work on a priority basis.
- d. Declaration of 2013 as 'IT Year' may be considered
- e. Organization of special events during this year, such as FATA IT Conference and Computer Exhibitions, mobile computer exhibitions, IT competitions at various levels, and special programs on electronic media.

# FATA IT Policy

---

## 8.5 Improve Research & Development

### 8.5.1 Policy Statement:

Establishment of a framework to support IT Research and Development geared towards National priorities.

### 8.5.2. Objectives:

- a. To encourage joint R & D efforts between the private sector and local educational institutions.
- b. To identify key technological areas as well as others and provide fiscal support and incentives to encourage local technology development.
- c. To promote self-reliance and export of IT products and services.

### 8.5.3. Strategy:

- i. Provide support for IT Research, Innovation and Development organizations and create a fund to support deployment of local IT innovations.
- ii. Encourage collaboration among local and regional experts and research institutions.
- iii. Provide incentives to software, hardware and IT systems development sector for Research, Innovation and Development in order to compete for local and foreign market shares with new and innovative products
- iv. Encourage establishment of centers of excellence that can spearhead the process of developing standards for hardware, software and IT system developments.
- v. Developing local expertise and resources through adaptation.
- vi. Developing market-oriented software for local market and export.
- vii. Developing low cost PCs, solutions, services and accessories in order to increase PC accessibility to at least 20% of the population in FATA

- viii. Introduce “Innovative ideas” competitions, on FATA wide basis covering all levels (from primary schools to colleges) to instill the spirit of innovation and excellence in our young professionals.
- ix. Stimulating growth of local IT industries through government patronage of local IT industries, products and services.

# FATA IT Policy

---

## 8.6. Legislation and Regulations

### 8.6.1 Legislation

FATA has a unique legal status in the Constitution of Pakistan. Laws enacted by the parliament of Pakistan do not apply automatically to FATA unless specifically extended to FATA with a Presidential declaration as per Article 247 Section 3 of the Constitution of Pakistan.

To provide protection and enhance confidence of users, providers, and facilitators of information services, legislation (ordinance) based on the recommendations of the steering group comprising IT and legal experts would be framed. The following laws, which are currently being considered at the federal level, would be adopted at FATA level. The UNCITRAL model laws would be kept in mind while drafting laws.

- a. Digital Signature Act - Laws should be enacted and/or amended to recognize digital IDs, signature certificates, and electronic authentication and verification.
- b. Computer Crimes Act
- c. Tele-Medicine Development Act - This should cover the legal issues involved in professional services provided electronically by practitioners in another country. Adequate provision should be made for covering liabilities associated with directly accessed information and services such as medical information or advice.
- d. Intellectual Property/Copyright Act and the Consumer Protection Act – The Copyright laws should be strictly enforced to protect intellectual property Rights of software developers and IT service providers while at the same time protecting the rights of the consumers

- e. Admissibility of copies of electronic records in an administrative or court proceeding.
- f. Review of existing laws to remove any contradiction that may hinder the implementation of IT Policy.

The FATA government should seek Presidential approval of changes to statutes that will encourage electronic commerce, and revise statutes that mandate a paper-based or manual process.

### 8.6.2 **Regulations**

A regulatory framework is essential to avoid violating policy goals and direction, incorporate social and consumer concerns in the deployment of new products and services, and safeguard precious national resources. It shall be ensured that excessive regulations do not stifle industry investment and growth. In devising a useful regulatory framework, the following measures shall be taken:

- a. Focus on creating a fair and competitive environment, based on the principles of free market and open access.
- b. Give network operators the freedom to build their own backbone and local access. Encourage combined and collaborative efforts in this regard.
- c. Facilitate rapid deployment of infrastructure for promotion of IT services.
- d. Review government management and procurement policies to encourage competition among telecommunication services providers in technical service standards, prices, and development of broadband services.
- e. Through the PTA, ensure that the Authorized Service Providers meet network

standards.

- f. To enable a free society to function, minimum amount of intrusion will be permitted in terms of Monitoring and filtering on all kinds of communication.

### 8.6.3 **Standards**

The government would consider standards on an ongoing basis as part of a continuing IT planning process. To determine where to standardize, the process should consider costs and benefits. Benefits may include:

- a. Easier sharing of data
- b. Easier sharing of skills
- c. Economic usage of resources and
- d. Improved product quality.
- e. The government would carefully consider the costs and benefits of standardization in technologies where there are many reasonable standardization alternatives and/or no clearly dominant standard exists. These considerations would be settled through an open, visible process with broad participation from relevant government representatives and public and private sector organizations.
- f. The FATA government should use the standards already developed by the IT Division, Government of Pakistan.

# FATA IT Action Plan (FITAP)

---

## 1. Incubation Center:

There are numerous business plan competition programs in the country as Entrepreneurship is the buzz word these days. However, these programs fall short because there is no consistent on-going help available to the entrepreneurs in his/her slog for the first couple of years when the venture is taking off the ground. Incubators are a well-established concept in the Western world. Both private and public sectors operate incubators in the rest of the world. The concept behind an incubator is that most of the innovation happens in small teams. Google was started by two engineers in their dormitory room. Apple was the work of two maverick individuals Steve Jobs and Steve Wozniak who convinced venture capitalists to invest in their fledgling companies. Sun Microsystems was started by two classmates at Stanford Business School. Similar is the story behind Microsoft and hundreds of other IT firms. Given that innovative ideas come from small groups, these small groups need to be nurtured to become big businesses. Incubators do just that. They make it easy for nascent ideas to take hold and become profitable businesses eventually employing tens, sometimes hundreds and thousands of people. In the process immense amount of economic wealth is generated. FATA Incubator would be a small step in implementing an effective incubator model through public private partnership. It is hoped that the program will continue based on the success it achieves.

The proposed program will increase the pace of innovation in the FATA region driven by unique local needs and will help create new companies that can employ hundreds of individuals in high paying jobs. The program will also prepare a crop of entrepreneurs who will adopt formation of companies as a career path. This opportunity could be combined with Universal Service Fund's (USF) Multi-purpose tele-center project.

The key objectives of the project are:

1. Creating jobs and wealth
2. Fostering a community's entrepreneurial climate
3. Technology commercialization
4. Diversifying local economies
5. Building or accelerating growth of local IT industry clusters
6. Business creation and retention
7. Encouraging entrepreneurship
8. Identifying potential spin-in or spin-out business opportunities

# FATA IT Action Plan (FITAP)

---

## 2) Universal Service Fund (USF) 's Multipurpose Centers:

Recent advances in technology have brought about some fundamental changes in ways by which economies and societies evolve and develop over a period of time. This has all been possible due to the development of the Internet, which has radically changed the way members of a society interact with each other and with those outside their geographical boundaries. Most of our communication is now interactive and not limited by geographical distance. The potential of the new interactive technologies is to:

1. Connect disadvantaged people with societal decision-makers so that their voices may be heard in the agenda-setting process.
2. Empower people and communities to determine their own futures through developing self-efficacy and collective efficacy.
3. Provide accurate information about social problems and their possible solutions.

Keeping in view the advances in technologies and to facilitate changing communication media, USF has initiated a process to setup a chain of Multipurpose Community Telecenters (MCTs) all across Pakistan, except FATA. USF scope should be expanded to include FATA as well. These MCTs will provide broadband internet connectivity and access to e-services for urban/rural communities along with voice and other services.

In a nutshell, the USF Program entails the availability of Broadband internet connectivity via fiber optic to specified facilities in selected rural/Urban areas. This facility will be equipped with 15 -20 laptops powered by Solar energy and equipped with Scanners, printers and required furniture. All the equipment and broadband will be sponsored by the USF with a simple commitment and guarantee from the local entrepreneur, who

would operate this facility, that this equipment is used for providing different services to the community. The entrepreneur would be open to provide any service to the community and charge as he/she deems appropriate. The entrepreneur will bear the cost of labor and power expenses (except solar energy which will be arranged by USF). USF will bear the cost of establishing the fiber connectivity from the local telephone exchange and providing furniture, computers, printers, scanner and solar power solution.

USF will have no claim on the proceeds of the business. These centers could be established near a school so it can be used as a Lab during school time, a community training facility during afternoon and PCO/call center in the evening.

Establish free or subsidized WiMax local Loops:

Establish a free or subsidized WiMax Local loops for availability of high speed wireless internet in the population pockets throughout FATA. These WiMax could be mounted on the USF's Multi-purpose centers which would be connected to the local exchange via fiber optic. WiMax's signal could be received in upto 15-30 KM radius thus enabling a vast area to utilize the benefits of Internet. It is easy to deploy and is cost effective.

# FATA IT Action Plan (FITAP)

---

## **3) Human Resource Development:**

### **a) Train the youth of FATA:**

Train approx. 10,000 FATA youth on Basic and intermediate IT skills. The USF multi-purpose centers may be utilized for trainings along with local school/colleges or other private entities in the respective area. This will enable youth of FATA to start taking benefit of the new ICT infrastructure being developed in FATA and will also provide economic opportunity (training) to the local schools/colleges/ICT centers.

### **b) Train Government Servants:**

Train approx. 2500 Governmentservants of FATA, including local law enforcement officers, local administration staff and others on basic ICT skills.

### **c) Train school teachers/college professors:**

Train approx. 1000 Government and private school teachers and college lecturer/professors on basic and intermediate ICT skills and also provide them adequate syllabus to effectively teach in their respective domains. Their services would be used in the computer Labs and other interventions across FATA as mentioned above in the multi-purpose centers section

### **d) Provide free Laptops to the local youth:**

Provide 5000 free laptops to students of the government colleges in FATA based on the students' academic excellence in the intermediate exams or other academic criteria.

# FATA IT Action Plan (FITAP)

---

## 4) E-Government Initiatives

E-Government is one of the major initiatives under this action plan. To pursue this initiative, the government in FATA should undertake a large number of initiatives in different areas. One of the main objectives of the IT Action Plan is to deliver public services efficiently and effectively without any delay. The strategic objective of e-governance is to support and simplify governance for all stakeholders' i.e. government, citizens and businesses. Solutions to development issues often require changes to government processes, e.g. by decentralisation. Objectives are generally to improve efficiency and effectiveness and to save costs. The driving force can also be public demand for online services and information that increase democratic participation, accountability, transparency, and the quality and speed of services. With the implementation of e-governance IT is becoming more and more important in government operations. The need for a professional organization i.e. **FATA IT Board** will be inevitably increased, not only during implementation, but also for maintenance of software, hardware and infrastructure. Some of the initiatives have already been taken and being implemented successfully such as establishment of IT Infrastructure in FATA and its linkage with all agency headquarters. Also Data Center has already been established in FS and FDA through which all government departments are connected through a secured, high-speed broad band optical fiber network with a central location.

Government in FATA shall follow the following pattern for implementing the e-government initiative:

1. Establishment of FATA IT Board
2. Some of the services of this Data center will be as follows:
  - a) Centralized repository and availability of Data & Services
  - b) Inter and intra departmental communication of data and Common software applications (HR , Payroll, Accounts, Monitoring & Evaluation System, Inventory, Websites, etc)
  - c) Security Management System
  - d) Disaster & Crime Management system
  - e) Receiving & Issuing, File Tracking & Reporting System
  - f) Sector's portals (e.g. Educational, Health, Public Safety, Business etc)
  - g) Collaboration / Workgroup Services (Email, Blogs, Online Forums etc)
  - i) Video Conferencing / Teleconferencing / Video Telephone
  - j) Webhosting Services & Internet Access
- b) Phase wise Computerization of all government departments e.g. education, health, finance and industries
- d) Identification and Provision of e-services to the general public. All forms for which people travel long distances and roam in different offices should be just a click away from them.
- e) Develop Government to Business (G2B) to establish online non-commercial interaction between local and government and the commercial business sector, rather than private individuals (G2C).