

2013

ICT Assessment of FATA Institutions

The report attempts to assess the impact of the ICT infrastructure established in FATA institutions on the working environment. The review sought to understand specifically how it is being adopted, not only to deliver efficiency benefits but also how it is helping improve the quality of public services and the ease in which they are accessed. And of course a key consideration of the review was the question of whether investments in ICT are delivering best value for money and if not where opportunities exist to improve on the existing status.

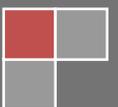


Table of Contents

Acronyms and Definitions.....	4
The Federally Administered Tribal Area (FATA).....	6
Administrative System	6
Background	8
Introduction and Context.....	10
Previous Assessments	11
Main Conclusions	11
Main Objectives and Methodology.....	12
Specific goals.....	12
Year wise Technology Landscape and Comparative Analysis in FATA Institutions.....	13
The Year 2008	13
The ICT Infrastructure	14
Network Connectivity	15
ICT Infrastructure Maintenance.....	15
Common / Shared Business Process Automation.....	15
Department / Directorate Specific Business Process Automation	16
Online Presence	16
Human Resource Capacity	16
The Year 2011	16
The ICT Infrastructure	16
ICT Infrastructure Maintenance.....	17
Network Connectivity	17
Common / Shared Business Process Automation.....	17
Department / Directorate Specific Business Process Automation	21
Online Presence	21
Human Resource Capacity	22
Year 2012	22
Recommendations	23
Business Process Automation.....	23
Types of ICT Applications Deployed in the FATA Institutions	24

Assessment of the ICT Projects..... 25

FATA Institutions HR Capacity Building..... 25

Table 1: Summary of the status of ICT Hardware in different institutions..... 14

Table 2: Status of ICT Hardware and Comparative Analysis..... **Error! Bookmark not defined.**

Table 3: Application deployed in FATA institutions 25

Table 4: Key Outcome Dimensions 25

Table 5: Consolidated List of IT Trainings Conducted by FISP..... 28

Acronyms and Definitions

ACS	Additional Chief Secretary
ADB	Asian Development Bank
AIU	Agency Implementation Unit
CBO	Community based organization
CDD	Community-driven development
EC	European Commission
EU	European Union
FATA	Federally Administered Tribal Area
FDA	FATA development Authority
FS	Fata Secretariat
FR	Frontier Region
GIS	Geographical information system
GoKP	Government of Khyber Pakhtunkhwa
GoP	Government of Pakistan
GPS	Global positioning system
ICT	Information Communication Technology
IDP	Internally displaced person
IEE	Initial Environmental Examination
KP	Khyber Pakhtunkhwa
MDTF	Multi Donor Trust Fund
MEA	Multilateral Environmental Agreement
MoU	Memorandum of understanding
M&E	Monitoring and evaluation
NEQS	National Environmental Quality Standards
NGO	Non-Governmental Organization
NWFP	North-Western Frontier Province (now KP)
OP	Operational Policy
O&M	Operation and maintenance
PDO	Project Development Objective
PCNA	Post-Crisis Needs Assessment

PKR	Pakistan Rupees
PMU	Project Management Unit
PSC	Project Steering Committee
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Program
USAID	United State Agency for International Development
WB	World Bank

The Federally Administered Tribal Area (FATA)

The Federally Administered Tribal Areas, located on the border between Pakistan's Khyber PukhthoonKhwa Province (KPK) and southern Afghanistan, the 27,500 square kilometers of FATA is home to a 3.2 million population that belong to the Pathan ethnic group¹.

The territories that form FATA is divided into seven **agencies**: Bajaur, Mohmand, Khyber, Orakzai, Kurram, North Waziris-tan and South Waziristan – mostly along tribal demographics and six smaller zones, called **frontier regions' (FRs)**: in the districts of Bannu, Dera Ismail Khan, Kohat, Lakki Marwat, Peshawar and Tank. To the north and east, the tribal areas are bounded by the Khyber Pukhthoonkhwa (KPK), while on the south lies the province of Balochistan. In the south-east, FATA joins the Punjab province. The Durand Line, which separates Pakistan from Afghanistan, forms the western border of FATA.

In the 19th century, the area held great strategic importance, serving as a buffer between the British colonial government of India and Tsarist Russia. More than a hundred years later, the region has been thrust onto the world political stage once again for reasons of global security. However, the fact that FATA is amongst the most poorly developed parts of Pakistan has not been properly addressed in the domestic and international policy frameworks.



Administrative System

FATA has a unique socio-political power structures and a system of governance different from the rest of Pakistan, which have been in place since British colonial rule. Since Pakistan's independence in 1947 the central Government of Pakistan has retained minimal administrative authority over the tribal regions, while affording the tribes autonomy. As a result, FATA has remained isolated from the rest of Pakistan.

Each agency is administered by a political agent (PA) who is vested with wide powers and is provided funds to secure the loyalties of influential elements in the area. The PA works in tandem with an extensive field and office staff including assistant political agents, or tehsildars, local police, or khassadars and security forces. This top-down system of administration has carried on to the present day.

The PA has several functions². His economic functions include regulating trade in natural resources with other agencies and the rest of Pakistan. Additionally, the PA plays a supervisory role for development

¹ Shuja Nawaz, *FATA – A Most Dangerous Place*, (Washington, DC: CSIS, 2009), 1.

² FATA Civil Secretariat, "Administrative System." <http://www.fata.gov.pk/subpages/admnsystem.php>

projects and chairs an agency sub-committee made up of various government officials to recommend proposals and approve development projects. He also serves as project coordinator for rural development schemes. His judicial functions include maintaining law and order through the implementation of the Frontier Crimes Regulation (FCR) of 1901.

Until 2002, decisions related to development planning in the tribal areas were taken by the FATA section of the KPK planning and development department, and implemented by government line departments. In that year, a FATA Secretariat was set up, headed by the Secretary FATA. Four years later, in 2006, the Civil Secretariat FATA was established to take over decision-making functions, with an Additional Chief Secretary, four secretaries and a number of directors. Project implementation is now carried out by line departments of the Civil Secretariat FATA. The KPK Governor Secretariat plays a coordinating role for interaction between the federal and provincial governments and the Civil Secretariat FATA.

At the same time, on the directives of President of Pakistan, a task force formed on restructuring of administrative and developmental regime in FATA. The task force recommended innovative and participatory approach to tackle widespread poverty that attracts extremism so as to bring economic, social uplift and mainstreaming of the people and area.

FATA Development Authority (FDA) therefore, came on the national development scene as one of the major outcomes of the report of Task Force. FDA was established as a specialized development organization in 2006, to introduce more innovative, fast track and participatory approach to replace the conventional straight jacket development systems. FDA is structured on corporate and commercial lines with a lean bureaucratic setup. Public Private Partnership is a hallmark of its operational strategy.

Background

Informed decision-making is a prerequisite for better and responsive service delivery. The use of information and communication technologies has not been optimal as has been demonstrated in the FATA institutions over the last few years. The information generation systems have consequently deteriorated and the institutions have dilapidated. To a great extent, the deterioration has been due to a low demand for the outputs from the systems in policy making and functioning of government. Institutional mechanisms are needed that would make it mandatory upon the planners and decision makers to use the information in policy making. The major reason behind the public sector institutions inefficient working is the lack of accountability and monitoring mechanisms in the government departments, which, to some extent relates to the absence of credible information.

Another issue regarding an information system is the unavailability of information in spite of the fact that mechanisms and staff exists in most of the government departments for collection and processing of information. Elaborate procedures also exist for the purpose in many departments. However, the efficiency of these systems in yielding information has not been according to the requirements. The use of IT has only germinated in some of the departments. The use of IT is an area where the efforts have been less than the requirements and the potential has not been tapped so far rendering the functioning of the government departments outdated.

During the first six years after its formation, FS has brought substantial changes to the administrative setup of the FATA institutions. New line departments/directorates have been set up, roles and responsibilities of different levels of government have been defined and new opportunities for engagements of citizens, communities and civil society organization have emerged. With the establishment of the new setup and devolution of broad range of powers to FATA secretariat, key line departments have acquired more autonomy in decision making and institutional setups. These institutional arrangements have increased the responsibility of the line departments in terms of planning, implementing, managing and monitoring development activities in the FATA region.

The FATA Secretariat however is still in its formative years and the line departments need strengthening and consolidation to perform the envisaged role. Administrative weaknesses, ad hoc planning and limited implementation of policies along with general resistance to change are some of the main factors that limit the effectiveness of the reforms and characterize current challenges faced by the new administrative setup.

The Government of Pakistan and United States Agency for International Development (USAID) recognize the significance of improving the Governance of FATA region through institutionalization of FATA secretariat. In this regard a project has been started which aims at Long term support to strengthen FATA Secretariat and FATA Development Authority through Institutional development of its line departments.

FISP is focused on strengthening core public administration functions including fiscal management, HR management and administration, communications, development planning, procurements, information technology and technical skills. In addition, the project will also support FATA Secretariat in introducing new and innovative approaches (like public-private partnership) for improving service delivery in FATA.

The project is aimed at strengthening the ability of FATA Secretariat (FS) to deliver essential government services in FATA. This will be achieved by improving the human and technical capacity of the FATA institutions, improving accountability and monitoring mechanisms, improving state responsiveness and supporting FATA institutions in communicating effectively with its citizens that it serves and beyond.

The main objective of this assignment was to ascertain and acquire information through need assessment at FS/FDA. The information gained from this needs assessment will feed into the FATA IT Policy³ and FATA IT Strategy⁴. The guidance provided by the FATA IT policy and FATA IT Strategy will improve the public service delivery mechanism by effective utilization of Information and Communication Technology (ICT). The proper implementation of ICT Infrastructure; better government by enabling better policy outcomes, better governance, quality services, and greater involvement of citizens in decision making process, contribute to economic policy objectives and advance the public reform agenda.

³ FATA IT Policy developed by the project in 2012

⁴ FATA IT Strategy developed in Phase-1 of the project in 2008

Introduction and Context

Before discussing how to move towards the future vision described in the IT Policy and IT Strategy it is clearly important that we have an understanding of where the FATA institutions are currently positioned and also of the challenges that stand in the way of delivering that vision.

As is inevitable with a review of this nature views are formed and status identified through a sample of interviews, research and investigations. All efforts have been made to ensure that these activities are as representative as possible of the overall sector in FATA institutions or where appropriate groupings of organizations within the sector.

This part of the report assesses the degree of penetration of usage of this type of technology within the FATA institutions. It also comments on the way in which investments in ICT are deployed and in particular if they are shared and coherent at an institutional level.

The overall perception is that senior managers are fully aware of the benefits that ICT adoption brings to the operation of public bodies and are committed to ensuring it does play a significant part both in improving the effectiveness of and satisfaction with service delivery and also as an efficiency and productivity enabler in reducing costs across all operations within FATA institutions. That commitment is matched by the realization that although much progress has been made there is still much to be done.

The overall conclusion is that the FATA Institutions are well behind the Federal and other Provincial Governments in the adoption and deployment of ICT and there is clearly some way still to travel to capture the vision described above. In some cases this is because adoption of core ICT support has been later than it could have been. In others the capability has been installed but the institutions lack the capacity and vision to catch up with the new developments. In addition there are some areas of activity and potential activity that are still untouched by ICT.

However, if the existing exemplar projects, already consistent with the vision, were made prevalent across the whole FATA institutions then much of the vision could be delivered.

In general conventional business processes such as HR, electronic filing system, asset procurement and maintenance are well covered by individual applications or enterprise-wide systems which are being implemented by FISP.

However, there are still important business processes and procedures within the FATA institutions that await full automation and translation into a fully electronic state. And, in particular, there is much to be done in the way of adding online capability that can both improve the quality of services and reduce cost.

At the same time it should be emphasized that in most parts of the FATA Institutions there are plans and strategies in place to move individual organizations forward in ICT adoption⁵. Within the departments/directorates there are hardly a couple of application such as ADP at P&D and EMIS at education department are running but even these applications are mostly installed and run separately by the individual organizations.

Therefore, there are significant and serious shortcomings in the way ICT is deployed. The prevalent model is one of “standalone self-sufficiency” with only P&D department have their data processing room for ADP preparation. This approach not only sacrifices the opportunity to reduce expenses and capital spend of individual institutions through cross organization sharing of ICT, it also makes capturing the further opportunity from the operation of other shared business processes highly unlikely. In fact

⁵ With the help of donor assisted projects like ASP-AID, ASP-LUMS, FISP etc

many organizations see ICT as an inhibitor to sharing other internal processes and services rather than the supporting platform that it should be.

There is also very significant scope to make progress in providing to citizens and businesses public services that have been electronically enhanced by ICT and which can be accessed and interacted with online.

Previous Assessments

Over the years, FATA Institutes has been assessed twice in the year 2008 and 2011:

- FATA ICT Strategy 2008 (CBP-USAID)
- ICT Infrastructure Assessment 2011 (FISP-USAID)

The main findings of the previous assessments would refer that these reports do not place their main emphasis only on statistics of connectivity and the penetration rates for information technology infrastructure, but also on describing extensively government policies, efficient institutional framework and human development. As FATA Secretariat is one of the most successful adaptors and up-takers of new communication technologies in FATA Institutions, it is even more important for FATA Secretariat to be aware how the penetration rates for using various technologies hold against the most advanced technologies (e.g. VoIP, State of the Art Datacenter etc) in other FATA Institutions.

The rapid growth rate in ICT infrastructure indicates that FATA Secretariat has used its potential to upgrade to a modern information institute rather well. Still, the question remains of its viability and sustainability, as ICT growth rates have started to slow down and institutions with more resources (federal and provincial) might leave FATA institutions further behind.

Main Conclusions

The assessments describing FATA ICT development have been beneficial to keep track of the changes and developments in infrastructure and business process automation. Thus, the reports have concentrated mainly on offering good coverage of statistical indicators, and benchmarking the presence of ICT equipment.

eEurope+ Monitoring and Benchmarking Report states that ICT actions should be benchmarked not only using technical indicators, but also be judged by checking their contribution to achieving economic, social and environmental objectives⁶. The same is true with assessing FATA ICT development. The penetration rates have reached to the level where further rapid growth is not possible since socio-cultural-economical constraints.

Thus, indexes should not measure only the present state of infrastructure and penetration rates, but also FATA institution's capability to sustain growth and development. That is why it becomes important to consider ICT developments in line with other societal developments. The same is essential the other way round – ICT potential should be considered while solving the problems currently facing FATA institutions. Only following these principles, it becomes possible to enhance FATA institutions overall competitiveness.

Explanation of the grown usage and improved access to ICT in the FATA institutions makes comparing only the quantitative data useless. Certain qualitative indicators need to be addressed as well (how 'digital divide' affects the relationship between citizens and the state; improved productivity of human

⁶ eEurope+ Monitoring and Benchmarking Report, p.5

capital). In spite of the ICT surveys in FATA institutions, there is still a lack of profound analyses (lack of background studies, analytical materials, research-based policy recommendations).

Main Objectives and Methodology

For reasons mentioned above, it is obvious that the scope of the ICT assessment in FATA institutions should not be just benchmarking; its objective is to provide a uniform coverage of all relevant aspects contributing to FATA institutions ICT strategy and FATA IT Policy leading to policy recommendations and action plans. Thus, while understanding the importance of comparative statistics on connectivity and penetration rates for the FATA institutions ICT infrastructure, we also identify the growing need for a deeper analysis of the problems hindering the development of a relatively advanced information institution.

To meet the objective of providing a more profound analysis of FATA institutions E-readiness, we propose that in addition to the conventional ICT Assessment report delivered according to the methodology of two major assessment, assessing primarily quantitative data; the next assessment should also provide the analysis of the developments in FATA institutions based mainly on qualitative data, providing comparative basis for other projects and institutions at federal and provincial level.

According to the IT literature, a good ICT assessment should introduce clear indicators to measure capacity and benchmark progress on the Connectivity, Information Security, Human Capital, and business processes necessary for any program to succeed.

In light of the foregoing situation, and the limited resources for researching the required fundamental aspects of the ICT sector in the FATA institutions; the following strategy for information collection has been adopted:

- The more rigorous techniques (i.e. Direct Observation, questionnaires, focus groups, tests and work samples) have been avoided. Instead, anecdotal approaches such as consultations with key personnel, interviews and reviews of relevant literature have been used.
- At the outset, a broad range of individuals from FISP having organizational knowledge representing several dimensions of the ICT infrastructure deployed was contemplated as interview targets. These included:
 - FISP IT support unit
 - FISP Network professionals
 - FISP Software Developers

However time constraints have made it necessary to abbreviate the breadth of these interviews. In addition provision had been made to cross-reference and validate information from certain sources with other complimentary and objective sources. To a great extent, this approach has had to be altered in the interest of expediency.

IT budget data and other objective statistics is not available. It has also been difficult to obtain data from relating to volumes and trends of hardware, software and service usage.

Specific goals

More specifically, the current report's goals are:

- to give an overview of the latest developments in the FATA institutions ICT sector
- to give an explanation why some choices and decisions have led to certain developments

- to provide comparative data for foreign aided projects and institutions on the current situation of FATA institutions e-readiness and the level of ICT infrastructure
- to draw attention to the main problems facing FATA ICT development in the future

The areas to be assessed in this report are the following:

- ICT infrastructure status, its maintenance and support
- Network (LAN, WAN)
- Business Processes Automation
- Online Presence
- HR Capacity Building

Year wise Technology Landscape and Comparative Analysis in FATA Institutions

The Year 2008

One of the components of FISP is to strengthen FATA institutions through utilization of ICT to improve the access to information for effective decision making, planning and monitoring at FATA Secretariat and Federal Government level. Thus, it envisages the importance of E-Governance in FATA region. At the FATA Secretariat and its associated institutions levels Information and Communication Technology deployment can increase efficiency and transparency in government services, besides, it can increase the level of engagement of the citizens in decision-making process, to improve delivery of public services.

As a first step, in the year 2008, a detailed assessment of current IT environment in FATA Secretariat was conducted. As-Is information of current IT infrastructure (i.e. software, hardware, networks), IT standards, IT organization and existing IT capacity of end-users was evaluated and documented in detail.

In the next step future IT environment was envisioned and gaps were identified by benchmarking existing IT environment with the future envisioned IT environment. Absence of IT culture within the organization was an obvious GAP, similarly other Gaps related to IT organization, IT infrastructure and IT standards were identified. In order to bridge the identified Gaps, various IT opportunities were identified and detailed recommendations for each IT opportunity were documented.

Finally a high level IT implementation roadmap and detailed implementation plan was developed to implement Identified opportunities. This roadmap helped a lot in the development of its work plan for the first year of phase-2 of this project. For detailed report please refer to IT Infrastructure Assessment Survey 2008.

A summary of the finding is as under:

- 1) Higher management is visionary and very keen to automate organizational processes by implementing appropriate level of IT systems within FATA Secretariat.
- 2) There is a drive and willingness among FATA Secretariat staff to learn the technology and employ it within their organization to perform their daily activities and optimize their efficiency.
- 3) Over the period IT culture has not been established within the organization, as a result appropriate level of IT readiness has not been achieved.
- 4) A unified effort has not been made to establish a centralized IT environment, few entities have made individual efforts to achieve basic level of computerization.

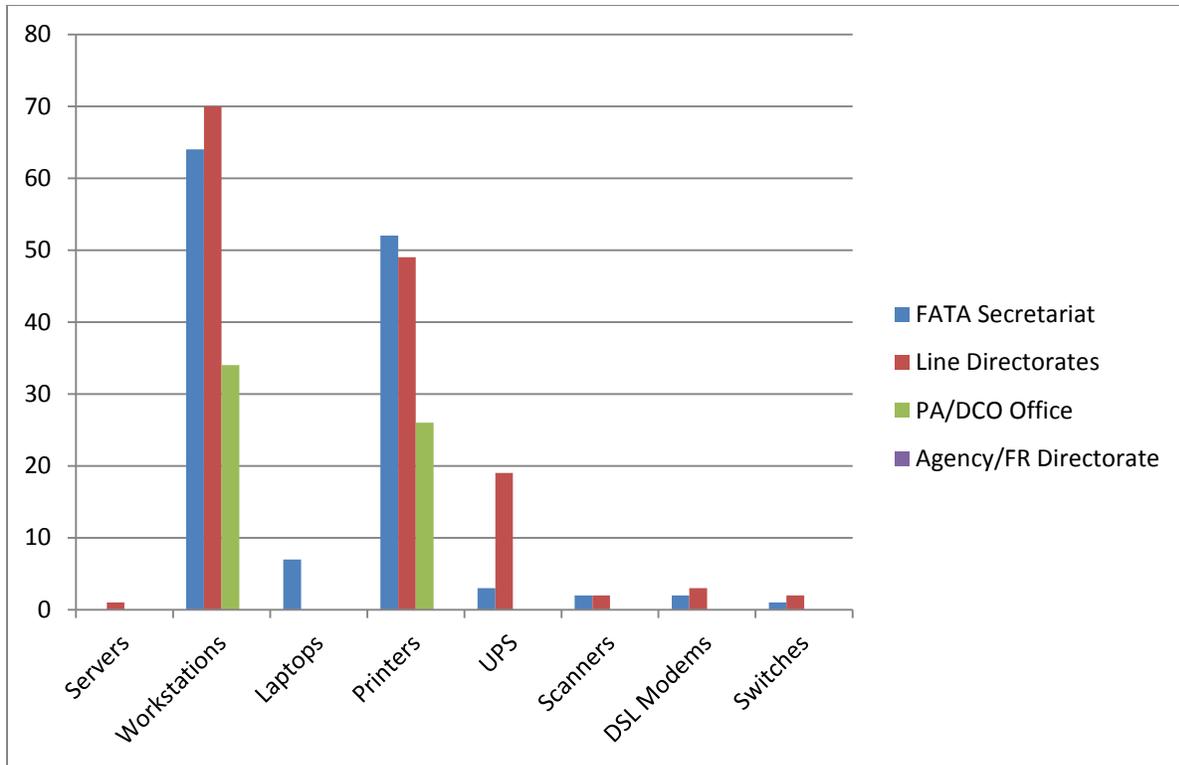
- 5) Most of the key business operations (e.g. finance & budgeting, project management, Human Resource Management etc.) are performed manually.
- 6) Data management on the computers is manual (i.e. manual usage of basic applications like Excel, Access and Microsoft word etc.)
- 7) IT organization does not exist within FATA secretariat, which results into non-availability of first-level support to the end-users. Hence smooth functioning of IT infrastructure cannot be ensured within the organization (many attempts to implement IT infrastructure within FATA secretariat were unsuccessful in past due to the non-availability of First Level technical support)
- 8) Appropriate level of connectivity does not exist within department, amongst departments and among various entities of the organization.
- 9) Unlicensed software are used mostly such as Microsoft Windows, Microsoft Office and anti-virus tools.
- 10) Information security standards are not in place.

The ICT Infrastructure

A summary of the ICT equipment is presented in Table 1 below. For details please refer to IT Infrastructure Assessment Survey 2008.

Equipment	FATA Secretariat	Line Directorates	PA/DCO Office	Agency/FR Directorate	Total
Servers	0	1	0	0	1
Workstations	64	70	34	0	168
Laptops	7	0	0	0	7
Printers	52	49	26	0	127
UPS	3	19	0	0	22
Scanners	2	2	0	0	4
DSL Modems	2	3	0	0	5
Switches	1	2	0	0	3

Table 1: Summary of the status of ICT Hardware in different institutions



Graph 1: Institutions wise breakup of Hardware

Network Connectivity

A very basic level of local area network was established in some of the departments in FATA Secretariat. For details please refer to IT Infrastructure Assessment Survey 2008.

ICT Infrastructure Maintenance

IT Cells, for support services, were not established within FATA secretariat, which resulted into non-availability of first-level support to the end-users. Hence smooth functioning of IT infrastructure could not be ensured within the organization (many attempts to implement IT infrastructure within FATA secretariat were unsuccessful in past, due to the non-availability of First Level technical support).

Common / Shared Business Process Automation

It has been noticed that the public sector of FATA still has complaints with the existing system being cumbersome and outdated. This seems to have resulted in widespread delays and inefficiency causing public dissatisfaction and frustration. Technology diffusion is imperative to enhance efficiency and effectiveness in the Government Departments.

There is dire need of automation at FATA Secretariat and Agency offices because current era is of emerging technologies and every step of business is going towards automation. Automation brings transparency and efficiency and assist in reducing the delays in business matters.

Most of the key business operations (e.g. finance & budgeting, project management, Human Resource Management etc.) were performed manually.

Department / Directorate Specific Business Process Automation

A unified effort has not been made to establish a centralized IT environment, few entities have made individual efforts to achieve basic level of computerization.

Online Presence

A possible indicator for the state of ICT in FATA Secretariat is the number of websites of line departments/directorates. In the year 2008 only one website existed owned by P&D Department i.e. www.fata.gov.pk containing mostly static, basic information which was rarely being updated. Websites/portal that are fully interactive for online services online, were rather an exception.

Human Resource Capacity

It was also noted that in all the institutions, sufficient ICT support skills were un-available for day to day computer maintenance and operations.

The main support challenges faced by the FATA institutions are as summarized below:

- Lack of technical capacity and experience to deal with day to day computer operation and maintenance.
- Lack of IT Back office support issues including system administration, IT Security and network security.
- Low computer literacy levels of general staff in these institutions.

The Year 2011

In the year 2011, with the initiations of phase-2 of the project, the project team conducted a detailed assessment of the existing state of ICT in FATA institutions. The information used for this assessment was a combination of results of surveys that measured the ICT penetration together with other readily available information on ICT obtained from a number of sources and personal interviews with key persons related to ICT field in FATA institutions. For detailed report please refer to IT Infrastructure Assessment Survey 2011.

The objectives of the assessment survey were to:

- a) Identify current level of penetration of ICT in FATA Institutions
- b) Recommend technical skills required to improve ICT capacity
- c) Identify common business processes among FATA institutions
- d) List available and required software packages, needed to automate the business processes
- e) Recommend standards for implementing messaging systems among FATA institutions
- f) Present guidelines and recommendations for Human technical capacity building, identifying skills and training required on short and long term plans
- g) Recommend the ICT organization structure in FATA Institutions
- h) Identify the steps required for preparing business process automation initiatives

The ICT Infrastructure

The ICT infrastructure has been growingly strongly in the past 3 years. With the assistance of various donors like USAID, DFID and UN etc, the number of ICT equipment in FATA institutions were in a healthy growth stage as compared to 2008. The summarized status of equipment is presented in Table 2 below. For details please refer to IT Infrastructure Assessment Survey 2011.

Equipment	FS		Line Directorates		PA/DCO Office		Agency/FR Directorate		Total		
	2008	2011	2008	2011	2008	2011	2008	2011	2008	2011	Difference
Servers	0	12	1		0		0		1	12	11
Workstations	64	210	70		34		0		168	210	42
Laptops	7	103	0		0		0		7	103	96
Printers	52	197	49		26		0		127	197	70
UPS	3	84	19		0		0		22	84	62
Scanners	2	22	2		0		0		4	22	18
Switches	1	24	2		0		0		3	24	21
IP Phones	0	200							0	200	200
Firewall	0	8							0	8	8
Router	0	1							0	1	1

Table 2: Status of ICT Hardware and Comparative Analysis

ICT Infrastructure Maintenance

There was a proper server room and IT Help Desk at that time.

Network Connectivity

FATA institution's network infrastructure has been fairly well developed and substantially improved in the last two to three years. In the beginning of 2010 modern technologies were introduced – initially DSL and later fiber optics laid the groundwork of the FATA telecommunication backbones. All were originally built by CBP - USAID.

At present, the majority of the departments, line directorates and agencies have at least technical capabilities to access the Internet and its information resources. A broad range of services, including Video conferencing, high speed internet service, metropolitan area network (MAN) over optical fiber and WAN network via optical and VSAT is offered with sufficient capabilities to meet FATA Secretariat requirements.

Common / Shared Business Process Automation

Common/shared ICT services are ICT components that are common to many or all departments/directorates. In a number of instances the common elements extend beyond the ICT elements into business operations. Following major systems were either developed or being developed:

1. Human Resource Management Information System (HRMIS)

There are hundreds of people employed by FATA institutions in Pakistan. If one is in charge of managing these huge numbers of employees, the question immediately arises according to what criteria would you recruit, select, train, discipline, promote and pay them. All these activities require skills and competencies of human resource. Today, the underlying assumption is that “managing people” is the most complex dimension of management. To a very large extent, the FATA institution's ability to achieve success through effective public service delivery depends on the performance, honesty and motivation of public employees. This emphasizes the fact that public sector human resource management is important.

To cater for this the project has developed and deployed an HRMIS at the FATA Secretariat for swift review and retrieval of employee's data. The system keeps track of all FS employees and will manage;

- Vacant positions
- Hiring status
- Expiring contracts
- Pendency alarms; and
- Leave records

The system is capable to handle all HRMIS functions as per the requirement of FATA Secretariat. Thus, the web-based HRMIS will bring efficiency and transparency in the management of HR related affairs.

Current status:

HRMIS has been developed and deployed at the FS. Data entry in the system is in progress.

2. *PMS Software*

The public sector is a diverse and complex environment, which imposes some specific performance management challenges. Mechanisms for delivering services are often more complex than those in the private sector, both because of the relative complexity of service users demands, and because of a lack of commercial pressure and choice to influence the design of services or how they are delivered.

Many public sector bodies have to cater for a multiplicity of stakeholders and may suffer from reorganizations (political or structural) that lead to changing priorities.

Changes of leadership (and indeed governments) can complicate another challenge, which is the allocation of resources between short-term priorities and longer-term investment. Ministers (or administrations) may allocate resources to win short-term successes, rather than laying the foundations for longer-term achievements which will mature long after their term of office.

Another factor is that the high level goals of the public sector – such as health, literacy, or security – cut across the boundaries of many public sector bodies. This degree of interdependence requires co-ordination and teamwork across departments and agencies, and a specific determination to avoid thinking in silos.

Significant factors are combining to put the public sector under enormous pressure – not only the current financial crisis of the country, but also a lack of strategic leadership and poor performance management practices. Addressing all three issues represents a once-in-a-generation opportunity to craft solutions that not only ensure that expenditure is constrained within available resources, but which use these pressures creatively to rethink or consolidate services.

Effective performance management is crucial to achieve sustainable and stable public finances and to gain the public's confidence that tax revenues are being used effectively.

To cater for the above problems the project has developed and deployed a Performance Management System which will bring efficiency in the service delivery and monitoring of field entities. It will provide useful information to FS management for effective and efficient planning, decision making and taking timely action for course correction.

Current status:

PMS software has been developed. During the year 2013-14, Performance Management System (PMS) will be rolled across all the directorates of FATA Secretariat, which will help in better implementation of the M&E framework.

3. File Tracking System (FTS)

Government Agencies all over the world, deal with a plethora of documents in the course of their day to day work. There is also an ever-increasing need and awareness to improve the efficiency of Government Operations and to provide more and more efficient services to citizens. Public sector needs a system which can help Government Agencies achieve this objective through a file management system. FS management expressed their desire to automate the file management system to increase the traceability of files. FTS assists FS management in bringing efficiency in the day to day working of the FATA Secretariat.

Current status:

File Tracking System was installed in the Administration Infrastructure & Coordination (A, I&C) Department of FS in 2012. Now the system has been expanded to the remaining five departments of FS and their attached directorates. These departments include Finance, Law & Order, Planning & Development, Social Sectors and Production & Livelihood Department.

4. FATA Assets Management System (FAMS)

Since the 1980s, many developed and developing countries have been embarking on public sector management reforms. The main reasons for commencing public sector reforms were public sector inefficiency and ineffectiveness. Governments have been constantly under pressure to improve public services quality while containing costs and enhancing public accountability at the same time. Among these challenges acquisition, maintenance and disposition of assets is one of the major challenge of the public sector. To address this challenge the project has developed and deployed an Asset Management System which will assist FS in efficient management of all assets and generates reports about the current status of the assets at any point in time for all FS departments. FAMS also assists the FS in improved record keeping, tracking and stock taking of all their assets, thus, reducing the wastage of public funds and leading to improved transparency in the management of FS assets.

Current status:

FAMS has been deployed at FS and currently data is being entered.

5. *Public & Media - Intercommunication and Awareness Mechanism (PMIAM)*

Public and Media intercommunication system for swift communication between the Governor KP/FATA Secretariat and news media organizations, has been developed. The system has switched the entire media reporting and monitoring from manual to a computerized system. This has resulted in the enhanced flow of internal and external communication, resulting in accelerated projection of the Governor's and FATA Secretariat's activities. Newsfeed and information regarding FATA is available to the FATA audience via this system.

Current status:

The system has been deployed and is currently in use.

6. *Planning Commission- Forms Management System (PC-FMS)*

Planning Commission forms automation software is being developed for improved efficiency and effectiveness in project planning, execution and monitoring.

Current status:

Module-1 (PC-I) and module-2 (PC-III A&B) have been developed. Module-1 has been operationalized and module-2 will be operationalized in the near future. Various training sessions for all FS directorates on the First module have been held. After complete operationalization of the first module, training sessions will also be conducted for the second module.

7. *Employee Attendance System (EAS)*

Employees' attendance system ensures the timely arrival of employees, which will help improve the overall efficiency of the FATA Secretariat.

Current status:

EAS has been extended to all departments of the FS and data is being entered into the system.

8. *FATA Web Portal*

The FATA web portal is an interactive website, which covers all the information regarding the FATA secretariat, agencies and frontier regions. The web portal makes available this information online for all citizens of FATA.

The system will provide information and services to the people of FATA in almost any field of life. A standard proforma has been developed which will help FATA directorates to provide their information for the portal.

Current status:

The web portal has been designed and developed. Once the required information is collected, the web portal will be made online.

Department / Directorate Specific Business Process Automation

1. Zakat Management Information System (ZMIS)

ZMIS, a web-based system, is the first of its kind; which will enable the Zakat officials at FS to enlist the Zakat beneficiaries, committees and funded institutions, as well as, maintain a complete audit trail. Also, ZMIS enables the officials to generate reports for the Zakat fund utilization in a certain local Zakat committee, hence, bringing more transparency and efficiency in the distribution and management of Zakat.

Current status:

ZMIS has been deployed and a dedicated cell is established at the FATA Secretariat for this purpose, which acts as a data center; maintaining all information from agencies and FRs regarding zakat disbursements.

2. NOC management system

NOC management system is a web-based application developed for Directorate of Projects (DoP), FATA Secretariat, in order to assign NOCs to different implementing partners.

This management system will facilitate DoP in keeping a track record of all NOCs and their current status (Issued, pending, expired etc.) This will also generate alerts to intimate the renewal of an NOC prior to its expiration.

Current status:

This system has been deployed and is in testing phase.

3. Litigation cases management system

Litigation case management system is a web-based application that has been designed and developed to automate the process of litigation case management. This system will facilitate the Litigation department of FATA Secretariat in reviewing, searching, tracking and managing court cases.

Current status:

The system has been deployed and is in its testing phase.

Online Presence

e-Governance encompasses a series of necessary steps for government agencies to develop and administer to ensure successful provision of government services to the public at large. In this regard, the FATA Secretariat took the initial steps such as the development of the official web portal (www.fata.gov.pk). Though it is in initial stage but it provides lucrative information to the citizens. Though most of the information is still static, but the website is regularly updated in terms of advertisement, tenders and notices etc.

In an effort to ensure its online presence other departments and directorates, e.g. Women Empowerment Portal www.fata.gov.pk, Directorate of Projects dop.fata.gov.pk and Post Crises Needs Assessment pcnafata.gov.pk, also joined FS in deploying their websites.

Human Resource Capacity

As revealed by the survey, FATA institutions overall ICT literacy rate is very low while a skilled ICT professional shows as extremely low. The indication suggests that FATA institutions in coordination with the Federal Government have to take immediate and proactive measures increasing Human Resources Development capacity.

As proved in many developed countries HR is the main factor for economic prosperity. Currently investing in human capacity development, especially in ICT must be taken as a very high priority.

In order to expedite and improve ICT HR capacity building process, the assessment report 2011 suggested the following critical areas to be addressed in capacity building strategy:

- **Capacity building:** Expanding capacity in existing institutions and building capacity in new institutions without compromising quality.
- **Private sector involvement:** The private sector will have to be more involved in ICT-HRD. The Federal as well as the FATA Administration should come up with some sort of incentives to make learning more affordable.
- **Train the Trainer:** This approach will expedite the teaching process dramatically. Most of all staff has to become adequately ICT literate to integrate the new approaches into their working environment.

The report suggested a short term training strategy geared towards improving the ICT HR deficiency. ICT training proposed to be addressed through several means.

- **Current Government Employees** – Increase training budget substantially both for regular user training and professional training.
- **Future Government Employees** - Making basic application know how a pre-requisite for employment.

The proposed strategy was well conceived by the project and substantial efforts have been placed in the work plan for HRD.

Year 2012

Very substantial implementation effort has positioned the FATA institutions for the next phase in the evolution of ICT policy and practice. There has been very substantial effort invested across FATA institutions in putting the recommendations of the Assessment Reports (2008 & 2011), IT Policy and IT Strategy into practice. The challenge now is to leverage that effort to enable FATA institutions to deliver different and better services and to engage more closely with its citizens.

However, there is still much to be done to bring FATA institutions ICT readiness level up to where it can provide an adequate level of support to its staff and other stakeholders. There are still not enough computers for officials in the remote areas and bandwidth is still below ideal levels and still costs too much. ICT literacy is still in its infancy at most institutions. Officials in FS/FDA mostly have computers and they use them individually for email, internet access, word processing and data analysis. What they do not do is to use them much for business requirements or collaboration.

At the same time that much remains to be done, considerable progress has been achieved. Some departments have ICT policies in place or under active consideration. Some of the departments have management information systems active in their departments/directorates. Overall bandwidth has increased. VoIP and teleconferencing have effectively lowered the operational cost which will increase in the near future. FISP has contributed substantially in this regard and helped FATA secretariat in

developing ICT policies for Inventory Management, Helpdesk, Network Management and Maintenance, Datacenter Security Policies etc. For details please refer to IT Manual.

One particular concern is the state of ICT literacy, the actual application of ICT to real ongoing business processes of the institution. ICT is in highly limited use in most of the institution for business processes optimization. With a couple of exception, they are just getting started.

When these pluses and minuses are combined, a vision of uneven deployment emerges, both with the institutions and among them. One has a sophisticated set of IT equipment and IT Cell, another has no central ICT cell and its IT staff complains lack of direction in what they should do beyond “Putting out fires”.

There is evidence of commitment to ICT in top management, but not one that has propagated throughout the FATA institutions. For example, staff reporting high up in the administration has no incentives at all to use ICT in day to day operation.

The IT Policy vision focuses the FATA institutions use of ICT on increasing productivity by improving service delivery, improving government operations, exploring innovative approaches and novel applications to better meet the needs of citizens, communities and business.

Hence in general, the FATA institutions are lagging where they should be and there is an opportunity to capture a multiplicity of benefits in radically changing how ICT is adopted and deployed and in how it enhances access to and improvements in the quality and value of services. Shared ICT platforms, a connection and spread of exemplar projects and enhanced engagement with the donor community would reduce the proportion of cost invested in ICT by individual departments and deliver local savings which might be partially reinvested in advancing the progress of ICT. It would also open the door to significant additional and wider savings in costs by providing a platform for the operation of other shared services and better support sustainability goals.

The FATA institutions should recognize that in the current economic environment a largely standalone and “self-sufficient” operating mode is no longer affordable and should commit to an era of sharing in ICT that will not only offer better value but also still meet the needs of individual institution and their customers.

These views are emphasized by the following key points:

- ICT adoption is progressing but still lagging where it should be.
- There are many outstanding exemplars and much progress can be made through a strategy of extending adoption of the practices and sunk investments executed by these exemplars.
- The use of ICT is not yet pervasive in the delivery of services and online access to services is still limited.
- Deployment is far from optimum and there is insufficient sharing.
- The standalone self-sufficient operating mode for ICT needs to be discontinued.
- Fragmented operating practices and structures are adding significant unnecessary cost.

Recommendations

Business Process Automation

Overall, although the institutions perceive ICT as an instrument to increase efficiency and reduce costs, there is a ubiquitous lack of awareness as to what the optimum ICT systems and tools are for doing so.

In each department there is a clear demand for tailored ICT solutions, which many departments are commonly doing or planning by adapting and customizing MS Office applications. Most public sector institutes believes that the donor community experts are too eager to push their solutions, and generally unacquainted with the particularities of their work environment, thus not fully competent to advise them on best solutions.

The assessment study’s findings divulge that, to apply ICT strategically to improve business processes, there is a serious two-way need for knowledge development. ICT use in public sector depends on collective actions guided by strategic planning, drawn from a well-defined strategic position. To this end the target department, Donors, Government and NGOs/Associations, have roles to play to foster an environment that will foster the uptake of ICT. These roles can be summarized as follows:

Target Institute	<ul style="list-style-type: none"> • Create and provide aggregate information • Prepare for growth through use of ICT solutions
Donors	<ul style="list-style-type: none"> • Develop consultancy skills to create tailor made ICT solutions for target institutes • Develop business and financial cases for ICT use
Government	<ul style="list-style-type: none"> • Encourage ICT uptake through use of e-Government • Facilitate and promote exemplar projects
NGOs/Associations	<ul style="list-style-type: none"> • Raise awareness • Promote ICT education and training

Types of ICT Applications Deployed in the FATA Institutions

The Vision in the FATA IT strategy focuses on improving the productivity of government operations through more targeted ICT investment enabling more efficient and effective business processes. Continuing fiscal constraint will place pressure on Government, at least in the medium term, to make better use of ICT capability and investments. The strategic actions necessary to improve government operations involve better targeting ICT investment to drive greater efficiency and productivity in government operations and encouraging innovation by government.

ICT applications and project can be deployed in the FATA institutions for different purposes. This portfolio of applications can be described as a continuum in terms of "stages of growth" from e-administration to e-services to e-participation. Many departments have started using ICT to improve efficiency and overall performance through automation of back-office functions and introduction of management information systems (MIS). Following the trend, FATA institutions can then expand the scope of ICT projects to areas requiring direct interaction with citizens. Informational Web sites provides the entry point for citizen services. As the technologies mature, the level of interactivity and integration will be increased. Table below illustrates the typical areas where ICT is being deployed in FATA institutions.

Type	Examples	Outcomes	Projects Deployed or in Development
Back-office automation, operation support	<ul style="list-style-type: none"> Accounting system/ Financial Management System Human Resource Management System Facility Control System 	<ul style="list-style-type: none"> Increased efficiency Transparency in public financial management Improved expenditure control 	<ul style="list-style-type: none"> HR MIS File tracking system Activity tracking system Asset Management System
Data Gathering and MIS	<ul style="list-style-type: none"> Department specific Management Information System 	<ul style="list-style-type: none"> Effective performance monitoring Improved decision making 	<ul style="list-style-type: none"> PC-1 to PC-5 Automation Zakat Management Information System
Electronic Delivery of Services	<ul style="list-style-type: none"> Websites / Transaction portals 		<ul style="list-style-type: none"> FATA Secretariat web portal Online Complaint Management System Help Desk – IT Support
E-Participation	<ul style="list-style-type: none"> E-discussions E-mail 		<ul style="list-style-type: none"> Centralized email VoIP Video Conferencing

Table 3: Application deployed in FATA institutions

Assessment of the ICT Projects

A common measurement framework evolved on the basis of existing frameworks shall be used to assess the impact of the projects already deployed or being deployed. An ICT project impacts three groups of stakeholders: (i) clients receiving the service; (ii) department (including several partners) that delivers the service; and (iii) the larger society consisting of citizens, businesses, government as a whole, and civil society. The impact can be assessed in terms of a variety of outcomes experienced by each type of stakeholder. Table below lists key dimensions of outcomes for each type of stakeholder.

Stakeholders	Key Dimension of Impact
Client	<ul style="list-style-type: none"> Economic (direct and indirect) Governance (corruption, accountability, transparency, participation) Quality of service (decency, fairness, convenience etc)
Institutions (including partners in implementation)	<ul style="list-style-type: none"> Economic (direct and indirect) Governance (corruption, accountability, transparency, participation) Performance on key non-economic objectives Process improvements
Society Government as whole Civil society	<ul style="list-style-type: none"> Economic (direct and indirect) Governance (corruption, accountability, transparency, participation, responsiveness) Development goals Attitude towards computerization of public services delivery

Table 4: Key Outcome Dimensions

FATA Institutions HR Capacity Building

The challenge of capacity building for effective service delivery has preoccupied most FATA institutions since their establishment. There are a number of institutional and resource constraints that have continued to work against FATA institutions capacity to meaningfully design and implement their developmental interventions. To address these constraints, capacity building and enhancement has

been recognized as being central in these institutions developmental process. Increasingly, there is mounting recognition among the top management that capacity development is at the center of development and that, without it, even past achievements could be reversed. Similarly, there is growing self-examination in the donors regarding the degree to which aid, for example, is helping in strengthening capacity development in developing countries. One USAID White Paper noted in this regard:

The strength and performance of institutions, particularly as evidenced in the quality of governance and rule of law, are the primary determinants of development. Resource transfers in the absence of institutional capacity do not yield sustainable outcomes...The primary determinant of progress in transformational development is political will and commitment to rule justly, promote economic freedom, and make sound investments in people. For foreign aid to most effectively contribute and support recipient self-help efforts donors should...[inter alia]...focus on strengthening institutional capacity and dealing with absorptive capacity issues.⁷

Similarly, the World Bank underscored the role of capacity building in poverty reduction:

An effective poverty reduction strategy process and a productive partnership can be built only on a platform of strong public capacity: capacity to formulate policies; capacity to build consensus; capacity to implement reform; and capacity to monitor results, learn lessons, and adapt accordingly. Building the requisite capacities turns out to be a formidable challenge. For these reasons, enhancing the capacity of developing countries has risen to the top of the continent's development agenda.⁸

In the light of the above, this section attempts, firstly, to define the meaning, scope and main elements of capacity building at both the institutional and human resource levels and, secondly, lays out the main challenges in FATA institutions that continue to compromise the improvement of public sector performance. A look at some of the capacity building initiatives in FATA secretariat is made. The section ends with recommended strategies for institutional and human capacity enhancement, focusing on interventions that are required to create a Capable State in FATA institutions.

When better facilitated and managed within an enabling policy environment, TA could play a useful role in institutional and human resource development particularly in those areas where certain competencies are inadequate or non-existent. It is also increasingly becoming clear that the demands of the ongoing ICT implementation as well as the emerging approaches that touch on harmonization and alignment of donor interventions do require externally-sourced competencies and skills that should complement local talent.

While many positive contributions by the cooperating partners have made through TA, the lack of overall, consistent and coherent strategy in this area has inadvertently frustrated a number of capacity building efforts. In many cases, assistance to an institution includes, and sometimes specifically tied to, consultants/experts who are meant to transfer technical skills and knowledge through the supported projects. Quite often, however, permanent skills transfer does not happen due to a host of factors that include the following:

- TA is often supply-driven, or imposed as a price for financial assistance rather than a response to local demands.
- Projects are over-designed, revealing, quite often, limited appreciation of the virtues of ensuring local input and adaptation.

⁷ USAID, (2004), U.S. Foreign Aid: Meeting the Challenges of the Twenty-first Century, Washington D.C., January

⁸ Sahr Kpundeh & Brian Levy (editors), "Building State Capacity in Africa" (World Bank & Oxford University Press

- The usually uncoordinated and sometimes duplicative flow of bilateral and multilateral sources of technical assistance has created monumental co-ordination problems among cooperating partners themselves and for the recipient entity.

The following main hypotheses are being set for this need assessment:

- If the government employees are given adequate training to use ICT in a better way, public satisfaction will be increased with their practical applications of knowledge gained.
- If employees are skillful/educated to undertake tasks and work under ICT culture, then they will be further able to facilitate public easy interactions.
- If government departments use ICT to simplify process and improve performance then transparency and productivity can increase.
- Access to information by use of ICT can improve public participation and satisfaction level with public services provision.
- The greater the degree of e-government, the greater is public satisfaction at lower cost which will lower the level of poverty in long run.

There is a tendency for old employees to resist change because they have inadequate information, skill or because they have not been involved in decision making. Trainings can be viewed as a process of their involvement to let them not only learn more about the current ICT program, but most importantly, to feel that they have had a voice in the outcome as well.

It is highly recommended to design specialized courses for policy makers to help them in:

- To assess ICT infrastructure and availability
- To see public opinion about e-government challenges and set the priorities according to their needs
- To systematically evaluate ICT functions/services and planning for improve productivity of government departments
- To provide justifications or explanations for budget and grant requests
- To examine the ICT issues
- To assist them to adopt Citizen Centric ICT approach so that level of citizen trust on government can be improved

The project had conducted several ICT trainings for common employees to help them in performing their day today activities. Specialized trainings have been conducted for FATA institutions IT staff for technology transfer and maintenance of ICT infrastructure in FATA institutions. A summary of the IT trainings conducted by the project is presented below:

S.No	Training Name	No. of Participants		Department	Batch	Training Duration
		Male	Female			
1	Urdu Typing & Formatting	18	2	FATA DA	Batch-I	One Week
2	Urdu Typing & Formatting	24	0	FATA DA	Batch-II	One Week
3	MS Office Advance 2010	19	1	FATA DA	Batch-I	Two Week
Sub Total		61	3			

FATA Secretariat						
4	MS Office Advance 2010	18	2	FATA Secretariat	Batch-I	Two Week
5	MS Office Advance 2010	15	5	FATA Secretariat	Batch-II	Two Week

6	MS Office Advance 2010	20	0	FATA Secretariat	Batch-III	Two Week
7	MS Office Advance 2010	19	2	FATA Secretariat	Batch-IV	Two Week
8	MS Office Advance 2010	18	2	FS/FDA	Batch-V	Two Week
Sub Total		90	11			
Grand Total		151	14			

Table 5: Consolidated List of IT Trainings Conducted by FISP