



FATA ICT Action Plan

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Acronyms and Abbreviations

BHU	Basic Health Unit
FATA	Federally Administered Tribal Areas
GoP	Government of Pakistan
HR	Human Resource
HRD	Human Resource Development
ICT	Information & Communication Technology
ISP	Internet Service Provider
IT	Information Technology
IPDF	Infrastructure Project Development Facility
KP	Khyber Pakhtunkhwa
LHW	Lady Health Worker
MOU	Memorandum of Understanding
MIS	Management Information Systems
PCNA	Post Conflict Needs Assessment
PPP	Public-Private Partnership
SMEDA	Small and Medium Enterprise Development Authority
TELCO	Telecommunication Company
USF	Universal Service Fund

Preamble

The socio-economic development of FATA, is a mission that Government of Pakistan is committed to, with a renewed urgency and focus. The mission is to bring the people of FATA into the mainstream of socio-economic stability and well being. Access, affordability and quality for all, to basic and advanced education, health care, youth development and employment opportunities, which are at least at par with levels in other parts of the country, is a mission that the Government of Pakistan is committed to. Above all, there is recognition of the reality, that FATA cannot remain an excluded region and marginalised segment of Pakistan's society.

The Post-Conflict Needs Assessment (PCNA) is an important anchor and starting point, of FATA's journey towards socio-economic development and long term peace and harmony, the region rightfully deserves.

The formulation and approval of the FATA ICT Policy is another important step. It recognises the role of Information and Communication Technologies in socio-economic development. It is considered a critical prerequisite and an undeniable accelerator for socio-economic development. It can augment and positively drive interventions in already identified sectors where journey has already been started, with varying impact and results.

FATA ICT Action Plan seeks to align ICT interventions with the sectoral priorities as per FATA ICT Policy. The Action Plan does not view ICT as an isolated intervention, solely as a desire that may in some way or the other address the Digital Divide of FATA. To the contrary it is viewed as an intervention that should be closely linked and synergised with the goals of FATA Strategic priorities and specific projects already in place or underway under the various sectors and related areas of health, education, agriculture, youth development and employment.

Secondly the ICT Action Plan pursues a clear distinction between components which constitute a necessary ICT infrastructure and such components which are ideal projects for initiating over the short, medium and long terms, but which will at some stage for wider applicability and success, rely on the presence of an adequate infrastructure.

The ICT Action Plan has a multi-direction focus. It seeks to leverage on investments already made and projects on ground, with an objective of quick gains and successes. It also seeks to bridge the digital divide and leapfrog literacy gaps by focussing on functional literacy, especially of the youth that have missed the opportunity of schooling or higher education. This combines with the medium terms mission of vocational and skills based training of youth that can see the hope of employment. Further it seeks to provide quickly an access to a first level of health care.

1. Executive Summary

a. Background and Introduction

FATA is viewed by the world today as a Region with an unenviable and unique status and situation, The Region of FATA is beset with challenges that are neither easily surmountable nor have immediate and readily available solutions to prescribe and address.. The collective neglect and continued years of inattention and disproportionate allocation of resources - by successive governments ever since 1947 - is what is reflected today in the form of the cumulative state of affairs of the Region.

Where FATA stands, in comparison with Pakistan and Khyber Pakhtunkhwa, is indicated the official statistics below:

Table of comparative social sector indicators

Indicator	Pakistan	NWFP	FATA
Literacy rate (both sexes, %)	43.92	35.41	17.42
Male literacy rate (%)	54.81	51.39	29.51
Female literacy rate (%)	32.02	18.82	3.00
Population per doctor	1,226	4,916	7,670
Population per bed in health institutions	1,341	1,594	2,179
Road (per sq km)	0.26	0.13	0.17

The more painful realisation that also came with the new attention to FATA was that there are no short term solutions to be prescribed and that interventions would now be the first steps towards a long term and gradual improvement in FATA's socio-economic conditions and long term stability by bringing it into the fold of the country's overall development plans.

Apart from developing the infrastructure that improves communication and mobility for the betterment of the common people of FATA, access to affordable health and education, and creation of employment opportunities and earning a livelihood have now assumed areas of high importance on the agenda of improving the overall socio-economic conditions of people of FATA.

b. Relevance of an ICT - in wider FATA Context

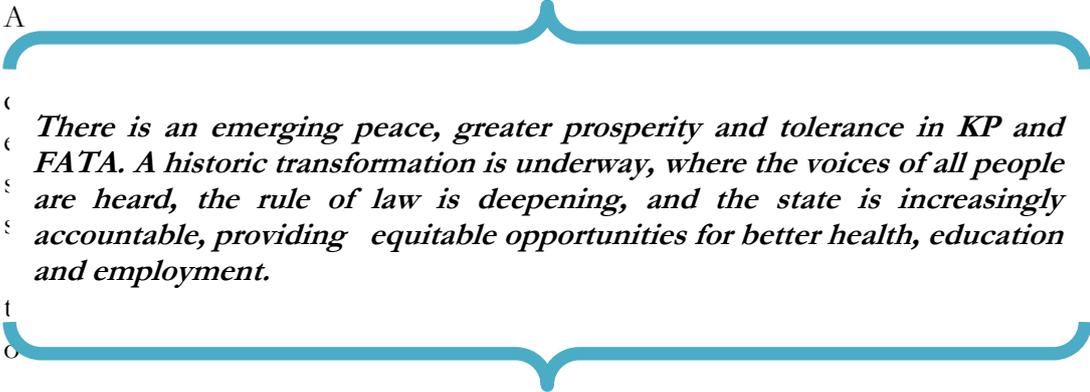
The Governments approved Vision for the future of FATA is stated as:

Any vision or goals that follow it, which have overall socio-economic upliftment of FATA and its people as the objective, would remain incomplete without ICT as the enabler and driver. Inclusion of all people of FATA, where the voices of all people are heard, where the rule of law is deepened and equitably applied, where the state is increasingly accountable and transparently so and ultimately FATA provided equal opportunities to all its people for health, education and employment, is the anchor point of the ICT Policy and Action Plan.

The relevance of ICT for FATA can be enunciated as follows:

I. Access to information – For voice of people to be heard.

A



There is an emerging peace, greater prosperity and tolerance in KP and FATA. A historic transformation is underway, where the voices of all people are heard, the rule of law is deepening, and the state is increasingly accountable, providing equitable opportunities for better health, education and employment.

information is a basic requirement of any community Availability and accessibility of information empowers and enables the citizen to voice their needs and aspirations. Establishing the channel that enables a two way flow of information (from government to citizen and from citizen to government) is the starting point for good governance which makes both accountable and responsive.

The Citizens, who are better informed, are better equipped to take advantage of opportunities, access services, exercise their rights, negotiate effectively, and hold state and non-state actors accountable. Most investment projects and institutional reforms whether at the community level or at the national or global level, underestimate the need for information and under-invest in information disclosure and dissemination. Today information and communications technologies (ICT) play important roles in connecting people – even the poor - to information about rules and rights to basic government services, about state and private sector performance, and about financial services, markets, and prices, as well as to each other and society at the larger levels.

ii. Access to Justice & Legal Aid – For deepening Rule of Law

Judicial and legal reform are being considered important for deepening the rule of law in FATA, and creating the legal environment for accountable governance and empowering poor people by increasing their access to justice.

iii. Provision of Basic Services – For equitable opportunities

Equitable opportunities means improving poor people's access to and effective use of basic services including health care, education, water, roads and basic financial services. The first and foremost requirement, from an ICT perspective and focus is improving access to information, primarily by putting information about government in the public domain. This is followed by mechanisms for inclusion and participation in the envisaged projects.

2. Background of ICT Action Plan

a. Introduction

Under directives of the Honourable Governor of Khyber Pakhtunkhwa, formulation of an ICT Policy for FATA was initiated. The responsibility for this was entrusted to the Fata Institutional Project (FISP), a USAID funded project.

Under consulting services hired by FISP, the task of formulating a FATA ICT Policy was initiated and through a series of consultative workshops- sharing of innovative ideas and keeping in view the unique and challenging position of FATA, the ICT Policy was formulated. The Policy is a result of the sincere commitment and belief that alongside the other interventions initiated to bring - change in the socio-economic conditions of FATA, IT and ICT based initiatives –are also pre-requisite which could not wait for the outcome and positive results of other interventions, before being initiated.

The ICT Policy formulated and submitted for approval was the product and outcome of ideas and contributions of experts representing government, non-government, public and private sector department and organisations. The ICT Policy is anchored on a Vision and a Mission Statement that seeks to initiate such interventions that beyond addressing the digital divide of FATA have a focus in impetus towards the development and fulfilment of wide ranging interventions, cross cutting the neglected sectors of health, education, youth, agriculture and industry, which complement and combine together on the holistic socio-economic environment and its uplifting, followed by sustained efforts for the longer term development of the FATA Region. Needless to say, the efforts required are uphill and require tireless work, unrelenting commitment and vast human and financial resources.

Mission Statement of the FATA ICT Policy

Rapid Development of ICT 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

The FATA ICT Policy was approved by the Honourable Governor of Khyber Pakhtunkhwa, in October 2012. Following approval of the Policy, it became necessary that the momentum should be maintained, for preparing a clear and quantifiable ICT Action Plan.

In pursuance of formulating the next step, of formulating an ICT Action Plan, and to give a clear direction, the ICT Policy identifies sectors and some projects at a high level. Detailing the envisaged projects and prioritisation was left to the Action Plan to identify and recommend.

b. Salient Features of the FATA ICT Policy

The FATA ICT Policy emphasizes the increasing importance and role of ICT in the work and personal lives of people. Further it recommends the steps that require to be taken phase wise

The policy identifies major thematic areas of focus and within each area the subjects or broadly identified projects that could be taken up towards attainment.

The areas identified by the Policy are over arching, covering on the one hand the ICT infrastructure and enabling environment that is a pre-requisite for service and people centric ICT Projects to be implemented and on the other hand, Projects that aim to improve accessibility to information and services in the Health, Education, Agriculture, Industry, Youth Development sectors.



Main Thematic Areas of FATA ICT Policy

- *ICT Education, Human Resource Development & Awareness.*
 - *E-Governance*
 - *ICT Industry, E-Commerce, Incubation Center*
 - *ICT Infrastructure (Broadband Internet connectivity, etc.)*
 - *Technology Parks & Incubation Centers*
 - *Regional Language Software Development*
 - *Hardware Language Development*
 - *Legislation & Regulation*
- 

3. Purpose & Objectives of the Action Plan

a. A Road Map for Actualization of the ICT Policy

As explained in Section 2. the ICT Policy document - provides the guidelines in thematic areas covered by the Policy. The Action Plan is the next step, to define projects within these thematic areas, and detail these in consultation with stakeholders, along with the realistic time frame, phases and order of priority that each project should be taken up and implemented.

Therefore the purpose of the Action Plan is to provide a projects implementation road map that enables specific projects to be initiated towards actualizing the ICT policy.

b. Selecting Projects of Impact and Potential Success

Specific projects identified for inclusion are the result of consultative discussions and articulation of ideas with participants from diverse stakeholder groups – representing both policy making and operational levels - and relevant sectors. Taking into account, the insight and experience of such stakeholder groups and participants, FATA’s situation and inherent challenges and bottlenecks which could impede progress or ultimate success of projects were considered. Therefore, the projects which are perceived as having a high impact and low risk, especially from the viewpoint of an objective of attaining some quick wins and successes have been selected.

c. Proposing a High Level Framework

Objective to clearly see the distinction between development of ICT Infrastructural Development and Projects that have a direct impact on the Sectoral priorities aiming at FATA overall socio-economic development

d. Delineating between Infrastructure and Projects

Eventually, all initiatives which are taken up under the broad scope of the ICT Policy will take the shape of projects. It has been considered important to delineate and draw a clear distinction between Infrastructure Projects – which provide the ICT enabling environment, such as reach of communication, mobile penetration, electricity and alternate energy – and Projects which provide a quantifiable benefit in the sectors of socio-economic developments, such as health, education, agriculture, youth development etc. This has been considered relevant, because



Objectives of the FATA ICT Action Plan:

- *Convert Policy to Implementable Projects*
 - *Provide the High Level Model & Framework for initiating Projects*
 - *Distinguish between ICT Development & Projects*
 - *Synergise approach with PCNA Sectoral Priorities*
 - *Dovetail ICT with a focus on PCNA Actions & Outcomes*
 - *Select Projects for Immediate & Short term Results*
 - *Communicate clarity for attracting Funding & Donor Support*
- 

waiting on the required infrastructure, including the regulatory and legal environment is not a short term realistic goal. The delineation and distinction has enabled sharper focus on Projects, which can be seen as potentially coming on-ground early, through a piloting mechanism where required and be further replicated for wider socio-economic impact and benefit to large and diverse segments of FATA's populace.

e. Cost & Impact

The Action Plan also suggests that due attention is required to a cost involved in a Project and the Impact and likely Outcomes of the Project.

If high cost projects are initially undertaken, which also have a higher risk of failure, even if these are perceived as implementable in the short term; the longer term effect of such projects can be negative; in terms of funding and support that future projects will require unless these can be implemented quickly, can benefit many and have a low risk of failure

f. Objectives & Scope of the Action Plan

Based on consultation with stakeholders, at both the policy implementation and operational management levels, consensus was developed of specific projects that would have a positive impact and outcome. Moreover, there was general agreement that projects which could be initiated early and implemented as quick successes in a relatively short period of time, are ideal for demonstrating the role of ICT in socio economic development.

Based on these priorities, the Action Plan includes details of selective pilot projects, to enable an early finalization of project structure, design, technical architecture, implementation plan and funding support requirements. The Action Plan, while identifying other projects, which fall as lower priority in terms of the time frame in which they would be initiated and developed, including such which can be categorized under ICT infrastructure development projects, provides the concept along with an extent of detail which should enable understanding the rationale, importance and role of the project, in relation to the overall socio-economic goals and objectives. Further details can then be developed, in the form of project scope, objectives and deliverables, prior to the budget preparation stage, followed by preparation of Terms of Reference (ToR) and Request for Proposals (RFP) as would be required for the tendering and procurement stages.

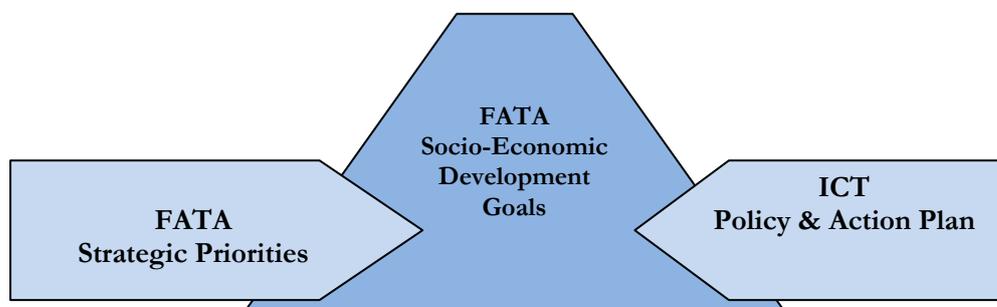
4. ICT Action Plan in Synergy with FATA Strategic Priorities

a. Synergizing ICT Interventions

The ICT policy for FATA was devised and formulated in its own right, as yet another necessary step towards addressing a subject from which FATA has remained excluded and its population ignored and marginalised. The overarching mission of the FATA ICT Policy is to open up the benefits of IT to FATA and its people and bridge the digital divide that persists.

While the positive impact that ICT would possibly have on many aspects of FATA and its population were obviously in the perspective when the policy was suggested and formulated, a direct linkage with the goals and interventions as already being pursued for FATA's socio economic upliftment is an aspect that has been kept in view while preparing the Action Plan and specific projects.

As graphically illustrated below, it is considered that ICT Actions need to work in consonance with FATA's strategic priorities. In fact in many of the interventions and projects being taken up under the framework of strategic priorities, IT and ICT are a necessary supporting and enabling tool and mechanism. This suggests that ICT interventions and projects need to be synergised with the strategic priorities, rather than viewed as intervention that will have their own path and outcomes.



b. Merging Action Plans as with FATA Strategic Priorities

The need to synergise ICT Policy and the Action Plan, as emphasised in the foregoing section implies that the ICT Actions are taken up in consonance with the strategic priorities and ultimately align the actions towards the vision that has been approved by the Government for the future of FATA.

The ICT Action Plan and the methodology and approach that was adopted and is further explained in Chapter 6. included, amongst other features, a consultative process. It was explained that while the subject of an ICT Action Plan implied perhaps that an expert knowledge and expertise in IT was required, this was in fact not as relevant as understanding how IT could be used as the tool to drive and enable many of the sectoral priorities envisaged under the Framework of Strategic Priorities. The process, with sector and subject matter experts (SMEs) representing government, non-government, private sector, was with the clear view of identifying clear actionable ICT projects and bring these into the . It was through this process that the importance of viewing ICT as an enabler and driver of the strategic priorities was emphasised.



**Government's approved Vision
for the future of KP and FATA:**

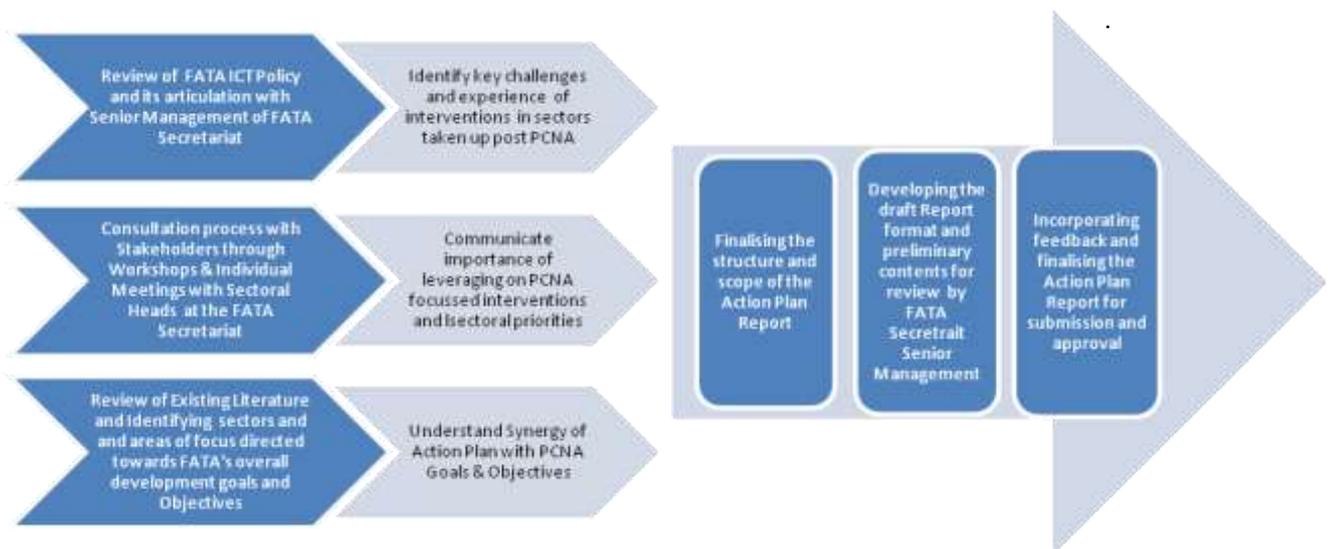
*There is an emerging peace,
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state is increasingly*



5. Methodology & Approach adopted in developing the Action Plan

It was considered important that a structured - rather than spontaneous - methodology and approach for developing the FATA ICT needed to be adopted. Acquiring the individual and forum views and ideas of those experts that have a deep understanding of FATA and priorities that have become the driving force was considered Action Plan, being the next step for acquiring the views and ideas of those experts that are the knowledge pool and best understand, not only the context and sense of urgency but also what would constitute realistic ICT interventions, was important.

Accordingly, the methodology and approach consisted of clear steps, the overall framework of which is depicted below:



6. Major Challenges & Constraints

In the context of the FATA ICT Action Plan, it is pertinent to consider the inherent challenges and constraints for implementation of projects suggested under this plan. While overcoming some of the constraints constitute projects which are proposed in their own right, it is not to say that until such time as the constraints are addressed, they should stand in the way of many of the projects. In fact, until that time, an innovative approach is suggested, enabling initiating several projects during the time that the challenges and constraints are overcome. Some of the main constraints are as follows:

a. Communication, Internet & Mobile

Broadband connectivity, while having reached some of the Agency HQ levels is to reach all Agencies. Reach of internet and mobile, beyond Agency levels is also sporadic and unreliable. While it is envisaged that ICT projects under the Action Plan and content relevance will increase the demand and utilization of internet and mobile communication by the FATA public, it is expected that the Telcos and ISPs will follow rather than lead the way. The outcome of Projects, some of which will be initially based on developing content on media locally usable without reliance on the internet, will be an important factor for telcos and ISPs to gauge public demand and utilization, before they make the added investment for wider proliferation of their services in FATA.

b. Electrical Power

Lack of electrical power, either in terms of complete absence or frequent outages for long durations is a major constraint. Obviously this is a basic requirement for any computer or mobile device. While generators and UPS appear to be the obvious alternative, the fact remains that these have their own high financial costs of sustenance, quite apart from maintenance and technical support requirements. However, projects, especially focused on education, health and youth development, will need to be considered in the interim, with solar energy and low energy consumption computers as relevant and integral components of the project. This is to avoid the situation which the IT labs set up in schools have faced; whereby they have been rendered underutilized or completely shut down. Solar energy is already finding its relevance for refrigerators at the health units. The experience gained from this application of solar energy is being kept in view for the projects, such as upgrade of existing computer labs.

c. Social & Cultural Barriers

Social and cultural barriers in FATA are both a combination of the traditional and tribal social values and the years of exclusion from the mainstream of socio-economic development of the country. While the male youth and population can be expected to benefit from the access and reach that the ICT Projects envisage, this may not be the case that extends to the female population. The benefits of ICT will have to be delivered at home for this to change, rather than

expect that the female population will enroll in schools and community centers that provide the access and connectivity to the outside world.

d. Human Resource Capacity

Dearth of human resources required for initiating, propelling and sustaining an ICT environment, presents a major short to medium term challenge. While the Action Plan has included several projects attracting, recruiting and training capacity and developing the HR mass which will be critically required, in the short term some projects that enable delivery of services remotely, using content delivered on the internet and mobile have a relevance – even in the longer term.

7. The Overall Framework for Prioritising Projects

For the ICT Action Plan to have a clear and cohesive direction, and for projects to be prioritised and viewed in a realistic and short, medium and long term horizon, an overall framework is necessary. The framework suggests viewing projects in the following context:

a. Policy Goals

The Policy Goals stated in the ICT Policy are kept in view and how the Projects will have an impact, not only in terms of the ICT goals but also in terms of the larger vision and goals stated for FATA's socio-economic development.

b. Strategic Priorities

The strategic priorities of FATA's overall development, in terms of interventions required in each sector (Education, Health, Youth Development, Governance, etc.) are an important point of reference to consider, especially in terms of the outcome and difference that ICT intervention, as a driver and enabler, will make to the strategic priorities.

c. Key Initiatives

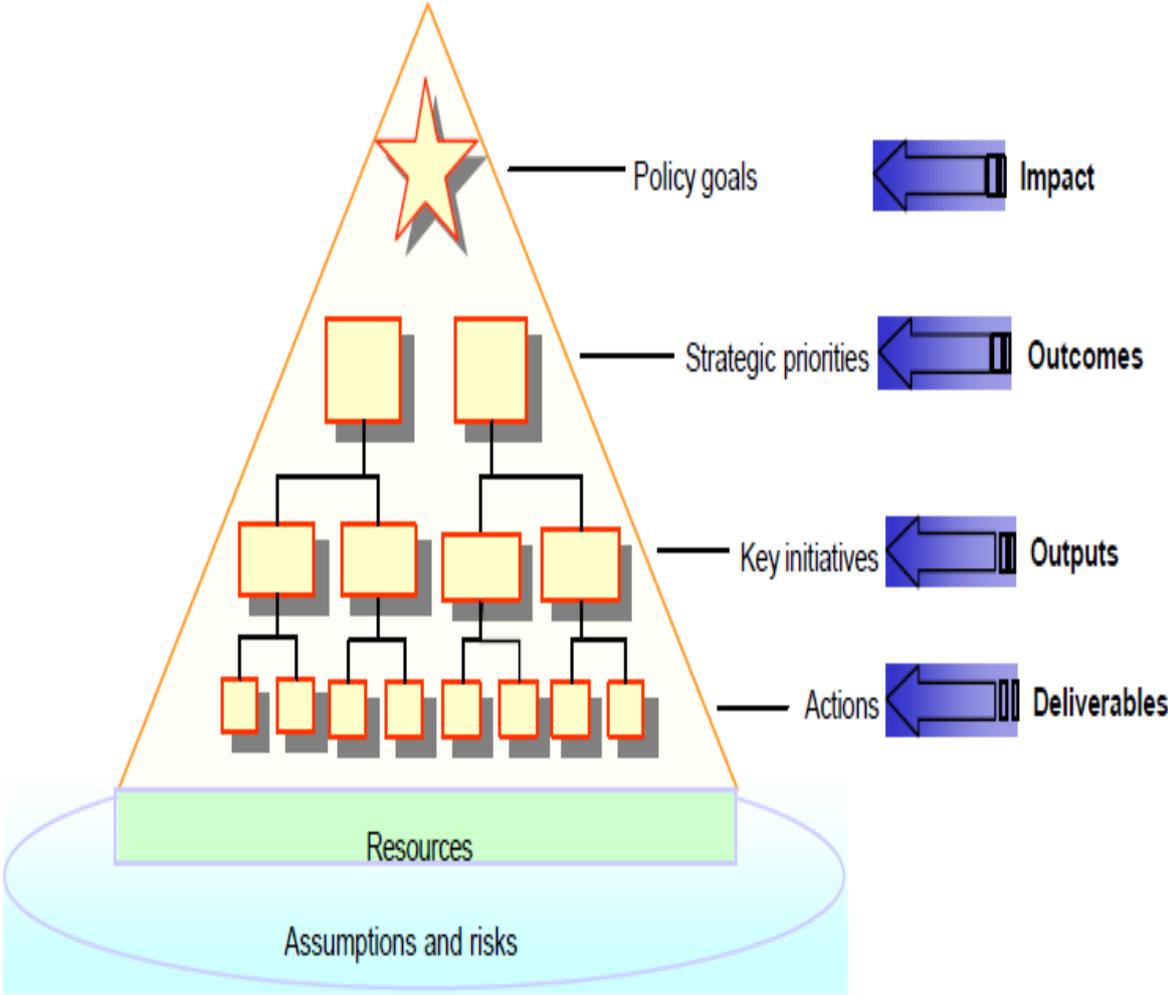
The key ICT initiatives reside in three main areas, which can be categorized as follows:

- Projects which have a direct and personal relationship with the citizen, the outputs of which are measurable in terms of the number of citizens that choose to avail and benefit from the Project – such as the number of students enrolling for obtaining education, IT training, or patients using a new way to access health services, etc.
- Projects which essentially create the capacity, to cater for the number of citizens - that it is perceived by the policy and decision makers - will avail or access the facilities created through the Project.
- Projects which constitute the infrastructure and enabling environment, including legal and regulatory, for ICT projects to successfully start and continue, without hindrance and which provides the encouragement to innovators and investors to propose new and additional projects.

d. Actions

Projects to be undertaken, over the short, medium and long term, are the essence of the Action Plan. The projects need to be viewed, not only in terms of the Project's own deliverables but also in terms of the elements that make up the framework for deciding project priorities, as depicted below:

Indicators



8. Taking up the Priorities under a Phased Approach

a. Importance of the Phased Approach

A Phased Approach is often and to an extent loosely used term. The assumption in –using of this term is that everything cannot be achieved together or in the short term. The previous chapter has attempted to identify and explain the various aspects that need to be considered in

There a multitude of Projects can be undertaken. While moving forward with the Action Plan it will be important to prioritise.

b. Criteria for classifying Projects under Short-Medium-Long Term

Clearly, there is the requirement to define criteria under which Projects will be classified as Short, Medium or Long Term Projects.

	<p>Long Term 24-60 Months</p>	<ul style="list-style-type: none"> • Projects that have a high dependence on Infrastructure not currently available • Requirement on a maturity content and localisation for direct relevance • Dependency on first developing HR capacity
	<p>Medium Term 12-24 Months</p>	<ul style="list-style-type: none"> • Projects which leverage existing Infrastructure • Combine with & improve existing Projects • Require relevant content to be developed • Require awareness and wide social acceptance
	<p>Short Term 6-12 Months</p>	<ul style="list-style-type: none"> • Projects with High Social Impact & Reach • Applicable to All age and gender • Low Risk-Capital to Pilot before Roll Out • Low continuing funding to sustain • Low dependency on external factors

c. Projects in linkage with Sector and Development Priorities of FATA

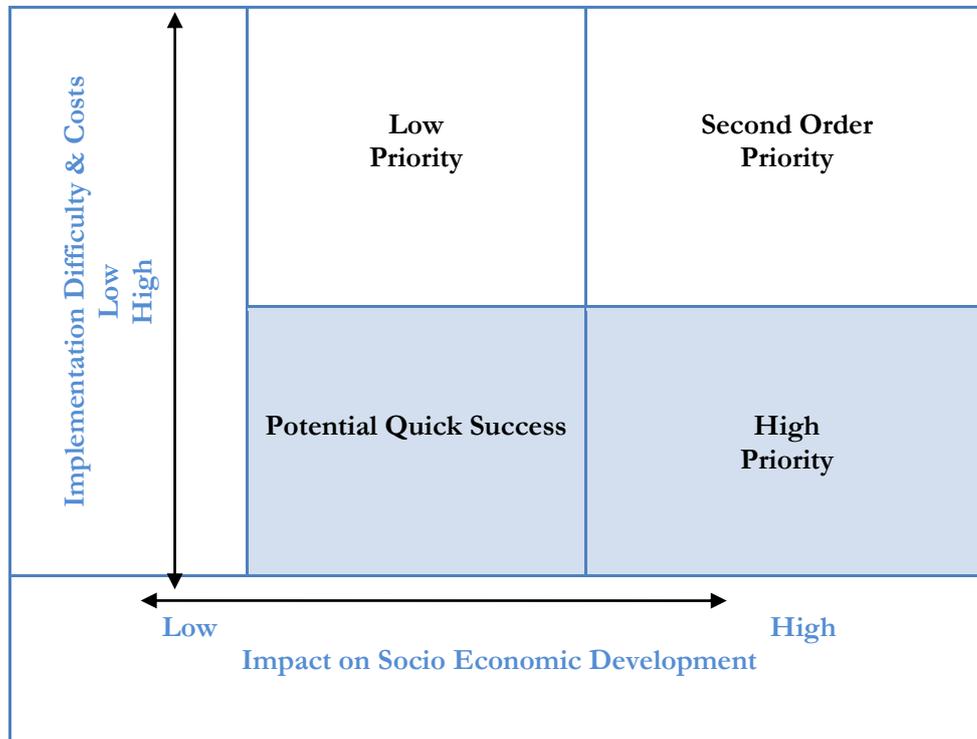
The Action Plan has suggested classifying Projects selected and initiated under a realistic and practicable Short-Medium-Long term approach, based on a clear set of criteria. In isolation, this would mean that Projects with a quick implementation cycle, less dependency on developing of supporting infrastructure or removal of an inherent constraint, involving lower capital and running expenditure would be the obvious choice for an early initiation and implementation. However, it is suggested that the priority should also keep in view the sector-wise priorities as identified under FATA’s framework of strategic priorities. What this means is that if a Project, in addition to being viewed as a quick success area is also seen as having a major impact on either improving or further accelerating a Project - when IT is coupled with its delivery – it presents the ideal synergy and utilization of IT as a driver and enabler.

A typical example of this suggested approach in deciding the priority and phase of an ICT Project is the current state of computer labs set up in schools, which owing to various factors, including but not limited to lack of electricity and internet connectivity, do not appear to be achieving the envisaged outcome and results. A large investment has been made in setting up the computer labs. A renewed focus under the ICT Policy could mean, for example that for the IT skills training of government employees in work relevant and functional use of computers, or a youth development program focused around vocational training, the existing computer lab facilities of the schools could be utilized. Such a utilization of existing infrastructure is also the synergy that is required between the strategic priorities and the ICT Policy and Action Plan.

SECTORS	PROJECTS I (Delivery of Services)	PROJECTS II (Development of Resources)	SUPPORT INFRASTRUCTURE TO ENABLE & SUSTAIN ICT		
			COMMUNICATION & ENERGY	HARDWARE & SOFTWARE INDUSTRY	LEGAL & REGULATORY ENVIRONMENT
E-Governance	E-Services	Web Information Web Portal Applications Relevant Content Development	COMMUNICATION & ENERGY	HARDWARE & SOFTWARE INDUSTRY	LEGAL & REGULATORY ENVIRONMENT
Industry		Web Content			
Agriculture	E-Agriculture	Relevant Content Development Web Portal Applications Mobile Applications			
Youth Development	Vocational Training	Content Development			
Education	Virtual University	Relevant Syllabus Development E-Hujra HRD & IT Skills			
Health	TeleMedicine LHW	E-Hujra			

d. Priority from the viewpoint of Socio-Economic Impact, Difficulty & Cost

Projects selected and recommended under the Action Plan have been considered for phasing by and also considering the impact versus cost and implementation difficulties (or ease) by applying the following matrix to each Project.



By keeping in view and applying the above matrix, the objective is to ensure that projects are not taken on the basis of what is happening in the rest of the country and indeed globally. This would be an easy approach and would not be considering the centrality and relevance of a project in the FATA context and priorities.

The matrix will also serve as the constant guide and reminder, ensuring that even future Projects which are not covered presently in the Action Plan but are added retrospectively, will be viewed and prioritized pragmatically. In the dynamic and developing scenarios of FATA, new Projects will undoubtedly be conceived and considered. The factors which will remain constant and most important in selection the project will be to consider the impact of the project on the socio-economic development of the ordinary people of FATA means in essence that when n do not presently constitute , including any that are conceived and considered It should enable keeping to the consider further is an trap the world the perhaps a up it is a clarity has been consistently, the importance of applied has enabled viewing each project in terms of its priority

9. Human Resource Development

a. Introduction

The stated overall Objectives and Goals of E-Government, which aims to develop the human resource capacity, both to promote ICT and also to support it, is highlighted below:

Develop high quality human resource and extensive pool of trained IT manpower at all levels to meet local and regional demand.

b. HRD – Matrix of Targets & Expected Outcomes

S.No	Project Code	Project Name	Expected Outcome	Timeframe	Risk Level
1	HRD-Youth	ICT Centers for un-employed FATA Graduates	10000 ICT Trained Youth	5 years	Low
2	HRD-Govt	Establishment of Training Centers for Government Employees	5000	5 years	Low
3	HRD-ITU	Establishment of ICT Higher Learning Institution	ICT University	3 years	Low
4	HRD-Teach	Recruitment & Training of IT Teachers	All Schools have IT Teaches	3 Years	Low
5	HRD-Sch	FATA ICT Scholarship Program	2500 in different disciplines	5 Years	Low
6	HRD-Intern	FATA ICT Internships Program	500 in different ICT Disciplines at different level	5 Years	Low
7	HRD-VU	Extension of Virtual University Campus in All Agency HQs	VU Campuses in FATA	5 Years	Low

c. HRD- Project Time Frame with Targets

S.No	Project Code	Pilot Phase		Roll Out Phase							
		Year-1		Year-2		Year-3		Year-4		Year-5	
		6 months	12 months	6 months	12 months	6 months	12 months	6 months	12 months	6 months	12 months
1	HRD-Youth	500	500	500	500	500	500	500	500	500	500
2	HRD-Govt		250	250	250	250	250	250	250	250	250
3	HRD-ITU		Start				Establish				
4	HRD-Teach										
5	HRD-Sch		250	250	250	250	250	250	250	250	250
6	HRD-Intern		250	250	250	250	250	250	250	250	250
7	HRD-VU										

d. Project Profiles

i. ICT Center for un-employed FATA Graduates - Utilization of School IT labs as HRD Training Centers

Project Title	HRD Training Centers for 10000 un employed youth cum School IT Labs
Socio-Economic Impact	High
Quantifiable Benefit	<p>Leveraging existing computer labs set up in schools for The Project aims to better utilize and leverage upon the existing computer labs set up in the schools.</p> <p>The quantifiable benefits include utilization of the computer labs after regular school hours for basic and functional IT skills (data entry and office related Microsoft packages)</p> <p>Utilization as data entry centers for government departments, by youth trained as data entry operators at the same labs; providing local employment and income opportunity and providing sustenance revenue to the computer labs through a marked up recharge to the government departments that outsource the data entry tasks to the school computer labs.</p>
Implementation Period	6 – 12 Months
Estimated Capital Cost	<p>Rupees 150 Million</p> <p>Covering;</p> <ol style="list-style-type: none"> i. Cost of recruitment, training and salaries of teachers in relevant content and teaching methods, focused on Youth Training - in ICT skills and advanced level syllabi for vocational and technical training; ii. Cost of recruitment, training and salaries of teachers focused on training of government employees in functional IT skills and office productivity tools. iii. Publicity, media campaign and advertising costs for
Implementation Priority & Justifications	High

	<p>While the project involves a capital cost of upgrade of current facilities the more important aspect is to develop syllabi, content (including Pashto) to make the training programmes centered on the objective of training in functional and employable skills.</p> <p>Development of training syllabi, methods and content will require time and in the meantime. It is recommended that the physical infrastructure is upgraded in parallel with the separate projects for developing syllabi and content of training aimed at government employees and youth.</p>
Major Dependencies	Improved power and back up required.
Perceived Risk Level	Low

ii. **ICT Training For Government Employees**

Project Title	HRD Training for 2500 government employees using ICT Center
Socio-Economic Impact	High
Quantifiable Benefit	<p>Leveraging existing computer labs set up in schools for The Project aims to better utilize and leverage upon the existing computer labs set up in the schools.</p> <p>The quantifiable benefits include utilization of the computer labs after regular school hours for basic and functional IT skills (data entry and office related Microsoft packages)</p>
Implementation Period	6 – 12 Months
Estimated Capital Cost	<p>Rupees 50 Million</p> <p>Covering;</p> <ul style="list-style-type: none"> i. Cost of recruitment, training and salaries of teachers in relevant content and teaching methods, focused on Youth Training - in ICT skills and advanced level syllabi for vocational and technical training; ii. Cost of recruitment, training and salaries of teachers focused on training of government employees in functional IT skills and office productivity tools. iii. Publicity, media campaign and advertising costs for
Implementation Priority & Justifications	<p>High</p> <p>While the project involves a capital cost of upgrade of current facilities the more important aspect is to develop syllabi, content (including Pashto) to make the training programmes centered on the objective of training in functional and employable skills.</p>

	Development of training syllabi, methods and content will require time and in the meantime. It is recommended that the physical infrastructure is upgraded in parallel with the separate projects for developing syllabi and content of training aimed at government employees and youth.
Major Dependencies	Improved power and back up required.
Perceived Risk Level	Low

iii. ICT Higher Learning Institutions

Project Title	Establishment of ICT Higher Learning Institution
Socio-Economic Impact	Medium
Quantifiable Benefit	Development of HR in ICT skills. Employable in FATA's expanding ICT infrastructure, government projects and manpower export possibilities (both within Pakistan and abroad.
Implementation Period	12 – 24 Months
Estimated Capital Cost	Rupees 500 Million Covering; <ul style="list-style-type: none"> i. Set up the required infrastructure. ii. Adoption of syllabi and accreditation / recognition of qualification / certification. iii. Employing the required teachers skills set.
Implementation Priority & Justifications	Medium
Major Dependencies	Adoption of existing Syllabi in use in KPK, Degree & Specialised Certification programmes, Teachers recruitment and Master Trainer development programme.
Perceived Risk Level	Medium

iv. Recruitment & Training of IT Teachers

Introduction:

IT education and training has a multi-tiered focus, covering the school and high schools (for basic computer training to be added to the syllabus), the higher learning colleges and institutions (for core ICT disciplines and skills) and the ICT excellence centres (for functional and applied training to be taught to government employees, un-employed youth, etc.). This requires not only recruiting the necessary mass of IT teachers but more importantly requires followed by immediate re-training, with a focus on the specific FATA needs which is envisaged to included specific syllabi, content and teaching aids and methods.

Project Title	Recruitment & Training of IT Teachers
Socio-Economic Impact	High
Quantifiable Benefit	Required Manpower aligned to the multi-tiered ICT and computer training needs of FATA.
Implementation Period	12 – 24 Months
Estimated Capital Cost	Rupees 75 Million Covering; .
Implementation Priority & Justifications	Medium
Major Dependencies	Establishment of the infrastructure of ICT Excellence Centers, IT Colleges, Upgrade of existing IT labs in schools. Developing the relevant support tools and methods, including relevant syllabi, detailed content, methodology, teaching aids, standards, accreditation and testing & certification, criteria, etc.
Perceived Risk Level	Medium

v. FATA ICT Scholarship & Internship Programs

Introduction:

Building a resource pool of core ICT skills is a pre-requisite, for an environment in which ICT enablement is viewed as a progressively important enabling component of the overall development and upliftment of the Region. The envisaged infrastructure and proliferation of ICT in different facets of socio-economic activity will require core ICT skills to support the long term vision of ICT policy. On the one hand this will require a self sufficiency in the core and support areas of software development, computer hardware assembly and maintenance, communication, etc. On the other it will create employment opportunities for the youth of FATA, both in a region expected to progress towards peace and stability and outside the Region, within Pakistan and abroad. A scholarship program, under which aspiring undergraduate students could be placed at university in FATA, or affiliated colleges in FATA offering specialised training and even extending to supporting students in gaining admission and study programs in other premier institutions of Pakistan or abroad.

Project Title	FATA ICT Scholarship Program
Socio-Economic Impact	Medium
Quantifiable Benefit	<p>Required high level technical ICT knowledge and qualifications aligned to the environment in which ICT is expected to multi-dimension and growing tiered ICT and computer training needs of FATA.</p> <p>The project's quantifiable benefits commence with the number of aspiring students that will apply for the scholarship program, especially. when the study is to be undertaken at the new University under establishment at Parachinar.</p> <p>The initial target envisages is 1,000 ICT graduates qualified over a period of 5 years.</p> <p>To qualify for obtaining the scholarship, the student would be required to undertake returning to FATA for a specified minimum period so that the expected benefit is not lost for FATA and its people.</p>
Implementation Period	12 – 24 Months
Estimated Capital Cost	<p>Rupees 500 Million</p> <p>Covring; Tuition Fees, Stipends, travelling cost etc</p>

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Implementation Priority & Justifications	Medium
Major Dependencies	<p>Establishment of the infrastructure – consisting of University of Parachinar, accredited IT Institutes at Agency levels (at least one in each Agency).</p> <p>Adoption and Developing the relevant support tools and methods, including relevant syllabi, detailed content, methodology, teaching aids, standards, accreditation and testing & certification, criteria, etc.</p>
Perceived Risk Level	Medium

10. IT Infrastructure Development

a. Introduction

The stated overall Objectives and Goals of E-Government, which aims to develop the human resource capacity, both to promote ICT and also to support it, is highlighted below:

Establish a modern, efficient and cost-effective IT infrastructure in FATA that provides equitable access to national and international markets.

b. IT Infrastructure Development – Matrix of Targets & Expected Outcomes

S.No	Project Code	Project Name	Expected Outcome	Timeframe	Risk Level
1	INF-BB	Broad Band Connectivity for Agency Levels	All Agencies have Broadband Connectivity	5 years	Low
2	INF-MOLAB	Maintenance & Operationalization of existing IT labs in schools HRD Centers cum School Computer	All existing computer Labs are operational	1 year	Low
3	INF-CLABS	Establishment of Computer Labs in All remaining Colleges	All Colleges are equipped with IT labs	2 Years	Low
4	INF-SLABS	Establishment of Computer Labs in All remaining High Schools	All Schools are equipped with IT Labs	3 Years	Low
5	INF-USF	Establishment of Universal Service Fund Multipurpose Centers	All FATA	5 Years	Medium

a. ICT Infrastructure- Project Time Frame with Targets

S.No	Pilot Phase		Roll Out Phase			
	Project Code	Year-1	Year-2	Year-3	Year-4	Year-5
1	INF-BB	Bajur	Kurram	Khyber		All Remaining
2	INF-MOLAB	130 IT Labs Operational				
3	INF-CLABS		All Colleges are Equiped with IT Labs			
4	INF-SLABS					All Schools are equipped IT Labs
5	INF-USF					

c. Project Profiles

i. Broad Band Connectivity – Agency Levels

Project Title	Broad Band Connectivity for Agency Levels
Socio-Economic Impact	High
Quantifiable Benefit	<p>For access to information, specifically that being provided to the citizens of FATA from the FATA web portal and general awareness by internet access to the world, the broad band connectivity at Agency levels will enable a large segment of FATA's more educated population to access the benefits associated with the internet age.</p> <p>The quantifiable benefits will be measurable, in terms of the following expected utilization of accessibility:</p> <ol style="list-style-type: none"> i. Individual citizens that use the internet, for obtaining on line services, specifically delivered through the FATA web portal, and in addition access to general information. ii. Organized sector trade and business that make use of the internet for connecting with rest of the country and even globally, for developing e-commerce and e-business opportunities.
Implementation Period	6 – 12 Months
Estimated Capital Cost	<p>Rupees 500 Million</p> <p>Covering:</p> <ol style="list-style-type: none"> i. Engaging with the telecommunication companies, in particular PTCL, to emphasise the urgent need to extend and publicise the broad band services to those agencies that still remain excluded from the facility and service. ii. Awareness campaign and publicity, for informing the general public that the broad band connectivity and of the benefits that accrue to them through utilizing the internet-age capabilities, whether for trade and business, or the public service delivery that the FATA web portal.
Implementation Priority &	Medium

Justifications	
Major Dependencies	Community leasers buy in. Internet availability to some extent. Content and detailed concept/RFP requirements, development of packaged content locally loaded on the e-Hujra computers and consolidation or access to content developed under other Health, Education and Youth training and employment projects.
Perceived Risk Level	Medium

ii. Upgrade of infrastructure of existing IT Labs in schools

Project Title	Maintenance & Operationalization of existing IT labs in schools HRD Centers cum School Computer
Socio-Economic Impact	High
Quantifiable Benefit	<p>Leveraging existing computer labs set up in schools, to leverage and improve the utilization of existing computer labs in the schools.</p> <p>The quantifiable benefits include utilization of the computer labs after regular school hours for basic and functional IT skills (data entry and office related Microsoft packages)</p> <p>Utilization as data entry centers for government departments, by youth trained as data entry operators at the same labs; providing local employment and income opportunity and providing sustenance revenue to the computer labs through a marked up recharge to the government departments that outsource the data entry tasks to the school computer labs.</p>
Implementation Period	6 – 12 Months
Estimated Capital Cost	<p>Rupees 50 Million</p> <p>Covering;</p> <p>i. Upgrading of current facilities, especially power backup for increased uptime during power outages.</p> <p>ii. Relevant Content and Syllabi development, focusing on Youth Training Programme - in ICT skills and advanced level syllabi for vocational and technical training;</p> <p>iii. Relevant syllabi development for training government employees in functional IT skills and office productivity tools.</p>
Implementation Priority & Justifications	<p>High</p> <p>While the project involves a capital cost of upgrade of current facilities the more important aspect is to develop syllabi, content (including Pashto) to make the training programmes centered on the objective of training in functional and employable skills.</p>

	Development of training syllabi, methods and content will require time and in the meantime it is not recommended that the physical infrastructure is upgraded as it would continue to remain underutilized for any real and quantifiable benefit.
Major Dependencies	Improved power and back up required.
Perceived Risk Level	Low

iii. Establishment of IT Labs in remaining Colleges and Schools

Project Title	Establishment of IT labs in remaining Colleges and Schools
Socio-Economic Impact	High
Quantifiable Benefit	<p>Extending the benefit of IT to a larger population of colleges and schools, under a roll out programme, based on the quantified benefits and success of the earlier phase under which IT labs in existing schools have been upgraded and utilized.</p> <p>Utilization as data entry centers for government departments, by youth trained as data entry operators at the same labs; providing local employment and income opportunity and providing sustenance revenue to the computer labs through a marked up recharge to the government departments that outsource the data entry tasks to the school computer labs.</p>
Implementation Period	6 – 12 Months
Estimated Capital Cost	<p>Rupees 250 Million</p> <p>Covering;</p> <ol style="list-style-type: none"> i. IT Labs infrastructure set up in colleges and schools. ii. Recruitment and Training of Additional Teachers
Implementation Priority & Justifications	<p>Medium</p> <p>While the project involves a capital cost of upgrade of current facilities the more important aspect is to develop syllabi, content (including Pashto) to make the training programmes</p>

	<p>centered on the objective of training in functional and employable skills.</p> <p>Development of training syllabi, methods and content will require time and in the meantime it is not recommended that the physical infrastructure is upgraded as it would continue to remain underutilized for any real and quantifiable benefit.</p>
Major Dependencies	Improved power and back up required.
Perceived Risk Level	Low

iv. Universal Service Fund (USF) ’s Multipurpose Centres

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.

Project Title	USF Multipurpose Centers
Socio-Economic Impact	High
Quantifiable Benefit	<p>Keeping in view the advances in technologies and to facilitate changing communication mediums, USF a federal government owned company under IT ministry 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.</p> <p>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</p>

	<p>equipment are 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.</p> <p>USF will have no claim on the proceeds of the business. These centers could be established near a school so it can be used a Lab during school time, a community training facility during afternoon and PCO/call center in the evening.</p>
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11. E-Government

a. Introduction

The stated overall Objectives and Goals of E-Government, which include e-Government as a specific area of focus, as stated in the in ICT Policy, is highlighted below:

Launch and e-Government program to promote widespread use of IT applications in government organisations 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

E-Government is one of the major initiatives under this action plan. To pursue this initiative, the government in FATA Secretariat will 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 delays. 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 body i.e **FATA IT Cell** will be inevitably increase, 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 Centre 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:

- i. Establishment of FATA IT Cell in FS
- ii. 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, 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).

b. E-Government – Matrix of Targets & Expected Outcomes

S.No	Project Name	Timeframe In Months	Estimated Capital Cost In Mil	Risk Level
1	Establishment of ICT Cell in FATA Secretariat	0-3	5	Low
2	Development of Service Oriented Fata Web portal	0-6	5	Low
3	Collaboration / Workgroup Services (Email, Blogs, Forums etc)	0-12	5	Low
4	Inter and intra departmental communication of data and Common software applications (Accounts, Monitoring & Evaluation System, Inventory, Assets, Management , etc)	12-24	15	Low
5	Human Resource Management and pay roll System	12-24	5	Low
6	File Tracking System	06-12	3	Low
7	PC Automation System	12-24	Under progress	medium
8	ADP Automation System	12-24	6	Low

9	GIS based Project Monitoring and Evaluation System	12-24	9	Low
10	Zakat Information management System	6-12	Implemented	
11	Disaster & Crime Management system	12-24		
12	Computerization of Government Departments- Phase-I (2 Departments. i.e P&DD and DoP)	12-24	50	Low
13	Computerization of Government Departments- Phase-II (AI&C, Law & Order, Finance Departments)	24-36	50	Low
14	Computerization of Government Departments- Phase-III (Social Sector, Production Departments)	36-60	50	Low
15	Establishment of Data Bank & Integrated FATA MIS	12-36	30	High
16	Security Management System	12-36	35	medium
17	FATA GIS for all Sectors	12-36	30	Medium
18	Workflow System for FATA Secretariat	24-60	20	High
19	Online Teacher Management Information system	12-24	15	Low
20	Law & Order Information Management System	12-24	10	Medium
21	Online Hospital Management System	24-60	100	Medium
22	Computerization of Political Agents Offices	36-60	100	High
23	Telemedicine	12-24	150	Medium
24	LHV Mobile Management System,	24-36	100	Medium
25	E-Hujra Community Centres	24-36	150	Medium
26	e-Agri Farmers Project	24-36	75	Medium

c. E-Government- Project Time Frame with Targets

	Pilot Phase	Roll Out Phase			
Project S.No	Year-1	Year-2	Year-3	Year-4	Year-5
1	Established IT Cell				
2	Web Portal Developed				
3	Official; Email in Use				
4		Inter & Intra Departments Communication			
5		HR-MIS			
6	File Tracking System				
7	PC Forms Management System				
8		ADP Automation			
9		GIS Based Project M&E System			
10	Z-MIS				
11			Disaster and Crime Management System		
12	Computerization of Govt Dept Phase-I				
13		Computerization of Govt Dept Phase-II			
14			Computerization of Govt Dept Phase-III		
15				Establishment of Data bank	
16		Security Management System			

17		Integrated FATA GIS for All Departments			
18					Work Flow Sys
19					
20		Online Teacher Management System			
21		Law & Order Information Management System			
22			Online Hospital management System		
23					Comp of PA Offices
24		Telemedicines			
25			E-Hujra Community Centers		
26			e-agri Farmers Project		

Project Profiles

i. Establishment of ICT Project Management Cell at FATA Secretariat

Initiating and implementation ICT Projects will require expanding the capacity at the FATA Secretariat, beyond the available in the existing Help Desk or Data Centre. For projects to be planned, implemented and monitored effectively, a separate and dedicated Projects Management Cell requires to be set up, staffed with HR possessing requisite qualifications, technical skills and experience in ICT projects implementation and management.

While it is envisaged that the development, implementation and consulting support services will be procured as customised or customised off-the-shelf (COTS) solutions, the assurance of successful and timely delivery of ICT projects will require a counterpart team of the FATA Secretariat, organised and managed as a fully equipped and dedicated projects implementation organisation. .

Project Title	Establishment of ICT Project Management Cell at FATA Secretariat.
Socio-Economic Impact	High
Quantifiable Benefit	<p>Dedicated cell with functions involving direct responsibility for planning, successful implementation, continuity and longer term sustainability support and expansion (roll out) of ICT Projects.</p> <p>A dedicated function that enables systemic and continuous monitoring and assessment of ICT Projects, including midstream reviews, redesign, priority setting.</p> <p>A clear long term understanding and enterprise level view of ICT projects, outcome and results of specific projects – as envisaged under each project – and an understanding of the synergy between socio economic interventions under each sector and the extent to which ICT projects playing the enabling and driving role towards attaining the long term socio-economic goals under the overall framework of FATA strategic priorities.</p> <p>A focus on the performance and accountability of investment made in the ICT projects under the mission and goals of FATA’s ICT policy and Action Plan.</p>
Implementation Period	6 – 12 Months

<p>Estimated Capital Cost</p>	<p>Rupees 10 Million</p> <p>Covering;</p> <ul style="list-style-type: none"> i. Formal approvals and establishment of the organizational structure, including selection and recruitment of core technical and management staff consisting of: <ul style="list-style-type: none"> i. Project Manager (1) ii. Senior Project Management Assistants (2) iii. Systems Analysis & Development Team (4-6) iv. Documentation and Training Team (2-3) v. Admin & Coord Team (2-4) <p><i>Note: capacity and recruitment b. to e. inclusive may be staged, in line with increasing work load, directly associated with number of projects being implemented, supported and sustained over the longer term.</i></p> <ul style="list-style-type: none"> ii. Infrastructure – Space, Furniture & Fixtures, IT Hardware/Software, Networking, Communication, Heating & Cooling, Project Management, Systems Architecting, Modeling Software tools, etc.

ii. FATA Web Portal

Project Title	FATA e-Governance Web Portal
Socio-Economic Impact	Medium
Quantifiable Benefit	<p>Simplification of governance for all stakeholders, i.e. government, citizens and businesses. .</p> <p>The quantifiable benefits will be measurable, in terms of the number of persons that will visit the portal and download information, application forms (or the more IT knowledgeable will complete and submit forms on-line).</p> <p>The web portal is also the single point where information relating to the various ICT programs and projects (education, health, youth development will be available).</p> <p>The content of the web portal will also be of interest to the funding agencies (especially donors) and will contain a section for such agencies to submit queries.</p> <p>By integration with back end databases and work flow based applications, the queries (both the cited stakeholders) will automatically be routed for appropriate feedback; enabling a more efficient mechanism of communication between external stakeholders and the and the relevant departments of the FATA Secretariat.</p>

Implementation Period	<p>In 2 distinct and separate phases, as follows:</p> <p><u>Phase I: 6 – 12 Months:</u> For upgrade of current FATA website to a web portal</p> <p><u>Phase II: 12 – 24 Months:</u> Development, enhancement and integration of back end databases, reporting and internal work flow and business processes automation systems.</p>
Estimated Capital Cost	<p>Rupees 5 Million</p> <p>Covering:</p> <ul style="list-style-type: none"> i. Phase I: Review of functional design and technical architecture of current website, including the web portal concept and design already in progress under a separate consulting assignment (USAID funded under FISP). Development and Implementation of Phase 1, following review of design to enable taking into view the requirements for a web portal scalable to an appropriately structured and supported backend aligned with a service oriented architecture (SOA). ii. Phase II: Design, Development and Implementation of back end databases and supporting internal work flow that supports the organizational hierarchy and automated workflows of the FATA Secretariat, as these will need to be defined with appropriate data information management governance rules and procedures. An important aspect will be the proper management of contents, entrusted to a section within the ICT Projects Management Division / Section at the FATA Secretariat.
Implementation Priority & Justifications	High
Major Dependencies	Finalisation and launch of projects relating to Health, Education, Youth Development. Decentralisation of government processes through redefining existing processes for which the web portal will become the originating point of

	an application, query. Defining business processes and integrating these with the other processes currently being brought under the envisaged work flow automation at the FATA Secretariat.
Perceived Risk Level	High

iii. Human Resource Management System

Project Title	Human Resource Management System
Socio-Economic Impact	High
Quantifiable Benefit	<p>A human resource management system (HRMS) or human resource information system (HRIS), refers to the systems and processes at the intersection between human resource management (HRM) and information technology. Human resource management systems enabled increasingly higher administrative control of such systems. Human resource management systems encompass:</p> <ul style="list-style-type: none"> • Payroll • Time and attendance • Performance appraisal • Benefits administration • HR management information system • Recruiting/Learning management • Performance record • Employee self-service • Scheduling • All service matters, including court cases • Training to the employees local and foreign • ACRs • Group Insurance/ GP Fund /CP Fund • Creation of posts. • Conduct anti-corruption and cases • Maintenance of services records
Implementation Period	12 – 24 Months
Estimated Capital Cost	Rupees 5 Million

Implementation Priority & Justifications	High
Major Dependencies	Approval and Funding for long term sustenance and continuity
Perceived Risk Level	Low

iv. Project Outline – Telemedicine

Introduction:

A Health Sector Project providing affordable access to health care, to the FATA population. Access to medical specialists who are not otherwise possible to the people of FATA without visiting the major towns and cities of KP and other Provinces can be made possible at the Agency HQ levels.

Project Title	Telemedicine for General & Specialized Diagnostics & Prescription
Socio-Economic Impact	High
Quantifiable Benefit	Can provide access to well qualified and experienced medical specialists and practitioners. Accessible and affordable by a large segment of FATA’s population, good quality health care and All Ages, Sex, Social Levels that are able to travel to Agency level of FATA
Implementation Period	6 – 8 Months
Estimated Capital Cost	Rupees 150.00 Million For establishing a single Telemedicine Center in one Agency HQ as a pilot project before further roll out.
Implementation Priority & Justifications	High Apart from the high socio-economic impact of the project, it would not be difficult to implement, in terms of any technological, social or other factors. Successful examples of similar Projects exist in several large hospitals of Pakistan. Therefore it is a Replicable Model Project (RMP) both at the outset when the first pilot project (at one selected Agency) is undertaken and also as a follow (roll out implementation at further Agency levels of replication.

<p>Major Dependencies</p>	<p>Good communication is required. However as the Project is envisaged for first location and implementation at the Agency level, this dependency is not of major concern, especially at Agencies where good and reliable communication has already been provided.</p> <p>Moreover, with awareness at the different levels that the project and its benefits will create at all strata of society, simply through word of mouth by those that start experiencing the benefits, it will not involve major awareness campaign and advertising costs. The project, by being associated with health care at a level which the people of FATA cannot realistically be assured of because of the paucity of good specialists and practitioners and even attracting them to FATA in the future, has the potential of extension beyond the Agency level – as and when communication improves.</p>
<p>Perceived Risk Level</p>	<p>Low</p>

v. Project Outline – LHW Mobile Service & Content Management Tool

Project Title	LHW Mobile Management System
Socio-Economic Impact	High
Quantifiable Benefit	<p>Can improve the current working of the LHW from 2 dimensions. The first dimension is the reporting methods of the LHW which relies on her reporting data relating to the community (cluster) which is her designated geographical area of responsibility. The second dimension is the relevant health related content which can be sent on the mobile which improves the knowledge, current health issues and preventive or referral steps which the LHW needs to educate the cluster community in. The LHW is an important link in the health referral chain, having access at the household level. The better she is equipped, the more efficiently and meaningfully she can work.</p> <p>The quantifiable benefits are immense. Not only does it enable providing the LHW with relevant and up to date preventive health information and content and improve her working efficiency, it is a direct demonstration at the household level, of the way that mobile technologies can deliver useful and meaningful content.</p>
Implementation Period	6 – 8 Months
Estimated Capital Cost	<p>Rupees 20.00 Million</p> <p>Covering supplying and equipping 50-75 LHWs with mobile devices, developing the web & mobile based LHW reporting system, a content management system (CMS).</p>
Implementation Priority & Justifications	<p>High</p> <p>The project is moderately difficult to implement but not from a technology or infrastructure standpoint. The social response that may be encountered when a mobile device is seen as being used to collect and transmit data relating to members of the household, especially females is an issue that can arise. However, it could be countered through steps which include media campaigns, and educating the leaders and elders of FATA about the many benefits of equipping the LHW with</p>

	<p>mobile based work and information tools and techniques.</p> <p>Apart from the positive socio-economic impact of the project, it would not be difficult to implement, in terms of any technological, social or other factors.</p> <p>Successful examples of similar Projects exist in several large hospitals of Pakistan. Therefore it is a Replicable Model Project (RMP) both at the outset when the first pilot project (at one selected Agency) is undertaken and also as a follow (roll out implementation at further Agency levels of replication.</p>
<p>Major Dependencies</p>	<p>Internet connectivity required. However if the software is designed to enable using the mobile device in an offline mode, this would provide the versatility for the LHW to work offline in a remote area when mobile/internet connectivity is not range and yet be able to upload any data collected during household visits in her cluster, as and when spot connectivity is available.</p> <p>Social resistance by the more elderly and unaware members of FATA's traditional social fabric, as mentioned above, is another dependency which may need to be addressed; when wider application and propagation of the project is to be considered.</p>
<p>Perceived Risk Level</p>	<p>Low</p>

vi. FATA e-Hujra

Project Title	e-Hujra Community Centre
Socio-Economic Impact	Medium
Quantifiable Benefit	<p>Developing a IT based community activity at the Hujras of community leaders who would become the champions of introducing the concept.</p> <p>The quantifiable benefits will be measurable, in terms of the number of persons it will attract, and extent of awareness it develops.</p> <p>The e-Hujra can progressively be the hub for access to content and information developed for other projects separately and primarily originating from the project itself, such as the content under the projects centered on e-Agri, youth ICT and Vocational training, LHW related health and hygiene content.</p> <p>Essentially it will become a community based activity programme.</p>
Implementation Period	12 – 24 Months
Estimated Capital Cost	<p>Rupees 150 Million</p> <p>Covering;</p> <ul style="list-style-type: none"> iii. Set up of a selective number of pilot projects based on community leaders demonstrated spirit of ownership and direct involvement. iv. Relevant Content development – primarily under other projects – but with e-Hujra as an additional point of access.
Implementation Priority & Justifications	Medium
Major Dependencies	<p>Community leasers buy in. Internet availability to some extent. Content and detailed concept/RFP requirements, development of packaged content locally loaded on the e-Hujra computers and consolidation or access to content developed under other Health, Education and Youth training</p>

	and employment projects.
Perceived Risk Level	Medium

vii. FATA e-Agri

Project Title	e-Agri Farmers Project
Socio-Economic Impact	High
Quantifiable Benefit	<ul style="list-style-type: none"> • Market information availability to farmers – mobile as the channel – or an internet connection for a group located with one of them. • Linkage development with potential markets / Research organization handling the info/ Quality Control (ISO) • Value Chain – • Value Addition – Find out how and why someone is performing better • Quality through mobile content and broadcasts • Linkage with e-Hujra
Implementation Period	12 – 24 Months
Estimated Capital Cost	Rupees 75 Million Covering;
Implementation Priority & Justifications	High

12. Research & Development

a. Introduction

For the ICT Policy and more pertinently the Action Plan to move forward as envisioned, to encourage joint R & D efforts between the private sector and local educational institutions. Also it focus on to identify key technological areas as well as others and provide fiscal support and incentives to encourage local technology development and promote self-reliance and export of IT products and services:

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

b. Research & Development – Matrix of Targets & Expected Outcomes

S.No	Projects	Expected Outcome	Timeframe	Risk Level
1	Development of Computer Based Training(CBT) Tools	CBT Tools available to students in all levels (school, college)	12-24	Low
2	FATA Center of Content & Syllabus Development	Contents of IT Training Developed	24-36	Low
3	Student of Year Awards for FATA at School ,College & University Level for R&D Projects	Promotion of R&D among FATA Students	12-60	Low

	Implementation Plan				
Project S.No	Year-1	Year-2	Year-3	Year-4	Year-5
1					
2					
3					

c. Project Profiles

i. Computer based Training Tools

Project Title	Development of Computer Based Training Tools
Socio-Economic Impact	High
Quantifiable Benefit	<p>Conversion of content and material developed by the Centre for Content & Syllabi Development (proposed as a specific project) to computer based training (CBT) toolkit, capable of being run on low specifications and lost cost computers.</p> <p>Provision of CBT tools to the school age female population of FATA, for self education and learning within the confines and social restrictions of the home.</p> <p>Provision of CBT tools to the HRD IT training centers for youth development Male youth utilizing</p> <p>Provision of CBT tools for self learning in the government departments, on functional use directly relevant to the respective work functions.</p>
Implementation Period	12 – 24 Months
Estimated Capital Cost	<p>Rupees 45 Million</p> <p>Covering:</p> <p>v. Separate and ongoing projects outsourced to the Private Sector for continuous development and periodic upgrade of CBT toolkit applications and use methods.</p> <p>vi. Funding support for large scale copying and distribution of CBT on electronic media (CDs)</p>
Implementation Priority & Justifications	High
Major Dependencies	Development of content and material for CBT tools conversion. However, the project can commence by digitisation of existing school textbooks with value addition of including self test (MCQ) and marking applications.
Perceived Risk Level	Low

ii. **Content & Syllabi Development**

Project Title	FATA Center of Content & Syllabus Development
Socio-Economic Impact	High
Quantifiable Benefit	<p>A research and development oriented focus on the long term and FATA centric need and requirements, dedicated to:</p> <ol style="list-style-type: none"> i. Developing relevant content for IT and computer training at the primary and secondary school levels. ii. Converting school text books to a digitized format, available on CDS free of cost. The text books will aid self learning by containing self testing questions, answers and marking schemes (the MCQ approach). This will have a special focus on the female school age population of FATA that is exclude from attending schools because of the social values, barriers and security concern. iii. Developing special syllabi with a practical and functional orientation – aimed at bridging the digital divide and creating practical ICT skills – for those ages of the male youth that have missed formal education. iv. Studying the needs of lower functional levels in government departments and developing a syllabus of learning, relevant to different clerical operational and junior management functions of the FATA government departments; for creating e-readiness of the wider e-government and e-administration projects envisaged for the FATA Government including the FATA Secretariat. <p>The quantifiable benefits will be measurable, in terms of the number of persons that will be trained in basic and functionally practical IT skills for immediate application in their workplaces or for creating employment and vocation related opportunities.</p>
Implementation Period	12 – 24 Months
Estimated Capital Cost	<p>Rupees 30 Million</p> <p>Covering;</p> <ol style="list-style-type: none"> ii. Defining and obtaining approval of the Charter, Constitution and Functions of the creating the legal the Charter, Consitution and and Establishment of the Set

	<p>up of a selective number of pilot projects based on community leaders demonstrated spirit of ownership and direct involvement.</p> <p>ii. Establishing the organization and putting in place – selection and recruitment the core management, academic and research human resources.</p>
Implementation Priority & Justifications	High
Major Dependencies	Approval and Funding for long term sustenance and continuity
Perceived Risk Level	Low

13. Legislation, Regulation & Standards

a. Introduction

For the ICT Policy and more pertinently the Action Plan to move forward as envisioned, the legal and regulatory environment is a prerequisite. It is recognizing the importance of this that the IT Policy has prioritized it as one of the overall objectives and goals by stating:

Develop an enabling legislative and regulatory framework for IT related issues

b. Legislation, Regulation & Standards – Matrix of Targets & Expected Outcomes

S.No	Projects	Expected Outcome	Timeframe	Risk Level
1	Extension of existing ICT related laws to FATA	Laws Extended	24-36	Low

c. Project Profiles

i. Development of ICT Legal & Regulatory Environment

Introduction:

A comprehensive legal and regulatory environment is required, which requires addressing aspects of how the government would manage, procure and use information technologies more efficiently to deliver services, institutionalize the funds allocated towards ICT Fund and apply the funds to meet the requirements of the ICT Projects cited under the Action Plan.

Project Title	Development of Legal & Regulatory environment for FATA ICT
Socio-Economic Impact	High
Quantifiable Benefit	<p>ICT enabling environment and institutionalization of various projects taken up under the ICT Policy & Action Plan, by having in place FATA specific:</p> <p>i. E-Government Laws:</p> <ul style="list-style-type: none"> • Data sharing among government agencies • Interoperability of government systems • Data privacy in government • Management of the e-Government Fund • Systems and procedures in the management of the e-Government Fund, including the selection, approval and monitoring of projects. <p>ii. Privacy and Data Protection Laws</p> <p>As more government agencies adopt ICT and engage in electronic transactions, there is an increasing importance to ensure the protection and privacy of the personal data that is being collected by these agencies. Doing so will encourage more citizens to deal with government.</p> <p>From the private sector side, a trustworthy legal environment that ensures privacy of data and other information will result in higher trust and confidence in the FATA ICT environment.</p>

	<p>iii. Cybercrime Laws</p> <p>To recognize the importance of protecting and safeguarding the integrity of computer, computer systems, networks, and database, and the confidentiality, integrity, and availability of information and data stored therein, from all forms of misuse, abuse, and illegal access. A cyber crime and Cyberfraud Prevention law would provide the legal basis for enforcing security measures and protecting the general public interest.</p> <p>iv. Freedom of Information Law</p> <p>A Freedom of Information Law will provide clear guidelines on:</p> <ul style="list-style-type: none"> (1)public access to government data (2)sharing and exchange of information among government agencies; and (3)the use of information obtained under such a law by the recipient government agency or private sector.
Implementation Period	12 – 24 Months
Implementation Priority & Justifications	High

14. Continuous Monitoring & Assessment

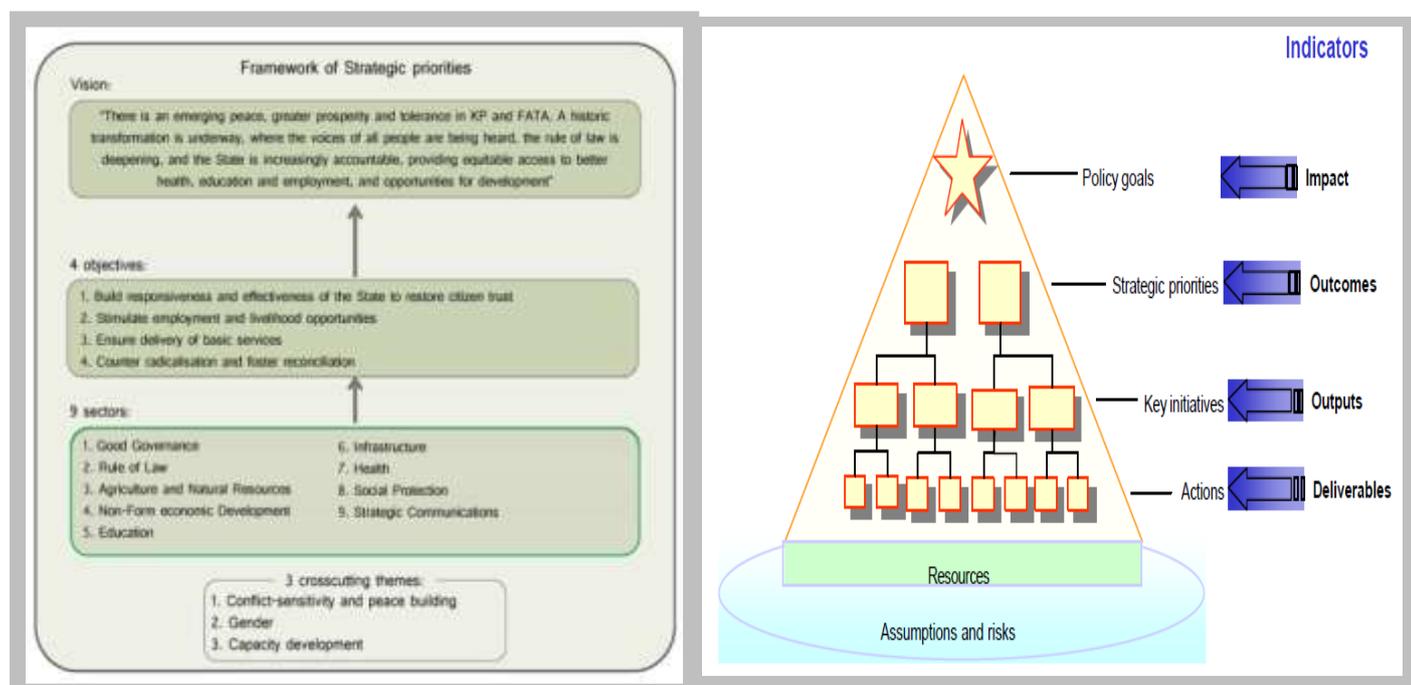
a. Introduction

Monitoring and evaluation constitute the backbone of any ICT strategy and make it more meaningful

For the actions taken up in terms of specific projects, there will be requirement of a results-based framework for monitoring & implementation progress of each project and its outcomes. The results framework will specify measurable indicators and major milestones to the extent possible, by which to monitor inputs, outputs, intermediate outcomes, and impact of the strategy within a specified time horizon. Consultations will explore how the results framework may be best aligned with the overall FATA priorities strategy framework, including any core ICT Indicators. The results framework will be used to provide periodic implementation updates. Collection of data and information relevant to the results framework, will build on the existing M&E systems in place at FATA Secretariat – covering each sector and the departments related to it.

b. Assessing ICT Action results in context of FATA's Strategic Priorities

It has been suggested that FATA's ICT policy and the Action Plans have a synergy, as the driver and enabler of the FATA strategic priorities. Therefore the indicators for assessing ICT intervention and projects, in terms of the deliverables, outputs, outcomes and impact need to be developed and monitored in the same context.



c. Importance and guidelines for Monitoring & Evaluation

The assessment of projects should be based on an agreed upon systematic tool to monitor and evaluate implementation of the projects, which includes:

- Project details, their outcomes and indicators of success
- Intended results and their justification
- Risk assessment and mitigation
- Cost and other detailed resource requirements
- Schedule for implementation

For a meaningful and effective M&E, the following guidelines are suggested:

- M&E should be present in all layers of the ICT strategy pyramid depicted in b. above
- M&E should be designed during finalization of the Project Implementation Plans and be fully in place before implementation starts.
- For each project, an overall objective is stated, along with project purpose, intermediate results and the detailed activities.
- Performance indicators based on agreed upon concrete and realistic outcomes should be monitored periodically
- Success indicators, measurable and directly related to the outcomes, should be determined at earliest stages of project planning and implementation
- A participatory approach is essential for success and ICT indicators constitute the cohesive material

Output	Quantitative indicator	Qualitative indicator
<i>Demand</i> for ICT education/training increased	<ul style="list-style-type: none"> ▪ Number of students applying to technical institutions increases by X% 	<ul style="list-style-type: none"> ▪ Secondary curricula places greater emphasis on ICT-focused subjects
<i>Quality</i> of ICT education improved at tertiary/vocational level	<ul style="list-style-type: none"> ▪ X number of partnerships formed with private sector ▪ X number of partnerships formed with foreign institutions ▪ Distance education services, extend access to X number of students to a full curriculum ▪ X number of students graduating with recognized certification from accredited ICT-training institutions 	<ul style="list-style-type: none"> ▪ Tertiary/vocational curricula includes market-leading techniques and knowledge ▪ An established information environment that provides a range of support systems through use of ICT. ▪ Hot-line services established to support teachers and advisors in their use of hardware and software.

15. Project Planning & Implementation Management

b. Introduction

For the effective planning, coordination, implementation, management, including an M&E system that enables continuous assessment of the ICT Projects, a dedicated Project Planning and Management organisation structure and capacity will be necessary. This will require a separate cell or section.

c. Organizational Structure

The ICT Projects Management Cell should be set up as a unit at the FATA Secretariat. While it will be necessary that cross functional MIS reporting is to the sector wise Directorates of the FATA Secretariat, especially on ICT projects implementation, which have a sector wise relevance (Education, Health, Youth Development, etc.) the overall reporting of the Cell should be to the Secretary FATA and Director Administration.

The existing Data Centre, mainly responsible for maintaining the ICT Infrastructure (servers, network, systems hosting, communication, systems software, user rights and access management, systems and software licensing, firewalls and virus protection, help-desk for users and maintenance) would then be dedicated to such functions without involvement in projects implementation and management.

d. Functions & Responsibilities

The existing Data Centre at the FATA Secretariat, apart from its main functions and responsibilities, as described above, also has currently the additional responsibility and involvement in implementation of projects; especially those being implemented at the FATA Secretariat. This is in the absence of the ICT Projects Management Cell.

The main functions and responsibilities of the ICT Projects Management Cell would consist of:

- i. Projects Implementation & Management
- ii. Monitoring and Evaluation.
- iii. Projects Implementation Reporting.
- iv. Directly Interfacing with Directorates at the FATA Secretariat.
- v. Communication and Interface with solution providers and consultants involved in development and implementation of projects.

- vi. Arranging and coordinating capacity development and functional level User Training, both at the FATA Secretariat and ICT Projects level.

e. Staffing

The ICT Projects Management Cell will require to be staffed with a team, covering the following skills and experience:

- i. Project Manager – A senior person (1) with requisite qualifications in project management and at least 8-10 years' experience in project management of IT projects, in the government or corporate sector.
- ii. Project Management Assistants – Persons (2-3) possessing 3-5 years' experience and qualifications in IT projects management, implementation and project documentation. Persons with hands on experience in implementation of software applications projects.
- iii. Analysts & Programmers – Persons (4-6) with qualifications, background and work experience in systems and business analysis, documentation and applications development that have progressed to a level that enables them to interface and work closely as counterpart team with the consultants and solution providers / developers during the life cycle of projects.
- iv. Documentation and Training – Persons (2-3) with IT backgrounds, good written and verbal communication skills, that will be involved in development of training, user documentation, both directly and as counterpart team members interfacing and assisting solution providers and consultants involved in developing and implementing outsourced IT solutions and applications, including providing hands on functional training to users at various levels, as relevant to respective ICT projects.
- v. Support Staff – Persons (2-4) for assisting the above core ICT staff in general administration, coordination, internal and external correspondence, etc.

f. Project Management Software Tools

In addition to the specific physical infrastructure, consisting of dedicated space, furniture, computer hardware, etc. the ICT Projects Management Cell will require appropriate systems and solutions such as Project Management Software (Primavera, MS Project, Enterprise Architecting and Business Process Re-engineering, Process Modeling and Mapping Tools, etc.

16. Conclusion & Recommendations

Conclusions and Recommendations of the ICT Action Plan are summarised as follows:

- i. ICT should not be viewed as an end in itself but an imperative means to an end, in terms of enabling and propelling the goals and objectives of FATA's socio-economic upliftment and sustained development.
- ii. ICT Projects should be viewed in synergy and context of FATA's "Strategic Framework of Priorities".
- iii. The ICT projects identified in the Action Plan will be added to, by new and exciting possibilities, through a combination, of success of the initial Projects, the changing reach and affordability of the Internet and Mobile and the rapid development of new technologies which evolves with the passing of every year. Therefore the Action Plan should be viewed as the starting point and basis for dynamic and continuous revisit and update, both in the strategic dimensions of the Action Plan and the new Projects that the overall framework as suggested by the Action Plan will enable taking up.
- iv. The long term success and support of ICT based interventions and projects, by government, donors, private sector alike, will be dependent not only on the emerging peace and security of the FATA Region but on the positive outcome and results of early or quick success projects. This will mean that the direct and quantifiable benefits derived by the ordinary people of FATA are demonstrable. It is therefore of critical importance and priority that the investments already made are restored, upgraded and leveraged to best return in the short term.
- v. Planning, Implementation Management, Monitoring and Evaluation, which are anchored on accepted best principles and practices, and are equipped and supported by dedicated resources and functional responsibilities, that enables continuous reassessment, will be critical for longer term success of the Policy & Action Plan. Only then would it be possible to continuously refine and identify new projects and maintain an overall strategic direction of the Action Plan, towards achievement of the goals of the ICT Policy and more importantly the Government's Vision for FATA's socio-economic development.

17. Existing ICT Infrastructure in Fata Secretariat