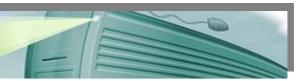Awami National Party

Destination Khyber Pakhtunkhwa
e-commerce - gateway to economic revival

GOVERNMENT OF KHYBER PAKHTUNKHWA SCIENCE & TECHNOLOGY AND INFORMATION TECHNOLOGY DEPARTMENT

IT MASTER PLANNING FOR KHYBER PAKHTUNKHWA

PC-1

ADP No.	Forum & Date of Approval	Total Cost
907-100306	DDWP Dated:	Rs:5.00 Million

PREPARED BY:
DIRECTORATE OF INFORMATION TECHNOLOGY KHYBER PAKHTUNKHWA

April 2011

GOVERNMENT OF KHYBER PAKHTUNKHWA
SCIENCE & TECHNOLOGY AND INFORMATION TECHNOLOGY DEPARTMENT

S.No	Description	Detail
1	Name of the project	IT Master Planning for Khyber Pakhtunkhwa
2	Location	Government of Khyber Pakhtunkhwa
3	Authorities responsible for: i. Sponsoring	ST&IT Department Government of Khyber Pakhtunkhwa
	ii. Execution	ST&IT Department Government of Khyber Pakhtunkhwa
	iii. Operation and maintenance	ST&IT Department Government of Khyber Pakhtunkhwa
	iv. Concerned provincial ministry	Government of Khyber Pakhtunkhwa
4	a- Plan provision i. If the project is included in the medium term/five year plan, specify actual allocation.	N/A
	ii. If not included in the current plan, what warrants its inclusion and how is it now proposed to be accommodated.	N/A
	iii. If the project is proposed to be financed out of block provision, indicate:	N/A
	iii.i) Total block provision	Rs: 5.00 Million in ADP 2010-2011
	iii.ii) Amount already committed	Rs: 5.00 Million
	iii.iii) Amount proposed for this project	Rs: 5.00 Million

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		iii.iv) Balance available	Rs: 5.00 Million
		b- Provision in the current year ADP 2010-11	Rs: 5.00 Million
5	Project objectives and its relationship with sector objectives		
	i. The objectives of the sector/sub sector as indicated in the medium term/three year plan be reproduced. Indicate objectives of the project and develop a linkage between the proposed project and sectoral objectives.		*"The ICT vision of Khyber Pakhtunkhwa government is to enhance delivery of public services to citizens in an efficient and cost effective manner, improve the quality of government service and management, enhance the collaboration of the internal departments and the interactions between the government and the public, optimize the government business process, , and finally to construct an honest, diligent, transparent and efficient government using information and communication technology as a means to the end"* The vision for Khyber Pakhtunkhwa E-Government initiative is detailed by determining following objectives to be achieved. Those objectives are categorized as follows: 1. Promotion of IT literacy, awareness and HRD 2. Establishment of E- Government Infrastructure and initiatives 3. Promotion of Software Industry in NWFP and its related activities E-government requires a Provincial Strategic Framework to become a reality. The framework articulates a government's vision, targets and milestones. In addition it provides the technical approach and standards for e-government systems. While underlining the importance of a National or Provincial strategy framework, it must be added that the framework is not a prerequisite for initiating and executing any e-government project. Computerization projects that are considered critical - at the department or local government levels – can and should move ahead and not be held up because a provincial strategy and model are not specifically in place. Governments sometimes spend many years and resources on developing an ICT strategy framework or E-Government model and end up holding back some critical projects. Developing an E-government model or ICT Strategic framework is an ongoing process and not a static document which is created once. The vision and process that create models of E-Government are as dynamic as the changing technologies which the models use as a foundation. To understand the relevance of this

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| | | statement one need just consider the impact that web and mobile technologies have had on the overall landscape of ICT. The impact of these two changing technologies brings to fore the stark realization that an E-Government model conceptualized ten years ago, compared to one conceptualized today, are as distant apart as two mobile phones with a ten years gap between them.

The success of any E-Government model lies in the extent to which programmes and projects under a given model transform the way a government works, conducts its business and delivers its services. ICT practically applied in the Government workplace has created varying definitions associated with the terms E-administration, E-Governance, E-Services, etc. Governments around the world experience successful transformation of their work and business environment in different ways. The outcome experience of developed, developing and transitional governments and economies is the emergence, ongoing refinement and adoption of different E-Government models.

The models are unique to the extent that the country situation of each government in which a particular model succeeded was different. The literacy rate, urban rural divide in income, affordability of and access to essential requirements and services, level of infrastructure, cultural and social values and other demographic variations between countries do not make one country model directly replicable in another country.

However, the values embedded in the Vision and Mission by those that created and pursued successfully a specific E-Government model are worthy of study; there are many lessons learnt along the path to success or indeed failure. Also what is essential to study is whether the values underlying a Vision and Mission of an E-Government model change during the lifecycle of an originally adopted model. It appears that while the values defining the Mission may remain substantially constant, it may not be the case with values defining the Vision.

The fact is the vision could have gone only as far as knowledge or foresight of new and emerging technologies existed at the time. Consider the new possibilities that web and mobile technologies have created for e-government or service delivery and what the vision of an e-government designed five years ago might have been if the knowledge had existed at the time! |

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Two different Approaches of E-Government Strategy and Framework

Study of international experience shows two approaches to e-government. One approach is "top-down", characterized by a high control by central government. It usually includes development of an ICT Strategy and E-Government Model. The other approach is "bottom-up" in which individual departments and local governments move ahead with their own projects. In this approach, adopting common standards and an overall national strategy are not important.

Singapore and China represent the top-down approach, while the US and Philippines embody the bottom-up approach.

Each method has its own advantages and disadvantages. The top-down approach facilitates integration, but as mentioned before, developing a national strategy as emphasized by the approach, can take years, can tend to be based with too much emphasis on technology decisions, the decisions can be poor and can ultimately prove to be costly and difficult to reverse.

The bottom-up approach is less orderly and can contain some redundancy but on the other hand can inspire innovation and can result in many grass roots projects and success stories to motivate government to take up and support yet further projects.

Where Khyber Pakhtunkhwa Government Stands Today

The Government of Khyber Pakhtunkhwa, in its pursuance of leveraging on ICT for modernization, stands at a juncture which requires it to assess what is the E-Government model for the Khyber Pakhtunkhwa? In the absence of an E-government model or ICT Strategy, it can be assumed that a conscious decision to allow a bottom-up approach was taken. Many ICT projects have been undertaken and have attained different levels of success. What benchmarks and criteria were created, against which to measure the success of projects, in terms of improving administration service delivery, citizen acceptance and satisfaction, etc. is not clear. Presently, the potential for many more projects exist. Continued success will depend on many factors, including public awareness and support, which in many of the projects that have e-services or citizen facilitation as an important objective, is critical for

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success and longer term sustainability.

The embryonic phases of automation and computerization in the government environment are largely the result of isolated initiatives of individual organizations and departments. An individual organization quickly sees the potential and benefits of creating a computerized database, automating certain functions and establishing a website.

The Government of Khyber Pakhtunkhwa has achieved significant progress in successfully pursuing programmes and implementing computerization projects that potentially enable transforming its administration, decision making and service delivery functions to the citizen. Therefore, even without detailed benchmarking it can be stated that generally the Government of Khyber Pakhtunkhwa has been successful in its ICT initiatives taken up in the embryonic phase.

How the successes of the embryonic phase will position the Government of Khyber Pakhtunkhwa towards its Vision and Mission values as these would be defined today, is the key question to consider. To what extent programmes and projects successfully completed are the outcome of a clear E-Government model is necessary to assess.

The next phase of ICT programmes and projects of government will require a more integrated and collaborative approach rather than be driven by isolated initiatives of individual departments and organizations. It would be adopting an "Enterprise" view of the government and would need to consider how an initiative of one organization can be combined, for interaction, integration, combined data repository with other departments.

When the potential of web based and mobile technologies are taken into account, it will create new possibilities for interaction, whether between departments, or between the government and the citizen. All this will mean that an E-Government Model will need to be revisited or created afresh.

To further consider what the Vision and Model of E-Government should be for guiding projects during the and next phase – which can be referred to as a take-off and maturity phase – examples of what could have been achieved in the embryonic phase if an E-Government model had been created from an enterprise viewpoint are relevant to illustrate the gaps that exist and which the next phase must address.

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		Databases without the mechanisms to capture changes in the entity
		An isolated project of national magnitude, the CNIC database, is not based on a computerized system of registration of Births, Deaths, Marriages and Divorces.
		Disconnect between Databases which do not allow a change or transaction affecting a common entity in one Database to be communicated to another Database
		Isolated projects such as CNIC by one government organization, Driving Licensing System by another and Arms Licensing by yet another, means that the reporting of death in the CNIC system does not automatically provide the same information to the Driving Licensing and Arms Licensing Systems.
		Creating an E-Government Model with an Enterprise Approach
		Government, if viewed holistically, in no different from a large corporation. Before the advent of ICT, it would have been daunting and virtually impossible to take an enterprise view of the government. Today, if a mega sized corporation can take a group view of its enterprise, when considering ICT, there is no reason for the government to consider the view irrelevant. The citizen which the government serves is a common entity to the Ministries, Departments and various organizations within government. This in itself implies, in the context of such popular phrases and buzz words such as "one window", "citizen facilitation", "E-services" that the enterprise view exists.
		The suggested research and study would also enable clarity of what are the essentials for an Enterprise view of government, in the ICT and E-government model context and therefore if a detailed enterprise architecture of government should be prepared. Such enterprise architecture would enable guiding the ICT journey of projects through the next phase of maturity. Issues of interoperability, interaction and integration between ministries and different department, leveraging the advantages that ICT offers, can only be effectively addresses when the enterprise view and architecture exits.
		The impetus for the IT Master Plan stems from a

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| | | series of strategic challenges at the Government of Khyber Pakhtunkhwa, similar to those facing most public utilities today. They include: higher customer/public/end user expectations (better service, safety, and value), continued improvements mandated by regulatory agencies, a changing—and aging —work force, and budget constraints.

In addition, the Departments are not realizing the full value of its IT investments and resources for the following reasons.
The Departments lacks sufficient staff to perform key functional roles such as applying and leveraging information technology across the agency that will lead to improved business processes and sustain continuous improvement, identify key business performance metrics to base decisions on, and instill best practices for managing information technology investments.
Information technology alone does not solve business problems or improve efficiency. There is a need to integrate the technology with business processes and train staff to maximize results.
Information technology projects under-delivered on functionality and over-ran budgets and schedules, largely because they were implemented with a departmental versus District/Department-wide focus and lacked a clear linkage of the projects with specific District/ Department business objectives.
Projects lacked adequate funding levels to implement and/or sustain the information technologies and systems they introduced or affected.

These challenges represent a serious risk to the District's ability to continue to effectively fulfill its mission, vision, and goals.

Strengths in meeting these challenges, the Government and management have committed to strategic responses that include:
streamlined workflows that reduce and eliminate paper-based processes, integrated and unified approaches to performing the services the Departments provides, seamless integration of the Departments internal and external business environments, and changes in the way the Departments performs key functions such as asset management, operations management, and customer service management.

Furthermore, the assessment of the Departments existing information technologies and current personnel affirmed prudent investments and recognized strengths in several technology areas. |
|---|---|---|

			The extremely efficient and flexible IT infrastructure of virtualized servers, networks, storage, and telecommunications is a differentiating strength. The Departments is several years ahead in this technology area, with a solution in place that many agencies are still aspiring to attain.
	ii.	In case of revised Projects, indicate objectives of the project if different from original PC-I.	N/A
	iii.	Objectives of the Study	A consulting firm will be hired which will 1. Visit, study and document the existing ICT Infrastructure, IT skilled Human Resource, IT projects and program of each Administrative, attached Department, District Governments, Academic Institutions and private sector IT industry. 2. Future strategy for establishing standard ICT infrastructure, capacity building of Human Resource, Projects and programs for every institution of Government 3. Conduct stake holders seminars, conferences, etc. to develop concenses on provincial ICT policy 4. Technology road map for 5 years (Enterprise level plan as well as for each department) 5. Standardization parameters for Hardware, network, Software, web technologies, cyber security, Backup mechanism of databases, and tools for software applications 6. Suggest the potential areas in the department to out source, BOT, self development for revenue generation and generate employment in the province 7. E-Government Enterprise Model
	iv.	Time Schedule	Attached
	v.	Scope of the Project	The main objective of the study is to document the existing ICT infrastructure in the public and private sector of the province and pin point the potential departments which can generate revenue for government and to start ICT programs in that departments to achieve the goals. Secondly the study will develop standardization parameters for Hardware, network, Software, web

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technologies, cyber security, Backup mechanism of databases, and tools for software applications so that that can be integrated easy

Thirdly Enterprise level plan for the government of Khyber Pakhtunkhwa and for each department will be designed for smooth and efficient governance of the Province.
Annexure B

The Scope of the project i.e. IT Master Plan of the Khyber Pakhtunkhwa would include the following :

1. **IT literacy , IT education and awareness Pogram/ Plan**
   i. A comprehensive IT training/literacy/capacity-building plan would be prepared.
   ii. Plan to promote ICT in true sense and Information and Communication Technology University shall be established in the Province.
   iii. Plan to equip all the High schools/Colleges with computer labs and computer proposed crash course would be introduce for the teachers and students at High Schools level.
   iv. Plan for computer training programs to train the government employees according to their job requirement and preparing them for e-government. Trainings/workshops/seminars on e-governance and use of technology for best governance shall be arranged for the higher authorities/Secretaries/ DMGs (19 & above) of the Secretariat and attached departments.
   v. Plan for Massive IT awareness campaign to be launched to update the masses of the region for the use of this technology.
   vi. Plan to introduce courses for soft technical skills will be identified and arranged for other than IT graduates.
   vii. National Institute of Public Administration (NIPA) would be consulted for inclusion of complete IT/e-governance training program in their regular training programs.

2. **E-Governance Plan including, the existing ICT infrastructure.** The following institutions of Government of Khyber Pakhtunkhwa will be covered under the project:

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		i. All Administrative Departments
		ii. All Attached Departments
		iii. All Autonomous Bodies
		iv. All District Governments
		v. All Academic Institution of the Province
		vi. Whole Public Sector ICT industry
		
		3. Promotion of private sector IT Industry in Khyber Pakhtunkhwa Plan
		  i. Recommendation to raise the standard of Local ICT Industry to international level in the near future.
		  ii. Recommendations in case of unavailability of skills (in the beginning) in the local market, the outside organization/firms must have a local partner for transfer of skills.
		  iii. Recommendation of Granting loans for creating new software houses/call centers.
		  iv. Feasibility of establishment IT Parks in the Province.
		  v. Plan for attracting international projects.
		  vi. Plan to attracting private sector investment.
		
		4. Promotion of ICT related R&D in Khyber Pakhtunkhwa

6	Description, technical parameters, technology transfer aspects, required equipment and physical infrastructure:	<table><tr><th colspan="3">Summary of the Total Cost</th></tr><tr><th>S.No</th><th>Descriptions</th><th>Amount in Million</th></tr><tr><td>1</td><td>Advertisement, Entertainment, Workshops, Seminars and Consultancy</td><td>5.000</td></tr><tr><td></td><td>Total</td><td>5.000</td></tr></table>
	i. Describe the project and indicate existing facilities in the area and summary of total cost	5.00 Million
	ii. Provide technical parameters i.e. input and output of the project. Also discuss technological aspect of the project.	N/A
	iii. Provide details of equipment, machinery required for the project.	No equipment is required for the proposed Project and will only consist of consultancy and documentation of Master Plan of strategic planning for the development of IT in the Province. And implementation of E-Government Model
	iv. Provide detail of	N/A

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| | | physical infrastructure required for the project | |
| | v. | Indicate governance issues of the sector relevant to the project and strategy to resolve them. | The purpose of this Project is to examine if and explain why, there is a need to carry out an in depth research and study that assesses if it is necessary to create an E-Government Model for the Government of Khyber Pakhtunkhwa at the current juncture. If an E-Government Model already exists, then the purpose of this document is to consider if it is necessary to study and revisit the Model, combining research with a study that can empirically measure the outcome of completed programmes and projects. If benchmarks were established, when the journey towards leveraging ICT for modernization started, then it would be important to consider if the study should also include measuring both success and failures against the benchmarks.

The outcome of the Project would ICT Master Plan & policy including the following attributes:

a. A basis on which to consider how the original E-Government model needs to be revisited and updated. if it is necessary to re-align or develop a clear E-Government Model and ICT Strategy, taking into account the changing times, emerging technologies and new paradigms of service delivery to the citizen.
b. The current ICT infrastructure in the Departments and potential areas in Government Department.
c. Future plan of proposed ICT infrastructure for least 5 years for each Administrative and attached Departments with the clear identification of project in each sector.
d. The standard technology road map so that data integration may possible at any level.
e. Standardization of ICT infrastructure (Hardware, Software, connectivity, data security, cyber security and guidelines for future)
f. Inventory of entire ICT facilities in present in all departments
g. Enterprise level architecture of Government of Khyber Pakhtunkhwa and at each department level.

For the study it will be equally important to understand global trends and to study global best |

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		practices of e-government models and strategies. Only from studying other countries' successes and failures is a country able to effectively design its e-government strategy and avoid pitfalls that cost time, money and resources.
7	Cost estimates a) i. Indicate date of estimation of Project cost. ii. Basis of determining the capital cost be provided. It includes market survey, schedule rates, estimation on the basis of previous work done etc. b) In case of revised projects, provide: i. History of project approval, cost and ADP number. ii. Item-wise, year-wise actual expenditure and Physical progress done. iii. Provide revised year-wise estimation of physical activities and cost.	N/A N/A N/A N/A N/A N/A
8	Annual operating and maintenance cost after completion of the project: (Item-wise annual operating cost)	N/A
9	Vehicle and TA/DA	N/A for Vehicle N/A for TA/DA
10	Financial plan and mode of financing: a) Equity: Indicate the amount of equity to be financed from each source : i. Sponsors own resources ii. Federal	 (100% financed by Provincial Government)

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	government
	
	   iii. Provincial
	        government
	
	   iv. DFI's/banks
	
	   v. General public
	
	   vi. Foreign equity
	
	   vii. NGO's/beneficiaries
	
	   viii. Others
	
	b) Debt
	
	Indicate the local & foreign debt, interest rate, and grace period and repayment period for each loan separately. The loan repayment schedule be also annexed.
	
	   i. Grants along with sources
	   ii. Weighted cost of capital
		N/A

11	Benefits of the project
	   a) Employment generation (direct and indirect)
	
	   b) Environmental impact
		The study will indicate areas where employment can be generated.
		
		N/A

11	Implementation schedule (Indicate starting and completion date of the project)	Attached

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12	Management structure and manpower requirements:	Consulting firm will hired through open tender for the preparation of Master Plan for Government of Khyber Pakhtunkhwa.
	i. Administrative arrangements for implementation of project.	
		N/A
	ii. The manpower requirements by skills during execution and operation of the project be provided.	N/A
	iii. Detail job description of Man Power required	N/A
	iv. Justification for increase in salaries of the current working staff	
	v. Justification of new staff required	N/A
13	Miscellaneous items required for the project	N/A
14	Project Performance Review	The following high level Steering Committee will review the performance and progress of this ambitious project:- 1. Secretary ST&IT. 2. Director IT. 3. Representative of P&D Department 4. Representatives from academia 5. Representatives from Private Sector

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15	Sign In	
	i. Prepared by:	_____ **Abdul Basit,** **IIS Manager-DoIT**
	ii. Checked by:	_____ **Sajid H. Shah,** **Director-IT**
	iii. Approved by:	_____ **Amjad Shahid Afridi** **Secretary ST&IT Department**

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Total Cost		
S.No	Descriptions	Amount in Million

1	Cost of the study and Master Planning
	  1. Advertisements
	  2. Workshops/Seminars
	  3. Entertainment
	  4. Traveling to each District
	  5. Printing & Publications
	  6. Logistics & POL
		5.000

	Total:	5.000

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