



# E-Readiness Assessment- Kyrgyz Republic

## *Final Report – December 2012*



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I. Glossary

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ADB: Asian Development Bank

BPR: Business Process Re-engineering

CCICT: Coordination Center for Information Communication Technology

EGDI: E-government development index

EU 20: Services of European Union

FDI: Foreign Direct Investment

G2B: Government to Business

G2C: Government to Citizen

G2G: Government to Government

GDP: Gross Domestic Product

HR: Human Resources

ICT: Information and Communication Technologies

IEDPE: Integrated Environment for Government Data Protection and Exchange

MDG: Millennium Development Goal (by the United Nations)

MIS: Management Information System

PMU: Program Management Unit

PPP: Public Private Partnership

SWOT: Strength, Weakness, Opportunity, Threat

UNDP: United Nations Development Programme

UNDP DGP: United Nations Development Programme Democratic Governance Program

VPN: Virtual Private Network

WiMAX: Worldwide Interoperability for Microwave Access

## II. Executive Summary

***This report presents an assessment of the situation and preparedness of the Kyrgyz Republic for implementation of E-Government services.*** It also evaluates the concepts, strategy papers and the current E-Government projects in Kyrgyz Republic. The key objectives of the current programs are weighed against UNDP's initiative aimed to support the Government in ensuring quick and efficient transition from E-Government concept level to implementation level.



The mid-term Country Development Strategy (2012-2014) and a special government program “Stability and Life of Dignity” aims at introducing E-Government to benefit all citizens. These initiatives also aim at combating corruption, increasing transparency and accountability of public administration.

The Country Development Strategy focuses on creating conditions for attracting foreign investment, reform of state regulation aimed at eliminating bureaucratic barriers and expanding economic freedom of business entities. It also aims at launching and implementing 40 national projects in the medium-term. All these fundamental factors would be crucial for long-term sustainable human development and achievement of the MDGs.

Round Table Discussions have been planned during the course of the project to help in an extensive evaluation of the current situation, to develop of a customized assessment framework and to discuss the issues and expectations of various stakeholders including Government representatives, Civil Society, Donor Organizations and other stakeholders,

***The first such Round Table meeting was held on 3rd December 2012 in Bishkek wherein the summary of the Assessment conducted as well as the research report was shared with the participants.***

Specific views and expectations which emerged during the Round Table ***have been incorporated as part of recommendations in the final version*** of the Assessment Report implementation strategy and would be form a part of the Kyrgyz Republic's E government Implementation Strategy.

III. Country Overview

According to the UN E-government survey 2012, Kyrgyz Republic ranks 99 out of 190 countries in terms of E-government development index (EGDI). It has an EGDI of 0.4879 which is slightly lower than the world average of 0.4882<sup>1</sup>. It fared lower than the world average in terms of online services and telecommunication infrastructure. However, it performed better than the world average in terms of human capital and e-participation. Kyrgyz Republic’s MDG report shows that it is unlikely to meet its goals for child and maternal mortality, tuberculosis, sanitation and gender inequality. However it is on track on extreme poverty reduction, access to basic secondary education and improved water resources. Maternal mortality (51.2 deaths per 100,000 births in 2010) and child mortality (37 per 1,000) are relatively high by regional standards<sup>2</sup>.

Table 1.15 E-government development in Central Asia

Country	E-gov. development index		World e-gov. development ranking	
	2012	2010	2012	2010
Kazakhstan	0.6844	0.5578	38	46
Uzbekistan	0.5099	0.4498	91	87
Kyrgyzstan	0.4879	0.4417	99	91
Tajikistan	0.4069	0.3477	122	122
Turkmenistan	0.3813	0.3226	126	130
<b>Sub Regional Average</b>	<b>0.4941</b>	<b>0.4239</b>		
<b>World Average</b>	<b>0.4882</b>	<b>0.4406</b>		

	Rank	E-Government development index	Online Service component index	Telecomm. Infrastructure component index	Human Capital component index	E-participation index	Environment index
Kyrgyzstan	99	0.4879	0.4248	0.1903	0.8485	0.2895	0.7059
Asia		0.4992	0.4880	0.2818	0.7278	0.2738	0.4914
World		0.4882	0.4328	0.3245	0.7173	0.2225	0.4633
Developing countries other than LDCs		0.4865	0.4311	0.2860	0.7553	0.2223	0.4455
Least developed countries		0.2420	0.2143	0.0685	0.4575	0.0428	0.2120



**Online Service**

- A measure of ‘how much’ the government is putting online
- New technology along with access to services can support efficiency and efficacy of solutions to expand citizen services



**Telecommunication Infrastructure**

- Average composite of internet users, fixed telephone lines, mobile subscribers, fixed internet and broadband subscribers



**Human Capital**

- Average composite of adult literacy rate and combined primary, secondary and tertiary gross enrolment ratio



**E-participation**

- Online inclusion of citizens for effective sustainable development through consultation and feedback
- Technology access and collective societal approaches to public policy changes



**Environment**

- Effective information dissemination about resource management while minimizing environment degradation
- Information about clean air, water, energy and resource conservation in general, including biodiversity maintenance

<sup>1</sup> As per the UN E-Government Survey 2012

<sup>2</sup> As per ITU document-“ E-Government implementation in the Kyrgyz Republic-experience and further steps”, September 2012

After its independence in 1991, Kyrgyz Republic has been on a path of democratic progression with sporadic cases of uprisings against authoritarianism. With two major incidents of fleeing of its two presidents (in 2005 and 2010), the country is going through a difficult process of transformation. As result of the June 2010 referendum a new constitution was adopted. It defines the Kyrgyz Republic as a parliamentary republic (during the previous 18 years, the country was a presidential republic) thus making it the only country with a parliamentary system in Central Asia. Parliamentary elections held in October 2010 were contested by 29 parties, with five winning places in Parliament and three forming a new coalition Government. Presidential elections were held in October 2011 resulting in peaceful transfer of power. However, peace and social cohesion cannot be taken for granted, as the root causes of conflict, including inter-ethnic mistrust and regional tensions, eroded credibility of state institutions, social exclusion and uneven access to economic opportunities remain to be addressed. Civil society's impact on decision-making still remains limited although its role has recently increased.

Kyrgyz Republic has a GDP per capita of US\$ 2200 (2010 est.)<sup>1</sup> and is a low income country. Its economy grew at 3.7% in 2005-2010 and 5.7% in 2011<sup>1</sup>. The poverty rate fell from over 62% in 2000 to 32% in 2009, but after the 2010 events it rose back to 33.7%, with an increasing proportion of the poor being female<sup>1</sup>. The foreign debt as of 2011 is 47% of GDP, while the budget deficit for 2012 is planned to be about 5.7% of GDP<sup>1</sup>.

Life expectancy is 73.5 years for women compared to 65.3 years for men, and female literacy rate is a high 97.7% (in the 15-24 age group)<sup>1</sup>. But despite progressive legislation on gender issues, women remain vulnerable to rising unemployment, a weak social protection system, and increased influence of patriarchal traditions in social relationships.

Kyrgyz Republic has a relatively good position within the electronic and Internet space due to the fast expanding private sector's demand for access to ICT due to FDI inflow and investment loans received from international organizations.

## IV. E-Government Vision

The National Strategy for “Information and communication technologies for the development of Kyrgyz Republic” was approved by the Decree of the President of the Kyrgyz Republic on 10 March 2002, with the objective of incorporation of ICT for effective and transparent management in state bodies and institutions of self-governance by prioritization of the following:

- Introduction of e Governance in Public administration and local self-government (e-governance) - effective, transparent and accountable public administration through utilization of ICT;
- Encouraging Education - human capacity building and training of staff in ICT
- Grow as an Electronic economy- become a hub in Central Asia for information business and electronic commerce for increasing regional business.

The E-Government programs aim to enhance citizen services, combat corruption and increase transparency and accountability of public administration. They also aim to grow the business and intellectual activity of the society and integrate Kyrgyz Republic in the world economic space<sup>3</sup>.



The National Strategy 'Information and Communication Technologies (ICT) for Development in the Kyrgyz Republic' sets out main priorities, objectives and tasks, main principles, provisions and directions of the national ICT policy. The potential benefits from ICT development include: achievement of an effective management; increased labor productivity; availability of new export opportunities, in particular in the area of software exporting and delivery of ICT services; provision of information to the farmers on agricultural markets and weather conditions; creation of the primary consultative medical assistance; expansion of distance education capabilities; improved cooperation between the state, local communities and private sector in regions and improved quality of state services rendered to population.

<sup>3</sup> As per the document “ National Strategy Information and Communication Technologies for Development in the Kyrgyz Republic”; source <http://www.ict.kg> 04/08/2003

## V. Implementation Plan<sup>4</sup>

The present E-Government projects will provide policy support and technical assistance to the Government of the Kyrgyz Republic through the following:

### 1. Setting up a Coordination Center for Information Communication Technology (CCICT)

UNDP along with the Government Office proposes to establish a Coordination Center for Information Communication Technology (CCICT) as the main governmental body for implementation of E-Government services. CCICT will provide logistical and conceptual support as well as consultancy services for the implementation of the ICT and E-Government strategies. It will implement concrete projects and initiatives such as the following:

- Organize and maintain an information database for ICT stakeholders, E-Governance key players and potential supporters.
- Promote the E-Governance potential in the administration and business sectors.
- Prepare all necessary reports on E-Government implementation status on E-Services and connectivity between central and local governance programs
- Develop a strategy and organization chart for development of E-Government concept and implementing in within the selected pilot regions in the country;
- Research and development of the best technology for implementation of E-Services within the E-Government programs based on innovative and cost-effective technologies – digital TV, mobile phones, Wi-MAX, etc.

### 2. E-Government Architecture and Standardization

- The CCICT will prepare necessary laws for establishment of a proper legal system and present them to the lawmaking authorities.
- An Intergovernmental portal for information exchange, a Central Archive of e-documents and an Integrated Environment for Government Data Protection and Exchange (IEDPE) will be developed.
- The mechanisms for introduction of e-services (EU-20) will be developed and support for their implementation will be garnered.
- The back-office interchange gateway(s) and mechanisms for interoperability between government organizations will be developed.

### 3. Creation of a Population Register

- The Population Register would be a single source of electronic information and a leading database for other government sector databases.
- An e-archive of the citizens' primary registration documents will be prepared.
- The State Registration Service will create and update the personal information in Kyrgyz Republic. It would be responsible for issuing passports and citizens' life cycle certificates – birth, marriage, divorce, maternity and paternity rights and death.

<sup>4</sup> As per ITU document-“ E-Government implementation in the Kyrgyz Republic-experience and further steps”, September 2012

## VI. Current E-Government Projects

Given below is an overview of the current projects and initiatives being undertaken by various Government agencies:

	<b>Mandatory Health Insurance Fund</b> <ul style="list-style-type: none"> <li>• Enrollment Data for Mandatory Health Insurance Fund updated twice a month</li> <li>• Pilot Project being planned with assistance from UNDP</li> </ul>
	<b>Ministry of Economy and Antitrust Policy</b> <ul style="list-style-type: none"> <li>• TULPAR Single Window System enabling electronic interchange of documents</li> <li>• Updation of CounterPro Software for sharing of information on economic entities</li> </ul>
	<b>State Personnel Service of the Kyrgyz Republic</b> <ul style="list-style-type: none"> <li>• Information system of Human Resource Management</li> <li>• Formation of a single electronic database of civil servants</li> </ul>
	<b>Ministry of Transportation and Communication</b> <ul style="list-style-type: none"> <li>• Streamline &amp; Co-ordinate ICT initiatives of all Government Bodies</li> <li>• Development of ICT Infrastructure &amp; a National Policy on ICT.</li> </ul>
	<b>National Statistics Committee</b> <ul style="list-style-type: none"> <li>• Organize collection, processing, analysis &amp; dissemination of Statistical Information</li> <li>• Software Testing for e Reporting and Collection procedures through Pilot in Chuy</li> </ul>
	<b>Ministry of Health</b> <ul style="list-style-type: none"> <li>• Automated book keeping operational, in all hospitals by 2013</li> <li>• Planning for a integrated world class hospital management system</li> </ul>
	<b>Center for Standardization and Metrology</b> <ul style="list-style-type: none"> <li>• Using LanDocs Software for electronic flow</li> <li>• All the workforce have been provided with IT Systems</li> </ul>
	<b>Social Fund of Kyrgyz Republic</b> <ul style="list-style-type: none"> <li>• Unified Database covering 95% population</li> <li>• Bi-lateral agreements with agencies for sharing data</li> </ul>
	<b>Ministry of Finance</b> <ul style="list-style-type: none"> <li>• Portals Developed for Open Budget, Economic Map &amp; Procurement under Infosystem</li> <li>• Strategic Roadmap until 2015 developed. Planning for ISO 27001 Certification.</li> </ul>
	<b>Ministry of Foreign Affairs</b> <ul style="list-style-type: none"> <li>• Need for having a secured communication channel with all embassies</li> <li>• Vision to have a Single Gateway for Visa, Consular and Border Control</li> </ul>

In addition to the Round Table discussions on 3<sup>rd</sup> December, **a series of interactions were conducted between 27th November and 4th December 2012**, with various Government Ministries and Agencies in order to get first hand views of all Ministry representatives and to better understand the ICT adoption, issues and future plans. A summary of the discussions is given below:

S.No.	Ministry/Department / Project Name	Meeting Date	ICT Intervention	Issues	Way Forward
1	<b>Mandatory Health Insurance Fund</b>	27 November 2012, 1600 hours	1) V.con facility not available. 2) IT Infrastructure getting old. 3) Issuance of Smart Card with all details including Medical History	1) Database does not capture population migrated (1 Million), leading to excessive funding. 2) No real time connectivity with doctors, hospitals, clinics. 3) Data available in manual form, difficult to digitize. 4) Enrolled population only get benefits in place of residence. 5) Database needs to be updated along with Ministry of Health. 6) Low public awareness, pharmacies not included	1) UNDP is planning a pilot project
2	<b>Ministry of Economy and Antitrust Policy of the Kyrgyz Republic/ TULPAR Single Window System</b>	28 November 2012, 1030 hours	1) Clear definition of Business processes before adoption of IT 2) In-house ICT team available 3) Centre for Standardization	1) Other Government agencies are developing systems of different standards, making it difficult for different systems to talk to each other	1) Updation of CounterPro Software for sharing of information on economic entities
3	<b>State Personnel Service of the Kyrgyz Republic /Information system of human resource management (ISUCHR)</b>	28 November 2012, 1130 hours	1) Prioritize E Government.	1) Optimization of Business Services and HR Services 2) Weak Coordination mechanism between different agencies	1) Enabling Factors available
4	<b>Ministry of Transportation and Communication</b>	28 November 2012, 1430 hours	1) Identify a single body to coordinate all ICT related issues.	1) Lower Budget for ICT due to no tangible results. 2) Insufficient coordination between organizations, not legally mandated.	1) Creation of a Optical Fible Network for Data Communication 2) Implementation of Basics- ICT Training 3) Unified Email System, Improve Quality of Websites,
5	<b>National Statistics Committee/e–statistic data collection</b>	28 November 2012, 1600 hours	1) Statistical data from legal entities and entrepreneurs are collected at rayon level via forms, which are filled in by respondents 2) Data are transmitted to the oblast level via e-mails, on hard copies/paper or CD-ROM 3) Oblast statistical offices, in turn, are responsible for collecting of data from their rayon statistical offices and transmission to the central office using VPN technologies 4) Statistical aggregates are produced at the central level and disseminated to the users.	1) More coordination required to involve NSC in ICT related meetings	1) Pilot Project for Chuy 2) Testing required for software for e Reporting and Collection procedures
6	<b>Ministry of Health</b>	29 November 2012, 0900 hours	1) SWAP system for automated book keeping operational, all hospitals will be included by 2013	1) Electronic Registration of Patients not being done 2) Out Patient facility requires automation 3) GP's need computers as well 4) No automated database for recording physical infrastructure 5) Prescriptions still being issued manually	1) Plan to acquire a standardized and proven integrated world class hospital management system

S.No.	Ministry/Department / Project Name	Meeting Date	ICT Intervention	Issues	Way Forward
7	<b>Centre for Standardization,</b> Ministry of Economy and Antitrust Policy	29 November 2012, 1030 hours	1) Using LanDocs Software for electronic flow 2) All the workforce have been provided with IT Systems		1) UNDP is planning a pilot project
8	<b>Social Fund</b>	29 November 2012, 1330 hours	1) Creation of an Unified Database covering 95% of population 2) Interactive with Birth, Death & Tax Databases 3) Bi lateral agreement with agencies for sharing data	1) Issues with verification of Addresses entered and accuracy of the same 2) Service for electronically generating PIN discontinued due to lack of ID Card	1) Data Cleansing underway, 30% completed
9	<b>Ministry of Finance/Info-System</b>	29 November 2012, 1500 hours	1) "Open Budget" Portal provide electronic data of revenues and expenditures of the republican and local budgets 2) "Economic Map" Portal provide electronic information about industrial production and financial budgets for individual provinces. 3) "Public Procurement" Portal provide electronic information about goods, works and services.		1) Strategic Roadmap until 2015 developed. Planning for ISO 27001 Certification. In-house IT team
10	<b>Ministry of Foreign Affairs</b>	29 November 2012, 1700 hours	1) Need for an integrated application solution for automation of all workflows and provision of a secured communication channel with all embassies.		1) Single Gateway for Visa, Consular and Border Control
11	<b>State Tax Service</b> under the Kyrgyz Republic Government	03 December 2012, 1400 hours	1) ADB Supported Project, undertook extensive BPR and Structural Re-organization starting 2008 including IT restructuring 2) New system developed on centralized model 3) Tax offices connect with Central office through VPN Citizens can submit tax returns through the website, need to get login password details during one time visit. PIN no. as generated by Social Fund 4) Project modeled on Customs Service model. SINAM assisting is developing Application Solution	1) Legal Issues yet to be resolved. Interaction with other Agencies difficult without a electronic document system 2) Delay in implementation of an electronic treasury system. There are integration issues with systems of other Ministries as well 3) Mandatory use of Digital Signature required as well as Govt. resolution of implementation of an electronic payment gateway.	1) A 3 year roadmap prepared which includes electronic payment of taxes and integration with Banks
12	<b>Ministry of Social Justice</b>	03 December 2012, 1500 hours	1) World Bank Project underway to improve the provision of social care information technology 2) Corporate Information Network implemented 3) Social Fund No used for identification. 647 computers have been supplied 4) IT Unit consists of 5 members, training through train the trainer mechanism.	1) Quality of Network and Bandwidth availability needs to be improved 2) Information exchange required with social fund and tax system as certification required from these agencies for disbursement of funds 3) Network should also connect with Mandatory Health Insurance Fund	1) System to go live in early 2013 covering 105 agencies and services planned at District level

S.No.	Ministry/Department / Project Name	Meeting Date	ICT Intervention	Issues	Way Forward
13	<b>Ministry of Justice</b>	03 December 2012, 1500 hours	<p>1) UNDP has initiated a project on Legal Reforms. A model for undertaking interactions with Ministries using a electronic consultation matrix.</p> <p>2) ADB Supported project for Registration of Legal Persons. A Centralized database has been created for legal documents and Acts</p> <p>3) Website created with assistance from UNDP</p> <p>4) Central office computerized with assistance from ADB</p>	1) Only 2 staff members to support IT implementation.	<p>1) Free Access Program to be operational in early 2013, which will be a system of inter-agency documentation flow, electronic receipt of documents received</p> <p>2) Electronic archiving being planned.</p>
14	<b>Customs Service</b>	04 December 2012, 0900 hours	<p>1) ADB-supported Unified Automated Information System implemented by Crown Agents for automation of the main business processes of the Kyrgyz Republic customs bodies, including the registration and control of the goods delivery; customs clearance process and customs control of the goods; risk management; maintenance of the base of the customs rules violation; maintenance of the united system of classifiers for the customs bodies; customs statistics; control over the customs fees and other payments; reports generation; data exchange with external sources, etc.</p> <p>2) Pilot implemented at Manas Airport where customs payments can be made through electronic gateway.</p> <p>3) In-house Training Centre established for Customs and Logistics, but training is being done in-house due to lack of funding available to engage external trainers.</p>	<p>1) Software Solution is complex and the timeline for implementation is short</p> <p>2) All Business Processes had to be documented before Software development</p> <p>3) Customs Service has taken a lead in computerization but other interacting agencies still need to catch up</p> <p>4) Manpower is available but retaining them is an issue and lot of time and expense is spent on training</p> <p>5) Since all payments have to go through Treasury System, this needs to be automated as well</p> <p>6) GPS system was tested but was not successful since the implementing agency was not familiar with the local conditions.</p>	<p>1) Comprehensive Development Strategy has been planned for 2010-2013</p> <p>2) Interface with Tax Authorities, National Statistics Committee</p>

This is not an exhaustive list of projects, and more details and information is expected vide the questionnaire circulated on Pg. 24 (Annexure I)

## VII. E-Readiness Dimensions

In order to make a comprehensive and realistic assessment of steps that have been taken towards development of E Government, a qualifying set of Dimensions have been developed against which all projects and initiatives would be rated and a weighted score would be given to each of these, as a precursor for preparing an implementation strategy. These dimensions have been given as below along with their relative importance on a scale of 100.



### 1 Stakeholder Commitment

The success of any E Government project is heavily dependent on the level of commitment displayed by the various stakeholders that are involved. Since E Government projects go beyond automation or computerization and involve large scale program transformation, almost all existing components are affected to a varying degree. These components include process, technology, roles and responsibilities, organization structure, infrastructure, business rules, etc. Unless there is a strong stakeholder commitment, the propensity towards change is likely to be low especially for the non-technical components including people, organization structure, etc. Stakeholder commitment ensures that there is adequate “buy-in” for the project since stakeholders have the ability and influence to motivate and incentivize as required. Important Stakeholders usually comprise project sponsors, top leadership, controlling government authority and other groups wielding significant influence. To ensure that there is adequate stakeholder commitment during the project life-cycle, it is important to define the project outcomes at the outset and to ensure that important stakeholders are provided with regular and timely updates.

## 2 Capacity Building

With the advent of a new initiative, especially one which revolves around ICT, an organization's existing capacity is put to the test. Resources need to be re-deployed and augmented during an early stage in the project through an appropriate means of capacity building. While capacity building is required for almost all project components, people and infrastructure are two of the most important beneficiaries of this exercise. Capacity building of people through initiatives focused around HR is complex in nature and required to be initiated at a very early stage, often before the start of any project. Further, capacity building for staff is required well beyond completion of the ICT phase, since this activity is pervasive in nature and has a direct bearing on the success of the project. Therefore capacity building is integral for building internal capacity of the government workforce in domain areas including Programme Management, developing Business and Financial Models, Technology, Business Process Re-engineering, Change Management, etc. Capacity building can be done in two ways viz. building Internal Capacity by increasing strength/numbers and by training and/or by leveraging external capacities by outsourcing. Capacity building for infrastructure requires enhanced/new infrastructure in terms of technical and non-technical facilities to be set up to cope with the additional requirements of the project. There are various options available for the management and ownership of the infrastructure established, including public-private partnership.

## 3 Change Management

ICT projects that fall under the purview of E Government aim at large scale transformation and require a cultural change in organizations. Since most government organizations carry with them a strong legacy and well-established rules and regulations, change any of these is a daunting task. Therefore, managing the change or change management is a vital dimension that requires a long-term specialized approach. Change management begins with providing orientation to the existing workforce, exposing them to the benefits of E Government. Change management also deals with re-alignment of roles and responsibilities, identification of a project champion to motivate subordinates, aligning the interests of stakeholders and providing specialized training to the workforce. Change management is a continuous process, which is applied to in varying degrees during the project life-cycle.

## 4 Institutional Framework

Governments are deeply rooted in law, supported by the appropriate legal framework. All the services delivered are through a legal mandate and are guided by acts or rules. Any change in the process that is followed for delivery of service requires a corresponding change in the governing law. These kinds of changes are time-consuming and arduous to implement and require a strong institutional framework that can drive these changes on an expeditious basis. Institutional framework refers to the ecosystem consisting of the organizational rules and the authorities governing these. A strong institutional framework is one through which changes in existing processes are all encompassing and binding to the rest of the organization. E Government projects are typically unsuccessful in cases where the technology changes are not backed by the appropriate change in the law, leading to a scenario wherein the system is forced to revert to the old system.

## 5 Resources

Availability of resources is an inherent requirement for the success of any project. ICT projects generally require resources that are related to process, technology, organization and facility. Timely and adequate availability of these resources are imperative during the course of the project. The first two components viz. process and technology are driven by organization and facility. Organization refers to the stakeholders and organizational staff who are undertaking the project. Only after there is adequate stakeholder commitment and willingness of the workforce to undertake the project does one delve in complex areas related to process and technology. However, the most important enabling factor for all of these components to smoothly function is the availability of facility or more specifically, financial resources. When we talk about financial resources, we refer not only to funding which may be limited in nature, but more importantly the financial viability of a project. A project that is not self-sustainable over a period of time will have a lesser chance of success as it will not be able to provide the necessary support required by other resources. Therefore, it is important to understand the financial viability of a project at an early stage so that the appropriate funding mechanisms may be deployed.

## 6 Technical Assistance

ICT deployment is the reason why transformation projects under E Government are possible in this day and age. While ICT acts as an enabler for improving governance, it also gives the citizen the ability to interact and interface more effectively with the government in real time. Due to industry dynamics, globally private sector has been the traditional pioneer in ICT development and deployment. However, since the public sector presents limitless potential for utilization of ICT, private sector has taken up the challenge of providing unique and specialized technological solutions that are revolutionizing the way governments function. With this backdrop, Governments realize that they are better off focusing on improving governance and seeking technical assistance from private sector. Technical Assistance does not apply to technology alone, but also specialized expertise in the form of manpower through external sources. This technical expertise provides government institutions with specialized and skilled manpower which can in turn assist in building capacity.

## 7 Project Management

Project management is the thread that binds together all the components and ensures that they all function in unison. ICT and E government projects are especially challenging since they test the boundaries of existing capacities and present a new way of doing things. Project management reduces operational risks by ensuring timely intervention. Traditionally, projects in the government were driven top-down, however with the improvement in more functional areas, there has been a shift in the project management approach. Resources are given the task of managing different operational areas along with the necessary authority to take decisions, with minimal interference by top leadership. However, a robust and effective MIS mechanism is required so that there is timely intervention and project teams can learn from experiences. In many government organizations which do not have a middle-management layer, project management functions are often outsourced at the start of the project, with the view to develop in-house project management expertise over a period of time.

VIII. E-Readiness Assessment

E Readiness Assessment refers to the different areas of E Government that are vital for making Projects function in a holistic manner. The Project team has carried out a preliminary assessment of areas related to ICT Infrastructure, Services & Content as well as the Rollout model for E Government. At a preliminary stage, the existing issues as well as possible solutions are given below:

**ICT Infrastructure**



Existing Issues	Possible Solutions
Last Mile Connectivity not available	Telecom solutions inc. WiMAX
Lack of Service Delivery Channels	Use existing Post offices, Mobile Technology
Establishing and Operating Data Centres	Applications on Cloud / Central Data Centre
Limited use of Digital Signature	Subsidizing the Cost & advocating adoption

**Services & Content**



Existing Issues	Possible Solutions
Services available manually	Service Automation including BPR
Content in non-standardized Format	Development & Adoption of Int. Standards
Lack of Service Levels for delivery	Service Transformation for efficiency

**Rollout Model**



Existing Issues	Possible Solutions
Coordination among different agencies	Coordination Centre for E Government
Funding related issued	Financial Models for Self Sustainability
Legal Changes required	Enactment through General Council
Mechanism for Project Assessment	Periodic Audit/ Role of Civil Society

The above issues were presented and discussed with various stakeholders during the 1<sup>st</sup> Round Table Conference held in Bishkek on 3rd December 2012.

The possible solutions are based on current best practices and preliminary brain-storming by the project team from UNDP-DGC. These have been further elaborated and form an integral part of the overall recommendations.

## IX. Gap Analysis (SWOT)

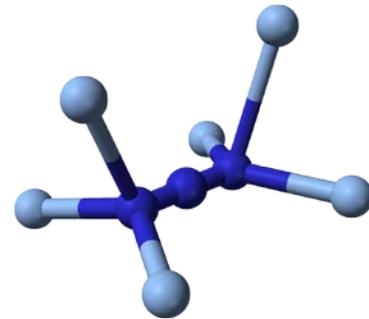
<p style="text-align: center;"><b><u>Strength</u></b></p> <ul style="list-style-type: none"> <li>• Strong willingness to implement E Government across all levels</li> <li>• Successful examples available for replication, eg-quick medical services through the use of telecardiology in a country with difficult and mountainous terrain</li> <li>• Good understanding of ICT requirements and easy access to electronic information at the levels of oblast, rayon and <i>aiyl okmotu</i></li> <li>• Establishment of a National Council on ICT under Prime Minister's Office</li> <li>• Creation of population register , a repository of electronic information about citizens, which provides easy inter connection among databases of different Ministries</li> <li>• High mobile penetration providing access points</li> </ul>	<p style="text-align: center;"><b><u>Weakness</u></b></p> <ul style="list-style-type: none"> <li>• Many projects centred around policy/scheme management rather than G2C, G2B, G2G</li> <li>• Lack of uniform approach for project conceptualization and implementation</li> <li>• Lack of a basic ICT Infrastructure</li> <li>• Shortage of staff, low level of qualification and relatively low level of wages and salaries</li> <li>• Limited role of civil society in decision making</li> <li>• Remote locations and mountainous terrain make internet connectivity difficult in these areas</li> <li>• Lack of Coordination among Government agencies and Donor agencies</li> </ul>
<p style="text-align: center;"><b><u>Opportunity</u></b></p> <ul style="list-style-type: none"> <li>• Relatively good position in the electronic and Internet space due to the fast expanding private sector's demand for access to ICT due to FDI inflow and investment loans received from international organizations</li> <li>• New export opportunities, particular in the area of software exporting and delivery of ICT services</li> <li>• Willing Donors and other stakeholders to support various initiatives</li> <li>• Good common knowledge and understanding of international IT standards so as to adopt best practices</li> <li>• Female literacy rate of 97.7% (in the 15-24 age group) provides employment opportunities for females in e-government projects</li> </ul>	<p style="text-align: center;"><b><u>Threat</u></b></p> <ul style="list-style-type: none"> <li>• Sporadic incidents of uprisings against authoritarianism have created an environment of political instability in some regions of the country</li> <li>• Inter- ethnic mistrust, regional tensions, social exclusion and uneven access to economic opportunities</li> <li>• Issues related to Governance</li> <li>• Limited concept of financial self sustainability in projects due to fund availability issues</li> <li>• Influence of patriarchal traditions in social relationships makes women vulnerable to rising unemployment</li> </ul>

## X. Recommendations

### I. Establish a dedicated Program Management Unit for Coordination of E Government

Organizing E Government involves assigning responsibilities for governing, coordinating, prioritizing and monitoring e Governance programs and activities. As observed during the assessment of E Government in the Kyrgyz Republic, various Ministries and agencies have independent ICT initiatives, and some operational autonomy is required. But when an e Governance strategy needs to be implemented and a centralized program has to be created, **coordination is required to promote, develop and support common infrastructure and applications, including government- wide networks, portals, data centers and common business processes.** Coordination is also required for creation of integrated service delivery channels and identifying other mechanisms for minimizing redundancy and duplication. E Government is a highly dynamic process, with constant innovations in technologies, applications, products and processes and hence, cannot be propagated solely by the Government. Therefore, **it is necessary to create an institution with expertise, financial autonomy and other means to facilitate and coordinate implementation of E Government strategies** and ensure stakeholders are engaged at all levels.

Based on the aforementioned factors, it is recommended that a full-time and dedicated **Program Management Unit (PMU) be created under the aegis of the National Council for ICT** established by the Prime Minister's office to provide operational and project management support to various Ministries that would undertake ICT and e Governance related measures. Given the scarcity of ICT and change management skills in the public sector, the PMU may consist of resources having specialized skills related to e Governance areas including Software/Hardware specialization, Business Process Re-engineering, Capacity Building, Change Management, Financial Planning, etc. The PMU would be responsible for identifying areas for standardization of common functions across the Government, reducing duplication of systems and processes, capturing process innovations and reuse of solutions, consolidating ICT expertise and promoting interoperability and administrative simplification.



It should be clarified that while the role of the National Council for ICT under the Prime Minister's Office would be to give strategic direction and provide Administrative Coordination for E Government, the PMU would provide technical coordination, involving the private sector and other non-governmental stakeholders and **leveraging the expertise available outside the government sector.** However, for the Coordination agency established as a PMU to focus effectively on achieving E Government goals, the National Council needs to give this agency the necessary autonomy and avoid political interference in operational matters. It is advised to establish the PMU using a Public-Private Partnership (PPP) Model, so that it has the ability to function dynamically and hire the requisite manpower at market wages. **These resources should be made available to various Ministries during the appropriate stages of the project life cycle** and would work closely with the National Council for ICT to provide assistance in areas related to e Governance.

## II. Donor Coordination

Donors have played an integral role in the growth of E Government in the Kyrgyz Republic over the last decade, providing strategic analysis for prioritizing public services, providing financial investments and mobilizing resources beyond the available government budget. However, as has been observed during the assessment phase, such efforts have led to **isolated initiatives, driven by ad hoc institutional arrangements with different donor agencies**. This may have resulted from an assumption that E Government development is a one-off project based on international models to be implemented by in-house teams, **specifically to adhere to the accountability and governance requirements of the donor supporting the project**. Thus, different donors work with different ministries through project implementation teams within those ministries resulting in **isolation, fragmentation and duplication of E Government initiatives**. However to move towards a centralized E Government model, technology, service priorities and infrastructure need to sustain change over a period of time. When funds earmarked for E Government are invested autonomously, there are bound to be **issues related to duplication, lack of interoperability and wastage of resources**.

Based on the above, Donor agencies working in the Kyrgyz Republic must develop **frameworks that maximize the impact of their investments** in E Government, ensuring the resulting initiatives are affordable, scalable and sustainable. This can be done only if Donors provide funding and technical assistance to Government Agencies that have a **clearly defined time-based and outcome-oriented project implementation plan**. The project implementation plan must be prepared with adequate inputs from the Program Management Unit working under the National Council for ICT, to ensure minimal redundancy and duplication, reform of business processes and adopting a citizen focused service delivery model.



Donors should measure success of projects through a well-devised monitoring and evaluation mechanism to measure the creation of public value and achievement of developmental results. Success should not be measured by carrying out a cost benefit analysis; however a **common framework to measure E Government success** may be adopted by all Donor agencies.

None of the above will be possible without a **robust communication mechanism between Donor agencies** and this can only be done through periodic strategic communication between agencies of shared vision, project progress made, impacts measured and lessons learned.

It is recommended that various donors coordinate in a structured manner to **share information about projects** that are being funded and future activities to ensure that there is a **streamlined centralized approach** towards adoption of e Governance and minimal duplication of efforts. To achieve this, a platform must be identified for Donors to coordinate and communicate with each other, along with active participation from the PMU for Coordination.

### III. Development of Common ICT Infrastructure

To make E Government successful, the government needs to introduce complex, large scale ICT Infrastructure and components. Various Government agencies and ministries, with assistance from the Donor community, have been working independently to design, procure and implement their own ICT solutions, resulting in a complex and fragmented solution, limiting sharing and reuse of services.

Going forward, it is essential to develop **a common ICT Infrastructure based on open standards**, which would allow services to be delivered at a lower cost within a shorter time-span. The use of common standards would allow ICT solutions to **be fully interoperable allowing for reuse, sharing and scalability by various departments and feeding into a common service delivery mechanism**. Keeping this in view, the Government may examine the technical modalities



for establishing of a National Data Centre, Network and Service Delivery Channel. One of the possible options could be the use of Cloud computing to deliver infrastructure, platform or software as a utility service, giving the government to capability to respond to challenging operational needs.

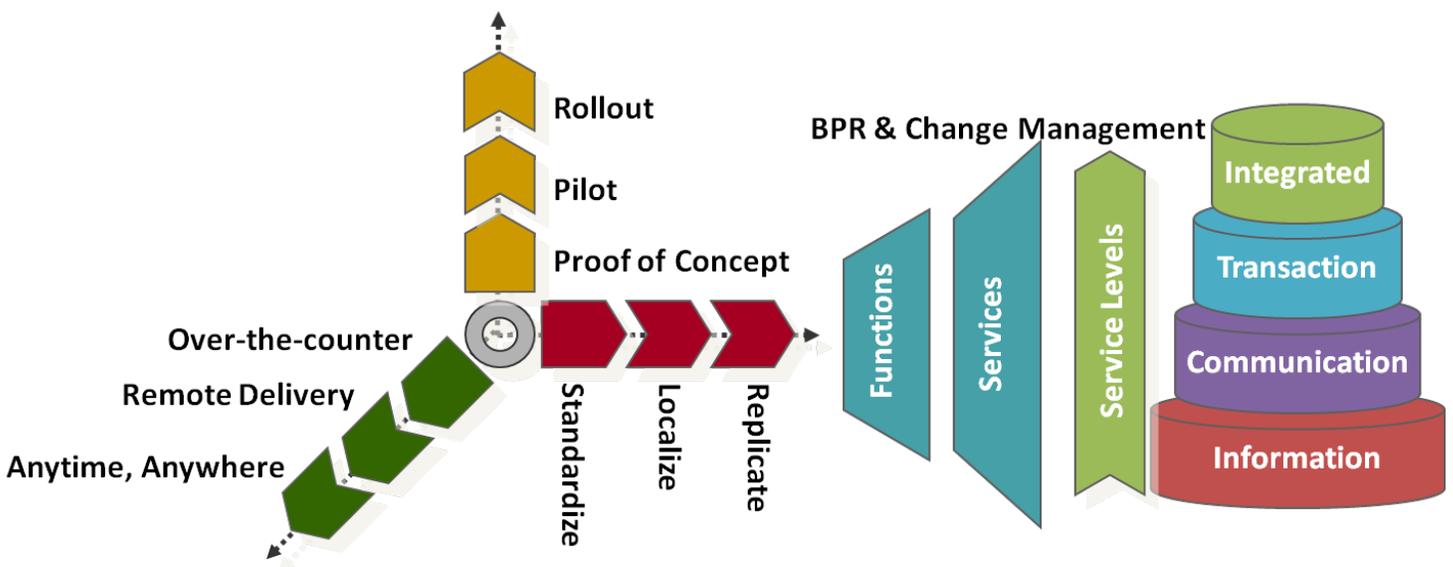
Similarly, options including WiMAX may be explored it is a solution for **delivering broadband connectivity** to far-flung rural areas, s where it would not be viable to establish wired connections. Currently the last mile part of the connectivity is the biggest stumbling block to provide access to the public services to the rural population. For service delivery, technologies supporting mobile applications should be supported so that citizens **can use mobile devices** viz. voice, signaling and data to access a comprehensive integrated service delivery platform enabling Government Departments to roll out various mobile services, with focus on building a centralized platform onto which the services/solutions for each and every Department can be integrated. In addition, **the widespread network of the Kyrgyz Post Office Network** may be leveraged as a physical front end for provision of services.

#### IV. Implementation of Pilot Projects

It is important to have a pilot model that tests all the project fundamentals in a controlled environment, before full scale rollout. The Pilot should be established for those projects which have a potential for **scaling up and rolling out**. The pilot should be established in a limited geographical area so that it is easy to **evaluate the outcomes** of the pilot and plan a rollout strategy in a **minimal timeframe**.

Implementation of Pilot Projects would involve minimal initial investment and would give the project implementation team the required confidence required to work on large scale projects.

Given below is an implementation plan for scaling up a pilot project, transforming the ICT service delivery model from **informational to integrated, allowing for anytime-anywhere access of services, requiring Business Process Re-engineering** of all functions and services, **mandating a service level** for delivery and ensuring smooth transition through change management



As denoted by the Pilot implementation model, a Pilot Project would initially stem from a Proof of Concept, utilizing Standardized guidelines based on **interoperability and scalability**. This would then translate into a **Pilot Project** with the ability to deliver informational services over the counter. A rollout model which would involve extensive **Business Process Re-engineering** would allow the pilot to be scaled up as a large scale rollout model, using which Citizens may access Services in “**Anytime, Anywhere**” Mode in an integrated manner.

## V. Innovative Approach for Capacity Building

Currently, a majority of the human resources available with various Government Ministries are focused on carrying out functions related to domain areas or related to internal functions. As the Government moves towards an integrated, centralized E Government model, ministry personnel should not only be aware of ICT related interventions in their own respective domain areas, but also understand the technology and process related developments of other Ministries. E Government is not limited only to ICT but also encompasses other specialty learning areas including Program/Project Management, Business Process Re-engineering, Change Management, Financial Planning, etc. It is important to **equip personnel at various levels with the knowledge and understanding of these new concepts** so that they can appreciate the large scale transformation that needs to be undertaken.

Capacity building of people is complex in nature and required to be initiated at a very early stage, often before the start of any project. Further, capacity building for staff is required well beyond completion of the ICT phase, since this activity is pervasive in nature and has a direct bearing on the success of the project. It is important to devise innovative schemes for Capacity Building so the workforce is enthused to adopt new ideas. The traditional methods such as on **the job training and orientation methods** have had limited success. Therefore increasingly, new ideas such as **collaborating with Educational Institutions** to offer short term courses and running **“Train the Trainer”** Modules are being explored so that

there is more incentive for people to participate and learn. One of the other effective means has been to induct resources from the private sector who bring in the requisite expertise and contracting them on a time and material basis rather than for the project-duration. This gives them a permanence and stability and allows for transfer of skills and knowledge to the existing work force.

**It is recommended that the State Personnel Service of the Kyrgyz Republic** may be entrusted with the responsibility of exploring various ways through which Capacity Building may be propagated across all Ministries.



## VI. Alignment of Stakeholders Interests

There are various stakeholders who need to work in a collaborative and consultative manner for the conceptualization and implementation of e Government in the Kyrgyz Republic. These include the Executive Authority of the Government, Government Agencies and Ministries, Donor Community, Private Sector, Civil Society and most importantly, the Citizens of the country. When E Government is implemented using a de-centralized approach, it is **impossible to align the interests of various stakeholder groups for achievement of common objectives**. Projects and initiatives are encouraged based on limited needs and requirements and benefits do not accrue to the Citizens. To avoid this situation, **it is very important to devise a framework for engagement with various stakeholders and seek feedback from citizens about their expectations**. Civil Society must be encouraged to play a more pro-active role in **mobilizing public opinion** and **representing citizen groups** on important issues.



Thus, it is important to ensure that all stakeholders are regularly apprised of all developments on a regular basis. The National Council for ICT may provide the necessary directive on creation of a regular forum for these kinds of interactions.

## VII. Funding Requirement for ICT Projects

It is apparent that different Ministries face funding challenges during various stages of project implementation. In the beginning it is important to **understand the funding requirements for various projects and to ascertain the quantum of funds required during different stages**. It may be a good idea to have a **centralized pool** wherein all funds related to e Governance and ICT may be parked and mobilized towards specific activities being undertaken by different Ministries, upon the directive of the competent authority. Since it is envisaged that there would be better coordination between different Donor agencies, donors may also given their inputs on how the allocated funds may be effectively utilized by projects. At the same time, Donors should encourage Ministries to **develop financial models that would ensure financial self sustainability** over a period of time. This could be done through levying a transaction/user charge for availing of services of building a Public Private Partnership Model wherein a Service Provider is responsible for a setting up an infrastructure and the partnership is based on a revenue-sharing model. Several well-established transaction models exist for exploring financial sustainability; however various agencies should be willing to adopt the same.



## XI. Annexure

## Annexure 1 - Questionnaire

## 1. Respondent Details

Organization/ Department	
Name	
Designation	
Country (If applicable)	
Mailing Address	
Telephone/ Fax	
Email	

## 2. Project Details

1. What is the Objective of the Project? (Please also specify the intended key beneficiaries )

2. What was the requirement for this Project? (Please mention clearly what was the method adopted for conceptualization of the project)

**3. Please provide a brief description of the project? (Include list of stakeholders)**

**4. Please mention all the project achievements till date**

**5. Please detail the total funds estimated for implementation and the actual funds utilized till date in US Dollars \$ . (Also mention the source of funding for the project)**

**Annexure 2 – Project Template (to be filled on the basis of questionnaires)**

<p>1. &lt;Name of Ministry (Project Name)&gt;                  &lt;Website link&gt;</p>	<p>&lt;Snapshot of website&gt;</p>
<p>Objective</p>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p>Requirement</p>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
<p>Description</p>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<p>Achievements</p>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>

## Annexure 3 – Project Evaluation Framework (For carrying-out Project-wise Assessment)

S. No.	Ministry/ Department	Name of Project/ Initiative	Type	Project Phase	Sophistication Level	Implementation Team	Access Point	Funding Mechanism	Linkages with Projects
1									
2									
3									
4									
5									

## &lt;Options for each parameter&gt;

Type	Project Phase	Sophistication Level	Implementation Team	Access Point	Funding Mechanism
G2C	Concept	Informational	In-house	Govt. Office	Govt. Funding
G2B	Pilot	Interactive (Forms Available)	Private Agency	Portal	Grants
G2G	Phase I	Submission	Govt. Agency	Kiosk	Loans
	Rollout Underway	Transactional	PPP	Mobile	
	Completed			Other	

