

AFGHANISTAN
ELECTRONIC GOVERNMENT PROCUREMENT
READINESS ASSESSMENT & ROADMAP

June 2007

Procurement Services Unit
South Asia Region



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ABBREVIATIONS AND ACRONYMS

ADB	Afghan Builders Association
AICC	Afghanistan International Chamber of Commerce
ARDS	Afghanistan Reconstruction and Development Services
BPR	Business Process Review
GoA	Government of Afghanistan
MoF	Ministry of Finance
PMIS	Procurement Monitoring and Information System
PPU	Procurement Policy Unit
PTAC	Procurement Technical Assistance Center
SLA	Service Level Agreement
SME	Small and Medium-Sized Enterprises
UNCITRAL	United Nations Commission on International Trade Law
UNSPSC	Universal Standard Products & Services Classification
WB	World Bank

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PREFACE

Date and Basis of Report

This report details the findings, conclusions and recommendations of a World Bank consultant that visited Kabul, Afghanistan, during February and March 2007, in order to prepare an electronic Government Procurement (e-GP) Readiness Assessment and Roadmap. It was prepared by the World Bank for Afghanistan's Ministry of Finance under the funding of Japan Consultancy Trust Fund. The contributing reports on e-GP Readiness and the Roadmap were prepared by Nippon Koei Co Ltd and International Governance Solutions.

The readiness assessment and roadmap for implementation are the first two components of the E-GP Assessment and Implementation Project, which is part of a wider ongoing program for procurement capacity building supported by the World Bank (WB) and the Government of Afghanistan (GoA). It is also a continuation of the GoA's program of public procurement reform that has seen the introduction of a new procurement law, a new vision, and the beginnings of an extended training program.

The report will be disseminated to the stakeholders through a workshop, planned for July 2007. The workshop will discuss the challenges in implementation of an e-GP strategy both in terms of its components as well as the transition path to implementation.

Acknowledgements

Thanks are given to individuals from public and private sector organizations who made their time and expertise available for the assessment and discussion meetings. Special thanks is also given to Alex Bertram, who followed through with interviews in the following organisations under difficult circumstances.

1. Procurement Policy Unit, Ministry of Finance
2. Afghanistan Reconstruction and Development Services
3. Afghanistan National Development Strategy
4. Afghan Builders Association
5. Afghan International Chamber of Commerce
6. Procurement Technical Assistance Centre

EXECUTIVE SUMMARY

Background

The overriding objective of a national public procurement system is to deliver efficiency and value for money in the use of public funds, while adhering to fundamental principles of non-discrimination, equal treatment, and transparency. Procurement is therefore at the core of the Public Finance Management (PFM) system and contributes greatly to several of its objectives, including efficiency, transparency, and accountability. In respect of public procurement, the 2005 review of Afghanistan's PFM system identified a weak legal framework, lack of ownership, lack of capacity and the lack of a monitoring mechanism as the key issues in the area of procurement. Since then, following the recommendations of the PFM review report, the country has made substantial progress in improving its public procurement environment. The current state of development of public procurement in Afghanistan shows that –

- a new Public Procurement Law has been enacted;
- a Procurement Policy Unit has been established and is now functional;
- detail procurement regulations, in compliance with the Procurement Law, have been prepared;
- an appeal mechanism is in place; and
- implementation of a large scale procurement capacity-building program for both public and private sectors has already begun.

While developments in the area of public procurement continue, it is important for the GoA to think about how and when to utilize the possibilities offered by Electronic Government Procurement (e-GP) now, while it is in the process of creating its new procurement system, rather than sometime in the future when practices and behaviors have already been established and become entrenched.

The purpose of this Report is to provide a Roadmap which sets out the incremental steps which may be taken to introduce e-GP tools according to the speed and development of the reform agenda.

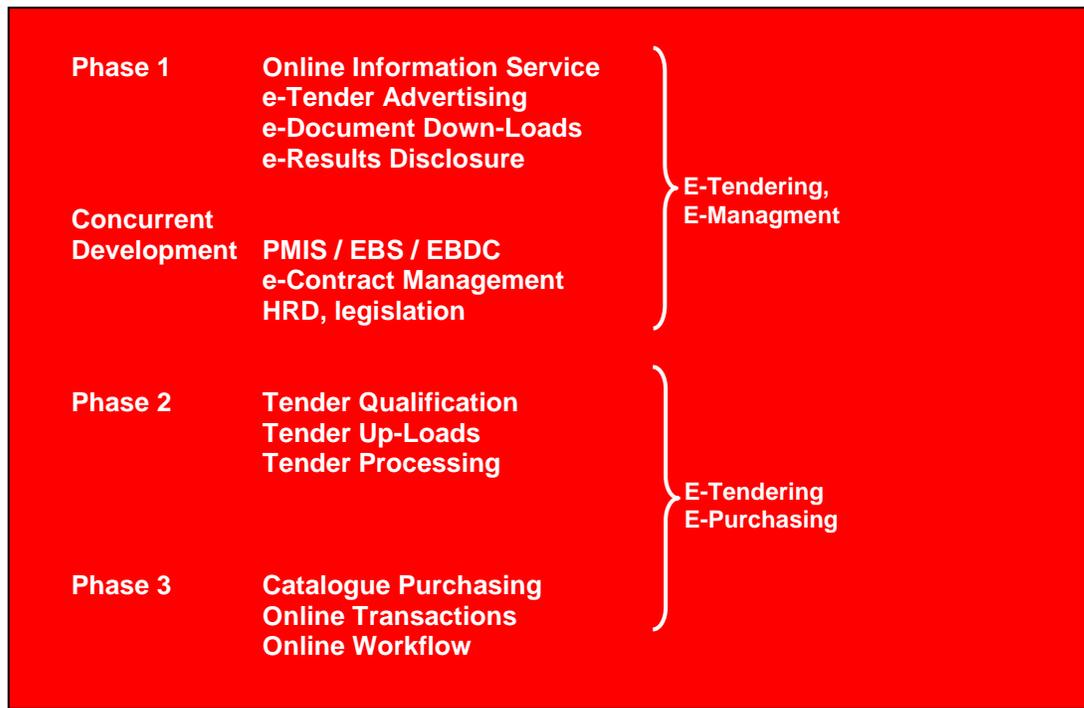
Rationale

E-GP is the application of an efficient high-quality management framework to public sector procurement, facilitated through online information and processes. The rationale for e-GP is established in terms of improved transparency and efficiency of public procurement as well as the broader agenda of driving the take-up of information technology in governments (e-government) and industry in pursuit of the well established productivity gains associated with this.

It is important to appreciate the role of e-GP in relation to the reform of public procurement. There are many efforts underway in this region as well as in other regions worldwide to promote the reform of public procurement. E-GP does not render these efforts redundant –

rather, the introduction of e-GP tools complements and strengthens these efforts and also is dependent upon them. Adoption of e-GP does not mean immediate replacement of old systems, such as paper-bidding, and switching to a full-fledged e-tendering system. It is undertaken as a phased process.

E-GP Implementation Phases



This order of the e-GP implementation phase is consistent with experiences from many other countries with a number of different approaches and models.

International experience suggests that successful e-GP implementation serves as a vehicle to drive procurement reforms further and more comprehensively and yield sustainable short and long term benefits to the government. These include improved efficiency in government spending, improved governance and through this public confidence in government spending leading to better public policy development and overall economic growth. Specific benefits include shorter procurement cycles, simplification of processes, lower transaction costs and lower prices. In the case of efficiency for small value acquisitions it has often been observed that the cost of the process can exceed the value of the acquisition itself. Typically, efficiency savings in terms of transaction costs for small value purchases that have been attributed to e-GP mechanisms (such as e-purchasing) are of the order of 10-20% or sometimes higher. For high value purchases, e-GP also is credited with delivering significant savings and is achieved through its capacity to increase competition. E-GP usually does not displace qualified procurement officials but does away with many of the more routine administrative processes as well as greatly enhancing transparency and management information and thereby the prospects for stronger governance of the process.

A key feature of an effective public procurement system is *accountability*, and accountability is driven by two ingredients – the probability of discovery and the consequences of the

discovery of malpractice and negligence. These two ingredients in turn require *transparency*, and transparency is substantially a function of access to and analysis of *information*. This is the role that technology facilitates and that in practical reality cannot be delivered without technology, any more than we can conceive of a modern financial management information system existing without modern technology – there is too much information and data that in a paper environment is too costly to access and analyze in any regular and systematic fashion. The application of information technology greatly reduces the cost of access and analysis of information and thereby enhances transparency to levels that were formerly impractical.

The country's Procurement Law already provides reference to the use of information technology in the process of procurement. In order to assist the GoA further in exploring the opportunity of adopting e-GP in Afghanistan, this assessment was carried out by the Bank with the objectives to (i) determine the level of country's e-GP readiness to make a transition to e-GP in a sustainable manner, and (ii) develop an 'e-GP strategy and implementation roadmap' for the strategic implementation of e-GP in Afghanistan recognising the risks associated with the level of Government leadership, technological capacity, organisation and expertise within the public and private sectors in the country.

The assessment was carried out following the MDB e-GP Readiness Assessment Guidelines, and primarily looked into the following strategic foundations – institutional capacity, governance, business functionality and standards, application of technology and private sector involvement.

Readiness Assessment

The assessment focuses on the degree of readiness of the Government of Afghanistan's (GoA's) current public procurement environment for making a transition from traditional paper-based, manual methods of procurement transaction processing and communication to electronic government procurement (e-GP). A narrow but strategic range of public and private sector organizations involved in a range of functions that relate to public procurement, provided advice or comment on the degree of readiness of eight key components related to e-GP: government leadership, human resource planning, procurement planning and management, procurement policy, legislation and regulation, Internet and electronic infrastructure, government technology capability, private sector integration, and current e-GP systems and initiatives.

The assessment identified several factors that are favourable for the implementation of e-GP in Afghanistan at this time:

- There is growing significant political support for the strengthening of procurement in Afghanistan
- There is some central procurement authority and policy institutions that could take the lead in this area
- There is a significant training programme underway for procurement officials.
- Common procurement procedures and policies apply across government agencies as mandated centrally by the Ministry of Finance.
- There are no significant pre-existing investments in e-GP systems in other government agencies.

- Afghanistan is becoming more prepared for the greater introduction of technology into public administration and service delivery, albeit unevenly between ministries.
- There is some support with few obstacles for procurement modernization from the business sector and the community.

There are clearly also major issues for e-GP and procurement reform in Afghanistan to confront – in particular:

- There is a low level of experience of e-government development or capacity in the public sector.
- There is a generally low level of e-literacy in the government, which is dominated by fragmented management practices.
- E-Procurement is perceived as a technology rather than a procurement initiative.
- Specific e-procurement legislation and regulations do not yet exist, although some enabling provisions are provided for in the Procurement Law.
- The current concentration of trained officials in ARDS-PU appears to have the effect of fragmenting the limited expertise available and undermining the potential for leadership and skills transfer.
- Procurement policy is not linked to policies on e-Commerce, e-Government or industry development.
- E-commerce is not widely practiced in the business sector.
- The weakness of computer and Internet infrastructure is exacerbated by power shortages, and a government-wide enterprise architecture does not exist.
- Some government ministries and departments are connected to the Internet, and have their own websites, but there is no central procurement portal.
- The government has a major shortage of IT professionals.
- There is insufficient capability to support e-GP from the Afghanistan business sector.

The assessment makes the following key recommendations in regard to the phased implementation of e-GP in the future.

1. An overall IT strategy should be developed focusing increased levels of computerization and e-literacy. The issue of weak internet infrastructure and power supply should be considered with priority in developing the IT strategy.
2. The Government needs to mandate a whole-of-government enterprise architecture for all e-government developments including e-GP.
3. A lead agency should be considered in driving the agenda of e-GP. In the context of Afghanistan, the PPU should be considered in this role with the capacity to mandate a national framework for e-GP.
4. The current procurement reform program needs to be consolidated to incorporate the e-GP aspects as per the roadmap indicated in this report. The training activities under the procurement reform program should also incorporate e-GP at the outset.
5. Develop a schedule for phased developments of the e-GP features presented in this report. Given the current level of readiness of the country, the following e-GP

- features can be readily implemented – procurement information services, tender advertising, document down-loads, results disclosure. The ARDS procurement website that is currently in operation can be developed to a one-stop procurement portal to introduce the above e-GP services.
6. Although the country Procurement Law provides reference to the use of information technology in the process of procurement, e-signature and e-document legislation could be brought forward to strengthen certainty.
 7. More effective consultative mechanisms need to be developed between the government and the private sector.

Roadmap

There is currently a basic e-Government Procurement website effectively operational in ARDS Procurement Unit (ARDS-PU). ARDS-PU is a procurement facilitation unit catering to the needs of procuring entities under the national budget. It currently handles all procurement *referred* to it by procuring entities irrespective of the source of funds and the website caters to this. However, the rationale of the procurement reform process in Afghanistan is that responsibility for procurement will be re-assigned to the line Ministries once these have demonstrated sufficient capacity. Some are already able to conduct their own procurement and others soon will be thanks to the capacity development project which has just begun. The ‘catchment’ of the ARDS-PU website will thus diminish over time.

The level of readiness for e-GP in Afghanistan is low but nevertheless technology could be used to accelerate the upgrading of procurement capability and to drive several related agendas.

The major requirements are role redefinition for the appropriate lead agency to drive and sponsor this procurement reform. The preferred solution is for the Procurement Policy Unit (PPU) within the Ministry of Finance to be enhanced with adequate resources. It should also coordinate with the Ministry of Information and Communications Technology. Should Government find that the time is right to adopt e-GP, steps should be put in place to ensure that the PPU is resourced accordingly from the outset. To avoid duplication of effort and cost, management and development of the ARDS-PU website should be transferred to the PPU. The following analysis emphasises that e-procurement is not a separate agenda from procurement reform *per se* but instead forms an integral part of such reform and complements and strengthens that agenda.

The Roadmap sets out the features for a comprehensive e-GP service including e-Tendering, Workflow Management, Reporting, and a Procurement Information and Management System. These represent the full range of options but need not all be taken on board at the same time. They can be adopted as and when GoA is ready and able to implement and benefit from the introduction of such tools. The Roadmap is designed to form the basis of capacity building as well as operational structures for an operational system and its management counterparts. The Roadmap sets out the issues and recommendations that relate to decision-making for implementing this agenda. The Table below outlines key recommendations made in this report in relation to the components underlying e-GP and puts them into a broad timetable. Some recommendations have been combined because they are strongly related to each other. The numbers are just to identify each recommendation in the Table and are not strictly

indicate the order in which things are done. Many of the recommendations for different components could be implemented simultaneously.

Summary of Implementation Steps

COMPONENT	No	Short Term (0-12 months)	Medium Term (12 – 24 months)	Longer Term (24 -48 months)
Preliminary Planning & Leadership	1.	Gain high level political support for implementing e-GP and role assignment to PPU		
	2.	Establish PPU role and resources (Implementation Team with recommended skills) and stakeholders. Conduct executive level training for the Team	Conduct manager and executive training in other lead agencies as implementation proceeds	
	3.	PPU Team to study Roadmap to understand implementation issues and identify preferred phases for e-GP – see discussion		
Human Resource Management	4.	Develop resource plan for implementation based on Roadmap.		
	5.	Establish base outcome measures based on existing performance indicators such as time for completion of bidding process, average number of bidders per advertised bidding opportunity etc..		Measure and report on outcomes over time
Initial Strategy	6.	Engage procurement, technical, workflow and information specialists to support implementation plan.		
	7.	Disseminate a final Implementation Plan and hold meetings and roundtables to ensure familiarity by all actors. Implementation to include parallel processes to ensure no exclusion of stakeholders in poor infrastructure areas.	Develop awareness package to promote e-GP to buyers and suppliers PPU to develop initial training for procurement managers and officers to support reforms	Implement change management strategy Review procurement staff positions/career Plan and deliver formal education
Policy	8.		Review scope and focus of procurement management policies and procedures to support procurement reform and direction consistent with the	

COMPONENT	No	Short Term (0-12 months)	Medium Term (12 – 24 months)	Longer Term (24 -48 months)
			inclusion of technology	
	9.		Develop a policy timetable to mandate basic online processes such as advertising of tenders, consistent with ministry online capability	
Legislation	10.	Implement procurement legislation relevant to e-GP.	Draft e-signature and e-document legislation that does not limit authentication to digital signatures	Develop standard regulatory compliance reporting from e-PMIS
Private Sector Integration	11.	Develop and deliver Business Activation Strategy	Establish formal consultation process with private sector	Ongoing
Infrastructure & Standards	12.	Implementation strategy to ensure initial functionality is consistent with low power and low bandwidth technology. Implementation to also interface with common browsers and open standards	Coordinate e-GP technology with e-government policy on connectivity, standards and infrastructure Develop government agency / telecentre outlet model	Ensure ongoing development is compliant with government architecture
System Development	13.		Engage Risk Mgt Consultant and Technical consultant	
e-Tendering	14.	Specify language standards to apply to document exchange and publication	Develop business model/costs for system development, operation and risk management	
	15.	Activate e-Tendering initially using the phases set out in Roadmap, review functionality of existing system with that outlined in this report. Initial phases to focus on advertising of rules, tenders and results of tender awards.	Develop and implement a single portal e-Tendering system on functions in report	Delay introducing e-tender lodgement pending development of e-signature regulations and security systems

COMPONENT	No	Short Term (0-12 months)	Medium Term (12 – 24 months)	Longer Term (24 -48 months)
	16.		Agencies to align their internal systems with the use of a common e-tendering system as in Roadmap	Agencies to re-align internal PMIS to allow consistent reporting and performance assessments across government
	17.	Ensure compatibility between system requirements and low power capabilities of rural tele-centres.	Review feedback from buyers and suppliers	
e-PMIS	18.	Establish standard documentation to support e-Tendering	Identify work flow requirements for e-PMIS and develop standard data templates	Match agency process & rules to e-PMIS and develop standardised procurement management and audit reporting
e-Purchasing	19.			Consider after four years
e-Reverse Auctioning	20.			Consider after five years

The e-GP Starting Point in Afghanistan ---- e-tendering

Given the current level of readiness of Afghanistan, it is recommended that the first developments of e-GP be around e-tendering – phase 1 activities. E-tendering is relatively easy to start for both government and suppliers, low cost to implement and maintain, and provides significant value to businesses, enhances efficiency and strengthens management. Functionality can be increased incrementally; however the following activities could be initiated immediately:

- Transfer to the PPU and develop the ARDS procurement site into central procurement portal for the government.
- All tendering opportunities and award outcomes published on this single internet site.
- The public procurement law, rules of procedures, appeal mechanism, tax regulations etc. and all other relevant information made available on the central procurement portal.
- Online registration for existing and potential suppliers.
- Online search tools for existing and potential suppliers.

- Open access via the internet to all original bidding documents.
- Customization options for agencies.
- Development of a Procurement Management Information System (PMIS) to standardize procurement data and information recording and management across ministries.

These are simple and easily understood steps that can be implemented at low cost.

ELECTRONIC GOVERNMENT PROCUREMENT READINESS & ROADMAP

1 INTRODUCTION

1.1 What is E-GP?

Electronic Government Procurement (e-GP) is the application of an efficient high-quality management framework to public sector procurement, facilitated through online information and processes. E-GP has the potential to strengthen the accountability, transparency, efficiency and effectiveness of this sensitive high-value government function.

For most jurisdictions, it represents both an opportunity for procurement reform and for changing the way procurement is conducted. The development of e-GP depends more on getting the policy, strategic planning, management and governance components in place, rather than just the actual application of the technology.

E-GP is usually conducted through a common website that allows for the registration of suppliers and buyers and for public access to procurement policy, guidelines, procurement opportunities, process stages, and procurement outcomes (who won the contracts, cost, duration). The procurement systems on the website can be accessed both by buyers and suppliers and allow the procurement process to be conducted online. They can cover

- e-Tendering: selection of suppliers for works, goods and services through a bidding process;
- e-Purchasing: the purchasing of high-volume, low-value goods such as stationery, furniture and tools on the basis of a price quote;
- e-Contract Management: the development and management of contracts to assist managers to provide good quality documentation, and to manage more effectively the quality of tendering and purchasing outcomes, their timelines and costs.

E-tendering through a central website is the most conspicuous part of e-GP but on its own is superficial. A procurement website is just a website. It has some good governance spin-offs in terms of transparency and supplier efficiency but does not deliver the most significant reforms of the management or governance of procurement unless it is integrated into the management, workflow and reporting systems of government, specified in Part 4 of this report (Roadmap Specifications).

The further development of the website, currently managed by ARDS-PU, for Afghanistan may have benefits for capacity building but only if the developments are conducted in parallel. This requires an e-tendering system, Electronic Document Construction and other recording and reporting capabilities if the true potential of e-GP is to be realized.

A more complete description of e-GP is provided in Annex 1.

1.2 Benefits

E-GP has the potential to greatly enhance the governance of a large proportion of government expenditure each year. E-GP can increase the efficiency of the Government of Afghanistan's (GoA) procurement administration as well as reduce the cost of government supply. Experience with e-GP in other countries shows that the resulting savings can amount to 15 percent or even more. In the case of Afghanistan where the public sector is small these savings would be relatively modest but can be expected to grow as the role of the state

matures. Typically for a more established public sector the value of these savings will be of the order of one percent of GDP for every 5 percent savings in public procurement.

The experience of many countries is that traditional public procurement frameworks need to be able to improve their performance in terms of governance, efficiency, and value-for-money and also to become more transparent. There is also often an economic development agenda associated with public procurement. However, it is clear that traditional paper-based procurement systems are often limited in their ability to achieve these outcomes even when they are well designed and properly applied.

Reasons for this include traditional administrative processes that:

- do not provide the market with full information concerning total public-sector demand, so that opportunities for bidders are missed;
- do not provide government with full information on the market, which reduces the government's choice and ability to attract competition
- often lack the transparency and accountability standards required for good governance, again reducing choice and competition, and
- are less efficient than electronic equivalents

As a result, opportunities to do business with the public sector are limited by the paper-based tools available and the existence or perception of privileged access and the exclusion of other potential suppliers becomes inevitable.

Traditional procedures can thus have the effect of limiting the scope for competition and often require strict internal control and approval procedures that make the procurement process less efficient. When this occurs, delivery times are longer and processing costs are higher, both for the Government and for suppliers. In addition, the amount of time allowed for the execution of some types of contracts may become excessive because it is not feasible to process a series of contracts for more reasonable time periods. Furthermore, a 'compliance' oriented approach to traditional procurement rules tends to erode the skill levels of procurement practitioners, making it difficult to introduce professionalism into this area of public administration

New technology has the capacity to substantially improve the governance and efficiency of public procurement by removing the need for some of these procedural impediments and by speeding up communications and processes. There is also a modernization agenda for procurement through the use of technology, but the management and institutional framework for reform is not yet in place in Afghanistan. And while there are indications that e-GP is regarded by some in Afghanistan primarily as a software program, the dominant lesson from international experience is that the application of technology alone does not represent reform and cannot succeed in addressing the issues without other changes to the procurement organization, processes and supporting expertise.

The transformations made possible by e-GP are not directly generated by the technology itself; they arise out of the institutional changes made possible by that technology. The transforming influences of technology are transmitted through well-designed policies and activities that make use of these new technologies to help modernize processes and policies. E-GP does not require that the public sector have high technological capability but it does promote technological capability in government. It is this transformation process that is the target of this strategic e-GP implementation roadmap for Afghanistan.

1.3 The E-GP Assessment and Implementation Initiative

After years of civil war, the Afghan government has almost no domestic revenues and no capacity to administer funds. Domestic revenues are among the lowest in the world (5 percent of GDP, US\$500M) and the country is highly dependent on foreign aid, a large share of which is spent directly by donors and NGOs.

In an attempt to build capacity, the WB and other donors have channeled some part of the funds through the Government of Afghanistan in the form of a trust fund (ARTF), but put in place an emergency procurement mechanism to assure that the funds are spent to international standards. An increasing share of foreign aid is being channeled through the government, with procurement assistance currently provided by a foreign procurement agent, managed by ARDS.

At the present time, comparatively little public procurement is conducted by government organizations themselves; where capacity is lacking, as it is in many procuring entities, major acquisitions such as works that are donor funded are facilitated by ARDS, using the services of the donor-funded procurement agent. On the other hand there are efforts to modernize the administration of the state including the management of procurement through capacity building and a corresponding transfer of responsibilities from external to local authorities, i.e. from the procurement agent to the government. There are also a significant number of contractors who are both connected and computer-literate.

There is therefore potentially a significant role for e-GP in Afghanistan and the e-GP Assessment and Implementation Initiative is part of ongoing work funded by the World Bank (WB) and the GoA to continue building procurement capacity in Afghanistan's public sector. E-GP offers potential to accelerate the capacity-building process and the normalization of procurement activity in Afghanistan, along with advantages to the management of public procurement and to wider administration of the state, while promoting e-literacy in the public and private sectors.

The readiness assessment and roadmap in this report are the first two components of the e-GP Assessment and Implementation Initiative. The report will be disseminated to the stakeholders through a workshop, planned for July 2007. The workshop will discuss the challenges in implementation of an e-GP strategy both in terms of its components as well as the transition path to implementation.

Although the conceptual framework that guides the initiative would normally require an agreed vision and goals for the procurement change process prior to definition of a roadmap (see Figure 1), this readiness review was undertaken even though the vision and goals have not been formally established in a specific policy document in Afghanistan. Considerations of experience in other countries and insights from the readiness review and other discussions served to identify the key issues that have guided the establishment of the framework for the roadmap in this report.

Figure 1. Planning Processes



2. READINESS ASSESSMENT

2.1 Summary of Methodology

Readiness indicators can provide signposts for what path may be preferred for the implementation of e-GP. This information was provided through meetings with some key stakeholders and a review of other reports relevant to public procurement. The approach was simplified slightly to match the circumstances in Afghanistan, especially the difficulty in bringing respondents together or for them to undertake an initial reading of the survey.

Usually the e-GP Assessment is distributed to respondents to complete based on their areas of expertise and this is followed up by a group discussion with the respondents. In this case it was decided to interview respondents with a copy of the assessment available. This was seen to be a more appropriate approach given the time constraints and the unfamiliarity of respondents with e-GP.

For each component discussed, examples of best practice were given and respondents were asked to comment on the extent to which the subcomponents were both in place and supported. They were also required to demonstrate evidence for each comment made. Lastly, a readiness level, using the scale shown in Table 1 was assigned to each component based on the aggregate responses received. Descriptions of best practice for each component are outlined in Annex 1. The methodology is further explained in Annex 2.

Table 1. Component Readiness Levels

Level	Description
1	No evidence that the component is in place and no evidence it is supported.
2	Little evidence that the component is in place and little or no evidence it is supported.
3	Some evidence that the component is in place and some evidence it is supported.
4	Adequate evidence that the component is in place and adequate evidence it is supported.

A range of respondents from government as well as from the business sector were approached who are informed stakeholders in the government procurement environment. Six

public and private sector organizations, involved in a range of functions that relate to public procurement, provided advice or comment on the degree of readiness of eight key factors related to e-GP. These stakeholders represented a relatively narrow but strategic band of authorities:

- the Procurement Policy Unit (PPU), part of the Ministry of Finance,
- Afghanistan Reconstruction and Development Services (ARDS)
- Afghanistan National Development Strategy (ANDS)
- The Afghan Builders Association (ABA),
- Afghan International Chamber of Commerce (AICC) , and
- AICC's Procurement Technical Assistance Centre (PTAC).

In the public sector, the PPU is now responsible for the legal framework and for procurement policy (formerly, the functions were exercised directly by the Ministries of Finance and Planning). The PPU is also now responsible for procurement monitoring. ARDS-PU is a Procurement Facilitation Unit to support procurements of all procuring entities referred to it (irrespective of source of funds) and relies, for this purpose, on the services of an international procurement agent.

In the private sector, ABA is a fast-growing industry body for the construction sector, but its leadership has had little experience with government procurement, preferring to tender directly for donor or NGO tenders. They consider government contracts to be “a waste of time” citing the multiple levels of bureaucracy (at the ministry, then ARDS, and finally the Donor) and frequent late payments. The AICC provided more complete information on the private's sector experience with government procurement. The AICC has established a separate team, the PTAC, which works closely with ARDS and with their member companies.

Some stakeholders could not be included. The Ministry of Rural Rehabilitation and Development (MRRD) is the largest buyer, but nearly all public works are funded by the external development budget under ARTF. Meeting MRRD proved impossible.

2.2 Summary of Component Assessments

The level of readiness for e-GP in Afghanistan is low but nevertheless technology could be used to accelerate the upgrading of procurement capability as well as drive several related agendas. The readiness assessment has rated the key components for e-GP implementation as shown in Table 2.

2.3 Observed Strengths and Weaknesses

There are several factors that are favourable for the implementation of e-GP in Afghanistan at this time:

- There is growing significant political support for the strengthening of procurement in Afghanistan
- There is some central procurement authority and policy institutions that could take the lead in this area
- There is a significant training programme underway for procurement officials.

- Common procurement procedures and policies apply across government agencies as mandated centrally by the Ministry of Finance.
- There are no significant pre-existing investments in e-GP systems in other government agencies.
- Afghanistan is becoming more prepared for the greater introduction of technology into public administration and service delivery, albeit unevenly between ministries.
- There is some support with few obstacles for procurement modernization from the business sector and the community.

Table 2. Observed Levels of Readiness for e-Government Procurement

No.	Component	Level of Readiness (March 2007)
1	Government Leadership	2
2	Human Resource Planning	1
3	Planning & Management	2
4	Policy	1
5	Legislation & Regulation	2
6	Infrastructure & Web Services	2
7	Technological Capability	1
8	Private Sector Integration	1
9	Existing e-GP Developments	2

There are clearly also major issues for e-GP and procurement reform in Afghanistan to confront – in particular:

- There is a low level of experience of e-government development or capacity in the public sector.
- There is a generally low level of e-literacy in the government, which is dominated by fragmented management practices.
- E-Procurement is perceived as a technology rather than a procurement initiative.
- E-procurement legislation and regulations do not yet exist, although some provision is made in the Procurement Law.
- The current concentration of trained officials in ARDS-PU appears to have the effect of fragmenting the limited expertise available and undermining the potential for leadership and skills transfer.
- Procurement policy is not linked to policies on e-Commerce, e-Government or industry development.
- E-commerce is not widely practiced in the business sector.
- The weakness of computer and Internet infrastructure is exacerbated by power shortages, and a government-wide enterprise architecture does not exist.
- Some government ministries and departments are connected to the Internet, and have their own websites, but there is no government intranet.
- The government has a major shortage of IT professionals.

- Formalised training activities for private suppliers to participate in public sector procurement capacity building have not yet begun in earnest, even though some initiatives have taken place.
- There is insufficient capability to support e-GP from the Afghanistan business sector.

Overall, the most significant factors confronting any implementation of e-GP in Afghanistan relate to the procurement and technical capabilities of the civil service and government leadership. E-procurement currently lacks a high-level sponsor in Government and does not have a critical mass of resources to drive the associated reforms, or the implementation outcomes that would arise from this initiative. The range of people with expertise in strategic procurement and implementation available to the Government is limited.

On the other hand the Government has sponsored a number of projects to reform public procurement. These include the development of a new public procurement Act 2005 and procurement training. This training could be used to facilitate early introduction of technology into this area. Detailed 'Rules and Procedures' have been in place since April 2007 and there needs to be comprehensive development of standard documents and contract templates.

2.4 Key Conclusions

The principal conclusions based on the assessment of the key components are summarized below. The full readiness assessment findings are provided in Annex 2.

Government Leadership

There is a lead agency in place but there is little expertise in the agencies against which this leadership can be usefully applied. The lead agency is primarily a centre of excellence from which other agencies are likely to receive training and skilled personnel over time. The new procurement legislation has been well received.

Human Resource Planning

Overall, there are significant weaknesses in the level of human resource management to support current and future reforms in procurement. There are efforts to address this but these will take several years to produce results and appear not to be technologically oriented.

Planning and Management

The PPU currently has limited resources and actual responsibilities and would find it difficult to take on the wider role and influence to be a lead agency for procurement reform and the transition to e-GP. The availability of resources needs to be matched to the level of progress to be achieved.

Policy, Legislation and Regulation

If e-GP is to be implemented, then policy to define direction, and address issues such as assisting supplier uptake, ensuring common standards, and achieving effective procurement outcomes will need to be considered. Without policy (and a plan) the implementation of procurement reform and e-GP could become a series of disconnected activities with few benefits being achieved. The ICT policy is in its early stages of implementation.

Infrastructure and Web Services

There are many policy, technical and business issues to be addressed before a national infrastructure is achieved that is integrated, reliable, affordable, has sufficient speed, and is widely accessible. The eventual involvement of small contractors in e-GP will be important to its success. There are divergent views as to when Afghanistan would have the

infrastructure to proceed with e-Procurement systems—it could be from one year to four years from now—and much uncertainty associated with many issues related to this component.

Technological Capability

There is no evidence that there is adequate understanding of the essential elements of computerization, and e-literacy is at best modest. The lack of understanding at this level puts at risk all projects to enhance computerization especially under circumstances where there is no enterprise architecture to guide it and little appreciation of matters such as digital security management.

Private Sector Integration

The private sector is relatively uninformed on many aspects of government procurement and this has led to poor perceptions of the process and what is actually available. The private sector's confidence in the government process is variable but generally low, with little conviction in the reform processes although satisfaction with the recent legislative changes. The private sector sees the Government as willing to make change but having limited skills or resources to carry through with its role in managing and regulating public procurement.

Existing E-GP Developments

The current system is in an early first stage of development but could provide a basis for future e-procurement system development and implementation. The relationship between potential new e-procurement systems and the backend management systems needs to be understood so that effective interoperability can be achieved. Basic problems of infrastructure including power supplies, and the relatively low levels of computerisation in the public and private sector and low levels of e-literacy mean that system enhancement needs to be very much on a phased basis and integrated with training. However in order to build confidence in the private sector, credible secure tender lodgement should be developed at an early stage.

Respondent's Views on Priorities for Change

Respondents said that the key constraints to procurement reform were lack of capacity among civil servants, slow adoption of computer-based processes, and lack of a competitive domestic market to supply government purchasing requirements. They recommended five key priorities for change:

- Resource and consolidate the procurement reforms already developed. Ensure they are managed and monitored to gain benefits, and where it may not deliver, justifiable reasons are to be made public.
- Improve the consultation and participation process between the government and the private sector.
- Provide comprehensive training for procurement managers and staff.
- Provide awareness programs for suppliers.
- Increase levels of computerization and e-literacy.

3. ROADMAP FRAMEWORK AND IMPLEMENTATION

The roadmap presented here seeks to build understanding as well as an implementation program. For example, it is important to understand that e-GP implementation is not likely to proceed on a distributed basis without a lead agency. The view of e-GP as a “black box”

installation that only needs to be plugged in and turned on, is a barrier to understanding and disempowers those who would use it. With new understanding, new roles emerge that replace obsolete processes, and new capabilities and empowerment rather than disempowerment. The implementation strategy embodied in the roadmap seeks to recognize the status of public procurement in Afghanistan, foster the necessary understanding, and address decisions about goals, strategic planning, private sector participation and other issues, as well as the technological and systems specifications.

3.1 E-GP Objectives for Afghanistan

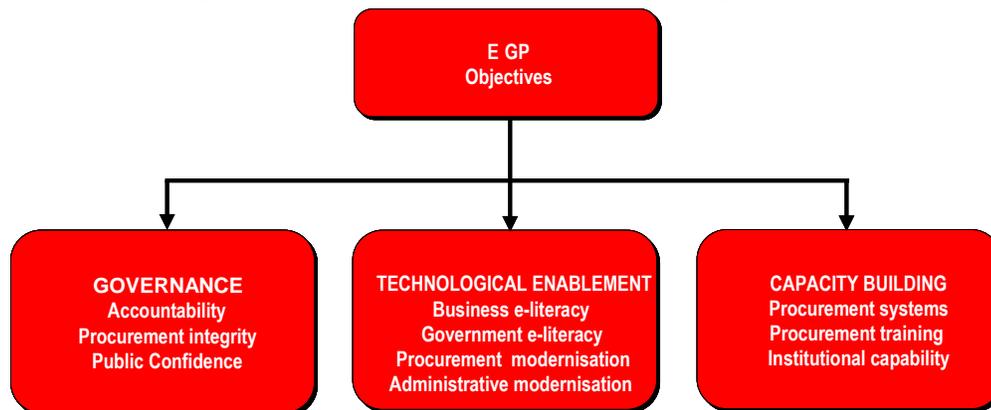
All roadmaps need an origin and a destination. A clear statement of the objectives of an e-GP program is an essential condition to developing this implementation roadmap. The starting point has already been described in the previous section on the readiness assessment.

The management of public procurement is measured, in most countries, in terms of:

- efficiency of public processes, effectiveness of outcomes, and public value for money;
- governance, accountability and professionalism, fairness and equity as measured by public and international confidence;
- business and economic development through efficiency, competition, opportunity and technology

These objectives are also proposed here for e-GP reform (see Figure 2).

Figure 2. Reform Objectives for E-GP in Afghanistan



The GoA may have tentatively and implicitly accepted the objectives of e-GP in terms of efficiency and governance but has not as yet recognized the objective of business and economic development as one of the goals of public procurement. Economic development is included as a goal here because there are aspects of e-GP that can be particularly beneficial for the wider promotion of economic productivity. Thus for example, well-designed e-GP is significant in driving the take-up of online technologies into both the public and private sectors, and the technological enablement of the private sector has been shown to be a strong contributor to national economic productivity. In the case of Afghanistan where there is minimal use of technology in public administration, these objectives can be varied.

The e-GP systems are appropriate for capacity building and oversight and equally for management of procurement. This means that e-GP can be deployed to accelerate capacity building, management modernization, and procurement reform as well as business enablement. It is **recommended** that these become the objectives for this program as set out in Figure 2.

It is **recommended** that the Afghanistan e-GP initiative formally adopt all three objectives in Figure 2 as the goals for e-GP. The three objectives are often interrelated and mutually reinforcing and can all be addressed for similar effort and cost as a more limited agenda.

It may seem that an efficiency agenda common to many other programs worldwide should also be included but since there are so few procurement professionals in the public sector in Afghanistan then this cannot reasonably be a priority and would be taken care of anyway in any sound transformation under e-GP. The concept of using e-GP to provide greater efficiencies can and will, however, be addressed in the capacity development program already underway. On the other hand transparency and governance are live objectives for public procurement today.

These objectives guide the development of the implementation roadmap and shape the specifications that follow. The issues are primarily about design, standards, and management rather than resources.

3.2 Procurement Management, Regulation and Policy

E-GP provides the potential for improved management information and performance. This potential will transform the management and policies around government procurement with new audit and compliance regimes. Improved management information about all aspects of procurement will allow management to re-examine its traditional supply practices and look at new procurement methods themselves.

E-GP provides the scope to address much of this modernization by providing much stronger information management to deliver transparency with streamlined processes. To allow this to occur, the procurement management rules and processes need to be designed within a modern technological context. This usually requires deep reform of these processes but in the case of Afghanistan where these management systems are often inadequate or still under development then an alternative path becomes an option.

It is therefore **recommended** that the reform and capacity-building activities for procurement in Afghanistan, in addition to the upgrade of the central procurement website, concurrently undertake the development of a Procurement Management Information System (PMIS) to standardize procurement data and information recording and management across ministries. This PMIS need not initially be in digital format but will be capable of digitization without further reform and will lay the foundation for comprehensive e-GP for the entire public procurement system. Where some ministries are able to adopt a digital format from the outset then this too should be accommodated and encouraged. The development of a PMIS will require the following:

- A review of the development of procurement rules and management processes to streamline them to be consistent with a modern electronic environment in order to allow consistent reporting, monitoring and audit as well as easy digitization. Examples include standardized forms, templates, standard data fields, and approvals processes in checkbox form. It is acknowledged that these streamlined processes cannot be digitized in most cases in the Afghanistan ministries but the procurement capacity building that is currently going on should be adopting these standardizations from the outset in order to avoid the need for further reforms at a later date. The PPU has the task in any event of standardizing reporting formats as required by the Law which will allow such a process to be streamlined. As ministries then become more capable their procurement management processes can become digitized and

automatically interoperate with the central procurement site (as specified elsewhere in this report, the central site should not be devolved into multiple ministry sites even in the long term).

- Accompanying and driving this PMIS development it is desirable that there be development of policies on data collection, reporting, and the mandatory use of the central site for defined processes and information transactions to which the current paper-based reporting mechanisms can be transferred and integrated.
- There also needs to be a drafting of the regulations subordinate to the procurement law that ensures compatibility with electronic processes. Some of these regulations can probably be drafted within the existing law, while others will also need to incorporate provision for electronic signatures and electronic documents under a new e-signature law. Much can be accomplished towards e-GP prior to passage of such new legislation.

3.2.1 E-Legislation

Downloading of electronic documents and uploading of electronic tenders from suppliers may require these e-documents and the electronic signatures attached to them to have legal status. These two simple requirements define the legislative requirements for e-procurement. There have been various evolutions of this legislation in other jurisdictions in parallel to the evolution of thought from UNCITRAL, which has now moved to a truly technologically neutral position on this issue. Draft legislation reflecting this most recent understanding is presented in Annex 3. An international consultant should be engaged to assist in drafting the regulations under this legislation.

It is a policy issue whether to require the application of digital signatures to tendering documents for them to be valid; some countries have not required this. It is **recommended** that, in the case of smaller value purchases, a regulatory or legislative approach is considered to allow electronic signatures rather than digital signatures, with correspondingly greater reliance on the due diligence phase of contract development. Use of electronic signatures would be more consistent with business practice, is less complicated and less expensive, and is common in other countries. For larger valued purchases with international tenderers and higher risks, correspondingly more stringent authentication may be preferred and digital certificates provide one answer.

New management policies will be required for the management and security of electronic records, the management and security of the online tender box, and the reliability and performance of the systems.

Recommendation: Procurement policies should be redefined to include not only management practices in the electronic environment but also to cover circumstances of

- inconsistency between electronic and hardcopy documentation,
- malfunction of government facilities,
- electronic tender opening protocols,
- electronic tender security,
- electronic contract development for template and document consistency, and
- business engagement

It is **recommended** that the PPU gain a full understanding of the issues that surround the use of digital signatures, including a careful consultation with the private sector, before any

attempt is made to implement these as part of the electronic tender submission process, and that consideration also be given to business solutions including electronic signatures for authentication. It is **recommended** that an international e-GP legal consultant be engaged to assist with the drafting of the regulations.

It is sometimes considered that the failure of legislation in some countries to give legal status to electronic or digital signatures or to electronic documents represents a roadblock to the early introduction of e-GP. This is usually not the case and many countries, both developed and developing, have embarked along this path ahead of such legislation. It needs to be recognised that in most cases an interpretation of existing procurement law allows the first stages of e-GP to proceed and is not relevant to some other stages. For example it is common for existing law to require that tenders be widely advertised and frequently internet publishing can be recognised as one means of achieving this. The processing of electronic documents in many governments has outpaced the legislation – for example most treasury departments have for years been using electronic processes even where such legislation is absent. It is frequently found that business practice is ahead of legislation.

The role of e-legislation for e-GP is to ensure that documents signed with some form of e-technology and then delivered electronically can have legal status in the case of dispute. Without this legislation these documents are not illegal but cannot be used as evidence in court hearings. For most purposes the only part of e-GP where this may become an issue is where there is electronic lodgement of tenders by bidders. This function is just one amongst many and there are many other developments under e-GP that can proceed without electronic lodgement of tenders as is discussed below.

3.3 Roadmap Implementation and Capacity

3.3.1 Leadership

The single most important factor for e-GP implementation is leadership. E-GP is most unlikely to be implemented successfully as an entirely devolved initiative or one that is facilitated as a second-level reform after traditional capacity building. Very little of e-GP implementation can take place via the acquisition of a software package. E-GP is the combination of skills, processes, rules, legislation, software and hardware. Just as in other administrative fields, the skill level requirements with e-GP are higher than for traditional procurement partly because the routine management processes are computerized. Just as in other parts of administration, computerization requires new standardizations and protocols and these cannot emerge or be implemented in a devolved environment. Leadership is central and if it does not exist, it needs to be created.

It is **recommended** that the PPU be the lead agency to take charge of this e-GP strategy, in particular capacity development, process specification, systems specification, and human resource development and reporting requirements, along with being responsible for specifying and compiling whole-of-government reporting. The technology department is not the appropriate choice for this e-GP role, which is primarily about procurement rather than technology. New management protocols and the application of e-GP need to be seen as part of procurement reform rather than as a technological reform, and they need to be driven from PPU as the central body responsible for procurement procedures, procurement capacity building and also procurement regulation.

It is further **recommended** that there should not be an implementation initiative for e-GP from outside this lead procurement agency.

The PPU would be responsible for e-GP specifically to ensure that it has policy authority across this area and to ensure that there is no separation between procurement and e-GP. This agency can only be successful if it has the capabilities, mandate and seniority, as well as the skills to perform these duties, so it will need to be skilled-up to undertake these responsibilities.

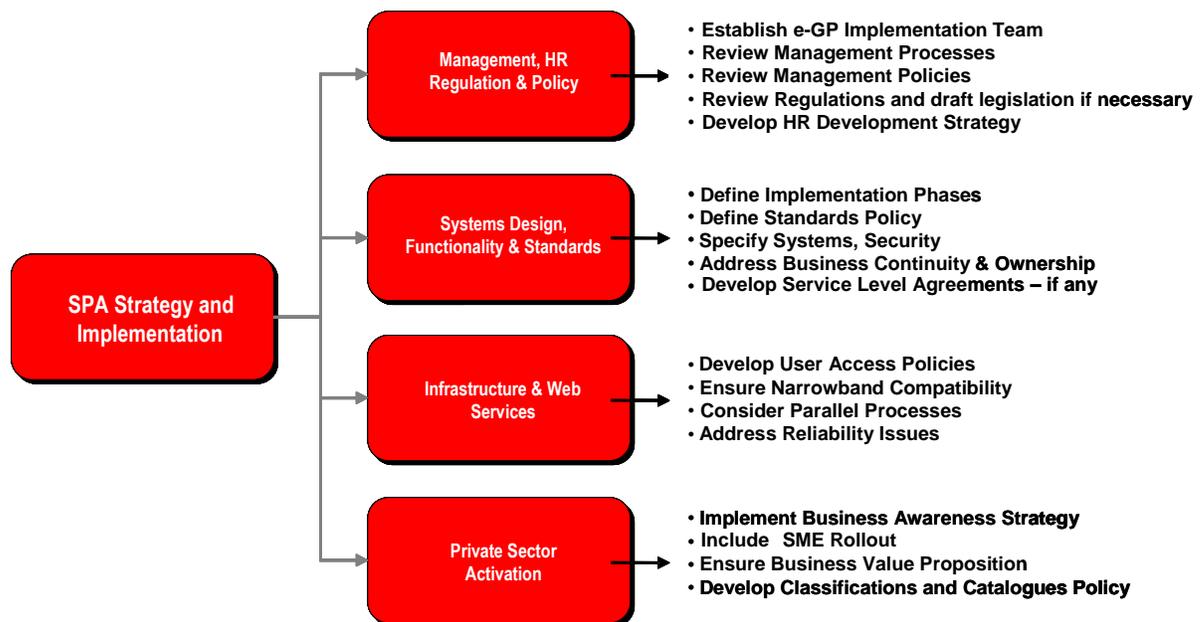
The PPU's authority should include a capacity to:

- mandate a national framework for e-GP including a single integrated system;
- mandate common system protocols, architecture and templates;
- arrange and engage service providers if necessary;
- establish e-GP whole-of-government policies including use of e-signatures;
- arrange industry briefings and an online service center

It is of basic importance that the PPU appreciate the potential of e-GP at the outset and recruit individuals into its structure who can understand and become champions of e-GP; without such staff at inception the PPU would then need to undertake an internal reform process of its own at a later date.

3.3.2 Strategy

The PPU needs to define an e-GP strategy. In doing this, it should not perceive that the e-GP agenda can be attended to once it has addressed other procurement reform issues, but rather that e-GP represents an important and essential instrument for procurement strengthening and reform. It is therefore **recommended** that the PPU adopt e-GP as a priority strategy in its new role despite lack of infrastructure, systems and expertise. It is **recommended** that the components of Figure 3 form the structure of this strategy. The figure identifies the implementation processes as being principally about management rather than technical issues. The roadmap adopted by the PPU should also recognize that e-GP reform is **an incremental process** and as such, it is a progressive implementation path, rather than a "big bang" or "plug and play" approach where changes are made all at once. It cannot be a software acquisition strategy if it is to drive significant change.

Figure 3. Components of an E-GP Implementation Roadmap

3.3.3 Outcomes

A critical issue in managing the development of GP and e-GP is to be able to measure the key outputs and outcomes that are planned to be delivered. The stated base outcomes of e-GP usually include improving the transparency, integrity, efficiency and effectiveness of the process, and raising participation by the private sector in public procurement. Base measures in relation to these outcomes need to be taken before the roadmap is fully implemented. The base measures of the current environment that are required could include:

- Average time taken for procurement planning and development of documents up to the date of public advertisement.
- Average time taken to conduct the bidding process up to contract award, and the time taken from contract award to commencement of work.
- The complete cost to government and business separately of conducting standard small and large bidding activities up to contract award.
- Percentage of large, medium and small suppliers currently that have contracts (or subcontracts) in public procurement.
- Percentage of government procurement opportunities advertised online
- Percentage of government bidding documents made available online.
- Average number of bidders per advertised procurement opportunity.
- Price trends in standard items procured.
- Number of supplier complaints regarding the government procurement process.
- Percentage of documents distributed to suppliers that are delivered electronically
- The level of information technology utilisation in the business community
- Percentage of tenders that are lodged electronically
- Percentage of suppliers satisfied with the current procurement process
- Percentage of current contracts that are over budget, over time, or both.

These include outputs and outcomes. The traditional procurement governance objectives are concerned with cost of procurement, efficiency of the process and transparency. The objective of transparency is addressed in the e-GP environment insofar as it can reduce the barriers to information access to almost zero. .

3.3.4 Order of Implementation Phases

It is important that the online e-GP services and functions be implemented in a phased manner where each phase may be broken down into smaller steps to match the resources, development and the business model. Such a risk-managed approach is to be **recommended** over a one-time changeover approach that would carry high risk of incompatibility with user skills, needs, policies and resources. The complexity and cost as well as the legislative requirements and integration issues of the various sub-components mean that the **recommended** path of this phased implementation should be structured along the lines shown in Table 3, although this should not be regarded as prescriptive and variations around this may be equally suitable.

Table 3. E-GP Implementation Phases



The sequence of tasks in this optimum process design

- facilitates institutional changes and the modernization of the civil service;
- promotes a learning process towards e-GP; and
- starts from the simplest functions and progresses to the most complex along a controlled development path.
- makes for faster, less expensive, institutionally sound introduction of e-GP.

The order of the e-GP implementation phases recommended for Afghanistan as shown in the table is consistent with experience in many other countries but advances the development of the management systems that in many other countries are pre-existing to some degree. This

is an unusual order of events because it seeks to enable the technological capability of agencies with procurement training to give substance to web services that are otherwise of minimal significance. Of particular significance is the **recommendation** that the first developments be around e-tendering. There is little prospect of introducing e-purchasing in the initial stages of e-GP in Afghanistan and no prospect of e-reverse auctions until a more competitive domestic supplier base has developed.

Because the central website will ultimately permit access to full tendering documentation, the institutional challenges involved in the provision of access are substantial, particularly with regard to the need to streamline and standardize procedures and encourage businesses to make use of the information. The management and policy reform process involved in support of e-GP will have a significant bearing on the timeframes for the implementation of e-tendering.

Although there is usually some advantage in governments implementing the early stage developments themselves with the assistance of IT contractors, rather than moving directly to a service provider model, in the case of Afghanistan this is **not recommended** because of the scarcity of expertise to build and manage this functionality. A third-party service provider is instead **recommended**. In line with almost all other installations worldwide, this service should be a stand-alone module rather than a component of a financial management package. It is **recommended** that an independent consultant be engaged to oversee this service installation along with any development work, to ensure that it delivers what is intended (as specified in this roadmap) and that it is compliant with the whole-of-government architecture. Such an arrangement should also ensure that the software is held in escrow on behalf of the Government should the service provider fail to deliver.

To provide open access to e-tendering documents and permit them to be downloaded on demand, it is necessary to verify that the final and legally valid versions of these documents are available, that they include all the relevant information (including graphs and blueprints), and that the clarifications issued during the process are attached. Pre-requisites include simplification and standardization of tendering documents across government departments, establishment of a complaints function by the PPU for e-procurement procedures as with other aspects of the procurement process, and Internet access to tendering documents and access via office and fax.

Recommendation: It would be desirable for the PPU to establish a timetable for the deployment of e-GP phases that takes into account the managerial, policy, training, and business issues as well as its own capability. This timetable will be published for use by government suppliers and government agencies.

It is **recommended** that any e-GP systems development or acquisition must be compliant with an e-government enterprise architecture that also needs to be defined concurrently for the technological enablement of the civil service. The definition of the enterprise architecture should currently be the responsibility of PPU. This enterprise architecture will define many of the non-functional requirements of the system; others are listed in the checklist of Annex 1.

3.3.5 Training

An international survey of 15 countries that have successfully implemented e-GP showed that the most important lesson they learnt was the need to provide formal and comprehensive

training to government managers and staff and suppliers.¹ Failure to address this issue led to a lack of confidence in adopting e-GP and extended the time to implement it.

Given the shortage of procurement expertise in Afghanistan, it is **recommended** that the PPU and capacity-building facility combine its procurement activities with a human resource up-skilling and orientation program for e-GP, for its own staff and any other trainees. For e-GP training the PPU itself needs to be trained as a champion of this modernization. It is **recommended** that all members of PPU undertake an executive orientation workshop and course of a minimum of 5 days on e-GP to aid the development of common goals.

It is appropriate that e-GP training be properly integrated into the current capacity-building exercise because e-GP can considerably simplify the training requirements and the associated rules. If this is not done, there is a danger that it will hinder the recognition of the essential role that can be played by e-GP and may also create some resistance to its introduction. This roadmap can be used as part of the content for this training as well as delivering against actual operational requirements. The capacity building should include

- an orientation and awareness program and workshop / laboratory for e-GP of 5 days for all procurement officers and trainees,
- access to policy, management and technical advice through a Support Service provided by the PPU, and
- an awareness program for dissemination of e-GP objectives and characteristics to all stakeholders including executives and policy officers.

The capacity-building process will recognize that for professional procurement officers, these new approaches offer new opportunities and up-skilling.

3.4 Activities and Responsibilities

The roadmap presented in this report has identified a range of initiatives that need to be undertaken and issues that need to be addressed. The resourcing required will depend on the business model adopted. The PPU would best be served by assembling an internal implementation team to manage the resources and the implementation of e-GP.

3.4.1 Implementation team

It is **recommended** that the PPU create an implementation team that includes:

- specialists responsible for or involved with the current procurement training program;
- an e-GP strategist with overall understanding of the vision and direction of the program (procurement consultant);
- a specialist in online technologies who is capable of overseeing the technical integrity of an external service provider and any internal developments (technical consultant);
- an industry and business development specialist capable of liaising with the private sector, raising awareness and representing their requirements (retraining of existing internal resources);

¹ International Survey of e-Procurement Systems (draft). WB,ADB, IADB, February 2007

- a business manager who will manage the contractual relationship between the PPU and the service provider if the service is provided by a third party and will monitor performance (existing internal resources)

The implementation team also needs to coordinate with the Ministry of IT and Telecommunications to ensure that connectivity and technical standards issues are fully addressed. The Terms of Reference for the key specialist consultants are provided in Annex 4. These five might not represent a net increase in the PPU staffing levels insofar as the introduction of e-GP is to be phased over time and the responsibilities within the PPU should also be gradually reallocated to shift from being geared to the paper environment to the online environment. All team members should join the rest of the agency for the mandatory executive orientation workshop and 5-day e-GP course.

The implementation team would appoint experts or committees to address each requirement within a specified timeframe. Most of these activities should be completed comfortably within 6 months and almost all can be developed concurrently as resources permit. An operational e-tendering system should be targeted to be widely operational within 12 months, with functionalities being activated as they become available. It may be desirable for the relevant operational managers to visit operational sites in other countries at the outset of this exercise to build confidence and see first-hand the systems at work, including at the offices of the private sector. Relevant systems include those in Italy, India, the Philippines, Korea and Azerbaijan.

3.5 Outsourcing Service Delivery and Support

While maintaining control of its procurement activities the PPU should be focussed on its objectives and on monitoring results and outcomes. The PPU need not become a software developer to achieve its desired outcomes. However the PPU should have access to expertise on issues such as system portability and standards, in order to be able to assess whether a developer or service provider is delivering services in a way that is consistent with the objectives. Without this capability the PPU will not be able to ensure that the interests of the State are protected.

Private sector inputs of management, hardware, software, and communications are an option, as are the development and support services of technology firms.

Recommendation: The PPU should define the *business model*, including development and ongoing operational costs, that is consistent with the objectives and policies established at the outset. The business model selected will guide how additional developments should be undertaken, for example, ongoing maintenance and revenue sources to pay for it. In some countries a small fee is charged for online tender submissions directly by the service provider so that the service viability is never subjected to government budgets. Charges for downloading of documents are not advisable as these will discourage competition and transparency. It is **recommended** that the business model consider a third party service provider. The PPU will require additional expertise to assist in manage risks, which can be significant. If this is the preferred model it is **recommended** that the PPU use this report to help it understand the issues and construct a service level agreement (SLA). The PPU will need the services of a technical specialist and a procurement specialist on the implementation team to help define and manage its risks with the service provider (TOR in Annex 4).

Recommendation: The PPU should consider the engagement of a Risk Consultant to develop a Business Continuity Plan as part of establishing any contractual relationship with

any third party service provider to ensure that it is not locked into an arrangement that may prove to be unsatisfactory in the future. Any software development for Afghanistan by a private developer should require that the software also be held in escrow on behalf of the government in case the service provider is unable to deliver in the future.

Also there is the issue of perceived and actual security of online tender submissions. Considerable distrust of this practice may exist in the business sector, and it can attract corrupt practices. Because it is difficult to construct 100 percent security, depending on the management and support arrangements of the virtual tender box, and because there is likely to be actual risk around this part of the service internally or in the service provided, it is **recommended** that the PPU establish a third-party service provider in an alternative location with robust governance standards (e.g. Canada, UK, Scotland, New Zealand) specifically for a virtual tender box service. The remote location would have no effect on the service itself, and have no management function or any role in tender openings.

3.6 Private Sector Activation

All markets, including those relevant to e-GP, are comprised of a buyer (demand) side and a seller (supply) side. An e-GP strategy that attends only to issues within government bureaucracy may have little appeal to sellers, in which case they will stay with old processes and reform will be defeated. The participation of sellers in the private sector cannot be taken for granted. This risk will be particularly acute in regional areas. Businesses may be sceptical of investing in a new technology but receptive to a credible business case that offers lower costs or greater tangible opportunity. For these reasons it is important that e-GP provide real value to the private sector.

The e-GP strategy also needs to ensure that the local IT industry understands the program. The Afghan IT service industry may be capable of meeting some of these requirements and should be encouraged to do so, but may require a lead from the Government about the Government's determination to carry this program through and that it has the capacity to do so.

A business awareness, consultation, and orientation program is vital to the success of e-GP and business issues must be consulted on and addressed in the policy protocols by the PPU. For example, in the case of e-purchasing (as opposed to e-tendering), the system of three random quotes will spread government business more broadly through the private sector than the lowest price tender, offering more incentive to businesses to participate.

Recommendation: The PPU, in consultation with key major business associations, needs to develop a business activation strategy to address existing government contracted suppliers and non-contracted suppliers. The principal method of delivery of this strategy will include business seminars, e-mail, and through the business associations. This strategy will address:

- contracted suppliers, non-contracted suppliers
- business association involvement
- service industry development
- business systems integration
- business selection and listing policies
- push-out services
- cost recovery
- supplier-supplier interoperability
- kiosk services, Internet cafés

- government e-GP management policies and protocols

Also relevant is the structure of the e-GP implementation program itself; where business is initially uncertain about the benefits, a phased approach is effective. E-tendering is easily picked up by business at little or no cost and represents an effective means of activation of the private sector, forming a foundation on which higher value services can be built. E-purchasing and e-reverse auctions will need greater business and Government online presence.

3.7 Schedule and Costs

An indicative timeframe of activities to implement e-Tendering is set out below.

Activity	Expected output	Start Month	Duration	Related issue
1. Engage ICT consultant (local if possible).	Assess infrastructure and procurement reporting status of lead agencies.	1	Two months	Required to prepare the BPR.
2. Select consultant for e-tendering system planning and review.	Review existing system, security and future development plans.	2	Two months	Donor funding required.
3. Initiate e-tendering.	Operationalize e-tendering phases with lead agencies.	3	Ongoing	
4. Select national consultant for training.	Develop online training module; train the trainer.	3	One month	
5. Select procurement consultant to align agency management systems.	Work with ministries and PPU to align the data, workflow systems, templates, reporting, and PMIS for ministries.	3	Six months	Requires single whole-of-government strategy.
6. Conduct training for procurement entities.	Train procurement entities in e-GP through local training institute.	4	Ongoing part of existing program	Requires coordination with e-government. Paces rollout.
7. Conduct IT infrastructure scoping for lead agencies.	Procure and install IT infrastructure for e-GP in lead agencies.	4	One month.	
8. Conduct awareness activities among stakeholders.	Hold workshops, seminars for stakeholders, customized training program for tenderers.	4	Ongoing	
9. Implement universal extension of e-tendering and e-contract management.	Launch e-Tendering and e-contract management in all entities handling public procurement.	8	Ongoing	Depends on the outcome of lead agency experience and IT infrastructure feasibility study.

Activity	Expected output	Start Month	Duration	Related issue
10. Extend single portal operations.	Include capability for secure tender submission and additional management capabilities.	12	Three months	Address security issues and policies and sign off on them.
11. Assess system impact.	Monitor, review, amend system.	20	Three months	
12. Conduct IT infrastructure feasibility study.	Assess IT infrastructure to implement country-wide e-Procurement.	20	Three months	

Indicative costs for e-Tendering implementation as per these activities timeframe are given below, assuming outsourced service provider. The cost of this program is sensitive to a range of factors and could be substantially reduced.

	Activity	Assumptions	Estimated cost (USD)
1.	Local ICT consultant – 20 days	To assess the requirement (infrastructure and procurement reporting) of lead agencies.	\$ 10,000
2.	International consultant e-GP – 3 months basic system.	One consultant to review, monitor and guide the implementation of system.	\$100,000
3.	Annual maintenance, support, helpdesk for e-GP system.	Yearly maintenance fee based on software & installation cost of the system.	Incremental to existing ARDS site
4	IT Infrastructure	Some hardware, LAN, WAN and Internet to procurement entity – may duplicate other developments.	\$ 300,000
5	Consultant – Training	Develop the training module and train the trainer. (1 month)	\$30,000
6	Training – Procurement entity through training institutes	Provide detailed e-Tendering training to procurement entities. Considering one training session per month for 10 people = 9 month program.	Part of existing capacity building
7	Awareness activities among stakeholders. To include businesses, media. Major suppliers to be invited to interactive presentations, literature to be prepared.	Workshops, seminars for all stakeholders and customized training program for tenderers including broad publicity & e-learning.	\$40,000
8	Feasibility study for introduction of e-Contract Management		\$25,000
9	Personal development / scholarships	Three scholarships @ US\$10,000	\$30,000
10	Contingency	Considering 10% on total value	\$24-53,000
	Total		\$ 259-588,500

3.8 Next Steps

The roadmap has been constructed to allow for any rate of development and management integration, from slow incremental implementation to more rapid transformation. The incremental approach is recommended for a full development of understanding by all stakeholders, because it dissipates unrealistic expectations and avoids the “black box” syndrome, and because it allows for the training of the PPU staff to the new skill sets required by e-GP.

It is **recommended** that the next steps for the implementation of e-GP in Afghanistan be:

- Ensure that the PPU assumes the role of lead agency and upgrade skills. Ensure that this organisation also coordinates with the Ministry of IT and Telecommunications to ensure connectivity, technical standards and architecture are properly addressed.
- Develop a vision and strategy for e-GP based reform.
- Gain high-level political support for the program as a whole and its implementation over the timeframe required.
- Disseminate final Implementation Plan and hold meetings and roundtables to ensure familiarity by all actors.
- Working from the schedule of features presented in the roadmap from this report, identify e-GP features that the PPU believes that it could readily implement using a phased approach.
- Define lead agencies that can be used to pilot developments.
- Review existing system for implementation and amendment if necessary.
- Develop a schedule for the phased development of readily implement-able features.
- Identify the resource requirements for these phases and seek any required support.
- Specify expertise required and where possible acquire these through internal retraining as specified in this roadmap.
- From the schedule that is decided upon for e-GP, develop an implementation team to activate the program.
- Assign the implementation team formal terms of reference and accountabilities for the program.
- Initiate e-signature and e-documentation legislation (Annex 3).
- Conduct training activities as outlined in this roadmap.
- Maintain a high level of political support for the program and the methodology in order to ensure the authority required to drive the e-GP reform program. Support should also be fostered from the private sector if possible, initially through briefings of industry associations.

4. ROADMAP SPECIFICATIONS

For e-GP purposes, the principal processes of government procurement are defined by the distinction between ‘tendering’ and ‘purchasing’, with reverse auctions a variation to purchasing. This distinction forms the foundation for phased e-GP implementation and leads on into broader management system integration. An alternative option is presented for the circumstances of Afghanistan, where the need for management and workflow systems *per se* is a major factor to strengthen capacity building and oversight systems. These management and workflow systems need to be operationalised while at the same time operating as training modules.

4.1 E-Tendering Specifications

The development of the e-tendering service requires the posting of all tendering information on a central Internet site and the streamlining of traditional systems of contract development and contract management.

This section specifies the functional and operational requirements for a successful e-GP system. These need to be clearly understood and specified for the e-GP service provider or developer for an internal or external service. The specifications in this section are generally consistent with those recommended by the WB, with some minor variations arising from Afghanistan circumstances and connectivity, and are designed to encourage international compatibility as well as good governance, efficiency, and economic development.

The **recommended** approach for Afghanistan is for the procurement website (Portal), currently operated by ARDS-PU, to be enhanced over time to reflect the required capabilities. It should also be engaged as central part of capacity building for procurement. This site should be transferred to the PPU.

Recommendation: The functional capabilities that make up a comprehensive e-tendering service suitable for public procurement in Afghanistan are specified as follows:

- a supplier registry and single sign-on window
- online access to procurement legislation and regulations for all agencies
- online access to forward procurement plans for each agency
- online advertising of all tender opportunities
- downloading of tender documents and technical drawings
- awarded contract information
- intelligent search facilities by locality, business type and value if applicable
- early tender advice on tenders currently under preparation in public agencies
- electronic submission (lodgement) of tenders by suppliers
- customized email notification of new tenders and amendments to suppliers
- an online tracking capacity for suppliers in relation to their tender processing
- archived contracts with public search capabilities
- a secure management information system that enables audit trails and access logs as well as comprehensive management information

The ARDS site has a few of the capabilities above but it is essentially an advertising and information site and can transfer some documentation but not securely. The ARDS site is

insufficient to provide the momentum for e-GP without the policies, operating rules, templates, leadership, resources, support and training to operate it successfully and integrate it into management. This chapter provides information on the operating rules, templates and many of the non-functional requirements for an e-tendering system and other systems that are required for a full transformation, including e-Contract Management, E-Contract Development and the PMIS. The templates and many of the non-functional requirements are detailed in Annex 1.

Much of the data required to support this functionality will be generated by a comprehensive PMIS, and linking the PMIS system automatically with the e-tendering portal would fulfil most of the functional requirements. For this reason the implementation of the PMIS in Afghanistan is recommended as a priority for capacity building and the reform of procurement.

The operations and qualities of the e-tendering service should also be consistent with minimum standards and qualities that the WB recommends. These should form a standard for the functions and qualities of the e-tendering system.

These standards and qualities are designed to ensure that basic standards of good governance apply to these resources. Operational rules are also designed to add value for private sector suppliers and thereby encourage the take-up of online technology, consistent with the goal of promoting economic development, competition and efficiency.

Recommendation: The operational rules and capabilities which make up the technical and policy requirements of an e-tendering service suitable for public procurement in Afghanistan need to be specified as described in 4.1.1—4.1.11 below. Many of these rules are management protocols rather than technical design elements and need to be specified and supported independently of the system itself. The PPU needs to be in a position to monitor and regulate their application.

4.1.1 System access

System access rules are designed to encourage confidence and value for private sector suppliers.

- System access is open, equal and unrestricted to all prospective tenderers / consultants and members of the public. Those who want to submit information or receive online alerts or notifications of amendments or clarifications are offered an online registration facility. Registration is free of charge.
- The principle of single sign-on applies. Single registration allows tenderers/ consultants the multiple use of the same electronic system for different projects from different parts of the government.
- The e-GP system is interoperable through open standards with ICT products in common use. The system is an Internet-based approach accessible by users through readily available and commonly used browser software.
- Downloaded documents are readable through open standards with a range of commonly used office software. If specialized software is necessary, this is also downloadable (e.g. software required to read PDF documents), free of charge and compatible with commonly used system and office software. Similarly, the requirements for electronic submissions, where these are provided for, make use of open standard interfaces with commonly used office software, or the submission software is made available online from the system as required.

- The principle of non-discrimination between paper-based and electronic information and transactions is, as far as practical, reflected in the system.
- The system performs reliably and securely in time-sensitive, commercial application.

4.1.2 Advertising

The tender advertising rules are designed to create transparency and value in the central site.

- All tenders are posted on the central website that is reliable, and affords free and unrestricted access.
- There is no material difference between the paper documents (if any) and those advertised online.
- The tendering period is measured from the date of publication on the required sites / media as required in the regulations. A secure log of these entries is available for audit as required.
- The tender advertisements and results disclosures are not restricted except in special security circumstances.

4.1.3 Correspondence, amendments, and clarifications

Rules on correspondence, amendments and clarifications are designed to strengthen governance and transparency.

- All clarifications and amendments of the tendering documents, as well as any pre-tender conference minutes, are posted simultaneously onto a tender tracking page of the tender advertising website. Tenderers who have already expressed an interest should be directly informed by the system of any amendments.
- Amendments and correspondence by any official are tracked and recorded by the system for audit. Systems ensure that only authorized changes can be made.
- In case of any amendments to the Tendering Document/RFP by the Contracting Authority, the system does not replace the Tendering Document/RFP with a new one, but rather provides such amendment by means of an additional document in line with the same distribution mechanism as for the Tendering Document/RFP.
- The system tracks receipt by tenderers/consultants when distributing pre-tender amendments and clarifications online.
- Online conferencing and chat facilities do not function after the tender submission deadline.

4.1.4 Tendering documents

The use of standard tendering documents is required to add value, competition, confidence and transparency for private sector suppliers.

- The use of standard tendering documents/RFPs is required. There must be no difference between electronic and print versions of the tendering documents/RFPs.
- The tendering documents use the contract procurement language as the catalogue standard defining its requirements.

- The system ensures the integrity of tendering documents in electronic format, and their online publication. Amendments are similarly secure and stored with the tendering document.

4.1.5 Submission of tenders/proposals

The rules for online tender submissions are designed to strengthen governance around the tender management process. The development of the security system for online tender submission requires developers experienced in this particular task and a clear understanding of the management protocols by the operator. These issues can be discussed in full.

- There are security arrangements to ensure confidentiality and integrity of tenders/proposals in electronic format.
- Tenders/proposals submitted online are virus-scanned by the system before being uploaded and accepted into the online tender box, and where this causes a tender to be rejected, the tenderer/consultant is notified immediately by the system.
- Online submissions are received into an electronic tender box and maintained to high standards of security for long-term record-keeping and audit. At no time are tenders/proposals in unencrypted format. Copies taken and decrypted for tender evaluation purposes do not affect the integrity of the original record.
- There must also be secure procedures to ensure that the time settings are in accordance with regulations and international time-zone standards. A secure log of these processes is made available for audit as required.
- Tenderers/consultants are allowed to submit modifications to tenders/proposals or withdraw previously submitted tenders/proposals electronically up to, but not after, the time of the tender submission deadline. Receipt of modification or notice of withdrawal including the date and time must be acknowledged, and this is also done electronically.
- The system accepts only those tenders/proposals in electronic format the submission or modification of which is completed at the time of the tender submission deadline. Receipt of electronic submissions, including the date and time, must be acknowledged immediately, and are also be sent electronically.
- The date and time for the receipt of tenders/proposals is the same whether submitted electronically or on paper.

4.1.6 Public tender opening

Rules for tender opening are designed to strengthen governance and confidence in the processes.

- Electronic and or print tenders if submitted are opened in a public opening at a location and time (deadline) designated in the tendering documents.
- Tenderers/consultants who choose to do so may attend the tender opening and are invited to sign a record of attendance. Information read out at the tender opening (prices, offered discounts, and pertinent information) is simultaneously posted on a website. A record of the tender opening must be kept in print copy and signed by individuals authorized to initiate the opening. The tender/proposal opening minutes are freely available by means of a website download.

- Tenders/proposals in electronic format are protected against access by unauthorized persons until the publication of the contract award.
- The PPU ensures that, for RFPs, financial proposals in electronic format shall only be accessed and opened after the evaluation of the technical proposals.

4.1.7 Tender evaluation and contract award

Automated evaluation processes impose severe constraints on the evaluation parameters unless the tender has been subjected to a two- or three-stage process. Automated evaluation may be inconsistent with the current management roles and expectations of the PPU and needs to be considered carefully before it is activated. This function is **not recommended**. The online publication of contract awards is important and is designed to strengthen governance, competition and confidence.

- The system may use pre-approved automated evaluation processes for certain elements capable of automatic verification, so long as the evaluation (i) aligns with the criteria established in the tendering documents, (ii) is consistent with the principles of economy, efficiency, equal opportunity, and transparency, and (iii) results in contract award to the lowest-evaluated, responsive tenderer/consultant.
- Contract awards are published online consistent with tender advertising.
- The system shows the tenders that have been entered, together with the identification of successful and unsuccessful tenderers.

4.1.8 Information security management

Security management rules are designed to strengthen confidence, governance and audit processes.

- For any e-GP processes engaged internally or through third parties, the system and its management develop, maintain and implement an information security management system that conforms with international standards for information management and takes account of recognized best practice, including but not limited to asset security, access security, human resource security, operations management and business application controls, documentation and script sufficiency and security, physical and online security, business continuity, record-keeping and compliance.
- There must be no outstanding audit issues that represent material risk to the integrity or security of any project.
- The contracting agency or the PPU indicates in the Tendering Documents / RFPs the procedures to be followed in the case of any failure, malfunction, or breakdown of the electronic system used during the procurement process. The PPU does not accept any responsibility for failures or breakdowns other than in those systems strictly within their own control.
- E-GP systems and information security ensure that secure records are kept of every process, procedure, transmission, receipt, and transaction in terms of the content, executing individual and authorizations, time and date. These records are kept for at least five years after the closing date of the contract and are made available for audit on request.

4.1.9 Authentication

The PPU should carefully evaluate whether digital Certification/Signatures are to be required as a condition of tendering, or whether management systems can be used instead. Digital certification is **not recommended** as the preferred option, but if adopted the following rules will apply:

- The certification process certifies tenderers for a reasonable period of time (at least one year) and tenderers are not required to request a certification for each tendering process.
- The certification process is kept open permanently, allowing tenderers to submit the request for certification at any time, in order to allow them to register in advance for future tendering processes.
- The certification process allows international tenderers to take all actions required for their certification within their own countries, without the need to travel abroad.
- The certification process accepts (i) an electronic signature or a digital certification/signature issued by certifying authorities within the country of the tenderer, or (ii) submission of online or offline documentation for certifying the authenticity of the tenderer's representative, accepting such documentation as can be obtained under commonly used procedures in the country of the tenderer (for example, no notarization in consulate or embassy is required).
- The certification process does not require a tenderer to submit mandatory information from a location outside the tenderer's own country.
- Consideration and consultation is required to address the practice by some countries of not requiring tenderers to pre-qualify. An accreditation application must be filled out only by the winning tenderer, who is given a reasonable time period (stipulated beforehand in the tendering documents) to do so. In the event of noncompliance, a penalty is applied and the contract is awarded to the second tenderer on the list.

4.1.10 Payment

Payment, if required, needs to be designed not to discourage technological take-up by the private sector.

- Specific Procurement Notices (SPNs): tenderers have open and free access to all SPNs and tendering documents. No registration, certification or payment should be required.
- Submission of tenders: tenderers may be required to make any payment as a pre-condition to be allowed to submit a tender.
- For charging, borrowers accept payments under one of the following options, at tenderers' choice: (1) payments online; or (2) payments by any form of transfer of payment, in which case such time for payment is added to the minimum time for the submission of tenders.
- The cost of tendering for the supplier is less than the cost of paper-based tendering and is determined by negotiation between the lead agency and the service provider.

4.1.11 Supplementary and archival information

It is useful, as required in the Procurement Law, to develop a planning discipline in the procurement system that requires government agencies to define their annual and quarterly procurement plans. These plans should in addition be posted on a single website in order to add value that attracts suppliers to the site and enable suppliers to better prepare and plan

their tenders. The submission by all government agencies of plans for publication on the website detailing scheduled tenders should thus also be mandatory.

Facilitating access to user-specified information will maximize transparency, efficiency, and the promotion of balanced development. The requirement for effective transparency is to provide user-friendly access to all available information and to facilitate cross-checks, classifications, data series, and comparisons. These outcomes can be accomplished with the help of a readily accessible database and customized information services operated by the PPU including:

- on-line data and indicators on major procurement operations.
- automatic delivery, at the request of suppliers, purchasers and others such as the media, of the information they need (individualized data, data series, comparisons).
- The documentation and dissemination of best practices from the perspective of suppliers and purchasing officials will serve as a tool for evaluating initiatives, making adjustments, and optimizing the relevant processes.

Recommendation: The PPU needs to identify supplementary information services to be provided by the system and develop a service to deliver these through the central site.

4.2 Workflow Management

Regardless of whether the system is created by a contracted developer or a third-party service provider, the functional and operational requirements need to be clearly and contractually specified in a way that integrates the central site and online transactions with procurement work processes. It is **recommended** that the PPU adopt the following specifications as the foundation for workflow management.

4.2.1 E-Tendering system

The e-tendering system (ETS) addresses the functionality required to initiate and register a tender. ETS then progresses the tender through the appropriate workflow processes, to the awarding of that tender and the output of that information to other systems. ETS selects the tender method, which will partly determine which process is used.

The central role of this system is to allow tenders to be transparently and consistently initiated and maintained as they progress through to award. The scope of the system commences from the time an agency decides to enter into the tender process.

4.2.1.1 Electronic Tender Document Construction

ETS should provide the authorized official with an Electronic Tender Document Construction (ETDC) facility based on the use of standard tendering documents. On entry to the ETDC the system should provide a hierarchical path to the type and category of procurement for which the document is to be created. Selections can include goods (information technology, general commodities); services (management consultancy, information technology, cleaning, security); and works (works consultancy, minor works).

As well as automating posting of tendering documents onto the central site and guiding the management of the process, ETDC also provides the means by which tenderers can track their tender via the central portal.

The ETS should provide a library of standard tendering documents with contractual templates for different categories of procurement. The tendering document templates should

use the contract procurement language as the catalogue standard when defining requirements and should be listed online. The final document should be in a format accessible to common packages such as Microsoft Word and Mac, so that general users as well as suppliers can download tendering documents.

4.2.1.2 Related Registers

ETS should automatically link to related databases (client register, contract register, government officer register, and supplier register) in order to provide part of the feed for a data warehouse for future analysis, decision-making and audit. Scope should be provided for secure and authorized deletion of bogus and obsolete records.

4.2.1.3 Maintain Officer Access Permission

Officials will need a valid user identification and password to log into the system. It should be possible to restrict access to system functionality on the basis of an individual's access permission. Some access functions may require passwords from more than one individual. Access, entries or deletions by individuals with specific access levels may need to be automatically copied to others with higher access classifications or authority.

It should be possible to enquire on, add, change or delete access to system functions and data for an individual official. The security system will also be used to store an individual official's tendering approval limits.

4.2.2 Document Classification

ETS should allocate a system reference number (tender number) and then, using a Government File Management System, automatically generate a unique tender file using the ETS tender number. An option is for a file prefix to be used to denote individual government agencies. Government tender types are commonly:

- EOI - Expression of Interest
- RFQ - Request for Quotation
- RFP - Request for Proposal
- RFT - Request for tender
- FC - Framework Agreement

For the person initiating the tender, the system should provide online a list of pre-tender notifications. If there is no pre-tender notification, the system should provide a compulsory field for the accountable official to provide an explanation.

4.2.3 Document addendum process

The ETS must maintain information about the content and timing of addenda to tenders. In case of any amendments to the tendering document/RFP, the ETS system shall not replace the tendering document/RFP by a new one, but provide such amendment by means of an additional document in line with the same distribution mechanism as for the tendering document/RFP.

4.2.3.1 Enquiries about tender addenda

It should be possible for any registered user to enquire about addenda to tenders. More than one addendum may exist for a given tender. Any additions or deletions of addenda to any tender must appear automatically on the Government Procurement Portal and also be notified electronically to potential tenderers.

4.2.3.2 Add a tender addendum

It should be possible to add new addenda to existing tenders before the tender has been closed. Addenda may need to be added to tenders with or without existing addenda. Business rules should be required for closing dates when addenda are added.

4.2.3.3 Change or delete tender addendum

It should be possible to change information about an existing tender addendum or delete the addendum. This may only occur if the addenda have not yet been sent out and the tender has not been closed.

4.2.4 Manage workflow actions

Each tender method in ETS should be conducted along a quality-assured workflow of actions and approvals, including planning and documentation development, to complete the tendering process. When a tender is registered, a tender method is automatically selected and this partly determines the actions to be followed. As the tender follows this path its progress must be recorded and trackable. The expected dates for each milestone action will be generated according to the tender method selected, but these should be able to be modified by the user at any stage (except retrospectively).

When the tender method is selected, a pre-tender estimate should be entered. Based on this value and the workflow method already selected, the workflow should direct the relevant actions to the users with the appropriate tendering approval limits.

4.2.4.1 Tender evaluation

The ETS may be able to undertake automated evaluation processes where these are both appropriate and have been defined (this will generally not be the case) in the standardized tendering documents and in doing so ETS should, in those cases where it is appropriate, be able to identify the winning tender and post it immediately onto the portal.

4.2.5 Register contract award

Line items in the tender may be awarded to different tender submissions (there may be more than one tender submission per tenderer). A flag may be set according to the tendering method, which will indicate whether prices may be released.

The award status may be one of

- declined all offers,
- shortlist,
- panel award, or
- contract award.

4.2.6 Electronic tender lodgement

ETS should be able to securely and confidentially receive tender submissions electronically. Tenders submitted electronically must be stored securely and confidentially.

4.2.6.1 Supplier access

A supplier must be registered before lodging a tender. A supplier email address is mandatory. The tender should be registered against the tenderer's ID from the supplier registry. If the tenderer is not in the supplier register, a supplier ID must be requested from the supplier register and used to register the tender submission. One of the purposes of supplier

registration is to allow for emailing of any amendments or further information to the potential tenderer and is therefore to the tenderer's advantage to register accurately. This should be communicated to the potential tenderer at the time of registration.

- To execute online lodgement a supplier shall access the portal where a tender lodgement icon will appear.
- Activating the tender lodgement icon will display a list of current tenders for which online lodgement is available.
- The tenderer can click the ID of the tender they want to lodge against. If the tender opportunity has already closed the system will display a notice to that effect and the user will be unable to proceed further.
- They will then be shown specific details about the tender they have selected so that the tenderer can verify they have selected the correct tender. They can then click the icon for lodging tender submission. Multiple files can be lodged, including those that accommodate the two-envelope system. Multiple tenders will be lodged separately.
- The tenderer is then asked to confirm or modify their supplier registration details and click an icon to confirm details.
- The system informs the user that their details are accepted and they are automatically transferred to a secure area where they will be invited to agree to the Conditions of Use.
- After the I Agree icon has been selected, the BLS checks the closing time for the tender and terminates with a message if closing time has passed.
- After checking on the conditions of use, the system invites the user to attach their documents and click the Lodge Response icon. Only if the tender is received in full before closing time will it be accepted. A receipt message will be sent to tenderer acknowledging receipt and time of receipt.
- Submissions that are corrupted during transmission are rejected. This policy should be clearly communicated to potential tenderers.

4.2.6.2 Authentication

The electronic tender lodgment system should be able to manage the authentication process if digital authentication is a policy requirement. This function will form part of the tender lodgment system to be implemented separately.

4.2.6.3 Tender box opening

The authorized agency official along with two or three witnesses will log on to the tender lodgment system and open the box normally by individually inserting their individual passwords. The process will be automatically tracked and recorded including the time and date of opening. The box opening will reveal encrypted files that will then be available for downloading. Once the files are downloaded they can be decrypted by using the private key installed on the authorized agency official's computer. Once a tender response is downloaded it is the responsibility of the agency officer to ensure its security.

4.2.6.4 Late tenders and tender closure

The system will automatically close at the designated tender closing time so that late tenders cannot be received. Notification of non-acceptance will be return emailed to source. The system does not allow amendments that bring forward a tender closing date.

4.2.6.5 Multiple suppliers (framework agreements)

A tender may be awarded to a panel of suppliers, without any specific contracts being awarded. When a contract is to be let against a tender of this nature, ETS should record the link back to the original tender number.

4.3 E-Contract Management

Government agencies typically manage numerous contract relationships simultaneously, each with various deadlines, expiry times, conditions and performance criteria. For construction contracts the problems are even more difficult and complex. Tenders need to be able to be managed and tracked on the basis of a properly defined workflow, preferably in line with a Quality Accredited process, so that important schedules, conditions and performance criteria are not overlooked. Standardized, structured workflows should be used to manage the sign-off processes required for contract award. Technology can be of significant benefit in managing these requirements.

Afghanistan is currently seeking to upgrade its procurement management capability including the use of new technology. A contract management system that is capable of digitization as the opportunities arise should be regarded as an essential component of this upgrading process. It is **recommended** that adoption of e-contract management should be undertaken concurrently with the development of the portal and capacity building. The development of this function would assist in the establishment of standard procedures as well as with capacity building.

4.3.1 Performance management

Performance management involves specifying interim and final outputs and the establishment of a timetable for producing them. E-monitoring of results will be used to signal when the deadline for a given output is approaching. In the event that an output is delivered after its deadline or its quality is deemed to be inferior to contract specifications, the person or factor responsible for this must be automatically flagged by the system (the contractor, the contract issuer, force majeure), so that the corresponding penalties or corrective measures can be applied and the performance and payment schedule adjusted.

It is best if the output monitoring system to be used in each sector and organization is designed on a consultative basis by suppliers and the purchasing organization. A component of performance management entails specifying exact payment dates and the requirements to be met for each payment and for automatic bring-ups to be generated. The purpose of this is to ensure efficiency and transparency, to ensure that the funds needed to make scheduled payments are set aside and drawn at the proper times, and to maintain up-to-date online accounts. All of this needs to be consistent with a digital format even if this is not engaged at the outset.

One of the major shortcomings that can occur in contract management systems is the lack of criteria and mechanisms for final acceptance of the work, good or service. This issue is addressed by the design of standardized procedures for these purposes and the maintenance of monitoring processes until the last day covered by the last performance security.

Performance management also includes the preparation of final evaluations of contract performance based on previously defined parameters. These evaluations are then used to compile records of each process, identify best practices, and systematize the information on each supplier's performance for use in subsequent operations.

Recommendation: The PPU, with the participation of the relevant agencies and suppliers, especially for works contracts, needs to develop workflow management, bring-ups and approvals templates for online performance management of large contracts as part of its PMIS data collection. This development will require effective leadership and authority from the PPU. This function illustrates why e-GP needs to be effectively integrated into management systems rather than consisting simply as a stand-alone web procurement portal.

4.3.2 Development of a PMIS

It is most common for countries to commence with the development of the electronic Internet procurement portal and build e-functionality around this portal. A preferred course of action for Afghanistan would be to concurrently undertake development of the portal and to mandate a Procurement Management Information System (PMIS). The development of a PMIS by the PPU for all agencies would provide a valuable opportunity to strengthen the capacity of the PPU as well as to integrate management systems with online technology.

E-GP implementation in Afghanistan can be strengthened by integrating with management information systems at an early stage, and this would also help drive e-government generally.

A consolidated template can be developed for any agency that accommodates specialist requirements with the scope for other optional data fields but also establishes a common core of data. As agencies move online their old paper-based processes are discontinued. Further development of the PMIS can allow for automatic uploads into the Government Procurement Portal (GPP).

The functionality specified in this section provides the scope for a PMIS that will deliver all of the objectives for e-tendering including management integration with technology.

It is **recommended** that the PPU with the participation of a technical specialist establish an interagency task force including one authoritative officer from each of the lead agencies to map PMIS development. The PMIS should be designed to integrate with agency-specific developments so that the standardized core data requirements, including portal information, will be automatically generated as part of the individual agencies' management activities. The experience of Bangladesh is illustrative.

A deliverable from this step will be the establishment for all of government of a common architecture for the PMIS with which their own management developments will automatically interface. The PMIS need not immediately be in digital format for all ministries. Included in this framework will be defined mandated fields that govern parts of the contract development and management processes. This mapping work should be time-limited to 3 months during which the mechanism for coordination of ongoing evolution in the system will be established.

The interagency task force will also coordinate a review of contract development, management and advertising, together with the associated human resources that is managed by offices outside of Kabul and for which basic hardware for connectivity is required. This review will provide the basis for infrastructure upgrades that may form part of the next phase.

Associated with this step, it is **recommended** that the PPU establish a Support Center to assist officials in training and implementing the PMIS as this becomes appropriate. Such support will also be required by the private sector on an interim basis. The resourcing requirements of this are not likely to be great; initially it can be managed on a call-center basis.

4.3.1.1 Procedural rules

Procedural rules include the rules for the selection of companies to provide quotes, pre-qualification procedures, procedures and rules for handing over tendering documentation, rules for tender openings, procedures for tender box management and security, rules and procedures for tender amendments, and rules for advertising of tender opportunities. Sometimes these procedural requirements are stipulated in legislation but in language that does not encompass use of an electronic system. Other issues include:

- authorization and control of processes such as contract and document variations;
- electronic records management and audit;
- standardization of contract terms and conditions

The PMIS provides the basis for determining the data collection and standard reporting requirements for the e-GP system. PMIS design must also include any supplementary information that may be required for ad hoc reports from the system.

Figure 4. E-GP Information Sub-Systems



4.3.1.2 Management and information systems

The PMIS encompasses contract development, the tendering process, contract management, and reporting, including the subsystems listed in Figure 4 and their functional and non-functional requirements. The data management requirements of the system need also to identify and differentiate between framework contracts, agency-specific tenders for goods and services, construction consultancies, construction works, and supplier performance.

4.3.2 Data field requirements

The consolidation of the PMIS will lay the foundations for e-tendering, e-contract development and e-contract management as well as for standard and ad hoc reporting. Comprehensive data should be recorded and archived and be available for ad hoc and routine reports, audit and other research as required. The existing recording and reporting requirements (managed by PPU) can be supplemented as required. Data fields may need to be customized for each agency but should have a central core that includes:

- tender identification
- tender details
- tender addendum
- potential tenderers
- tender submissions
- tender workflow actions
- tender method actions
- eligible suppliers (from supplier register)
- government personnel (from supplier register)
- client agency codes (from client register)
- tender search and enquiries
- record potential tenderers
- advertising details
- direct notification
- pre-tender notification (PTN)
- advertise contract award

4.3.3 Supplier and government trainer

A function should also be included on the central site that allows users to learn how to practice using the systems without creating real entries.

4.3.4 Reporting

Tender committee decisions and meeting minutes should be recorded in the ETS because they form part of the action sequence in the relevant tender method as well as part of the audit trail. Agenda item numbers should be allocated and reports generated for tenders and procurement plans that the relevant tender committee will consider. ETS should identify the difference between a tender and procurement plan submission to a tender committee. Functionality should include the ability to:

- produce *ad hoc* reports in ETS;
- select data: It should be possible to select the items of information to appear on the report (for example, tender reference number; tender description; successful tender; date accepted; tender amount, officials ID at each stage)

- produce standard reports in ETS system as specified by the PPU that can readily be extended over time;
- produce standard notices in ETS:
 - notices to advertise the tender
 - notice of tender submissions, accommodating
 - the two-envelope system (prices not released)
 - the modified qualifications based criteria selection (prices not released)
 - the standard system
 - building works tenders;
 - successful / unsuccessful notices to tenderers;
 - for building works:
 - notices for tenderer under consideration or not under consideration
 - contract award notices
 - decline of all tenders notices;
 - addenda templates and notices;
 - notices of invitation.

An online edit function should be available for the master documents which cannot operate after commencement of invitation to tender.

4.3.5 E-Purchasing and Reverse Auctions

Many procurement transactions involve more direct purchasing rather than contract tendering. Where e-tendering is used for contracts, e-purchasing is used for procurement of low-value goods and services based on the use of online price quotes from a list of sources of supply. This level of purchasing is expected to account for about 10-15 percent of the *value* of government procurement but the bulk of the *volume* of transactions.

E-purchasing is useful for addressing petty corruption and strengthens audit, record-keeping and reporting for a large turnover of activity. However without considerable technology penetration into the backend management systems it cannot effectively be implemented and this lends further weight to the starting point for e-GP in Afghanistan being the introduction of the procurement management systems.

Some attempts in other jurisdictions have been made to introduce e-purchasing by way of the financial management information system but this has not been the preferred path even in jurisdictions with strong management and is **not recommended**, especially where governance is one of the key objectives. This also requires good e-literacy in the line ministries which is often not the situation in Afghanistan.

Because e-purchasing is considerably more complex than e-tendering and requires a higher level of business capability, it is **recommended** that e-purchasing not be addressed until e-tendering and e-contract management are established and operational, a process which may take 36 months in Afghanistan. Introduction of e-purchasing will also require additional training in the PPU on issues such as catalogues.

Because the introduction of e-purchasing capability lies in the future for Afghanistan, it is not specified here, as systems will likely have evolved considerably by then.

4.4 Infrastructure and Web Services

The potential of online technologies arises from *interoperability*, which is determined by standards, and *connectivity*, which is a function of infrastructure and web service availability. The limitations of Internet capacity, cost and reliability in Afghanistan need to be recognized within the strategic plan and the plan needs to be tailored to accommodate this reality. For communities outside of Kabul, connectivity, bandwidth and reliability may be regarded as an obstacle to e-GP. Even in Kabul, response times are slow. However, it has been proven in other countries that valuable e-GP services can be delivered through very limited infrastructure.

The main driver for expanded Internet connectivity in the private sector will be the availability of valuable online services that can reduce business costs and expand business opportunities. Businesses do not need to be physically connected to make use of many basic services that can be delivered through Internet cafés. E-tendering is capable of delivery through particularly weak infrastructure and connectivity, but reverse auctions and dynamic pricing are more demanding of bandwidth, reliability and connectivity both in the public and private sectors.

Initiatives should be devised for bringing about improvements in public sector connectivity and in Internet access for the private sector and the general community as a building block for e-GP and e-government more generally. E-GP implementation should address connectivity issues at various levels, some of which require coordination rather than additional resources.

Recommendation The PPU, in consultation with any e-GP service provider and the IT business association, needs to assist the e-GP service provider and the IT industry in addressing connectivity and infrastructure in terms that include:

- departmental connectivity
- departmental kiosk services, retail connectivity (Internet cafés)
- ISP facilitation
- hardware interoperability (between Internet, fax, post)
- bandwidth design and compression
- business systems integration

These demands are considerably less for e-tendering than for e-purchasing.

An important complement to these options is the reform of government documentation itself, such as standard terms and conditions, to ensure that these documents are readily downloadable across relatively narrow bandwidths typical in regional areas. While it cannot be expected that national infrastructure will be upgraded specifically for e-GP, this application is a valuable driver for making infrastructure upgrades more viable.

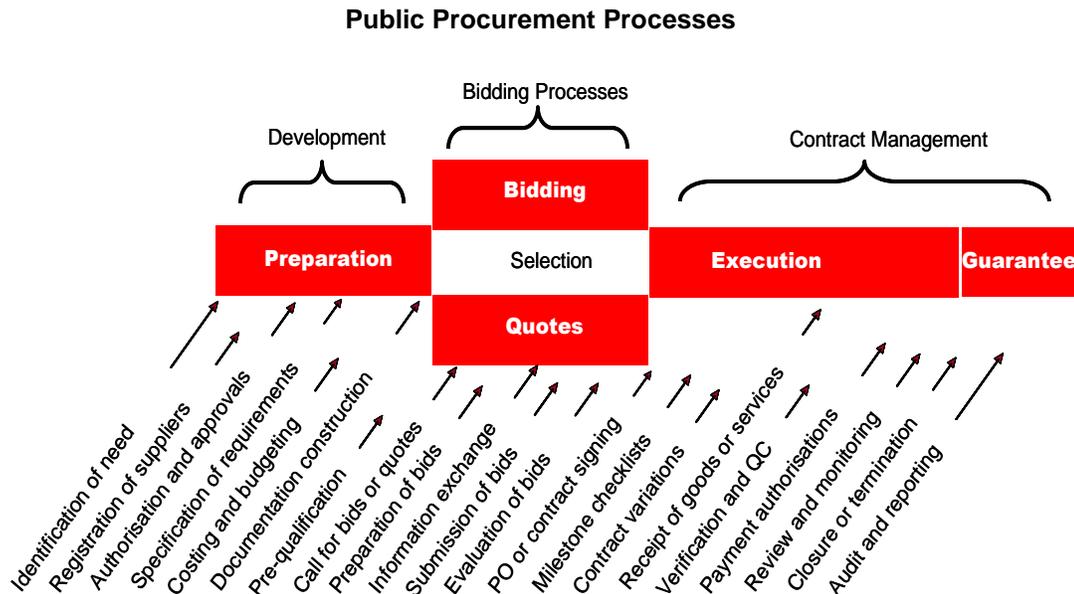
ANNEX 1: INTRODUCTION TO E-GP

One of the most significant modernization initiatives for many government reform agendas is e-Government Procurement (e-GP). E-GP offers many advantages to the management of public procurement as well as wider economic benefits. E-GP has the potential to greatly enhance the governance of a large proportion of government expenditure each year.

Scope and Definition of E-GP

Electronic Government Procurement (e-GP) is the application of technology (particularly online technology) to public sector procurement of goods, works, and services, under an efficient, high-quality management framework. E-GP has the potential to strengthen the accountability, transparency, efficiency, and effectiveness of this sensitive, high-value government function. For most jurisdictions, it represents an opportunity for both procurement reform and changing the way procurement is conducted.

All public procurement processes involve the four basic stages shown in the figure below. These elements of the procurement process also must be part of the e-GP design and scope.



Because end-to-end integration is required to attain the governance and efficiency objectives, the processes of procurement should be integrated by a Procurement Management and Information System (PMIS), which also specifies the reporting capability. This PMIS will greatly strengthen the management of procurement across the public sector. There is also a need for Procurement Workflow specification and integration with other components of the g-GP such as the portal service.

Once the preparation stage has been completed, a procurement operation may be one of two primary types: suppliers may be selected through a tendering or bidding process, or through direct purchasing on the basis of a price quote. Both forms entail contract management functions.

The principal processes of government procurement are defined by the distinction between tendering and purchasing, with reverse auctions a variation to purchasing. The same distinction also forms the foundation for phased e-GP implementation and leads into broader

management system integration. An alternative option is presented for the circumstances of Afghanistan where the need for management and workflow systems per se is a major factor to strengthen capacity building and oversight systems. These management and workflow systems need to be operationalised while at the same time operating as training modules.

Electronic Tendering

The e-tendering stage is about the acquisition of high-value, low-volume goods, works, and services by seeking tenders (proposals) via a public process, followed by the evaluation of tenders and award of contracts. For most governments this form of acquisition accounts for more than 85 percent of public procurement expenditure.

E-tendering is relatively easy to start for both government and suppliers, low cost to implement and maintain, and provides significant value to businesses, enhances transparency and strengthens management. Functionality can be increased incrementally and includes:

- Development of a central public procurement site for the Government.
- Publishing of all tendering opportunities and award outcomes on this single Internet site.
- Online registration for existing and potential suppliers.
- Online search tools for existing and potential suppliers.
- Open access via the Internet to all original tendering documents
- Secure electronic tender submission by suppliers
- Customization options for procurement officials in government agencies

These are simple and easily understood steps that can be implemented at low cost and phased in as required. The technically most difficult element of this service is sometimes regarded as the security demands of online tender submission/lodgment.

E-Tendering usually does not include tender evaluation, unless the tendering documents are arranged so that evaluation is based on a simple scoring of objective measures such as price. For jurisdictions with weak governance, this is preferred but requires strong contracting skills for major acquisitions.

Also e-tendering usually does not include the development of pre-qualification lists of suppliers or potential suppliers. The technology does not gather or test data about businesses and allocate them to various levels of pre-qualification. Pre-qualification remains a largely manual process, often partly based on previous performance, with the results entered into the system, which then automatically applies these results when businesses seek to tender. Some systems, especially for services, allow performance reports to be entered by the buyers after each contract so that the data available for pre-selection is constantly evolving.

E-tendering does not define the optimum structure of a contract, such as whether a particular task should be the subject of a single large contract or whether it should be disaggregated into smaller contracts, nor does it define what the optimum timeframe of a contract might be or what many of the other final contract terms of reference might be.

Thus, e-GP usually does not displace qualified procurement officials but rather it does away with many of the more routine administrative processes as well as greatly enhancing

transparency and management information and thereby the prospects for stronger governance of the process.

Price Quotes and E-purchasing

E-purchasing involves the acquisition of low-value, high-volume goods. Works. and consulting services by direct quote in the open market or from pre-qualified suppliers, and payment for the purchase. E-purchasing functionality is relatively complex because there is a need to integrate workflows and transactions, as well as manage a wide variety of purchases and information flows for many buyers and many sellers. There needs to be full integration of back-office and front-office systems as well as end-to-end supply chain management and also integration with supplier systems. It is through this systems integration that valuable management information becomes available and process savings are made. Some of the basic capabilities include:

- buyer authorization management
- online quotations and information flows
- catalogue standardization and online searching
- e-purchasing transactions
- financial management integration
- data warehousing
- online catalogues

The implementation of e-purchasing (and e-reverse auctions, a special type of e-purchasing) is more difficult and expensive for suppliers and for Government, even though it deals with lower valued purchasing than e-tendering. E-purchasing requires much greater connectivity of businesses and entails extra expenses for businesses to develop and maintain online catalogues. Difficulties are increased where infrastructure is weak, especially for reverse auctions. E-purchasing systems for Government have a greater training component and are more expensive to implement than e-tendering systems, by a factor of ten.

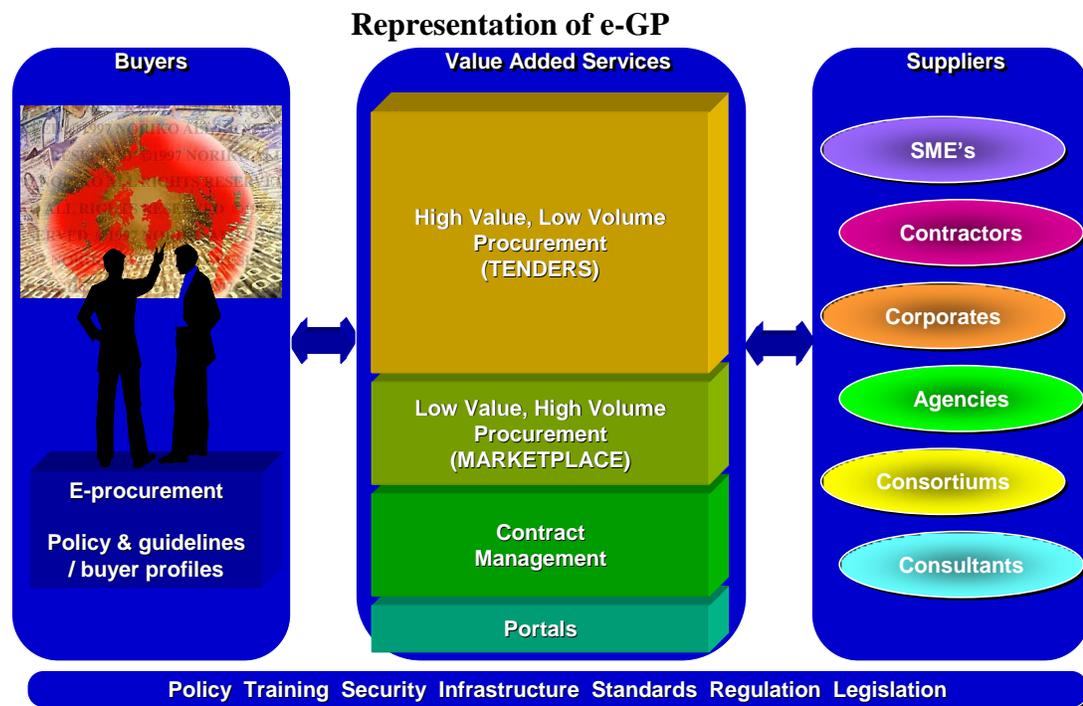
As for e- tendering, e-purchasing does not usually develop pre-qualified supplier lists but is effective in managing them.

E-purchasing typically accounts for no more than 15 percent of the value of public procurement but more than 80 percent of the transactions. It is useful for addressing petty corruption and strengthens audit, record-keeping and reporting for a large turnover of activity. However without considerable technology penetration into the backend management systems it cannot effectively be implemented.

Some attempts in other jurisdictions have been made to introduce e-purchasing by way of the financial management information system but this has not been the preferred path even in jurisdictions with strong management and is not recommended especially where governance is one of the key objectives

Description of a Mature e-GP System

The development of e-GP depends more on getting the policy, strategic planning, management, and governance components in place, than on just the actual application of the technology. A schematic representation of a mature e-GP system is shown in the diagram below.



E-GP is usually conducted through a common website that allows for the registration of suppliers and buyers, and for public access to procurement policy, guidelines, procurement opportunities, process stages and procurement outcomes (who won the contracts, cost, duration). The procurement systems on the website can be accessed by both buyers and suppliers and allow the procurement process to be conducted online. They usually cover:

- e-Tendering: public tendering for works, goods and services;
- e-Purchasing: the purchasing of high-volume, low-value goods such as stationery, furniture and tools; and
- e-Contract Management: the development and management of contracts to assist managers in providing good quality documentation and managing more effectively the quality of the procurement outcomes, timelines and costs. Elements of this system may be incorporated in the tendering and purchasing systems.
- The Procurement Management Information System (PMIS), which provides information and management support such as an online procurement library containing policy statements, guidelines, document templates and procurement advice, to assist in the operation and particularly in the reporting of the process.

The procurement systems are usually integrated with government administrative systems so that payments can be made online, and issues such as asset planning and management information can be linked to the procurement cycle. They may also be linked to a data warehouse so that procurement trends can be tracked, and information analysis can be undertaken by both government and business to assist improved decision-making.

The diagram shows e-GP systems provide value-added services to both buyers and suppliers, and are supported or facilitated by components such as policy, infrastructure, legislation and regulation, and training. There is a particular need for strong support from:

- government leadership and policy that sets the direction for e-GP;

- legislation and regulatory process that are consistently applied and monitored;
- comprehensive procurement planning and management in both the procurement agencies and in agencies across Government that support the integrity, transparency, efficiency, and effectiveness of the government procurement market;
- active integration of suppliers to support increased access to procurement opportunities, a fair and competitive market, and more streamlined and consistent processes.

Many of these components should be in place in supporting the traditional approach to government procurement and are equally important for the implementation of e-GP.

The Eight Components

In a jurisdiction with a mature, self-sustaining approach to e-GP in place, the eight key components would appear in the following mature form.

Government Leadership

Jurisdictions that have successfully adopted e-GP have usually had significant Government leadership with funding, resourcing, planning, management, and implementation support to create an environment where procurement modernization and change can occur in a sustainable way. Government leadership is evidenced by the degree to which a national vision and objectives for procurement have been articulated, and whether a lead agency(s) is in place with responsibility for procurement policy and guidelines. The presence of an integrated implementation strategy for procurement reform and change, procurement career development and education, and the provision of procurement advice to agencies is also evidence of strong leadership in procurement.

Human Resource Management

In jurisdictions that have successfully adopted e-GP, there have usually been significant Government efforts to make provision for the education and training of executives, managers, and staff with procurement responsibilities. Education and training is also available to suppliers, as they are also required to adopt the changes made and work effectively with government. The career and job structure for public sector procurement managers and staff has been reviewed so that it matches the new responsibilities involved. The government lead agency(s) has had available to it the appropriate high-level policy, legislative, technical and management expertise and knowledge required. A range of education and training programs is provided via government agencies, private sector organizations, and NGOs. A change management strategy is in place to assist procurement managers and staff to deal with the changes involved in procurement reform and making any transition to e-GP.

Planning and Management

For any e-GP implementation strategy, good planning and management are essential. The role of planning and management to support electronic-based services is complex and challenging.

Planning has been based on a clear assessment of the existing procurement environment. This assists management to define the direction, scope, focus and phasing required for their plans. A Strategic Implementation Plan including an e-GP strategy is in place and is linked to other current e-Government and e-Commerce plans. These plans were developed collaboratively with the involvement and support of major stakeholders in government

procurement. These stakeholders represent government functions such as finance, asset planning, audit and review, legislation development, regulation, procurement management, education and training, and public sector management. In the private sector they represent industry sectors, professional associations, supplier groups, and watchdog organizations.

A lead agency (or agencies) is in place for the **management** of government procurement and to support buying agencies in meeting their procurement responsibilities. Clear guidelines and procedures that can be translated into consistent management actions and outcomes are available. Procurement guidelines and processes are well documented to assist users to learn and check their understanding as required. Contract outcomes are managed and reported and appropriate action is taken where required. Consolidated procurement data is available to support current understanding of the market and to support future decisions on government procurement.

Public information on the procurement process and outcomes is available. Sufficient management controls are embedded in the process to ensure effective compliance with policies and guidelines, risk management, probity and performance auditing, and quality management, so that corrective action can be taken. Independent external audits can be carried out for any agency with responsibility for government procurement.

Procurement staff has access to appropriate competent advice on procurement issues. Some level of procurement responsibility is usually devolved to government agencies together with a mechanism (such as accreditation) to demonstrate that they can meet the standards required.

Policy, Legislation and Regulation

The development of **policy** gives important direction and intent to the procurement environment and its transformation. Policy is applied to issues such as value for money, open and effective competition, risk management, supporting local business, economic development, public procurement performance, common use contracts, and integrity and ethics. It is also applied to the development of e-procurement systems and their interfaces to other corporate systems.

A public policy-driven approach to procurement gives broad direction as to what outcomes government procurement should achieve without over-specifying how it is to be done. The procurement guidelines, based on policies, can then provide for some flexibility in how the process is managed for different levels and types of procurement involved. This approach appears to have had more success than adopting a rigid set of regulations that have little flexibility and that stifle management decision-making. Policies need to be well understood by all stakeholders and be independently monitored for compliance.

An e-GP strategy has to be linked with a range of direct and supporting **legislation**. However, because creating change through policy is often simpler than legislating change via the legislature, there is often much that can be achieved without legislative change. An e-GP strategy should recognize this distinction in its schedule of phased implementation. Legislation that allows for policy to be developed and changed without requiring major change to the legislation appears to have some advantage in dealing with the evolving issues in procurement. Some specific legislation may have already been enacted in relation to electronic commerce, including issues such as the status of electronic documents, digital signatures, authentication, privacy, and security of data.

Regulation is a key factor in determining the integrity, fairness and effectiveness of government procurement. Regulation is much more than the text of the regulations

themselves. It includes enforcement, good management of behaviour and process, external and internal auditing of compliance and performance, and the maintenance of procurement responsibilities at agency level via accreditation and other means of performance management. It implies that comprehensive data on procurement process, management, and outcomes is available to support decision-making and taking corrective action. Often there are independent regulatory agencies in place with supporting authority to set and monitor legislation, policies and guidelines, to act as arbiter in disputes, to manage the accountability of agencies with procurement responsibilities, and to conduct reviews of procurement issues. The regulators also often have authority to audit government agencies and to ensure that standards are adopted for procurement.

Infrastructure and Web Services

Infrastructure is an important issue for e-GP. Reasonable connectivity, availability of web services, user access, and network reliability are required to support e-procurement systems. The services should be comparatively affordable for users. There needs to be interoperability between systems (telephone, Internet, email, fax) enabling systems to be linked. Some technical standards for telecommunications and the Internet will have been applied. The speed and quality of the network should be sufficient to encourage growth in its usage and support the timely transmission of documents. There should be a viable hardware and software market and sufficient expertise available to support and maintain the infrastructure. The term “reasonable or adequate” can be quantified from comparative data provided from a range of e-readiness assessments in other countries.

Technological Capability and Standards

The level of computerization and the understanding of digitization processes, security, enterprise architecture, and standards form an important part of IT competency. E-GP, as part of e-Commerce, is inextricably part of these developments. The immature status of many, if not most, of the standards on which e-GP is dependent poses special risks to governments. These risks include systems obsolescence, lack of interoperability, higher operating costs, vested interest influences, sub-optimal functionality and reduced innovation and, more broadly, retarded technological enablement of commerce generally. These financial, commercial, and social risks mean that these standards become essential dimensions of government policy, legislation and leadership. Other issues are less technical and include departmental connectivity, e-literacy, IT supplier relationships and help desks for reliability.

It is important that executives and managers be able to appreciate and engage with these issues if the risks to governments are to be managed. The existence of a well-defined and broadly generic framework for standards in government can play a catalytic role in bringing together major developers in different sectors and networks to promote common methodologies, modelling, and standards.

Without an understanding or awareness of many of these issues, managers will struggle to appreciate other issues, such as:

- supplier registries and catalogues, market networks and communities;
- system qualities such as reliability, security, portability, communicability and management;
- procurement process standards for documentation, legal contracting, interpretation of legislation, process workflow and choreography

Private Sector Integration

The participation of the private sector should not be taken for granted. Business will see benefits in e-GP, if it improves its confidence in the integrity, fairness, consistency, transparency, and efficiency of the public procurement process, and provides open access to a wider range of business opportunities. Training and advisory support needs to be made available to private sector entities. Private sector integration can be achieved in a number of ways. There may be a high level of consultation between government and business in relation to e-GP issues. Business may be represented on government decision-making bodies dealing with procurement strategy and process. The business sector needs in any case to have ready access to information and advice on government policy, regulations and procedures. Feedback for unsuccessful tenderers and an independent appeal mechanism to deal with industry and public complaints should be available.

The Government may initiate strategies to enable all business sectors to develop electronic catalogues and support business systems integration. The Government may have strategies to ensure that suppliers, particularly small to medium enterprises (SMEs), have access to the electronic government procurement market through a well-distributed infrastructure or other mechanisms such as Internet kiosks. The Government may develop strategies to assist business in competing in regional and international procurement markets as well as meeting its international trade obligations. The cost of engaging in government procurement should not be a deterrent for SMEs nor put them at a disadvantage in the procurement process. Training and education on procurement should be readily available. When a significant percentage of suppliers participate in government work, this is a sign that private sector integration has been well fostered and is well advanced.

Existing e-GP Developments

Some governments already have initiatives underway to establish specific e-procurement systems, which may or may not be linked to an overall strategy to pursue e-GP. Guidance for integrating these initiatives into an overall e-GP strategy would consider both management and system technical perspectives. The readiness issue is the extent to which e-procurement systems are being developed so as to be compatible with a longer term e-GP strategy.

From a management perspective, Government can develop an e-GP Strategic Plan to link e-GP with other e-initiatives and provide for the development and implementation of the e-procurement system(s). Government can provide policy and management direction in choosing the type of systems being considered. Some procurement market, process, and systems standards can be identified and adopted. Government needs to have created or designated a lead agency to oversee the development and implementation of the system(s). The Government retains control over the further development and use of the system (even though the delivery and support of the services may be via the private sector).

From a system perspective, the initial systems (usually tendering systems) commonly have been developed and implemented with the following functionality in mind:

- 1) Systems are web-based.
- 2) Information on all procurement opportunities is advertised on a single Internet site.
- 3) No proprietary hardware or software is required by suppliers to use the system other than a web browser and access to the Internet.

- 4) Buyers and suppliers can register for business online.
- 5) The system has a search engine to assist users in finding information.
- 6) Procurement legislation, policies and guidelines, and information on how to use the system, can be accessed online.
- 7) There is open access to all tendering documents.
- 8) Access to the system for registered buyers and suppliers is free or low cost.
- 9) Electronic download of tendering documents is available.
- 10) Electronic upload of supplier proposal documents is available.
- 11) The system provides for security and privacy of information.
- 12) Progress of the evaluation and award process can be accessed by the public.
- 13) Information on award outcomes can be accessed by the public free of cost.
- 14) Common interoperability and procurement standards are applied to all systems.

It is critical for the tendering documents, policies, and legislation that appear on this electronic system to have legal validity. The online documents must be equivalent to the originals and not simply represent copies.

International Lessons

Worldwide, some 20 countries have already developed e-GP to a significant extent over the past 10 years. Another 20 or so countries are in the process of planning for e-GP or are in the early implementation phase. This is not surprising given that government procurement usually makes up between 10 and 20 percent of GDP and the benefits are easily quantifiable and substantial. The benefits achieved include:

- a reduction in the cost of the procurement process for both Government and the private sector;
- improved process transparency, credibility, consistency, and integrity;
- improved accountability for procurement outputs and outcomes;
- increased participation by suppliers in the government procurement market;
- assistance to the conduct of international trade and commerce.

Yet among the countries that have launched e-GP, some have committed significant budgets and yet have not realized their objectives, while others have achieved good outcomes from relatively modest resources. Here are some of the lessons learned.

- E-GP implementation should be driven by a central procurement lead agency and requires effective leadership with a reform mandate.
- E-GP leadership and implementation requires a well-defined vision and strategy, with clear objectives.
- E-GP implementation is a phased process, rather than a once-and-for all event ("big bang"), and requires that objectives and functionality be prioritized and implemented on a scheduled basis according to what is realistic at each point of the program.
- E-GP requires officials who understand public procurement and also who are receptive to the application of new technology. This means that effective professional development is essential.
- Internet access is basic to e-GP, and policy is required that recognizes the state of the technology for smaller businesses.

- Implementation that approaches the issue as primarily one of technological installation rather than workflow and management reform is likely to falter because in fact the reverse is true.
- E-GP implementation requires new policies and procedures and therefore a detailed understanding of what e-GP does and does not do.
- E-GP requires choosing a business model.
- Implementation requires a qualified team which is responsible and accountable for the task.

One of the most common mistakes by government officials is to regard e-GP as a “black box” technology installation. This misconception becomes a barrier to their understanding of what it is all about and effectively represents a disempowerment of their roles.

Often one of the most difficult aspects of e-GP for officials to understand is that they must come to understand e-GP. With this understanding come new roles that replace obsolete processes, and new capabilities and empowerment rather than disempowerment.

Non-functional Requirements

Non-functional requirements (systemic qualities) are requirements that do not have a direct bearing on what a system does, but rather on how the system does it. Although some or all of these requirements are often the subject of a service level agreement (SLA), determining the non-functional requirements is a task for which the Government should seek technical advice independent of any service provider, through a risk analysis to assist in the development of any service level agreement (SLA), discussed with an independent technical specialist in the context of an open international standards environment.

Non-functional requirements can be described in terms of a series of manifest, operational, and development qualities that should form a checklist for development, SLA or acquisition.

Manifest Qualities

Manifest qualities reflect the visible behaviour of the system from a user perspective. These qualities are mostly measurable and include:

Performance reflects user waiting times;

Reliability reflects the average time between system failures.

Availability reflects uptime vs. downtime, measurable in terms of partial or complete lack of availability.

Usability refers to the ease of use of the system.

Operational Qualities

Operational qualities relate to the system operations and operators. These qualities are generally not visible to users unless they become degraded. Supplementary measures may be envisaged to address inadequate operational qualities.

Throughput measures how many services or operations can be supported at required minimum performance thresholds.

Security is the prevention of undesired access to the system and its data. This typically centres on identity management. Currently this means that encryption standards must be at least 128 bit.

For any e-GP processes engaged internally or through third parties, the system and its management needs to develop, maintain and implement an information security management system that conforms with international standards for information management and takes account of recognized best practice, including but not limited to asset security, access security, human resource security, operations management and business application controls, documentation and script sufficiency and security, physical and online security, business continuity, record keeping and compliance.

Manageability reflects the capacity to readily start, restart, and stop the system or its processes, to monitor its performance against benchmarks, and to take corrective action.

Serviceability is the extent to which a system can be updated or repaired, as reflected by the ease and speed with which its components can be swapped, as well as the downtime effect on the system while this is taking place.

Development Qualities

Buildability is a measure of confidence that the system can be built within the given timeframe.

Interoperability is the ease with which other systems or sub-systems can be made to interface and interoperate with the system often through common standards.

- The e-GP system needs to be interoperable through open standards with ICT products in common use, be Internet-based, and accessible by users through readily available and commonly used browser software.
- Downloaded documents need to be readable through open standards with a range of commonly used office software. If specialized software is necessary, this should also be downloadable (such as software to read PDF documents), free of charge, and compatible with commonly used system and office software. Similarly, the requirements for electronic submissions should require only open standard interfaces with commonly used office software, or the submission software should be available online from the Contracting Authority's system.

Evolutionary Qualities endeavour to accommodate future system demands beyond the current version. Unlike performance qualities, these are generally difficult to measure since they are somewhat speculative and it is difficult to hold anyone accountable for them.

Scalability is the ratio between the capacity to support more users and the amount of cost and effort. Vendors often claim that their systems are scalable but sometimes fail to fully define the costs.

Maintainability is the ease with which faults can be detected (routine maintenance), diagnosed, and addressed within the design and application of the system.

Extensibility is the degree of ease with which significant enhancements can be made.

Reusability (or Flexibility) allows sub-systems of the system to be incorporated into other systems.

Portability enables the system to be moved to other platforms and can be managed by ensuring open standards-based interfaces between components to prevent the degree of tight integration that reduces freedom of choice later.

ANNEX 2: READINESS ASSESSMENT METHODOLOGY AND FINDINGS

Methodology

The readiness assessment survey focuses on the level of readiness for making the transition to e-GP. It does this by focussing on what currently exists, and what does not exist, within the existing, largely manual, government procurement environment in Afghanistan, which would contribute to making the transition to e-GP. The survey asks respondents to comment on nine key components and associated sub-components in the existing procurement environment that are relevant to the adoption of e-GP.

The level of readiness has been constructed by reference to international practice with respect to these components. The premise is that if the existing procurement environment demonstrates a significant level of readiness on these components, then the jurisdiction is in a good position to adopt e-GP. Conversely, if the readiness level is low, then the adoption of e-GP is going to require some initial building of the key components, and will mean that the implementation strategy used will be different and probably require a longer time.

The survey focuses on eight key components that support the introduction of e-GP. These components are drawn from a consideration of the strategic foundations that underlie e-GP. A tenth area, participants’ opinions on what they considered is required to best support e-GP in the jurisdiction, was also canvassed. This area does not involve readiness levels but provides valuable input to the assessment.

The assessment survey questionnaire was distributed to each participating organization and interviews with individuals and discussions with respondent groups were conducted. Some respondents followed up with additional comments within a few days. Respondents were requested not to attempt to give views on components that were outside their particular experience in the procurement environment. The responses to the questionnaire were complemented by information from other relevant reports and documents where these were available.

The eight components are outlined in the table below.

Factors	Respondents				
The degree to which	Score	Score	Score	Score	Score
a) The government has set a vision and objectives for procurement. Comments:					
b) The government has declared a need for procurement reform. Comments:					
c) A government lead agency is available to provide leadership for procurement management, policy and reform. Comments:					

<p>d) The government lead agency has adequate resources to provide its leadership role (for example, an implementation group).</p> <p>Comments:</p>					
<p>e) The government lead agency has the authority to manage and reform procurement.</p> <p>Comments:</p>					
<p>f) An effective agency (Regulator) with clear, enforceable power to regulate the conduct, management and policies of procurement is in place.</p> <p>Comments:</p>					

Findings

Government Leadership

Overall, some effective government leadership is in place with the setting up of the PPU, but there is extremely limited human resource available to other agencies to drive a reform agenda. Clearly much more needs to be done to resource this area and to give substance to the reform agenda. The capacity of the PPU would be under resourced if required to both drive a traditional procurement reform agenda as well as support the introduction of e-GP.

- The GOA has articulated the need for procurement reform and has sponsored the development of a vision and objectives this reform. There is a strategic plan for the future development of government procurement (which may include e-GP) at the National and Regional level is available.
- Also a central procurement lead agency (PPU) has been established in the Ministry of Finance with authority and the policy role to drive reform but opinions were divided as to whether it had the appropriate resources. All offered qualified responses: currently, the World Bank is providing all necessary funds to advance the procurement agenda, but the government in of itself has neither the financial resources, nor more importantly, the human resources to advance the procurement agenda.
- Private sector respondents were very negative about the government’s capacity to implement procurement properly. They were also divided as to whether the PPU has the authority to manage and reform procurement policy.
- An integrated plan for the development of e-GP is not in place but there have been activities to reform the current procurement environment, including the development of legislation, regulations and documentation, of the procurement process.

Human Resource Management

Overall, there are significant gaps in the level of human resource management to support current and future reforms in procurement.

- There is currently no agency or function responsible for human resource management issues in relation to procurement.
- Procurement education and training programmes have been conducted in the past with some success and a consultancy is currently being contracted by the PPU to start a 3-year program to train and certify government procurement staff who will then be able assume responsibility for procurement in various line Ministries.
- The Afghan Builder's Association advised that "There are occasionally some workshops one afternoon or another, but it's always very basic information – nothing comprehensive" while the AICC reported "At the Procurement Technical Assistance department, we provide help to member companies that want to bid for tenders – either from the government or directly from the donor." This is currently being addressed under the 3 year consultancy.
- Educational information related to government procurement available to suppliers is reported to be minimal although there is an NGO called the Peace Dividend Trust which is providing some training on writing bids for the private sector. Also ARDS is in the process of developing a user manual for the website which will be shared with both government staff and the private sector.
- As to whether the private sector has a reasonable level of e-literacy respondents offered qualified responses – the private sector as a whole is very informal and overall has little familiarity with technology. On the other hand the kind of companies that bid for public procurement are very different – the AICC estimates 70% have email address and are often returnees who come back to Afghanistan to start businesses of all sizes. The same companies/businessmen that are not e-literate are largely the same group that lack the capacity to enter a formal bidding process, electronic or otherwise.
- ARDS points out that many of the suppliers for public procurement are foreign, particularly among the largest value projects.
- Internet cafés are common in the capital and major regional centres.
- As to whether the range of expertise required to implement e-GP is available to government respondents considered that this is the case but contingent on continued foreign support and donor funding.
- Government relies on foreign consultants, though there is a small cadre of Afghans with the technical and management experience to contribute. However they are not integrated into the local business sector but rather employed at the WB/foreign consultancies and paid expatriate wages.
- Given the time it takes to develop and deliver training to significant numbers of people, it is clear that there will be a serious shortfall in this resource for several years at least.
- Any procurement reform program and transition to e-GP will progress slowly and uncertainly unless the required levels of expertise to plan, implement and operate e-GP are available to government.
- A wider range of procurement education and training needs to be made available to prospective procurement specialists, public sector managers and staff, technical staff,

suppliers, and future employees (students) on a more formal basis. The training and education programs should have a comprehensive range of operational and strategic content and be readily available. The availability of procurement expertise is critical to changing both the existing system and making the transition to e-GP. Much of this training needs to be ongoing and preferably online.

- A career structure in procurement managers and staff needs to be established. Overall, there are significant gaps in the level of human resource management to support current and future reforms in procurement.

Planning and Management

Overall, some effective planning and management has taken place in relation to key supporting components of procurement reform such as uniform processes and documentation, although these may take years to become established. Most of the reform initiatives are yet to be implemented.

- As noted under leadership a strategic plan for the future development of government procurement (which may include e-GP) at the National and Regional level is available but without a lot of conviction from various stakeholders.
- A new Public Procurement Law has been gazetted and the “Rules of Procedures” are currently in place. The PPU should now focus on the implementation of the Law.
- Common procurement procedures, policies and guidelines are often not consistently applied across government agencies. The ‘procurement capacity building contract’, currently in place, will ensure adequate training on the new procurement law to ensure consistent understanding and application of the Law by all procuring entities.
- Additionally, ministries do have an “internal budget” which comes from domestic revenues, and can conduct their own procurement with these funds. Such procurement is subject to the Procurement Law and carried out off-line.
- There is no centrally maintained catalogue for use by government buyers and no range of centrally maintained framework contracts for government buyers - currently, the standard contracts for the funding donor are used, depending on who is funding the procurement. The only standardised documents that are available to support the procurement process are the standard contracts for the funding donor, depending on who is funding the procurement. Donor standard documents are available on the website. There is an intention to develop country standard documents based on the new procurement Law. This will happen over the next 12 months. This will ensure harmonization of procurement procedures and documents.
- Contract outcomes related to service delivery and product/service quality are managed and reported by each Ministry while ARDS-PU facilitates the bidding process centrally for all procurement. There have been no effective management controls for monitoring compliance, quality, risk management, efficiency and the performance of procurement in all government agencies in place. There is as yet no consolidated procurement data on usage, trends, and performance available to assist government decision-making, although the reporting requirements of the new Law will enable the PPU to start the collection and analysis of such data.

- The public has access to information on the process and the outcomes of procurement decisions of the procurement agent - all its contract awards are published on the ARDS website.
- The PPU currently has very limited resources and actual responsibilities and would find it difficult to take on the wider role and influence to be a lead agency for procurement reform and the transition to e-GP. This issue has already been addressed in the foregoing discussion. The availability of resources to implement, and then manage and monitor the efficiency and effectiveness of changes already being made, is very necessary to embed those changes in the government procurement environment. The availability of resources needs to be matched to the level of progress to be achieved. If the resource issue is not addressed then process compliance may appear to be achieved without process performance, integrity, and quality of contract outcomes.
- The establishment of a PMIS, if the collection of procurement information is well managed, audited and reported, could be an effective tool in driving procurement reform – ICT could be driven in to mainstream management through this means. The use of e-GP for training and operations together with the application of a PMIS suggest a strategy for e-GP implementation in Afghanistan.
- There appears to have been little private sector involvement or conviction in the planning for procurement and developing the process.

Policy, Legislation and Regulation

Overall, little policy and strategies have been developed to provide direction for, and integration of, government procurement with other e-commerce issues. If e-GP is to be implemented, then policy to define direction, and address issues such as assisting supplier uptake, ensuring common standards, and achieving effective procurement outcomes will need to be considered. Without policy (and a plan) the implementation of procurement reform and e-GP could become a series of disconnected activities with few benefits being achieved.

- Procurement policies have been developed and specific legislation for procurement now exists. The Public Finance and Expenditure Management Law (PFEM) was passed in September 2005, repealing all previous laws. Even the private sector respondents were positive about the new law. However, there may need to be a significant increase in the resources available to the GOA to successfully implement and sustain these legislation and regulatory initiatives.
- Procurement policies are generally regarded as not easily available or supported by education programs or expert advice. This to be addressed as part of the Terms of Reference of a consultancy, which will begin a 3-year training program. Also the AICC offers services and support of the Procurement Technical Assistance Centre (PTAC) to the private sector.
- Procurement policy is theoretically linked to policies on e-Commerce and e-Government. The Ministry of Communication is supposed to be in-charge of implementing all ICT programs, but they have been slow to put actual systems in place, despite numerous “needs assessments.”
- Procurement policy is not linked to industry development policy

- There is no cyber-legislation that has been enacted to support the requirements of e-procurement (eg use of electronic documents). No drafting of such legislation will occur in the near term. There also is actually no legislation regarding intellectual property, including copyrights, patents, or trademarks, currently in force at all.
- Agencies need to report on their procurement activities and outcomes to the PPU.
- The ICT policy is in its early stages of implementation. PPU has the role of managing and overseeing public procurement policy.

Infrastructure and Web Services

There does not appear to be up-to-date, appropriate information on all aspects of the infrastructure to assist those who wish to provide services using the infrastructure. This would apply to e-Procurement services along with many other e-Government and e-Commerce services. There are divergent views as to when Afghanistan would have the infrastructure to proceed with e-Procurement systems that range from a year to four years from now.

- Telephone or internet networks are in place that can service major city users. Things have improved dramatically in recent years. A mobile network is in place, but internet networks are weak: mostly dialup or satellite connections at this point. Peering is non-existent and interconnections between mobile operators is poor.
- Telephone or internet networks (via kiosks or internet centres) are in place that can service regional users. Buyers and suppliers have reasonable access to telecommunications systems. However access to telecom services is highly dependent on access to electricity, which remains unreliable in the capital.
- Internet cafés are ubiquitous and cheap. On the other hand available bandwidth is small and all respondents reported that the speed of the connection is very poor.
- Internet access is reasonably affordable in comparison to adjacent countries. Securing internet access for an organization or office remains very expensive at about US\$275/month for a very slow connection. The vast majority of internet users, however, use internet cafés, whose hourly rates (\$0.60/hour) is about 10% cheaper than Pakistan.
- Buyers and suppliers do not have ready access to a viable, competitive software and hardware market in the usual sense:
 - (i) Off-the-shelf software is available very cheaply (with no intellectual property laws, Windows XP, Office is available in the bazaar at \$1 - \$2)
 - (ii) Hardware is imported and more or less comparable to Dubai prices.
 - (iii) There is no viable *domestic* market for software development services
 - (iv) Foreign firms bid for software development contracts, but it is hard to evaluate competitiveness of bids.
- Sufficient expertise is not readily available to government and suppliers to support and maintain the infrastructure and their software and hardware. Expertise is available through foreign consultancies, which are currently funded by the WB and other donors.

Readiness Levels of Infrastructure & Web Services in Afghanistan (Feb 2006)

No	Indicators	Level of Readiness				Afghanistan's Profile
		L1 none/little	L2 small	L3 some	L4 adequate	
1.	Internet subscribers (% pop)	<0.05	<1.0	<10.0	>10.0	L1
2.	Internet users (% pop)	<1.0	1-3.0	4-10.0	>10.0	L2
3.	Number of ISP providers /million people	<1	<2	<3	>3	L1
4.	PC penetration (%pop)	<1.0	<3.0	<10.0	>10.0	L1
5.	Modem transfer speeds generally available	e-mail only	9.6-14.4 Kbps	14.4-28.8 Kbps	28.8-56.0 Kbps	L2
6.	Availability of data network	Little or no network	A few agencies with LAN	Networks in major centres	Networks link many centres	L1
7.	Availability of public internet centres	None	Mostly in Kabul	Few in most locations	Some in most centres	L2
8.	Comparative (regional)cost of internet access	Very high	High	Marginally above	Comparable	L2-14
9.	Telephone fixed line penetration (% pop)	<2%	<8%	<40%	>40%	L1
10.	Mobile phone penetration (% pop)	<0.5%	<5%	<14%	>14%	L2
11.	Coverage of telephone service (%pop)	<10%	10-30%	31-50%	>50%	L1
12.	Quality of service (faults /100 lines)	>100	50-100	10-50	<10	L2
13.	Service and support to install service/fix problems	2 years/ 6 months	6 months/ 1 month	1 month/ 1 week	Few days/ <48 hrs	L2
14.	Availability of hardware	All components imported	Many components imported	Some components imported	Few components imported	L1
15.	Availability of software providers	0	1-9	10-50	50+	L2

- There are many policy, technical and business issues to be addressed before a national infrastructure is achieved that is integrated, reliable, affordable, has sufficient speed, and is widely accessible. The telecommunications network in particular is poorly integrated.
- To assist e-Government, e-Commerce, and e-GP initiatives in particular, there is a strong need to increase access to broadband and reduce the cost of wholesale access.
- The eventual involvement of small contractors in e-GP will be important to its success. There can be significant benefits to these contractors in gaining wider and

unfettered access to procurement opportunities, while reducing the cost and time to do business with government.

Technological Capability

There is no evidence that there is any real understanding of the essential elements of computerisation and e-literacy is at best modest. The lack of understanding at this level puts at risk all projects to enhance computerisation especially under circumstances where there is no enterprise architecture to guide it and no appreciation of matters such as digital security management.

- Computers are not routinely used throughout the civil service by government managers. Government officials generally do not have a good level of e-literacy. Despite the availability of computers due to donor funding, most civil servants are not e-literate. Where computers are present most are used as sophisticated typewriters.
- Computers are absent from many levels of government and indeed rare outside of the central ministries. One programme is in the process of computerizing some processes in the Kabul Municipality, but it will take time before they become operational. Donor-funded government programs always include a budget for computers.
- Ministries and departments are often not connected to the internet. Often only the minister is connected to the internet and s/he will only use it for email. There are really only four ministries with comprehensive access to the internet - Ministry of Rural Rehabilitation and Development, Ministry of Finance, Ministry of Commerce, Ministry of Foreign Affairs.
- The government would much prefer to purchase software for procurement rather than developing this itself. An e-GP service would be engaged through a service provider. All software is developed by foreign consultancies. Sometimes the foreign consultancies employ Afghan nationals as consultants, but these staff are paid several times more than in the civil service and are unlikely to take government jobs after the consultancy has finished. Outsourcing these developments is common around the world and only becomes an issue if the technical understanding of the government is insufficient for it to ensure that the developments are consistent with its best interests. In the case of the Afghanistan administration there is no assurance that such competency exists.

Private Sector Integration

The government has a potentially serious problem if it intends to continue with procurement reform and the introduction of e-GP. The support of government by the industry sectors and major supplier groups is essential for success. The key to the relationship is to build trust and confidence with the private sector by effective consultation, awareness raising of government intentions and addressing the concerns of suppliers.

- There is a low level of consultation between government and business on procurement issues. Consultation has not been completely absent, but there have been no formal exchanges. There are no formal vehicles for such interaction.
- Information and advice on procurement policy, regulation and process, to the extent that such processes exist, is reasonably available to the private sector. Such information is available on the ARDS website.

- Feedback to suppliers on unsuccessful bids is becoming available. This is a right granted through the recently passed procurement law, but it has not yet been implemented. Some informal feedback is currently available.
- An independent appeal mechanism does not yet exist. However it is a feature of the recently passed procurement law. It is planned to establish this facility over the next 12 months.
- The costs to participate in government procurement processes are reasonably acceptable to small business. Fees for bidding documents are quite low (free, or \$10 - \$20) depending on the ministry, and so considered to be minor. However the costs to submit a bid are a barrier to competition. Most tenders require a bank guarantee, which is difficult and expensive for business to obtain given the state of the Afghan banking sector.
- The private sector has little confidence in the integrity, fairness, consistency, transparency and efficiency of the existing government processes. The government respondents have little contact with private sector representatives, which they attributed to an immature private sector.
- On the contrary, the private sector organizations were quite clear that there is a lack of trust in the government. The industry body for the construction sector said its members would rather bid directly with the donors or with NGOs because they feel personal relationships primarily drive the awards process and, more importantly, the subsequent management of the contracts.
- ABA cited the common pattern of well-connected contractors winning a bid by the virtue of a very low price, but then subsequently winning cost extensions to make up for the low bidding price.
- SMEs are not disadvantaged in the procurement process with the significant caveat of the requirements of the bank guarantee. There is a general consensus that small companies are not specifically disadvantaged but unsophisticated companies or those companies directed by Afghans who don't speak English or who are unfamiliar with technology are often left out of the process.
- There is very minimal practice of e-commerce in Afghanistan and minimal e-literacy skills except for the expatriate firms.
- Advice to the business sector on public procurement is currently arranged primarily by the business associations themselves or is left to individual firms to network their way into the system.
- Overall there are a number of issues to be addressed with the suppliers. Without supplier support any reforms and transition to e-GP will fail, as they have done elsewhere. The government needs to recognise that both sides of the government supply market must function effectively for its reforms to be successful.
- The private sector is relatively uninformed on many aspects of government procurement and this has led to poor perceptions of the process and what is actually available.
- The private sector's confidence in the government process is variable but generally low with a low level of conviction in the reform processes although satisfaction with

the recent legislative changes. Additionally, the consultative mechanism between supplier organisations and government is non-existent or not effective. The government needs to make the private sector more aware of what it is doing and interact with it on a more formal basis.

- The private sector sees the government as willing to make change but not having the skills or resources to carry through with its role in managing and regulating public procurement.

Existing E-GP Developments

The current system is in an early first stage of development but could provide a basis for future e-procurement system development and implementation. The relationship between potential new e-procurement systems and the backend management systems needs to be understood so that effective interoperability can be achieved.

- Basic problems of infrastructure including power supplies, and the relatively low levels of computerisation in the public and private sector and low levels of e-literacy mean that system enhancement needs to be very much on a phased basis and integrated with training. However to build confidence by the private sector secure bid lodgement should be developed at an early stage.
- A strategy to modernise procurement is in place but no plans for full e-GP are being considered right now. Without the legislation governing e-signatures, and the general unreliability of the internet/telecom networks, all procurement processes will require submission of hardcopies of bidding documents for the foreseeable future.
- The new procurement law has represented an important step forward and the focus at present is to bed this down.
- ARDS, the procurement information systems advisor, and the actual developer of the current website, are the most enthusiastic advocates of moving e-GP forward, but could not address the concerns raised by the World Bank concerning the lack of confidentiality, digital signatures, etc.
- Outside of ARDS, no ministries or departments are independently developing their own approaches to e-GP. No training or information is available for buyers and suppliers.
- A system (www.ards.gov.af) to support e-procurement activities, with the following functionality is in place. Such a system is for procurement funded by the external development budget.
 - (i) Information on all procurement opportunities is advertised on a single internet site
 - (ii) No proprietary hardware or software is required by suppliers to use the system other than a web browser and access to the Internet.
 - (iii) Buyers and suppliers can register for business online. The current registry is somewhat fragmented: there is a combination of Excel spreadsheets, Access databases, and a website database that contain the information; these are in the process of being consolidated.

- (iv) ARDS emails AICC the new offers, and then AICC emails the offers to members
 - (v) Buyer and supplier registries are part of the system. Suppliers can register (and they are improving the functionality) but there is no interface for buyers yet.
 - (vi) There is open access to all bidding and other process documents
 - (vii) Access to the system for registered buyers and suppliers is free or at very affordable cost
 - (viii) Information on contract awards can be accessed by the public free
 - (ix) Electronic download of bidding documents is available
 - (x) Bidders can email their proposals to ARDS, but upload is not available. Planned developments of uploads will not be secure
 - (xi) Documents are available in PDF or Microsoft Word format and the HTML is standard; respondents were not aware of the existence of any technical standards related to e-Procurement.
- WB advises that lack of reliable electricity impacts the reliability of the telecom network, which in turn makes both the government and suppliers nervous about relying only on electronic transmission by email.
 - The system is not particularly well used by the private sector
 - No confidential information is exchanged online, but often emails with confidential information are exchanged, but no privacy features in place.
 - The government has employed contract developers or programmers to help build these services.

Annex 3. DRAFT E-LEGISLATION

Law On E-Transactions, E-Signatures & Data Messages

(Draft dated March 2007)

Preamble...

This Law provides for e-transactions, e-signatures and data messages.

CHAPTER I

GENERAL PROVISION

Article 1- Scope

1. This Law makes provisions for e-transactions, e-signatures and data messages in the operations of State bodies; civil organisations and individuals and businesses.
2. The provisions of this Law shall not apply to certification of land ownership, house ownership and other immovable properties, or documents as determined by regulation under this Law.

Article 2. Scope of Application

1. This Law shall apply bodies, organizations, individuals electing to transact or record through electronic means.
2. If any person commits any crime under the purview of this Act outside Afghanistan which would have been punishable under this Act, this Act shall be enforceable in such a manner that he has committed the crime inside Afghanistan.
3. If any person commits any crime in Afghanistan under the purview of this act with the help of any computer, computer system or computer network outside Afghanistan, the provisions of the Act shall be applicable in such a manner as if the entire process of the crime had taken place inside Afghanistan.
4. If any person commits any crime outside Afghanistan from inside Afghanistan under the purview of this Act the provisions of the Act shall be applicable in such a manner as if the entire process of the crime had taken place inside Afghanistan.

Article 3. Application of International Treaties and other Legal Documents

In case where provisions of other laws contradict to provisions of this Law, this Law shall apply.

Article 4. Definitions

In this Law, the following definitions apply:

1. Automated message system means a computer program or an electronic or other automated means used to initiate an action or respond to data messages or performances in whole or in part, without review or intervention by a natural person each time an action is initiated or a response is generated by the system;
2. Certification of an e-signature is the process of applying agreed or regulated standards for the association of an identity or entity with an e-signature and forms a certified e-signature.
3. Database is a set of data, being ordered, established to access, exploit, manage and update through electronic means.
4. Data is figure, symbol, writing, number, image, sound or other similar formats.

5. Data message is information generated, sent, received or stored by electronic, magnetic, optical or similar means, including, but not limited to, electronic data interchange, electronic mail, telegram, telex or telecopy;
6. Electronic document or e-document is a data message that is created and/or stored in electronic form
7. E-signature is the electronic sound, symbol, or process associated with a contract or other record and adopted by the signatory with the intent to sign the record.
8. Electronic signing program is an electronic program established to independently operate or operate through equipment, information systems or other computer programs in order to create an e-signature for the person who signs data messages.
9. Entity is an agency, organisation or individual, or an agent, software or hardware under the control of an agency, organisation or individual in the government, business or in the community.
10. An e-transaction is a transaction that uses data messages implemented by electronic means
11. An automatic e-transaction is an e-transaction that is automatically implemented in part or in whole through information system which has already been established.
12. An information processing system is an electronic system used for creating, sending, receiving, saving, displaying or implementing other processing with respect to data messages.
13. An intermediary is a body, an organization or individual representing other bodies, organizations and individuals to send and receive or store a data message or provide other services relating to such a data message.
14. An electronic means is a means that operates based on electric, electronic, digital, magnetic, wireless, optical, electro-magnetic technologies or similar technologies.

Article 5. General Principles

1. To allow for the voluntarily selection of electronic means to carry out transactions, affix e-signatures and create data messages
2. To allow for the voluntary selection of the types of technology used to carry out e-transactions, affix e-signatures and create data messages
3. To ensure integrity and security in e-transactions and data messages.

Article 6. Policies on Development and Application of E-transactions

Under this Law the government shall

1. Give priority to the development of technology infrastructure and train human resources to facilitate the use of e-transactions, e-signatures and data messages
2. Encourage agencies, organizations, individuals to invest in and apply e-transactions, e-signatures and data messages in accordance with provisions stipulated in Article 1 of this Law.
3. Support the applications of e-transactions, e-signatures and data messages in public services.

Article 7. State Management

Under this Law the government shall

1. Promulgate and implement legal documents on e-transactions, e-signatures and data messages
2. Promote the development and adoption of e-transaction, e-signature and data message standards for State entities
3. Manage or regulate service providing State entities relating to e-transactions, e-signatures and data messages

Article 8. State responsibilities

The Ministry of ----- shall be responsible before the Government in taking the lead, coordinating with related Ministries, branches on implementation of the State administration under this Law.

CHAPTER II

DATA MESSAGES

Section 1

Validity of Data Messages

Article 9. Legal recognition of data messages

A data message, communication or a contract shall not be denied validity or enforceability on the sole ground that it is in the form of an electronic communication.

Article 10. Form Requirements for Data Messages

Nothing in this Law requires a data message, a communication or a contract to be made or evidenced in any particular form.

Article 11. Data Message Written Form

Where the law requires that a communication or a contract should be in writing, or provides consequences for the absence of writing, that requirement is met by an electronic communication, a data message or a e-document if the information contained therein is accessible so as to be usable for subsequent reference.

Article 12. Data Message Having Validity as Original Copy

Where the law requires that a data message, an e-document, communication or a contract should be made available or retained in its original form, or provides consequences for the absence of an original, that requirement is met in relation to a data message, an e-document, an electronic communication if:

- (a) There exists a reliable assurance as to the integrity of the information it contains from the time when it was first generated in its final form, as a data message, an electronic communication or otherwise; and
- (b) Where it is required that the information it contains be made available, that information is capable of being displayed to the person to whom it is to be made available.

For the purposes of paragraph (a):

- i.) The criteria for assessing integrity shall be whether the information has remained complete and unaltered, apart from the addition of any endorsement and any change that arises in the normal course of communication, storage and display; and
- ii.) The standard of reliability required shall be assessed in the light of the purpose for which the information was generated and in the light of all the relevant circumstances.

Article 13. Data Message as Evidence

1. A data message cannot be denied [its] validity as evidence for the sole reason that it is in an electronic format.

2. The validity as evidence of a data message shall be determined based on the reliability of the manner in which the data message was generated, stored or communicated; the manner used to ensure the integrity of the data message; the manner in which its originator was identified, and on other relevant factors, in the light of the purpose for which the information was generated and in the light of all the relevant circumstances.

Article 14. Storage of Data Message

1. In cases where the law require records, files or information to be stored, such records, files or information can be stored in the form of data messages when the following conditions are satisfied:
 - a) The information in the data message is accessible for reference when needed;
 - b) The data message is retained in the format in which it was generated, sent or received, or in a format which can be demonstrated to represent accurately the contents of the data message;
 - c) Such information is retained in a way to enable the identification of the origin and destination of a data message and the date and time when it was sent or received.
2. Contents and time limit of storage of data message shall be ensured in accordance with the law on record keeping.

Section 2

Dispatch and Receipt of Data Messages

Article 15. Originator of a Data Message

1. The originator of an electronic communication means a party by whom, or on whose behalf, the data message, e-document or electronic communication has been sent or generated prior to storage, if any, but it does not include a party acting as an intermediary with respect to that electronic communication, data message or e-doc;
2. In the case where parties participating in transactions do not agree otherwise, the determination of the originator of a data message shall be as follows:
 - d) A data message is considered as that of the originator if such data message is sent by the originator or is sent by an information system established to automatically operate which is designated and authorized by the originator;
 - e) The recipient may consider a data message as being that of the originator if [the recipient] has applied the identifying method, which is approved by the originator and [such method] shows that such data message is of the originator.
3. The provisions of items (a) and (b) of Clause 2 of this Article shall not apply from the time when the recipient knows that there is a technical error in the transmission of the data message or [the recipient] incorrectly used the verifying methods approved by the originator.

Article 16. Time and Place of Dispatch of Data Messages

Unless otherwise agreed by the parties of the transaction, the time and place of dispatch of a data message is as follows.

1. The time of dispatch of a data message, e-doc or an electronic communication is the time when it leaves an information system under the control of the originator or of the party who sent it on behalf of the originator or, if the electronic communication has not left an information system under the control of the originator or of the party who sent it on behalf of the originator, the time when the electronic communication is received.

2. Place of dispatch of a data message is the place of business of the originator if the originator is an organization or the regular residence of the originator if the originator is an individual. If the originator has more than one place of business, the place of business is that which has the closest relationship to the transaction.

Article 17. Receipt of Data Messages

1. The recipient of a data message is the person who is designated to receive the data message from the originator of the data message but does not include any intermediary transmitting the data message.
2. Unless otherwise agreed by the parties to the transaction, the receipt of a data messages is provided as follows:
 - a) The recipient of a data message is deemed to have received the data message when the data message enters his/her information system or an information system accessible to the recipient.
 - b) The recipient is entitled to consider each data message as an independent data message unless such data message is a copy of another data message and the recipient knows or must have known such data message is a copy.
 - f) Where the originator has required or agreed with the recipient before or during the dispatch of a data message that the recipient must send an acknowledgement when receiving the data message, the recipient must comply with such request or agreement.
 - g) In case the originator has not stated that the recipient must send an acknowledgement and the acknowledgement has not yet received the acknowledgement, the originator may give notice to the recipient stating that no acknowledgement has been received and specifying a reasonable time by which the acknowledgement must be received. If the acknowledgement is not received within the time specified, the originator may treat the data message as though it had never been sent.

Article 18. Time and Place of Receipt of Data Messages

Unless otherwise agreed by the parties to the transaction, the time and place of receipt of a data message are provided as follows.

1. If the recipient has designated an information system for the purpose of receiving data messages, receipt occurs at the time when the data message enters the designated information system. If the recipient has not designated an information system, the receipt occurs when the data message enters any information system accessible to the recipient.
2. A data message is deemed to be received at the place of business of the recipient if the recipient is an organization or the regular residence of the recipient if the recipient is an individual. If the recipient has more than one place of business, the place of business is that which has the closest relationship to the transaction.

Article 19. Automatic Dispatch and Receipt of Data Messages

If the originator or the recipient has designated one or several information systems for the purpose of automatic dispatch or receipt of data messages, the provisions of Articles 15,16, 17, and 18 of this Law shall apply.

CHAPTER III

E-SIGNATURES AND CERTIFICATION OF E-SIGNATURES

Section 1

E-signatures

Article 20. E-signature

1. Where the law requires that a data message, e-document, communication or contract should be signed by a party, or provides consequences for the absence of a signature, that requirement is met if:
 - (a) A method is used to identify the party and to indicate that party's intention in respect of the information contained in the electronic communication; and
 - (b) The method used is either:
 - i.) As reliable as appropriate for the purpose for which the electronic communication was generated or communicated, in the light of all the circumstances, including any relevant agreement; or
 - ii.) Proven in fact to have fulfilled the functions described in subparagraph (a) above, by itself or together with further evidence or
 - iii.) As agreed between parties

Article 21. Secure E-signatures

A secure e-signature is an e-signature which also is verified by a security verifying process agreed by transacting parties and satisfies the following conditions:

1. Secure e-signature creation data is reasonably associated only to the signatory in the context that such data is used;
2. Secure e-signature creation processes are under the control only of the signatory at the time of signing;
3. All changes to the e-signature after the time of signing are detectable.
4. All changes to the contents of the data message after the time of signing are detectable.

Article 22. Principles of using e-signatures

Unless otherwise provided by law, the parties to the transaction have rights to freely enter into agreement:

- a.) To use or not to use e-signatures to sign data messages in the process of transactions.
- b.) To use or not to use certified e-signatures
- c.) To select an e-signature certification procedure in case there is an agreement to use certified e-signatures.
- d.) To select an e-signature certification process as mutually agreed.

E-signatures of government bodies may be certified by e-signature certification processes or standards stipulated by government bodies.

Article 23. Validity of E-signatures

Where the law requires a written document to have a signature, such requirement with respects to a data message is taken to have met this requirement if the e-signature used to sign such a data message satisfies the following conditions:

- a) The method creating the e-signature permits the identification of that person and indicates that person's approval of the contents of the data message;
- b) Such method is sufficiently reliable and appropriate for the purpose for which the data message was generated and communicated.

Article 24. Responsibility of the Signatory of an E-signature

1. A signatory of an e-signature is the agency, organisation or individual or the legal representative that controls the electronic signing process and uses such processes to certify his/her intention with respect to the signed data message.
2. A signatory of an e-signature shall have the following responsibilities:
 - a) Have reasonable means to avoid unauthorized use of its e-signature creation data;
 - b) Without undue delay, using appropriate methods to notify any persons who rely on the e-signature when the signatory discovers that the e-signature may not be under the signatory's control;
 - c) Where an e-signature certification process is used, must apply necessary methods to ensure the accuracy and integrity of information included in the certification
3. A signatory shall bear all consequences of its failure to satisfy the requirements of set forth in Clause 2 of this Article.

Article 25: Responsibilities of the Party Accepting E-signatures

1. A party accepting e-signatures is the party who acts based on the reliance of e-signatures of senders.
2. A party accepting e-signatures shall have the responsibility for satisfying themselves that the e-signature is sufficiently reliable and appropriate for the purpose for which the data message was generated and communicated.
3. The party accepting e-signature shall take all responsibilities for its failure to comply with the provisions stipulated in Clause 2 of this Article.

Article 26. Recognition of Foreign E-signatures and Certifications

1. The government may recognize the validity of foreign e-certifications and e-signatures if such e-signatures or e-certifications have a reliable level equivalent to the reliability of e-signatures and e-certifications in accordance with the provisions of this Law. For the government the determination of the reliability of foreign e-signatures and e-certifications may be based on regional or international standards or bilateral or multilateral agreements, which are recognized and other relevant factors.
2. Government and private parties have the right to accept foreign certifications for contracts or other transactions or make other mutual agreements between themselves for the recognition of e-signatures.
3. The government may provide for regulations on foreign e-signatures and certifications.

Section 2

E-signature Certification

Article 27. Application of E-Certification

1. Certification of an e-signature may be provided by technological means, management systems and protocols or by certification service providing entities
2. The standards adopted for e-signature certification shall be reasonably reliable for the purposes of which such an e-signature is applied.
3. The reliability for the purposes of use of certified e-signatures is assessed basing on one or more following criteria:
 - d) the importance and value of information contained in the data messages;

- e) the agreement of related parties;
- f) the technology used by related parties;
- g) the nature of the commercial activities conducted;
- h) the frequency of the commercial activities conducted;
- i) the types and scope of commercial relationship;
- j) the fact that normal changes should not adversely affect the content of information contained in the data messages;
- k) the compliance of commercial customs and practices;
- l) ability of communication systems;
- m) other related factors.

CHAPTER IV

ENTERING INTO AND EXECUTION OF E-CONTRACTS

Article 28. E-contracts

E-contracts are contracts established in the form of data messages in accordance with the provisions of this Law.

Article 29. Recognition of Validity of E-contracts

A contract shall not be denied validity or enforceability on the sole ground that it is in the form of an electronic communication.

Article 30. Principles of Entering into, Execution of E-contracts

1. Parties have rights to freely agree on use electronic means in the process of entering into, and execution of contracts.
2. The entering into, or execution of an e-contract shall comply with the provisions of this Law and laws on contracts.
3. When entering into, or executing e-contracts, the parties shall have the right to agree on technical requirements, certification, and conditions ensuring the integrity and confidentiality related to such e-contracts.

Article 31. Entering into E-contracts

1. Entering into e-contracts refers to the use of data messages in order to execute one or all steps in the process of entering into contracts.
2. During the process of entering into contracts, unless otherwise agreed by the parties, an offer to entering into contracts and acceptance of the offer to entering into contracts may be carried out through data messages.

Article 32. Receipt, Dispatch, Time, location of dispatch, receipt of data messages in entering into and execution of e-contracts

The receipt, dispatch, time, location of dispatch, receipt of data messages in entering into and execution of e-contracts shall be taken as in accordance with Articles 16,17, 18 and 19 of this Law.

Article 33. Validity of a Notice in E-contracts

In the process of entering into, or execution of an e-contract, a notice in the form of a data message shall be legally valid as a notice in other traditional forms.

Article 34. Use of Automated Message Systems for Contract Formation

A contract formed by the interaction of an automated message system and a natural person, or by the interaction of automated message systems, shall not be denied validity or enforceability on the sole ground that no natural person reviewed or intervened in each of the individual actions carried out by the automated message systems or the resulting contract.

CHAPTER V

E-TRANSACTIONS IN STATE AGENCIES

Article 35. Types of E-transactions in State Agencies

1. E-transactions within an agency;
2. E-transactions among different State agencies;
3. E-transactions between State agencies with other agencies, organizations, businesses and individuals.

Article 36. Principles for Conducting E-transactions in State agencies

1. E-transactions between State bodies must be in accordance with the provisions of this Law and other provisions of related laws.
2. A State body within its tasks and powers has rights to initiate the carrying out of a part or all of the transactions in its internal body or with other State bodies or external entities by electronic means.
3. Agencies, organizations, individuals have rights to select transactional means with State bodies where such State bodies agree to accept transactions in traditional forms as well as transactions in electronic means, unless the law provides otherwise.
4. State bodies may determine a reasonable process to implement the use of electronic means in the transaction types stipulated in Article 35.
5. When conducting e-transaction, State agencies shall determine the following:
 - a) formats, forms of data messages;
 - b) in case e-transactions require e-signatures, descriptions of types of e-signatures and e-certification (if any);
 - c) procedures to ensure appropriate integrity, security and confidentiality of e-transactions;
6. A State agency can provide public services in electronic form based on regulations of such an agency. Such regulations shall not be contrary to provisions of this Law and related laws.
7. State agencies can undertake processes for acquisitions or disposals of goods, works, services or contracts by electronic means.
8. When undertaking processes under Clause 7 agencies may seek assurance of the reliability of the associated e-signatures basing on one or more of the following criteria:
 - i. a reasonable assessment of the risks of the e-transaction
 - ii. the agreement of related parties;
 - iii. the technology used by related parties;
 - iv. the nature of the commercial activities conducted;
 - v. the types and scope of commercial relationship;

- vi. the fact that normal changes should not adversely affect the content of information contained in the data messages;
 - vii. the compliance of commercial customs and practices;
 - viii. ability of communication systems;
 - ix. other related factors.
9. The government may establish management principles, standards and regulations for the conduct of its processes under Clause 8.

Article 37. Security, Confidentiality and Storage of Electronic Information in State Agencies

State agencies have responsibilities to:

1. Conduct periodic reviews and ensuring security of their electronic data systems in conducting e-transactions.
2. Ensure confidentiality of information related to e-transactions and data messages; and not to use the information for other purposes in contrary to the provisions on the use of such information; and not to disclose the information to a third party in accordance with law on confidentiality.
3. Ensure the integrity of data messages in e-transactions; ensuring safety in operating their computer network;
4. Create databases of corresponding transactions, ensuring information security and having standby systems to recover information in case of failures of the electronic information system.
5. Ensure security, confidentiality and storage of information in accordance with the provisions of this Law and other provisions of related laws.

Article 38. Responsibilities of State Agencies in Case of Errors of E-information System

In case an e-information system of a State agency does not ensure the safety of data messages, such agency shall be responsible for informing users immediately of the circumstance and taking all necessary steps to rectify the issue.

Article 39. Responsibilities of Agencies, Organizations and Individuals in E-transactions with State Agencies

Agencies, organizations and individuals in their e-transactions with State agencies shall comply with the provisions of this Law, the regulations on e-transactions as issued.

CHAPTER VI

CONFIDENTIALITY, SECURITY AND SAFETY IN E-TRANSACTIONS

Article 40. Ensuring Security and Safety in E-transactions and Electronic Data

1. Entities have a right to select measures to ensure security and safety in accordance with the law when conducting e-transactions.
2. Entities conducting e-transactions in such a manner to cause technical errors or damage to the information systems or that affects the integrity of the data of other entities shall be liable to pay compensation.
3. Entities are prohibited from taking actions that prevent or cause damage to the assurance of security and safety in e-transactions or data messages or that affects the integrity of the data

Article 41. Information Confidentiality in E-transactions

Entities shall not use, provide or disclose part or all of the information related to the private and personal affairs or information of another entity which is accessible by them in e-transactions without prior agreement of the other entity unless the law provides otherwise.

CHAPTER VII**IMPLEMENTING PROVISIONS****Article 42. Effectiveness**

This Law shall take effect on (date).

Article 43. Implementing Regulations

The government shall provide for detail regulations and implementation guidelines of this Law.

Annex 4. SPECIALIST TORS

To review existing developments and guide further systems development, an *international technical consultant* is **recommended** to be engaged. This consultant will be complemented by a *procurement consultant* who can assist in the workflow re-engineering required to align and interface agency procurement management systems and create standard tendering, reporting and management templates and monitoring frameworks. This work should include national consultants to encourage local skills development.

The ICT **technical consultant** would have at least 5 years technical development experience with e-government procurement and be prepared to oversee the development of an e-GP management and reporting system in an open standards environment. The consultant will deliver or advise on the following:

- analysis of detailed requirements of the GoA's e-Procurement strategy;
- evaluation of current systems (if any) and infrastructure;
- review of system architecture within the context of GoA's e-Government activity;
- TOR for the engagement of a developer for additional e-GP systems;
- assistance in the evaluation of the tenders from the TOR;
- assistance to local procurement staff in the acquisition of required software, hardware and data communications products and services;
- formation and coordination of project team incorporating staff from multiple vendors and local developers;
- implementation of technical infrastructure including development, test and production environments;
- project management of any development phases of project;
- development of a quality control or testing strategy;
- design and implementation of change management strategy;
- development of ongoing system management strategy (including risk and security) and service level agreements

The procurement consultant will have at least 10 years of procurement experience and at least 3 years of e-government experience with extensive record of business process re-engineering. This consultant will guide the development of a common government-wide Procurement Management and Information System (PMIS) that incorporates works, goods and services, providing major assistance in the alignment of requirements from each ministry within a single framework. Activities will include:

- reengineering requirements for the development of management and information capabilities for a PMIS;
- lead guidance to the business process re-engineering of agencies procurement management information systems to effectively incorporate new capabilities as specified
- Assistance in the formation and coordination of project team incorporating staff from multiple vendors and local developers;
- project management of re-engineering processes of project;
- design and implementation of change management strategy;
- assistance in the development of ongoing system management strategy (including risk and security) and service level agreements