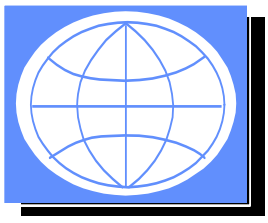
NEPAL

ELECTRONIC GOVERNMENT PROCUREMENT

READINESS ASSESSMENT AND ROADMAP

October 2007

Procurement Services Unit
South Asia Region



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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AGO	Auditor General's Office
BPR	Business Process Review
CIAA	Commission for the Investigation of Abuse of Authority
CPAR	Country Procurement Assessment Review
DTCO	District Treasury Comptroller's Office
FCGO	Financial Comptroller General Office
GoN	Government of Nepal
HLCIT	High Level Commission for Information Technology
ICT	Information and Communications Technology
ITPF	Information Technology Professional Forum
KITPA	Korean IT Industry Promotion Agency
MoF	Ministry of Finance
NASC	National Administrative Staff College
PPA	Public Procurement Act
PPMO	Public Procurement Monitoring Office
PMIS	Procurement Monitoring and Information System
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

This report details the findings, conclusions and recommendations of a World Bank consultant team that visited Kathmandu, Nepal, during February 4-12, 2007, in order to prepare an electronic Government Procurement (e-GP) Readiness Assessment and Roadmap. The readiness assessment and roadmap for implementation are the first two components of the E-GP Assessment and Implementation Project, which is a part of the Government of Nepal's program of public procurement reform. This report was prepared by the World Bank for the Government of Nepal supported from the 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.

Also addressed in this report is the third and last component of the e-GP Project - the stakeholders' workshop, held on June 22, 2007, organized by the World Bank's Nepal Country Office in Kathmandu, where participants reviewed and discussed the assessment, the issues/challenges and the Road Map for implementation of the Project.

Acknowledgements

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1. Nepal Army
2. Nepal Police
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9. Office of the Auditor General
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11. Revenue Administration Training
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13. Ministry of Finance
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15. High Level Commission for Information Technology

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EXECUTIVE SUMMARY

Rationale

The rationale for electronic government procurement (e-GP) is established in terms of transparency and efficiency of public procurement as well as the broader agenda of driving the take-up of 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 and other regions worldwide to promote the reform of public procurement. E-GP does not in any way render these efforts as redundant – indeed e-GP complements and strengthens these efforts and also is dependent upon them.

The application of information technology to the management of procurement needs to be a key component of procurement reform. Thus procurement reform and the development of national systems usually refer to the development and promulgation of comprehensive procurement law, subordinate regulations and associated training and process developments.

A further ingredient essential to the conduct of public procurement is *accountability*, and accountability is driven by two ingredients – the probability of discovery and the penal consequences of 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 application of technology also has other benefits especially in terms of the efficiency of procurement management itself.

The significance of these and other issues for Nepal are demonstrated through the Nepal readiness assessment in which findings included that suppliers are unaware or skeptical of government procurement practices and that public perceptions of collusion and corruption among suppliers and buyers are widespread.

Readiness Assessment

The assessment focused on the degree of readiness of Government of Nepal's (GoN's) current public procurement environment for making a transition from a traditional paper-based, manual procurement transaction processing and communication to e-GP. Some 20 public and private sector organizations, involved in a wide range of functions that relate to public procurement, provided comment on the degree of readiness of nine key components related to e-GP: leadership, human resource planning, procurement planning and management, procurement policy, legislation and regulation, Internet and electronic infrastructure, standards, private sector integration, and current e-GP systems and initiatives.

The assessment found

- adequate evidence that an e-Tendering system is in place but is little used;
- some evidence that procurement legislation and procurement planning is in place and being supported, and that some procurement training has been conducted;
- limited evidence that leadership, human resource planning, procurement management, regulation, and Internet infrastructure services are in place and being supported.

There was little evidence that adequate procurement policy, standards for procurement, or private sector integration were in place.

Respondents said that the key constraints to procurement reform were lack of funding, poor quality infrastructure, and private sector reluctance to support e-procurement. They recommended five key priorities for change:

- more comprehensive training for procurement managers, staff and suppliers on procurement issues and the use of computers;
- more resources to consolidate implementation of the Procurement Act and its regulations;
- better quality Internet infrastructure (reliability, bandwidth);
- move existing e-Tendering system to a single portal; and
- better consultation between public and private sector and more private sector participation.

The e-GP Readiness Assessment Report made the following recommendations in regard to the implementation of e-GP in the future.

1. Develop a vision and objectives for procurement modernization as part of a process to develop an implementation a plan for e-Government Procurement.
2. Quickly establish the roles, responsibilities, powers and resources of the PPMO with a clear mandate for procurement reform and management, a high-level leadership and influence role, and sufficient resources to take effective action when required.
3. Identify a small group of people with procurement experience, and support them with a high-level procurement expertise person, to develop a core resource to support public procurement reform.
4. Support the development and implementation of an e-GP Implementation Plan that will result from consideration of both this report and the input of the public and private sector respondents to a draft Implementation Plan. This e-GP plan will need to complement the developing plans for e-Government and Information and Communications Technology but not be delayed by those plans.
5. Develop a policy statement and a strategy for implementation of e-GP.
6. Conduct a quantitative assessment of the developing Internet infrastructure in Nepal and the e-capability of government agencies as required to support sound implementation decisions by the planners of interactive e-services such as e-procurement.

7. As a matter of urgency, establish a standards taskforce to coordinate the development and implementation of the procurement market, system, and management standards to support e-GP and other proposed e-services.
8. As a matter of urgency, develop a public sector strategy for achieving the more formal participation and involvement of the private sector to support the implementation of forthcoming changes in the public sector procurement environment.
9. Once a procurement agency has been established the existing e-Tendering system could be relaunched as a single portal.

These recommendations and a review of all the issues involved were then used to establish the Roadmap.

Roadmap

While there is currently no e-Government Procurement website effectively operational in Nepal, an e-Tendering system has been developed for local conditions. The overall level of readiness for e-GP in Nepal is reasonable except for the major problem of the lack of an appropriate lead agency to drive and sponsor this reform. A new independent lead procurement agency (PPMO) is planned, but not yet in place, and this is a critical issue. The preferred solution is for the PPMO to be created and appropriately resourced as soon as possible. Failing the imminent creation of the PPMO, another lead agency such as for civil works could be nominated and given the procurement mandate, however this mandate would be difficult to assign outside of the legislation applicable to the PPMO.

Should Government find that the time is right to implement e-GP as part of broader e-government and procurement modernization, steps should be put in place to ensure the PPMO is resourced accordingly. The following analysis emphasises that e-procurement is not a separate agenda from procurement reform per se but instead forms 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, e-Purchasing, e-Reverse Auctioning, and a Procurement Information and Management System. The existing e-GP software development is just part of what is required. Lessons from experience in other countries are provided and support the report's **strong recommendation for an incremental approach** to e-GP implementation in Nepal. The report sets out a full program, options and recommendations for such a phased approach, together with the resources that could be used to accomplish this. It also identifies the next steps to be taken.

Next Steps

1. Establish the PPMO or an equivalent central procurement lead agency.
2. Gain high-level political support for the program as a whole and its implementation over the timeframe required.
3. Disseminate final Implementation Plan and hold meetings and roundtables to ensure familiarity by all stakeholders.
4. Working from the schedule of features presented in the roadmap from this report, identify e-GP features that the PPMO or MOF believes that it could readily implement and develop a timetable for their phased introduction.
5. Review existing e-Tendering system for implementation and amendment if necessary.

6. Identify the resource requirements for these phases and seek any required support.
7. Specify expertise required and where possible acquire these through internal retraining as specified in this roadmap.
8. From the schedule that is decided upon for e-GP, develop an implementation team to activate the program.
9. Assign the implementation team formal terms of reference and accountabilities for the program.
10. Conduct training activities as outlined in this roadmap.

These steps need to be explicitly harmonised with the broader procurement reforms that are also proposed or are underway and should not proceed independently of these.

Implementation Plan

As was discussed in the Roadmap the steps for implementation cannot be prescriptive for e-GP. Instead 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. This table can be the base for developing specific action plans.

SUMMARY IMPLEMENTATION PLAN

COMPONENT	No	SHORT TERM (0-6 months)	MEDIUM TERM (6 – 18 months)	LONGER TERM (18 -36 months)
Preliminary Planning & Leadership	1.	Gain high level political support for implementing e-GP		
	2.	Establish PPMO role and resources (Implementation Team with recommended skills) Conduct executive level training for the Team	Conduct manager and executive training in other agencies as implementation proceeds	
	3.	Set objectives for ongoing agenda of procurement reform including e-GP		
Human Resource Management	4.	PPMO Team to study Roadmap to understand implementation issues and preferred phases for e-GP – see discussion		
	5.	Assess capabilities of existing system and review implementation phases		
	6.	Establish base outcome measures.		Measure and report on outcomes over time
Initial Strategy	7.	Engage procurement, technical, workflow and information specialists to support implementation plan.		
	8.		Develop awareness package to promote e-GP to buyers and suppliers	
	9.		PPMO 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	10.		Review scope and focus of policies to support procurement reform and direction in relation to e-GP	

COMPONENT	No	SHORT TERM (0-6 months)	MEDIUM TERM (6 – 18 months)	LONGER TERM (18 -36 months)
Legislation	11.	Implement procurement legislation	Develop e-signature and e-doc regulations	
Management	12.		Review current rules and management processes to ensure consistency across agencies	
Regulation	13.		Consider development of e-PMIS, to support regulatory activities	
Private Sector Integration	1	Develop and deliver Business Activation Strategy	Establish formal consultation process with private sector	Ongoing
Infrastructure & Standards	2.		Coordinate e-GP technology with e-government policy on connectivity, standards and infrastructure	Ensure ongoing development is compliant with government architecture
System Development	3.	Engage Risk Mgt Consultant and Technical consultant		
e-Tendering	4.	Specify language standards to apply to document exchange and publication	Develop business model/costs for system development, operation and risk management	
	5.	Activate e-Tendering initially using the phases set out in Roadmap, review functionality of existing system with that outlined in this report	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
	6.	Ensure compatibility between system requirements and low power capabilities of Nepal rural telecentres	Review feedback from buyers and suppliers	Identify information requirements e-PMIS
e-Purchasing	7.			Consider after e-Tendering established
e-Reverse Auctioning	8.			Consider after e-Tendering established
e-PMIS	9.		Identify work flow requirements for e-PMIS	Develop e-PMIS
	10.			Match agency process & rules to e-PMIS

COMPONENT	No	SHORT TERM (0-6 months)	MEDIUM TERM (6 – 18 months)	LONGER TERM (18 -36 months)
	11.		Establish standard documentation to support e-Tendering and e-PMIS	
	12.		Confirm standards & reporting templates	

GOVERNMENT OF NEPAL
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 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;
- 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 the procurement outcomes, timelines and costs.

Further details on e-GP are 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 Nepal's (GoN) 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. Thus for Nepal where government procurement equates to around 15 percent of GDP, the value of a saving of this order or even much lesser amounts would be of major budgetary and economic significance: a gain of about NR740million can be expected from each 1 percent savings in public procurement.

Budget constraints on the GoN are becoming more severe, with public expectations increasing, while the tax base is under pressure from political transition, community unrest and other factors. The experience of many countries is that traditional public procurement frameworks need to be able to deliver better outcomes by way of 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 procurement systems often have difficulty achieving these outcomes even when they are well designed and properly applied.

Reasons for this include traditional administrative processes that:

- do not provide potential suppliers with full information concerning total public-sector demand;
- do not provide government purchasing units with information on all potential suppliers,
- do not provide adequate means for the general public to oversee procurement processes;
- often lack the transparency and accountability standards required for good governance, and
- are procedurally inefficient compared to best practice.

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

Traditional procedures also often limit the scope for competition and require strict internal control 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. Higher processing costs lead to higher costs for goods and services being acquired. In Nepal, poor contracting processes and contract management also have resulted in excessive cost and time overruns.

New technology has the capacity to substantially improve the governance and efficiency of public procurement and to modernize the administration of the State. This technology has the capacity to drive procurement reform in Nepal further and more comprehensively than would otherwise be possible. However the dominant lesson from international experience is that the application of technology alone does not represent reform and cannot succeed in addressing the issues on its own, in isolation from 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. It is this transformation process that is the target of this strategic e-GP implementation roadmap for Nepal. E-GP is therefore a **management** rather than a **technical** challenge and has its greatest prospect of success by being treated as a management exercise.

1.3 The E-GP Assessment and Implementation Project

The e-GP Assessment and Implementation Project is part of ongoing work funded by the World Bank (WB) and the GoN to continue Nepal's public sector procurement reform agenda. The work began in 2002 with the preparation of a Country Procurement Assessment Review (CPAR).[1] The CPAR recommended (i)

[1] Country Procurement Assessment Review, Nepal, World Bank, 2001.

revision of Nepal's procurement guidelines to comply with WB guidelines on National Competitive bidding and requiring public entities at all levels to apply them; (ii) development of a new Public Procurement Act based on UNCITRAL Model Procurement Law to replace the set of financial rules then governing procurement; (iii) development and acceleration of procurement training at all levels of government, including the Auditor General's staff; (iv) development of standard bidding documents for public procurement financed by the GoN; and (v) creation of a small, independent procurement agency, with functions defined by the Public Procurement Act.

The WB reviewed Nepal's achievement in implementing the CPAR recommendations.[2] It found that the new Public Procurement Act had been passed by Parliament and a new set of Procurement Guidelines (regulations) had been developed to support the new Act. Training courses to develop 30 trainers and 12 advanced trainers and to deliver basic training to 210 Procurement Officers had been completed, and new standard documents for construction contracts had been developed. The creation of an independent procurement agency was planned as per provision of the new Act.

Since the 2002 CPAR, national policy and planning has been developed for Information and Communications Technology (ICT) and e-Government generally, and a high-level committee has been set up to oversee developments in these areas. On the procurement level, Nepal has an e-Tendering system with good functionality characteristics but it is not being used because resources and policy support are lacking.

The readiness assessment and roadmap in this report are the first two components of the e-GP Assessment and Implementation Project. A third and last component was the stakeholders' workshop, held on June 22 2007, where participants reviewed and discussed the assessment, the issues and the roadmap for implementation of the project.

Although the conceptual framework that guides the project 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 policy in Nepal. 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.

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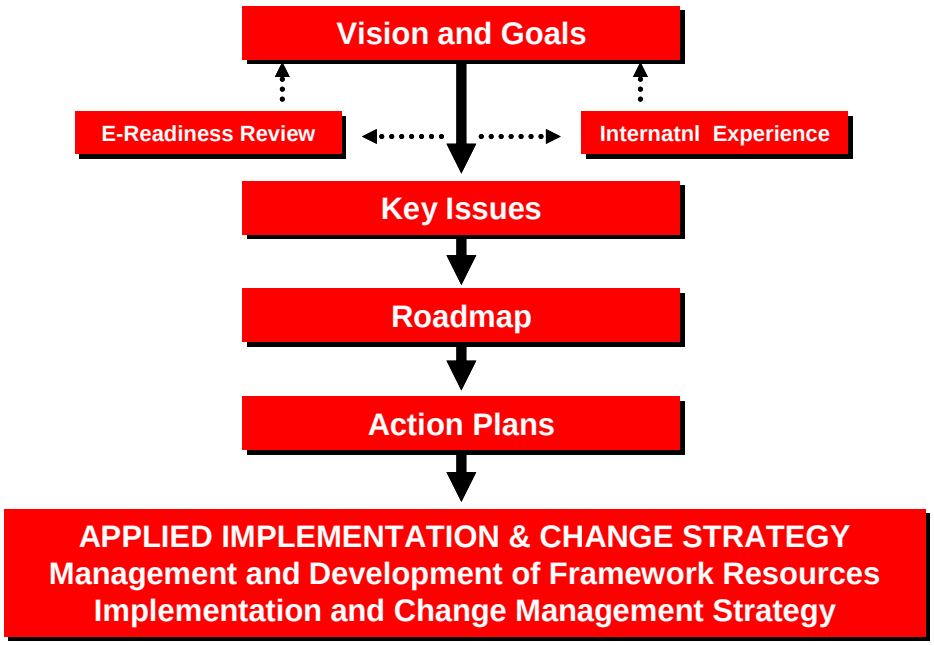
[2] IDF Grant No, 051865, Public Procurement Reform in Nepal, Implementation Completion Memorandum, September 2006

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. The e-GP Assessment survey questionnaire was distributed to informed respondents who are stakeholders in the public and private sectors to complete based on their areas of expertise. This was followed up by group discussion and some individual meetings with the respondents. The responses to the assessment were complemented by information from other relevant reports and documents where these were available.

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 (degree of readiness). They were also required to demonstrate evidence for each comment made. The readiness levels set out in Table 1 were applied. 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.

2.2 Summary of Component Assessments

E-GP technology is available and in place but the management and institutional framework for its deployment has not been provided. The readiness assessment has rated the key components for e-GP implementation as shown in Table 2.

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

No.	Component	Level of Readiness (Feb 2007)
1	Government Leadership	2
2	Human Resource Planning	2
3	Planning & Management	3 2
4	Policy	2
5	Legislation & Regulation	3 2
6	Infrastructure & Web Services	2
7	Standards	1
8	Private Sector Integration	1
9	Systems	4

2.3 Observed Strengths and Weaknesses

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

- Nepal is becoming more prepared for the greater introduction of technology into public administration and service delivery, albeit unevenly across ministries. Reform proposals include the introduction of e-GP even though the Government has not yet set a vision or objectives for e-procurement.
- There is growing political awareness of the significance of e-government for the quality of service delivery in Nepal.
- Clear procurement guidelines and procedures are documented and easily available to government agencies.
- Common procurement procedures and policies apply across government agencies as mandated by the Ministry of Finance, although procurement processes are being applied inconsistently across government agencies.
- Standard bidding documents are available in major centres for some sectors including Works and Services, and Police.[3]
- There is sufficient capability to support most of this program from the Nepali IT sector.
- A capable e-Tendering system has already been developed.
- There are no significant pre-existing investments in e-GP systems in other government agencies.
- Specific legislation for e-commerce exists. An Electronic Transactions Act 2005 has been passed by Parliament that establishes the use of electronic documents. It also makes provision for the use of Digital Certificates but does not set up a mechanism for the creation of Digital Authorities. This legislation is not technology neutral in this respect but a further section of

[3] Public Works Directives, Parts I, II and III, Standard Procurement Documents, 2002.

the Act addresses the need for neutrality and allows for any form of e-signatures to have legal status.

- There is some support with few obstacles for procurement modernization from the business sector and the community.

There are also issues for e-GP in Nepal to confront – in particular:

- There is little central procurement organization for procurement policy that can provide leadership or expertise for this reform and e-procurement regulations are not currently available.
- The level of experience of e-government development and capacity in the public sector is generally low.
- The level of e-literacy in the public sector is low and constrained by obsolete management practices.
- Educational information related to government procurement is generally not available to suppliers.
- Policy development for public procurement is yet to be developed.
- Procurement policy is currently not linked to policies on e-Commerce, e-Government or industry development.
- E-commerce is not widely practiced in the business sector.
- Internet infrastructure is still being developed and power shortages are common.
- Some government ministries and departments are connected to the Internet and have their own websites, but there is no unifying architecture and no government intranet.
- The Government has a shortage of IT professionals.
- Suppliers are unaware or sceptical of procurement practices or reform. Public perceptions of corruption among suppliers and buyers are widespread.
- Procurement is generally not seen as a career and there are no available comprehensive training courses for procurement managers on strategic procurement, although some initial training of trainers (30) and procurement officers (210) has been achieved by the National Administrative Staff College (NASC) working with the Administrative Staff College of India. The NASC has set up a procurement faculty.
- Little formalized training activities exist for private suppliers to participate in public procurement.

An existing e-Tendering system is not used, or only partly used, in Government Ministries. The reasons are numerous and include:

- absence of a government e-GP strategy;
- insufficient resources for the High Level Commission for Information Technology (HLCIT), the information technology policy agency, to support the system;
- absence of legislation in place to support the use of electronic documents.

Overall, the most significant factors that are affecting the implementation of e-GP in Nepal relate to the lack of bureaucratic and political leadership for this reform. Although E-Procurement was introduced as e-Tendering a year ago, it has fallen into disuse and its priority for reintroduction is ranked as 14th in the recent e-Government Master Plan. No change management strategy to assist procurement modernization has been developed. Procurement lacks a high-level sponsor in Government. It currently does not have a critical mass of resources to drive procurement reform, in order to attain the implementation outcomes that would arise from the E-GP project of which this report is a part.

E-Procurement has been perceived as a technology rather than a procurement initiative and has been residing under the High Level Commission for Information Technology (HLCIT), also because there is no meaningful alternative sponsor. The training that has occurred has been sponsored by the HLCIT. Lead sponsorship by the HLCIT has strengthened a perception among procurement professionals that they are to be replaced by computers.

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 (PPA) 2007, a new set of regulations to support this Act, and a review of some procurement documents. The PPA is intended to address the following issues:

- Establish the principles to be applied to public procurement including, planning, standardization of process, fair competition, improved process transparency and integrity, and public access to information;
- Establish the Public Procurement Management Office (PPMO) and its role and responsibilities;
- Promote professionalism in procurement;
- Specify the key steps for the procurement process for works, goods and services;
- Identify and regulate alternative types of procurement;
- Curtail fraudulent practices;
- Handle complaints;
- Establish an Independent Review Panel ;
- Establish procurement regulations.

This legislation is based on the UNCITRAL Model Procurement Law and the WB approach to procurement. A lead procurement agency, the PPMO, is provided for in the PPA but has yet to be established. It is planned that the PPMO will be set up under the Office of the Prime Minister and will be headed by a person with the rank of Secretary to the GoN. It would not be involved in operational procurement or conduct reviews of procurement activities, and it would have provision to introduce e-procurement.

The range of people with expertise in strategic procurement and implementation available to the Government is limited and is unlikely to be sufficient to support the implementation of current and future planned reforms in procurement. There are plans within the ICT Policy 2004 and a current Asian Development Bank (ADB)

initiative[4] to assess the needs and design training to raise the ICT expertise capability in government. This expertise would assist the implementation of e-GP.

The PPMO would be a central lead agency; it would have the mandate for procurement reform, and would be the authority for public procurement in Nepal. It would manage a procurement regime across the ministries, with common policies, procedures and standardized documentation. If staffed at the outset with individuals who are capable of driving e-GP, the PPMO when created could be in a strong position to introduce e-GP.

On the other hand if the PPMO is established to lead procurement in its traditional form with an intention to drive e-GP once other issues are better resolved, then an opportunity would be lost. Experience in almost every other country has been that the other issues are never resolved through traditional methods but can often be effectively addressed through technology. Thus it is **recommended** that the PPMO be staffed initially with individuals who are procurement professionals but who are also champions for the application of technology to this area.

2.4 Key Conclusions

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

Government Leadership

Overall, some effective government leadership is in place with the proclamation of the PPA, the new draft regulations, an initial training base, and the development of some standard bidding documents. A sponsor at top government level has not been identified. More needs to be done to promote, consolidate and implement the changes made thus far and make the intentions of the Government public. There is a need for the PPMO to have its mandate and resources established quickly to support procurement reform and the implementation of e-GP.

Human Resource Planning

Some initial procurement training for trainers (12) and staff (210) has been conducted via the National Administration Staff College (NASC), which has also set up a procurement faculty. Some training on the regulations and systems administration has also been conducted. However, overall, there are significant gaps in the level of human resource management to support current and future reforms in procurement.

There is a shortage of expertise in ICT and strategic procurement. Procurement does not appear have a career structure and no strategies are in place as yet to review the job structures and skills required to support change. A far greater commitment to human resource management will be required to support e-GP.

Planning and Management

National policy and planning has been developed for ICT and e-Government and this will assist the transition to e-GP. A high-level government committee has been set up to oversee developments in these areas. No procurement plan is available as yet.

[4] Preparing the Information and Communications Technology Development Project, ADB, Aug 2006.

National procurement was reviewed in 2002 and led to the reforms currently being addressed. The Financial Controller General's Office (FCGO) is under-resourced to support the existing reforms in a transition to e-GP. The new PPMO needs to be established as a matter of urgency. The new Public Procurement Act and regulations, will, if effectively implemented, assist the introduction of e-GP. Most respondents saw procurement processes as inconsistent and often lacking integrity.

Policy

A brief statement of procurement policy is included in the new PPA. A comprehensive procurement policy has not been communicated clearly to the public or private sectors.

Legislation and Regulation

Responsibility for procurement is devolved to agencies.

Comprehensive new legislation on public procurement (PPA) and electronic transactions and a range of supporting legislation is available. It needs to be well supported to be effective.

The Commission for the Investigation of Abuse of Authority (CIAA) and Auditor General's Office (AGO) provide external investigation and audit functions for government programs. There are few management regulatory processes in place as yet. The proposed PPMO and Independent Review Board have regulatory functions. Comprehensive data on public procurement is not available.

Infrastructure and Web Services

The current telecommunications and Internet infrastructure is developing but there are many policy, technical and business issues to be addressed before a national infrastructure is achieved that is integrated, reliable, has sufficient speed and bandwidth, and is widely accessible to potential users. Power rationing is also a problem. Access to the Internet is reasonable in major centres but communication with remote areas is generally difficult.

Despite such infrastructure issues, an e-Tendering system has operated in a number of government agencies in the recent past. The problems with the system have largely been lack of resources to manage it and policy as to its use.

Standards

Little has been achieved as yet in this area. The ICT policy recommends setting up a national standards organization. The development of national standards is complex and difficult, but is essential if the long-term effectiveness and efficiency of e-services, including e-GP, are to be sustained.

Private Sector Integration

There is little information on the attitudes of the private sector to making the transition to e-GP. The Government does not appear to have a formal approach to discussing major economic issues such as procurement with the private sector. There are many unresolved issues. Private sector respondents were most critical of the high time investment required to engage in public procurement. Currently there is no effective appeal mechanism available to suppliers and they have to rely on the long process of taking their complaints to Court.

The involvement and support of significant stakeholders in the private sector is critical to procurement reform and the transition to e-GP in particular. The Government could encounter serious resistance if it intends to continue with procurement reform and the introduction of e-GP with the current low level of private sector participation. The key to the relationship is to build trust and confidence with the private sector by effective consultation, awareness raising of Government's intentions, and addressing the concerns of suppliers.

Systems

Nepal has an e-Tendering system that appears to have most of the required functionality but not the policies, leadership, resources, support, or training required to operate successfully. If the right environment was created then the system may be relaunched, particularly with support from the private sector.

Respondent's Views on Priorities for Change

Respondent views reflected many of the conclusions of this report and included:

- Government needs incentives to improve public procurement and reduce collusion among suppliers.
- The key constraints are lack of funding, the quality of the infrastructure, and some reluctance by the private sector to support e- procurement.

The key priorities for change recommended by respondents were:

- Provide more comprehensive training for procurement managers and staff and for suppliers on procurement issues and the use of computers.
- Resource and consolidate the implementation of the PPA and its regulations.
- Improve the quality of the infrastructure in relation to reliability and bandwidth.
- Review the e-Tendering system and move to a single portal.
- Improve the consultation and participation process between the Government and the private sector.

3. ROADMAP

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 come new roles 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 Nepal, 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

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

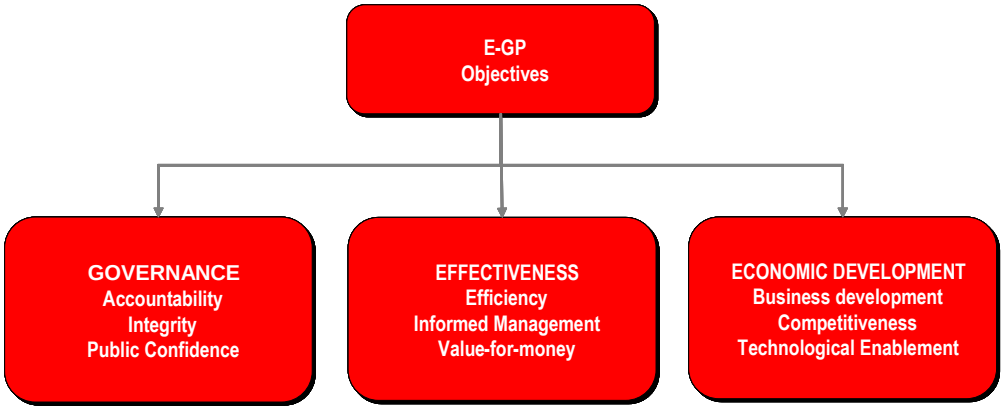
roadmap. The starting point has already been described in the previous section on the readiness assessment.

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

- governance, accountability and professionalism, fairness and equity as measured by public and international confidence;
- efficiency of public processes, effectiveness of outcomes, and public value for money;
- 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



The GoN 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, even without inclusion of local preference policies for public procurement. 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 powerful contributor to national economic productivity. Conversely, e-GP which overlooks the potential for private sector participation can become a productivity drag on the private sector.

It is **recommended** that the Nepal 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.

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. These objectives can also be important criteria in defining the use of e-GP systems and the policies for their application in the public sector in Nepal.

3.2 Leadership and Strategy

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. The prospective Public Procurement Management Office (PPMO) would appear to

be the most effective and obvious lead agency to take charge of this strategy, especially since it is intended to be placed under the Prime Minister's leadership. Conversely there should not be an implementation initiative for e-GP without such a lead agency being in place. The HLCIT is not the optimum choice for this role, which is primarily about procurement rather than technology. Thus it is **recommended** that the formation of the PPMO be the first step for the implementation of e-GP. Failing this, a lead agency such as that responsible for civil works might be given a mandate, but in the current political environment (March 2007) this seems unlikely to occur.

The PPMO needs to provide the essential lead agency roles of strategy, coordination and leadership to ensure interoperability as well as other values such as accessibility, transparency and simplicity. E-GP is essentially a reform program and as such can be expected to meet resistance from several sources, including procurement professionals who may fear that they will have reduced job security, and elements both within the public and private sectors that might have vested interests that are inconsistent with the greater transparency and competition that e-GP delivers.

The PPMO needs sufficient policy authority across this area to ensure that there is no separation between procurement and e-GP. This agency can only be successful if it has the capabilities, mandate, seniority, and skills to perform these duties.

3.2.1 Terms of Reference

The PPMO's appointed roles and responsibilities should include a capacity to:

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

These activities mean that this agency will have regulatory / policy roles which can also be expected to include responsibilities such as:

- developing and mandating procurement policies for goods, service and works;
- monitoring and reporting of government procurement activities and compliance
- legislative and regulatory development for procurement;
- procurement training
- industry and civil awareness of procurement issues

For small jurisdictions this central unit may also have an operational role of, for example, arranging and managing framework contracts. Operational roles may appear to conflict with its policy and oversight roles, but this combination of functions occurs in other much larger governments and is a pragmatic recognition of the constraints on the available skills in this area. Where potentially conflicting roles

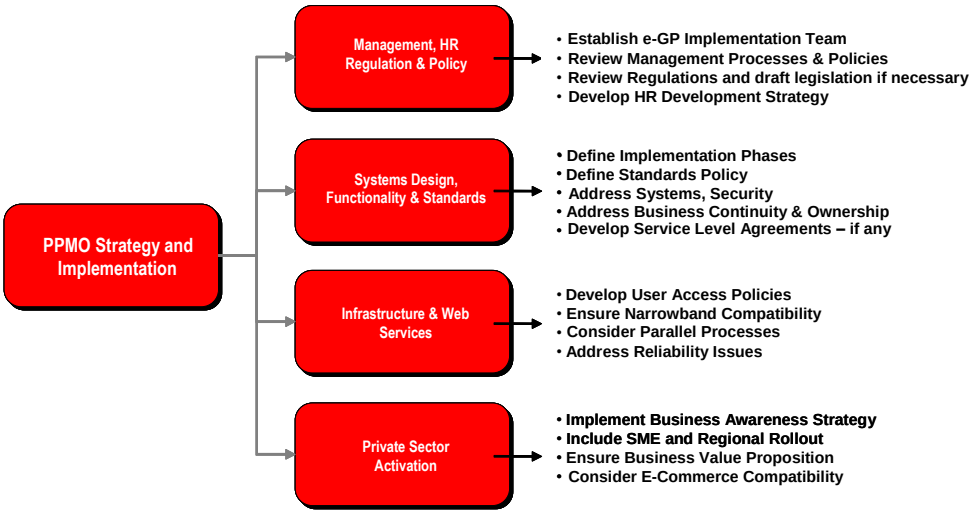
such as these cannot be separated then the alternative governance response is to ensure high levels of transparency in the undertaking of these roles.

It is of fundamental importance that the PPMO appreciate the potential of e-GP at the outset and recruit individuals into its structure who are experienced in procurement and can understand and become champions of e-GP; without such staff at inception the PPMO will need to undertake an internal reform process of its own.

3.2.2 Strategy

The PPMO 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 the single most effective instrument for procurement strengthening and reform. It is therefore **recommended** that the PPMO adopt e-GP as a priority strategy in its new role and recruit experienced staff who can be champions of e-GP. It is **recommended** that the components of Figure 3 form the structure of this strategy.

Figure 3. Components of an E-GP Implementation Roadmap



The figure identifies the implementation processes as being principally about **management** rather than **technical** issues. The roadmap adopted by the PPMO 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.

This strategy will address issues such as:

- Why the government wants to make the transition to e-GP
- Benefits to suppliers and government
- Government's vision and objectives for e-GP
- Government's e-GP Implementation Plan, stakeholders, and resources to be applied
- Key issues to be addressed (including dealing with supplier and buyer concerns)
- Training and other support for suppliers and buyers
- Contracted suppliers, non-contracted suppliers
- Business association involvement, including the IT industry associations.

- Service industry development
- Push-out services to suppliers
- Costs
- Government e-GP management policies and protocols.
- First steps
- Project Contacts

E-GP is sensitive to the various elements that define organizational success, including management and leadership culture, regulations, skills and expertise. Accordingly an e-GP implementation strategy is firstly a management task and requires coordination and strong leadership as well as consultation and shared objectives.

3.2.3 **E-Legislation**

It is sometimes considered an absence 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 is 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.

3.2.4 Outcomes

A critical issue in managing the development of 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. It is **recommended** that 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 transparency, integrity, fairness and efficiency of 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. This will only impact corruption if non-government institutions (such as the media) and the public are interested in using this newly available information to demand accountability through the political processes of the country.

3.2.5 Training

An international survey of 15 countries that have successfully implemented e-GP showed that the most important lesson they learned was the need to provide formal and comprehensive training to government managers and staff and suppliers[5]. Failure to address this issue led to a lack of confidence in adopting e-GP and extended the time to implement it.

In Nepal, there are significant requirements for training both in e-GP and in procurement more generally. It is appropriate that e-GP training lead this capacity-building because e-GP can considerably simplify the training requirements and the associated rules. If traditional training is undertaken first, it will obfuscate the understanding of e-GP and may also create some resistance to its introduction. This roadmap can be used as part of the content for this training. It is recommended that a comprehensive training and education program at a national level be considered to address the following:

- Awareness seminars for buyers and suppliers on the key changes in making the transition to e-GP and specialized training in the management and use of systems as they are developed.
- Work orientated training courses for procurement managers and staff to raise levels of expertise beyond understanding the procurement process into areas such as market analysis, procurement planning, and document development, effective evaluation, monitoring application of policy and procurement performance, dispute resolution, and contract management.

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

- Tertiary courses to provide undergraduates with an introduction to strategic procurement as a key business skill, and post graduate courses to further develop procurement professionals.

This program requires good co-ordination between government, tertiary institutions, technical education agencies and private sector training organizations.

To support e-GP implementation the PPMO itself needs to be trained as a champion of this modernization and it is **recommended** that an executive level course of 3-4 days be mandatory for all members of this Office.

3.2.6 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 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 on the next page, although this should not be regarded as prescriptive and variations around this may be equally suitable. The phased strategy is preferred not in order to match the development of the technology (which already exists) but rather to match the capacity of management and procurement practitioners to adapt and adopt new practices. Also the phased approach is compatible with government-wide implementation rather than pilot implementation that would serve no additional purpose and merely slow down reform. Pilot implementation is **not recommended**.

The order of the e-GP implementation phases recommended for Nepal shown in Table 3 below is consistent with experience in many other countries that used different approaches and models, and is the approach recommended by the WB, the ADB, and the Inter-American Development Bank. 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 Nepal. There is also some advantage in Government's implementing the early stage developments themselves with the assistance of contractors, rather than moving directly to a service provider model. By undertaking early-stage developments themselves, public officials become more familiar and knowledgeable about e-GP and the local information technology (IT) industry is placed in a stronger position for supporting this and other e-government projects.

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.

Table 3. E-GP Implementation Phases

Because the central website will ultimately permit access to full bidding 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 existence of some standardized documentation in Nepal does not entirely obviate the need for this step, as the documentation will need review as to its suitability for online publishing. 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.

To provide open access to bidding documents and permit them to be downloaded on demand, it is necessary to verify that the final and legally valid versions of those documents are available, that they include all the relevant information (including graphs and blueprints), and that the clarifications issued during the process are attached.

Prerequisites include simplification and standardization of bidding documents across government departments, establishment of a complaints function by the PPMO for e-procurement procedures, and Internet access for government departments posting bidding documents as well as suppliers. This process itself significantly enhances transparency – one consistent complaint from the business sector is that government procurement is difficult to understand and that departments undertake the processes with their own versions of documentation and policy interpretation. E-GP forces simplification and standardisation as well as enhancing access to the documentation.

Recommendation: The PPMO needs to establish a timetable for the deployment of e-GP phases that takes into account the managerial, policy, training, and business issues in the country context. This timetable will be published for use by the Nepal technology industry, government suppliers and government agencies.

It is strongly **recommended** that any e-GP systems development or acquisition must be compliant with the e-government enterprise architecture currently under development as part of the e-government strategy. This enterprise architecture will define many of the non-functional requirements of the system; others are listed in the checklist of Annex 1.

During the transition to e-GP, traditional paper-based procedures can be considered that operate in parallel depending on SME (Small and Medium Enterprises) and infrastructure policy.

3.3 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 such as reverse auctions, business profiling, and the possibility of framework contracts.

e-GP provides the scope to address much of this by providing much stronger information management to deliver transparency with streamlined processes. To allow this to occur it is **recommended** that the PPMO undertake:

- Reviews of current rules and management processes to identify those that can be streamlined, modified or abolished for the electronic environment or where traditional rules for the non-electronic environment will continue to apply. Rules that change in the electronic environment are minor in relation to e-tendering, such as methods of tender advertising, authentication of documents, and identification or definition of 'original' document and definition of date of advertising. Also rules may be required in cases such as a discrepancy between the electronic documents and paper versions. Other rules may remain unchanged such as period for which a tender needs to be advertised. In the case of e-purchasing or e-reverse auctions there will be more substantial changes. Rules that should be re-examined will also include those for the selection of companies to bid or to provide quotes, pre-qualification procedures, procedures and rules for handing over bidding documentation, rules for bid openings, procedures for tender box management and security, rules and procedures for tender amendments, and rules for advertising of tender opportunities. Sometimes these requirements are stipulated in existing legislation or regulations but for which there is no meaningful electronic counterpart such as for e-signatures and 'original' document (copies of digital documents are taken as originals too). Sometimes procurement regulations stipulate that advertising must take place in various newspapers. Other process-related issues include online authorization and control of processes such as contract and document variations, control of collusive practices, and electronic records management and audit. Sometimes regulations apply for pre-qualification simply to reduce the number of potential bidders to a manageable level for the buyer agency to process, but in e-GP this will be a quite unnecessary restriction on competition.

- Individual agency reviews to ensure consistency across the public sector so that a single e-GP framework can operate. Lack of consistency between

agencies in Nepal has already been the subject of complaints from the business sector. E-GP can be customized to the management requirements reflecting procurement accountability in each agency.

- An area of concern is whether there is to be a requirement for the application of digital signatures to bidding documents for these to be valid. (Some countries have not required this). It is **recommended** that a regulatory or legislative approach be 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.

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

- malfunction of government facilities,
- electronic tender bid opening protocols,
- electronic tender security,
- electronic contract development for template and document consistency, and
- engagement and facilitation of small and medium enterprises (SMEs).

New management protocols and the application of e-GP need leadership with strong direction and compliance processes. These should be designed around accountability principles but also around e-GP technology as set out in section 3.6 on e-Contract Management.

It is **recommended** that the PPMO 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 bid 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 with donor support to assist with the drafting of the regulations.

Recommendation: The PPMO needs to develop a human resource up-skilling and orientation program for its own staff and for the public sector. The PPMO requires resources and expertise not just in technical areas but also to undertake change management. Procurement managers sometimes express the fear that they will be "disintermediated" by technology. Technology affects the skill requirements for procurement but is not a substitute for basic procurement skills; instead it generates a requirement for education and training of procurement officers.

Recommendation: The PPMO needs to develop a program to incorporate the current procurement managers and their supervisors in the transition to the new e-GP environment. This program should include

- an orientation and awareness program of 3-4 days for all procurement officers in the public sector,

- access to high-level policy, management and technical advice through a Support Service provided by the PPMO, and
- an awareness program for dissemination of e-GP objectives and characteristics to all public sector stakeholders including executives and policy officers.

The change management process will recognize that for professional procurement officers, these new approaches offer new opportunities and up-skilling rather than "disintermediation." In fact, e-GP usually does not displace qualified procurement officials but rather does away with many of the more routine administrative processes.

3.4 Outsourcing Service Delivery and Support

While maintaining control of its procurement activities the PPMO should be focussed on its objectives and on monitoring results and outcomes. The PPMO need not become a software developer to achieve its desired outcomes. However the PPMO should have 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.

Private sector inputs of management, hardware, software, and communications are an option, as are the development and support services of technology firms. An e-tendering system for Nepal already exists and the issues are likely to be more about management and maintenance.

Recommendation: The PPMO 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 help decide whether developments should be undertaken in-house or through a third party service provider (commercial and non-commercial options exist). The business model will also address the issue of ongoing maintenance costs. Just as other e-government services are provided free of charge to the broad public it is **recommended** that this e-GP service should not levy fees on users. Free access encourages transparency and competition. In some countries a fee is charged for online tender submissions directly by the service provider so that the service viability is never subjected to government budgets; if it is necessary to apply a fee structure then this is the preferred approach. Charges for downloading of documents are not advisable as these will discourage competition and transparency.

A business model for the introduction of e-GP may include"

- Background
- Rationale for transition to e-GP
- Benefits
- Objectives and outcomes
- Options for acquiring/developing procurement system
- Recommended option
- Key system and non system issues (e.g. ownership and operation)
- Required stakeholder (public and private sector) support
- Implementation strategy and timetable
- Risk assessment
- Resource requirements including any external expertise requirements

- Impact on Government policies and other management and e-initiatives
- Estimated costs
- Measurement of benefits and outcomes
- Management and reporting of e-GP

It is **recommended** that the business model consider a third party service provider. The PPMO may require additional expertise to assist it manage risks, which can be significant. If this is the preferred model it is **recommended** that the PPMO use this report to help it understand the issues and construct a service level agreement (SLA).

Recommendation: The PPMO 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.

Also there is the issue of perceived and actual security of online bid 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, it is **recommended** that the PPMO establish a third-party service provider in an alternative location (e.g. Canada, UK, Scotland, Australia, New Zealand) to provide a virtual tender box service and minimize risk. The remote location would have no effect on the service itself, and would have no management role (other than managing the technology according to agreed security protocols) or any role in tender openings.

3.5 E-bidding Specifications

The development of the e-bidding (e-tendering) service requires the posting of all bidding 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 of the WB, with some minor variations arising from Nepal circumstances and connectivity, and are designed to encourage international compatibility as well as good governance, efficiency, and economic development.

The **recommended** approach for Nepal is for the PPMO to have a central procurement website created and for these capabilities to be gradually released to users. In addition to an e-Tendering system there are the e-Contract Management, E-Contract Development and the procurement management information system (PMIS) among other elements that are required for a full transformation, as described further in sections 3.6 and 3.9.

Recommendation: The functional capabilities which make up a comprehensive e-tendering service suitable for public procurement in Nepal are **recommended** to be 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 bid opportunities
- downloading of bid documents and technical drawings
- awarded contract information
- intelligent search facilities by locality, business type and value
- early bid advice on tenders currently under preparation in public agencies
- electronic submission of bids by suppliers
- customized email notification of new bids and amendments to suppliers
- an online tracking capacity for suppliers in relation to their bid 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 e-tendering system developed for Nepal by the Information Technology Professionals Forum in 2005 may represent the preferred software because it is locally developed and supported (www.bolpatra.gov.com.np). It has many of the capabilities just listed, including:

- single registration of suppliers
- registration of buyers
- online help desk facility to support use of the system
- ability for users to revisit site without loss of data
- general advertisement or procurement information and opportunities
- provision of targeted information to suppliers (e.g. opportunities)
- potential access by buyers to supplier e-catalogues
- transmission of purchasing requests by buyers to suppliers
- advertisement of bid documents
- downloading of procurement specifications and process requirements, bid documents, auction specifications, and requests for quotations
- requests for quotations sent to suppliers online
- provision of addenda and changes to suppliers
- receipt and answer of questions (buyers or suppliers)
- uploading proposals/responses or e-bids
- acknowledgement of receipt of proposal/request or e-bid
- notification of successful bids or quotations
- logging and date and time stamping of all online communications, which can be made available for audit or resolution of disputes.

The system is available in both English and Nepali and is also likely to be compatible with the enterprise architecture currently being developed for Nepal's public sector. Much of the data required to support this functionality will be generated by the PMIS, and linking the PMIS system automatically with the e-tendering portal would fulfil most of the functional requirements.

If the right environment was created then the e-tendering system could be relaunched, particularly if it has support from the private sector, but only once an effective lead agency such as the PPMO has been put in place. The activation of e-bidding procedures would need to be accomplished progressively. For the limited number of contracts that involve state security, parts of the documentation and reporting procedures will be modified.

While Nepal's e-Tendering system has much of the required functionality, in order for it to begin operating, the policies operating rules, templates, leadership, resources, support and training required for it to succeed still need to be specified and put in place. The operating rules are detailed in subsections 3.5.1—3.5.11; the templates and many of the non-functional requirements are detailed in Annex 1.

The operations and qualities of the e-tendering service should be consistent with minimum standards and qualities that the WB requires if e-GP systems are to be applied to the loans, grants or credits that it provides. 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 Nepal need to be specified as described in 3.5.1—3.5.11 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 PPMO needs to be in a position to monitor and regulate their application.

Recommendation: It is **recommended** that the system be independently reviewed by a technical specialist to determine compliance with all technical requirements, especially in relation to security.

3.5.1 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 bidders / 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 bidders/ 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, be reflected in the system.
- The system performs reliably and securely in time-sensitive, commercial application.

3.5.2 Advertising

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

- All tenders are posted on the central web site 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 bidding 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 bid advertisements and results disclosures are not restricted except in special security circumstances.

3.5.3 Correspondence, amendments, and clarifications

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

- All clarifications and amendments of the bidding documents, as well as any pre-bid conference minutes, are posted simultaneously onto a bid tracking page of the bid advertising website. Bidders 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 shall ensure that only authorized changes can be made.
- In case of any amendments to the bidding Document/RFP by the Contracting Authority, the system does not replace the bidding 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 bidding Document/RFP.
- The system tracks receipt by bidders/consultants when distributing pre-bid amendments and clarifications online.
- Online conferencing and chat facilities do not function after the bid submission deadline.

3.5.4 Bidding documents

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

- The use of standard bidding documents/RFPs is required. There must be no difference between electronic and print versions of the bidding documents/RFPs.

- The bidding documents use the contract procurement language as the catalogue standard defining its requirements.
- The system ensures the integrity of bidding documents in electronic format, and their online publication. Amendments are similarly secure and stored with the bidding document.

3.5.5 Submission of bids/proposals

The rules for online bid submissions are designed to strengthen governance around the bid management process. The development of the security system for online bid submission requires developers experienced in this particular task and a clear understanding of the management protocols by the PPMO.

- There are security arrangements to ensure confidentiality and integrity of bids/proposals in electronic format.
- bids/proposals submitted online are virus-scanned by the system before being uploaded and accepted into the online bid box, and where this causes a bid to be rejected, the bidder/consultant is notified immediately by the system.
- Online submissions are received into an electronic bid box and maintained to high standards of security for long term record-keeping and audit. At no time are bids/proposals in unencrypted format. Copies taken and decrypted for bid 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.
- Bidders/consultants are allowed to submit modifications to bids/proposals or withdraw previously submitted bids/proposals electronically up to, but not after, the time of the bid 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 bids/proposals in electronic format the submission or modification of which is completed at the time of the bid 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 bids/proposals is the same whether submitted electronically or on paper.

3.5.6 Public bid opening

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

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

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

3.5.7 Bid evaluation and contract award

Automated evaluation processes impose severe constraints on the evaluation parameters unless the bid has been subjected to a two- or three-stage process. Automated evaluation may be inconsistent with the current management roles and expectations of the PPMO and needs to be considered carefully before this 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 so long as the evaluation (i) aligns with the criteria established in the bidding 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 bidder/consultant.
- Contract awards are published online consistent with bid advertising.
- The system shows the bids that have been entered, together with the identification of successful and unsuccessful bidders.

3.5.8 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 PPMO indicates in the bidding 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 PPMO 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.

3.5.9 Authentication

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

- The certification process certifies bidders for a reasonable period of time (at least one year) and bidders are not required to request a certification for each bidding process.
- The certification process is kept open permanently, allowing bidders to submit the request for certification at any time, in order to allow them to register in advance for future bidding processes.
- The certification process allows international bidders 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 bidder, or (ii) submission of online or offline documentation for certifying the authenticity of the bidder representative, accepting such documentation that can be obtained under commonly used procedures in the country of the bidder (for example, no notarization in consulate or embassy is required).
- The certification process does not require a bidder to submit mandatory information from a location outside the bidder's own country.
- Consideration and consultation is required to address the practice by some countries of not requiring bidders to pre-qualify. An accreditation application must be filled out only by the winning bidder, who is given a reasonable time period (stipulated beforehand in the bidding documents) to do so. In the event of noncompliance, a penalty is applied and the contract is awarded to the second bidder on the list.

3.5.10 Payment

The use of e-GP is preferably without fees and charges. Free use encourages transparency and competition. If charges are to be raised then the rules to be followed are as follows.

- Specific Procurement Notices (SPNs): bidders have open and free access to all SPNs and bidding documents. No registration, certification or payment is required.
- Submission of bids: bidders can be required to make any payment as a pre-condition to be allowed to submit a bid.
- For charging, borrowers accept payments under one of the following options, at bidders' 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 bids.
- The cost of bidding for the supplier is less than the cost of paper-based bidding and is determined by negotiation between the lead agency and the service provider.

3.5.11 Supplementary and archival information

It is useful to develop a planning discipline in the procurement system that requires government agencies to define their annual and quarterly procurement plans. These

plans should 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 bids. The online submission by all government agencies of plans detailing scheduled tenders should be mandatory by the PPPM/SC. The transition time required by agencies for this reform should not exceed six months**.**

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 PPMO 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 PPMO, in consultation with procurement stakeholders and with reference to international best practice, needs to identify supplementary information services to be provided by the system and develop a service to deliver these through the central site.

3.6 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. Bids 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. Nepal is currently developing a financial management system through the use of new technology and an e-contract management system would complement this. However it is **recommended** that this should only be attempted when the e-tendering system is in place and functioning reasonably well. The development of this function would also assist in standardizing procedures between agencies.

3.6.1 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.

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 PPMO, with the participation of the major contracting 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 PPMO. The expertise in the PPMO should be able to lead this development and its ongoing maintenance.

3.7 e-Purchasing

Many procurement transactions involve direct purchasing rather than contract tendering. 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.

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 24 months. Introduction of e-purchasing will also require additional training in the PPMO on issues such as catalogues.

Recommendation: The functional capabilities that define an e-purchasing system suitable for public procurement in Nepal are:

- many-to-many functionality (many buyers to many sellers)
- decentralized buyers and sellers
- search for suppliers by name, category, locality code, and contract
- browse supplier catalogues
- random quote selection with minimum price benchmarking
- generate and award all procurement requests for information and quotes
- create purchase requisitions

- generate purchase orders while including optional approver workflow
- receive goods into the system
- allow for the customization of "buy policies"
- buyer data management
- supplier data management
- single sign-on capability
- FMIS integration
- reporting on all e-marketplace activity
- payment gateway integration
- supply chain workflow management, recording and reporting

The establishment of e-purchasing procedures requires significant systems integration in the major departments and substantial supplier connectivity. In Nepal, connectivity is often of unreliable quality although it is improving.

Recommendation: The operational capabilities which make up an e-purchasing service suitable for public procurement in Nepal need to be consistent with those of the e-tendering system as applied to RFQs and RFIs and with WB e-purchasing guidelines. The e-purchasing system will operate as follows:

- When a specific good or services is to be purchased, the system automatically offers a shortlist of eligible suppliers (typically three in number).
- The rules may permit the purchasing organization to choose any short-listed supplier, but the chief procurement officer must be able to justify that choice to the organization and to the general public and there will be a mandatory field that requires this explanation to be entered.
- The selected good or service is ordered directly online from the supplier and the necessary funds to pay for it are automatically set aside within the FMIS.
- Once the order is delivered, the person who accepts delivery (the government agency's depot officer, for example) enters acceptance into the system.
- The system then automatically processes the payment order for the supplier, update the accounts, addresses any tax issues, enters the items in the inventory, and records the information in the database for use in governmental and public oversight.
- Inventory storage requirements and purchasing proceeds are minimized by using a just-in-time purchasing approach.

There are three stages involved in e-Purchasing: first, the eligible sources of supply are posted on the Internet; second, an on-line purchasing mechanism is created; and finally the range of customized information services is expanded.

3.7.1 Internet posting of sources of supply

The two main elements required in order to post eligible suppliers of low-value goods and services on the Internet are **catalogues** and the establishment of **reference prices—**or better, **competitive** markets. These elements provide the basis for open registration of suppliers that meet the eligibility requirements. The PPMO needs to fully appreciate the use of these tools and develop associated policies to neutralize the inevitable tensions that arise from collusive tendencies and monopoly practices.

3.7.2 Use and coding of catalogues

Catalogues are used to facilitate product identification, searching, and price comparisons. For e-purchasing the use of the Universal Standard Products and Services Classification (UNSPSC) catalogue standard is **recommended**. This catalogue standard, which is maintained by UNDP to serve as a standard for the classification of goods and services (http://www.un-spsc.net/), is recommended for two reasons: its use will lower the cost of preparing and maintaining a separate standard and permit international price comparisons, and it will facilitate the use of e-GP within regional and global integration schemes. It is also an open standard and available without charge.

This UNSPSC standard is to be widely disseminated for use. Assistance should be available for both government users and businesses. There are two models for catalogue deployment. The first is to create a large centralized catalogue including price lists and suppliers, which uses a products and services classification standard such as UNSPSC to locate items within it. Such a central catalogue may include many tens of thousands of line items and requires substantial ongoing maintenance of products, suppliers, prices and other information, much of which is changing constantly.

The alternative model is for suppliers to maintain their own catalogues, also according to a classification standard set by Government, such as the UNSPSC. The efficiency of online search tools mean that it is now far preferable for suppliers to maintain their own catalogues rather than for Government or a service provider to maintain a single centralized catalogue. However the Government or service provider will search these catalogues using a centralized UNSPSC catalogue of search codes, with or without reference prices included for specific items within it. The imposition on business of maintaining their own online catalogues need not be significant and is not materially greater that for them to ensure that their presence on a central catalogue is up to date.

3.7.3 Systems for establishing price

There are two main price formation systems for ordinary goods: (i) e-bidding on large volumes of the product in question, which may be used to obtain a floor price; and (ii) historical cost information, which will provide an average price for use as a benchmark.

When e-GP begins to be implemented for online purchasing, the tendering system can be used to arrive at a reference price. This approach should be effective if the market is competitive, and competitiveness may need to be assured through the inclusion of international competitors. Once a database has been formed, price information can be kept up to date. Alternatively, and preferably, where the market is mature and competitive with little risk of collusion, there will generally be no requirement for reference prices, as the system can search automatically each time for the lowest catalogue price in the locality or region (or three lowest if three quotes are sought). The PPMO needs to be in a position to understand which of these scenarios applies and to establish policies for price determination.

3.7.4 Open registration for eligible suppliers

With the setting of the reference price for a specific good or service in the catalogue, eligible suppliers are defined as those who can provide the good or service at, or less than, the reference price. Where there is no requirement for a reference price

because there is a competitive market, then all suppliers are eligible unless they have been disqualified for non-performance or other reasons.

Suppliers who can provide the product within the established price range may sign up with the system to offer the product. Suppliers must have an electronic catalogue according to the open standards stipulated for interoperability and classification (preferably UNSPSC-based).

Suppliers should be able to enter and exit the system automatically. Entries will only be valid, however, if suppliers provide all the information requested on registration. This information is essential in order to determine suppliers' contract performance record, verify the legality of their business activities, and generate the necessary statistics.

3.7.5 On-line availability of locally eligible price quote

Procurement policy decisions are established regarding the automatic electronic search rules. For example, subject to legislation, the search rules can initially seek suppliers within the immediate locality where the request has originated to ensure that local small businesses are not overlooked.

3.7.6 On-line processing of purchase orders

In addition to being able to consult lists of eligible supplier catalogues, government agencies must be able to order the product they select online. The system needs to be adjusted agency-by-agency: each agency has its own authorization hierarchies and rules that need to be built into the system to ensure that officers cannot undertake unauthorized buying and that buying policies are adhered to. To provide this function, supplier selection criteria will be established, while providing the purchasing organization with the capacity, and an online mechanism, for issuing purchase orders and for changing processes for approval, authorization, and notification as needed at numerous points throughout the organization.

3.7.7 Development of suppliers' online purchasing capacity

Suppliers also need the opportunity to be able to receive and fill purchase orders online, which requires connectivity and negotiated performance rules, for example for emergency hospital supplies.

3.7.8 Online receipt, payment, and inventory management

Government agencies need to have access to electronic means of recording the delivery of orders so that, in a single operation, they can authorize payment, update the accounts, record the shipment's entry in the inventory, and generate the statistics required for the system's monitoring and oversight.

3.7.9 Online production of public information and reports

The information generated during the online purchasing process must be automatically entered into a database for subsequent use in auditing and review of individual transactions and classifying information by purchasing individuals, organization, suppliers, region, price, type of good, and any combination of these criteria. Such information is vital for oversight by supervisory and auditing units and for budgeting. The statistics furnished by the system will also be used to monitor practices, evaluate performance, and formulate policies on supply-side incentives for the private sector that can be tailored to market conditions in Nepal.

3.8 E-Reverse Auctions

The operation of e-reverse auctions is similar to e-purchasing except that the online quoting facility has the capacity to operate interactively in real time, with bid prices posted instantaneously during the process. Like e-procurement, e-reverse auctions should not be initiated in Nepal until e-tendering is operating successfully and the private sector has been able to adapt. It may also require time for the performance of Internet connectivity to improve.

Reverse auctions should not be undertaken unless it is clear that the market is truly competitive and free from perceptions or practices of collusion. These conditions make this option inappropriate for much of government procurement in Nepal at the present time unless the market is internationally based.

Recommendation: The operational capabilities which make up an e-reverse auction system suitable for public procurement in Nepal cover system preparation, bidding specifications, advertising, operation, clarification, access, evaluation, and information management.

3.8.1 System preparation

The procurement subject matter must be accurately specified and the purchase matter and requirements must be suitable for simple bidding processes (in terms of price or quantifiable in figures/ percentages). Procurement proposals that include multiple variables and qualitative factors are unlikely to be suitable. The auction system for Nepal should operate only on price.

The auction scope (variables to be subject to numerical bidding) and the evaluation criteria for selection and award of a contract must be clearly established and advertised, and more generally, the value of purchase should be high enough to make it commercially viable for a competitive supplier base, but not so high as to materially reduce competition.

The PPMO must verify whether all operational conditions are met for starting the auction (all participants are connected and conditions required for safeguarding anonymity are in place).

There should be good intelligence on past transactions in the marketplace and market structure. Each auction should be carefully monitored for market manipulation. Auctions should not be used where the relevant market structure exposes them to significant risk of improper practice such as predatory pricing (low-balling) or collusion.

3.8.2 Bidding specifications

The published specifications should include:

- the quantifiable features whose values will be the subject of electronic auction, expressed in figures or percentages;
- any limits on the values that may be submitted, based on the specifications in the contract;
- the information that will be made available to bidders in the course of the electronic auction and, where appropriate, when it will be made available to them;
- the relevant information concerning the electronic auction process;

- the conditions under which the bidders will be able to bid and, in particular, the minimum differences which will, where appropriate, be required when bidding;
- the relevant information concerning the electronic equipment used and the arrangements and technical specifications for connection.

3.8.3 Advertising

The notification of an e-auction is posted on a publicly accessible website that is well-known nationally, well maintained, functional, and affords free and unrestricted access.

The notification period is measured from the date of publication on the required sites / media, and where these dates vary, the latest one will apply. A secure log of these entries should be available for audit as required.

The contract notice must mention that an e-auction will be used. Advertising must be electronic, including the specifications.

The published specifications must include all the features to be auctioned. In addition, they must include all the "rules of the game" (the event and timing of the auction, rules for participation, bid increment, how to bid, and whether the auction is divided into successive phases), as well as technical information needed to participate in the auction.

The contracting agency ensures the integrity of master documents in electronic format, and their online publication. Modifications must be similarly secure and stored with the master. The system would inform bidders/ consultants where such master documents can be accessed.

3.8.4 Operation

The system runs the auction according to information specified in the invitation to the e-auction. The auction device collects electronically and without human intervention, anonymous bids that are automatically ranked by the system. The system informs bidders instantaneously of new ranking(s) as they occur, together with price and other information as previously specified, in such a way that bidders are able to ascertain their ranking at any moment.

- Under no circumstances are the identities of the bidders disclosed during any phase of the auction.
- If a bidder submits an invalid bid, the bidder is notified online immediately with a message explaining why the bid is rejected.
- When deciding to give out additional information, the contracting authority verifies that this information does not distort competition and informs all bidders simultaneously.
- The system closes the auction in accordance with the option it has specified. Closure will be either (a) at the time and date previously published, or (b) when a previously advertised time period has elapsed during which no new valid bids have been received. It immediately informs bidders about auction closure.
- The PPMO evaluates whether there has been improper use of the auction.

3.8.5 Correspondence, amendments, and clarifications

All pre-auction clarifications and amendments of the bidding documents, as well as any pre-auction conference minutes, are posted simultaneously onto the bid advertising website. Whenever possible these should also be emailed to businesses that have previously shown an interest.

Modifications by any operator will be tracked and recorded for audit. Systems should ensure that only authorized changes can be made. Modifications or amendments to the Master Bidding Document/RFP are made by providing the changes in an additional document distributed through the same mechanism as for the master document (and not by replacing the master with a new version).

No bidding documents will be available to any party in advance of the advertising of the opportunity.

The system tracks receipt by bidders when distributing pre-bid amendments and clarifications online.

Where online pre-auction conferences and clarifications are staged using the same system, including for example online conferencing and chat facilities, such facilities are shut down and do not function once an e-auction has begun.

3.8.6 Access

Access is open, equal and unrestricted to all prospective bidders. Where a two-stage process is used, such as within a framework or panel contract, this open access requirement will apply to the first stage under the conditions set out in the e-tendering guidelines.

Where suppliers are required to pre-qualify, the pre-qualification processes are approved in accordance with the open and public bidding processes defined in the e-tendering rules. A reverse auction may not be used if pre-qualification has reduced the number of bidders to a level that materially affects competition.

Where pre-qualification occurs, an electronic invitation is issued to admissible bidders simultaneously, informing them of the e-auction. bidders must be contacted electronically at least 2 working days before start of the auction.

Those that want to submit information or receive online alerts or notifications of auctions are offered an online registration facility. Registration is free, unrestricted and the principle of single sign-on apply.

The e-GP system is interoperable through open standards with ICT products in common use and accessible by users through readily available and commonly used browser software. If specialized software is necessary, this should also be downloadable.

The system should perform reliably and securely in time-sensitive, commercial application consistent with the number of bidders participating.

3.8.7 Bid evaluation and contract award

An e-auction award should be based either solely on price where the contract is awarded to the lowest price, or on price and / or other numeric values of the features of the acquisition as specified in the bid publication and as combined in accordance with the published mathematical formula.

Contract awards from reverse auctions should immediately be published online, together with the awarded price or the results of any mathematical calculations as specified in the advertising.

3.8.8 Information security management, authentication and charges

Information security specifications for reverse auctions are similar to those for e-tendering.

3.9 PMIS Specifications

It is most common for countries to commence with the development of the electronic Internet procurement portal and build e-functionality around this portal. It makes sense to develop a Procurement Management Information System (PMIS) in parallel with the Internet portal, and mandate its use. E-GP implementation in Nepal can be strengthened by integrating with management information systems at an early stage, and this would also help drive e-government generally.

3.9.1 Development of the PMIS

The development of a PMIS that can be led by the PPMO would provide a valuable opportunity to establish the capability of the PPMO as well as to integrate management systems with online technology. PMIS development can be implemented through the use of a consolidated template that accommodates agencies' 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 PPMO 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 an acceptance by the purchasing agencies of a common architecture for the PMIS with which their own management developments will automatically interface. 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.

This 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 Kathmandu 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 PPMO establish a Support Center to assist agencies to implement 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-centre basis with responsibilities assigned on a part-time basis.

The work that is undertaken to develop a consolidated PMIS is closely related to the management systems for procurement in each agency. The opportunity should be exploited to use the consolidated PMIS to also review current rules and management processes of the pilot agencies to identify rules and processes that can be streamlined, modified or abolished for the electronic environment. The Procurement Management Information System will become the Procurement Management ***and*** Information System.

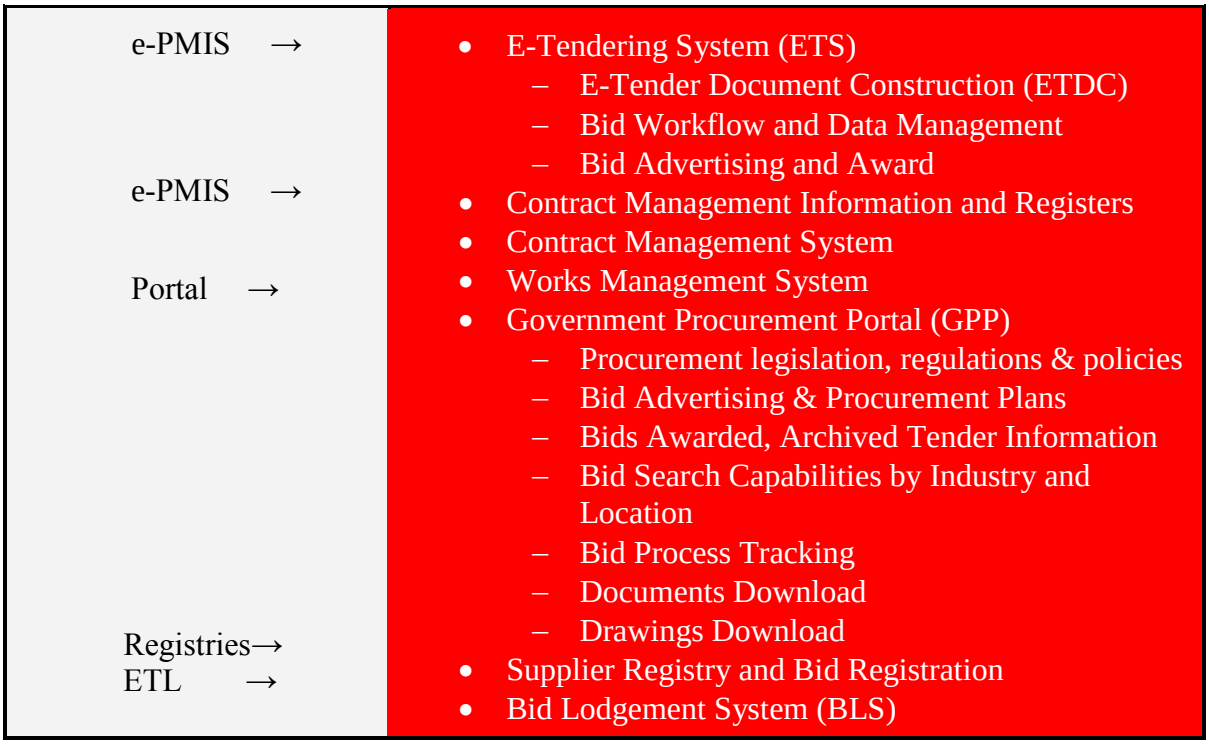
3.9.1.1 Procedural rules

Procedural rules include the rules for the selection of companies to provide quotes, pre-qualification procedures, procedures and rules for handing over bidding documentation, rules for bid 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 as set out in section 3.7 above dealing with functional requirements. 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



3.9.1.2 Management and information systems

The PMIS encompasses contract development, the bidding 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 bids for goods and services, construction consultancies, construction works, and supplier performance.

3.9.2 Data field requirements

The consolidation of the PMIS will lay the foundations for e-bidding, 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. Data fields may need to customized for each agency but should have a central core that includes:

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

3.9.3 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.

3.10 Workflow Management Specificati*ons*

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 PPMO adopt the following specifications as the foundation for workflow management.

3.10.1 E-Tendering system

The e-tendering system (ETS) addresses the functionality required to initiate and register a bid. ETS then progresses the bid through the appropriate workflow processes, to the awarding of that bid and the output of that information to other

systems. ETS selects the bid method, which will partly determine which process is used.

The central role of this system is to allow bids 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 bid process.

3.10.1.1 Electronic Tender Document Construction

ETS should provide the authorized official with an Electronic Tender Document Construction (ETDC) facility that is based on the use of standard bidding 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).

The ETS should provide a library of standard bidding documents with contractual templates for different categories of procurement, in a format accessible to common packages such as Microsoft Word and Mac, so that general users as well as suppliers can download bidding documents. The bidding document templates should use the contract procurement language as the catalogue standard when defining requirements and should be listed online.

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

3.10.1.2 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.

3.10.1.3 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 bidding approval limits.

3.10.2 Document Classification

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

- EOI - Expression of Interest
- RFQ - Request for Quotation

- RFP - Request for Proposal
- RFB - Request for bid
- FC - Framework Agreement

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

3.10.3 Document addendum process

The ETS must maintain information about the content and timing of addenda to bids. In case of any amendments to the bidding document/RFP, the ETS system shall not replace the bidding 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 bidding document/RFP.

3.10.3.1 Enquiries about bid addenda

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

3.10.3.2 Add a bid addendum

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

3.10.3.3 Change or delete bid addendum

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

3.10.4 Manage workflow actions

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

When the bid method is selected, a pre-bid 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 bidding approval limits.

3.10.4.1 Bid evaluation

The ETS should be able to undertake automated evaluation processes where these have been defined (this will generally not be the case) in the standardized bidding documents and in doing so ETS should be able to identify the winning bid and post it immediately onto the portal.

3.10.5 Register contract award

Line items in the bid may be awarded to different bid submissions (there may be more than one bid submission per bidder). A flag may be set according to the bidding 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.

3.10.6 Electronic bid lodgement

ETS should be able to securely and confidentially receive bid submissions electronically. bids submitted electronically must be stored securely and confidentially.

3.10.6.1 Supplier access

A supplier must be registered before lodging a bid. A supplier email address is mandatory. The bid should be registered against the bidder's ID from the supplier registry. If the bidder is not in the supplier register, a supplier ID must be requested from the supplier register and used to register the bid submission. One of the purposes of supplier registration is to allow for emailing of any amendments or further information to the potential bidder and is therefore to the bidder's advantage to register accurately. This should be communicated to the potential bidder at the time of registration.

- To execute online lodgement a supplier shall access the portal where a bid lodgement icon will appear.
- Activating the bid lodgement icon will display a list of current bids for which online lodgement is available.
- The bidder can click the ID of the bid they want to lodge against. If the bid 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 bid they have selected so that the bidder can verify they have selected the correct bid. They can then click the icon for lodging bid submission. Multiple files can be lodged, including those that accommodate the two-envelope system. Multiple bids will be lodged separately.
- The bidder 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 bid 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 bid is received

in full before closing time will it be accepted. A receipt message will be sent to bidder acknowledging receipt and time of receipt.

- Submissions that are corrupted during transmission are rejected. This policy should be clearly communicated to potential bidders.

3.10.6.2 Authentication

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

3.10.6.3 Bid box opening

The authorized agency official along with two or three witnesses will log on to the bid 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 bid response is downloaded it is the responsibility of the agency officer to ensure its security.

3.10.6.4 Late bids and bid closure

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

3.10.6.5 Multiple suppliers (framework agreements)

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

3.11 Reporting

Bid committee decisions and meeting minutes should be recorded in the ETS because they form part of the action sequence in the relevant bid method as well as part of the audit trail. Agenda item numbers should be allocated and reports generated for bids and procurement plans that the relevant bid committee will consider. ETS should identify the difference between a bid 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, bid reference number; bid description; successful bid; date accepted; bid amount, officials ID at each stage)
- produce standard reports in ETS system as specified by the PPMO that can readily be extended over time;
- produce standard notices in ETS:
  - notices to advertise the bid
  - notice of bid submissions, accommodating

  - the two-envelope system (prices not released)
  - the modified qualifications based criteria selection (prices not released)
  - the standard system
  - building works bids;
- successful / unsuccessful notices to bidders;
- for building works:
  - notices for bidder under consideration or not under consideration
  - contract award notices
- decline of all bids 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 bid.

3.12 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, and is prepared to skill up to meet its needs. The Nepali IT industry may be capable of meeting these requirements 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 PPMO. 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 bid, offering more incentive to businesses to participate.

Recommendation: The PPMO, 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 a road-show to the major centres providing business seminars, e-mail, and advertising, and presentations to the business associations. This strategy will address issues such as:

- Why the government wants to make the transition to e-GP
- Benefits to suppliers and government
- Government's vision and objectives for e-GP
- Government's e-GP Implementation Plan, stakeholders, and resources to be applied

- Key issues to be addressed (includes dealing with supplier and buyer concerns)
- Training and other support for suppliers and buyers
- Contracted suppliers, non-contracted suppliers
- Business association involvement, including the IT industry associations.
- Service industry development
- Business selection and listing policies
- Push-out services to suppliers
- Cost recovery
- Access to the systems
- Government e-GP management policies and protocols.
- First steps
- Project Contacts

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.

3.13 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 Nepal need to be recognized within the strategic plan and the plan needs to be tailored to accommodate this reality. For some communities outside of Kathmandu, connectivity, bandwidth and reliability may be regarded as an obstacle to e-GP. 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 which can be delivered through Internet cafés and kiosks. 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 will 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. These initiatives will seek policy support from the Nepali public sector. E-GP implementation will need to address connectivity issues through co-ordination and additional resources when necessary.

Recommendation The PPMO, in consultation with e-GP service providers and the IT business association, needs to coordinate government policy 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 many regional areas.

3.14 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 lead agency should be the PPMO. The PPMO will best be served by assembling an internal implementation team to manage the resources and the implementation of e-GP.

3.14.1 Implementation team

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

- a public sector management specialist familiar with the development of training and awareness programs and personnel placements for the public sector and who will also liaise with implementing agencies (from existing internal resources);
- an e-GP strategist with overall understanding of the vision and direction of the program (retraining of existing internal resources);
- a specialist in online technologies and especially with open international standards, and who is capable of international networking to monitor relevant trends and developments (engaged or trained from existing resources even if the service is provided by a third-party provider in order that the PPMO can monitor and manage its risks; could also be coopted from the National IT Centre);
- an industry and business development specialist capable of liaising with the private sector, raising awareness and representing their requirements (retraining of existing internal resources);
- a business manager who will monitor performance and manage the contractual relationship between the PPMO and the service provider if the service is provided by a third party (existing internal resources).

These five might not represent a net increase in the PPMO staffing levels insofar as the introduction of e-GP is to be phased over time and the responsibilities within the PPMO should also be gradually reallocated to shift from being geared to the paper environment to the online environment.

In addition, it is **recommended** that all members of this agency to be required to undertake an executive orientation workshop and e-GP course of a minimum of 2-3 days to aid the development of common goals.

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 3 to 4 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. Pilot testing is not required as there is now sufficient experience with the existing e-tendering system.

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 Australia.

3.15 Capacity

The capacity requirements are primarily from existing resources. There is a significant level of awareness of the issues already within the Ministry of Finance and in the private sector.

3.15.1 Stakeholders' Workshop

The Stakeholders' Workshop held in June 2007 to discuss the report including the assessment and the roadmap revealed significant understanding of the issues. This forum did not advance any changes to this report but instead was used as an opportunity by participants for clarification and elaboration of the issues.

The readiness factors and assessment were reviewed and related to international best practice.

It was emphasized that e-GP is not a substitute for other core procurement reforms including reforms to the legislation and associated capacity-building. This was a significant point of clarification. A second point of emphasis was the imperative to implement on a phased basis. The preferred options for sequencing of implementation phases were explained in some detail. Some basic elements of this have previously been undertaken.

There was also clarifications relating to the capacity of Nepal e-Transactions legislation to support e-GP and it was explained that this legislation is capable of providing the necessary legal status for all of the roadmap to proceed.

The Workshop also discussed the need for a lead agency and it was explained that the PPMO would be the ideal driver for these reforms, rather than an IT agency. There was a consensus amongst participants that this represented the next step. There was further discussion of the existing e-GP system that has already been built for Nepal by national consultants and it was advised that this should form the basis of the further steps and any further developments.

The list of Participants in this Workshop and the Programme are included in Annex 3.

3.15.2 Resources

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 bidding, reporting and management templates and monitoring frameworks. This work should include national consultants to encourage local skills development.

3.15.3 Technical consultant

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 GoN's e-Procurement strategy;
- review of system architecture within the context of GoN's e-Government strategy;
- TOR for the engagement of a developer for additional e-GP systems;
- assistance in the evaluation of the bids 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

3.15.2 Procurement consultant

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:

- analysis of detailed requirements for GoN's e-Procurement strategy;
- reengineering requirements for the development of greatly enhanced management and information capabilities for a PMIS;

- lead guidance to the business process re-engineering of four major 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.

3.16 Schedule and Costs

Once the PPMO is in place, implementation of e-Tendering could follow the indicative timeframe of activities set out below.

Activity	Expected output	Start Month	Duration	Related issue
1. Engage local ICT consultant.	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	Requires PPMO to be in place as client. 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 relevant ministries and PPMO to align the data, 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	Once every month ongoing	Requires coordination with e-government. Paces rollout of e-GP.
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 bidders.	4	Ongoing	
9. Implement universal extension of e-	Launch e-Tendering and e-contract management in all entities handling	8	Ongoing	Depends on the outcome of lead agency experience

Activity	Expected output	Start Month	Duration	Related issue
tendering and e-contract management.	public procurement.			and IT infrastructure feasibility study.
10. Extend single portal operations.	Include capability for secure bid 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 this activities timeframe are given below. 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 – 60 days	To assess the requirement (infrastructure and procurement reporting) of lead agencies.	$ 12,000
2.	International consultant e-GP – 2 months.	One consultant to review, monitor and guide the implementation of system.	$50,000
3.	Annual maintenance, support, helpdesk for e-GP system.	Yearly maintenance fee based on software & installation cost of the system.	$ 150,000
4	IT Infrastructure	Some hardware, LAN, WAN and Internet to procurement entity – may duplicate other developments – possibly $0.	$ 300,000
5	Consultant – Training	Develop the training module and train the trainer. (1 month)	$4,000
6	Training – Procurement entity through training institutes	Provide detail e-Tendering training to procurement entities. Considering one training session per month for 10 people = 9 month program.	$10,000
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 bidders including broad publicity & e-learning.	$40,000
8	Feasibility study for introduction of e-Contract Management		$20,000
9	Personal development / scholarships	Three scholarships @ US$10,000	$30,000
10	Contingency	Considering 10% on total value	$60,000

	Activity	Assumptions	Estimated cost (USD)
	Total		$ 666,600

3.17 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 to allow for the training of the PPMO staff to the new skill sets required by e-GP and for a full development of understanding by all stakeholders, and because it dissipates unrealistic expectations and avoids the "black box" syndrome.

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

- Establish the PPMO or an equivalent central procurement lead agency.
- 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 PPMO believes that it could readily implement and develop a timetable for their phased introduction.
- Review existing e-Tendering system for implementation and amendment if necessary.
- 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.
- 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, beginning with briefings of industry associations.

ANNEX 1: INTRODUCTION TO E-GP

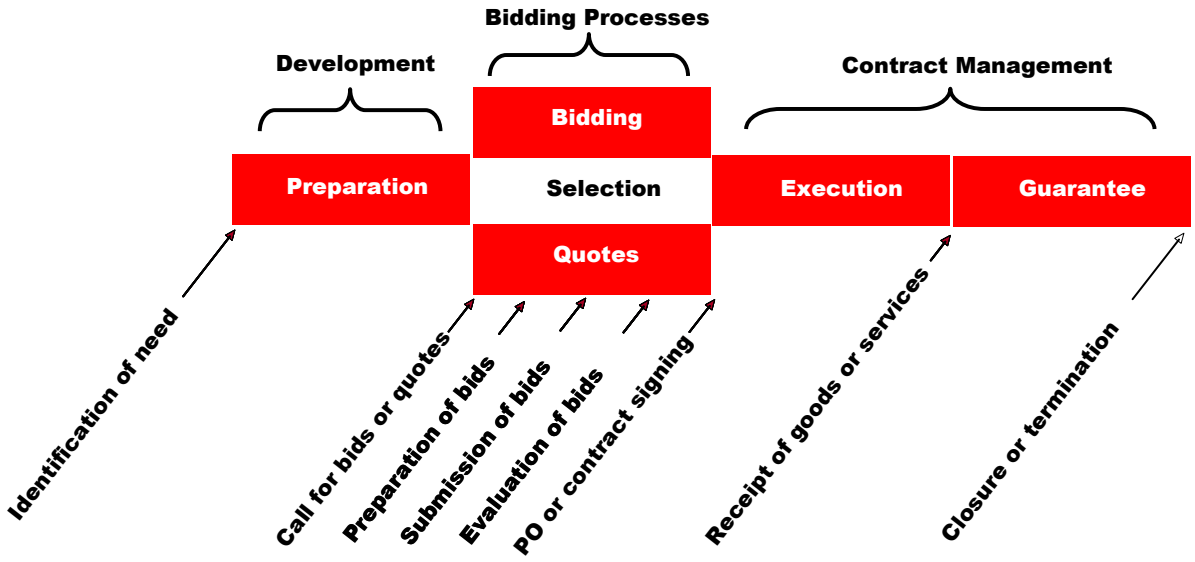
One of the most significant modernization initiatives for many government reform agendas is e-Government Procurement (e-GP). E-GP offers many advantages to the management of public procurement as well as wider economic benefits. E-GP has the potential to greatly enhance the governance of a large proportion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

Stages of Public Procurement



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). This PMIS will greatly strengthen the management of procurement across the public sector.

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 bidding (tendering) and purchasing. (E-Reverse Auctions form a variation to these). It is this distinction also forms the foundation for phased e-GP implementation.

Government Procurement via Electronic Bidding (e-tendering)

The e-tendering stage is about the acquisition of high-value, low-volume goods, works, and services by seeking bids (proposals) via a public process, followed by the evaluation of bids 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 bidding documents:
    - Secure electronic bid submission by suppliers
    - Customization options for agencies

These are simple and easily understood steps that can be implemented at low cost and phased in as required by the PPMO. 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 bid evaluation, unless the bidding documents are arranged so that evaluation is based on a simple scoring of objective measures such as price.

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.

Government Procurement via Online Price Quotes (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

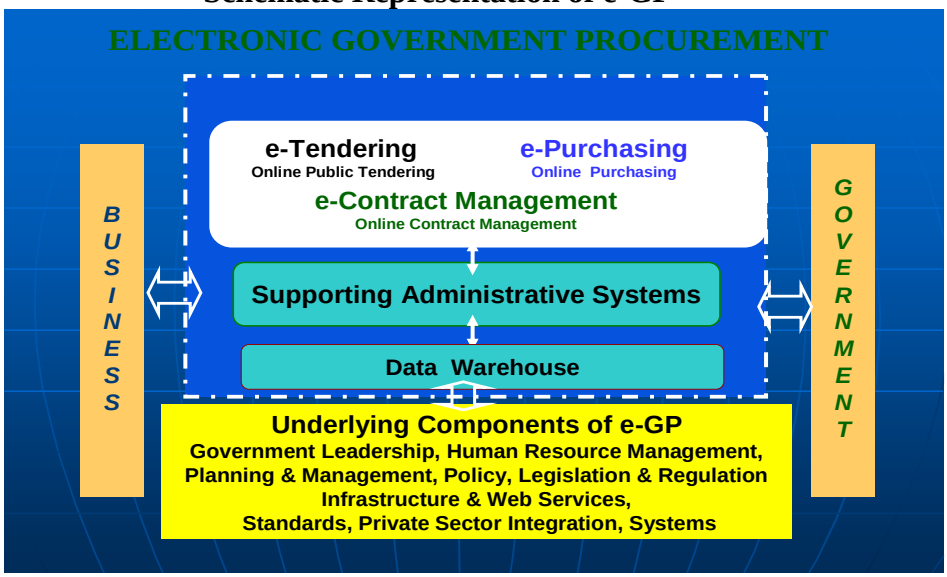
The implementation of e-purchasing (and e-reverse auctions, a special type of e-purchasing) is more difficult and expensive for suppliers and for Government, even though it deals with lower valued purchasing than e-tendering. E-purchasing requires much greater connectivity of businesses and entails extra 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-bidding 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.

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 installing hardware and software and using the technology. A mature example of e-GP is shown in the diagram below; e-GP systems are contained inside the dashed rectangle.

Schematic Representation of e-GP



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.

There may also be other associated systems to provide information and management support, such as an online procurement library containing policy statements, guidelines, document templates, and procurement advice.

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 being supported by a viable information and communication infrastructure, which provides suppliers and buyers with good quality, inexpensive access to the Internet. There is also strong support from a number of other critical key components that would strengthen any approach to government procurement, including the current approach in Nepal:

- 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 and more streamlined and consistent processes, and to ensure a fair and competitive market.

The Nine Components

In a jurisdiction with a mature, self-sustaining approach to e-GP in place, the nine 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. 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 tertiary institutions. 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

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.

Legislation and Regulation

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 Parliament, 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 behavior 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.

Standards

The establishment of standards to support electronic-based services is a complex and developing area. 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. 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.

The standards that underlie e-GP are not all technical. Identification of standards depends on what processes are to be integrated, the markets to which they are applied, and the qualities inherent in the sustainable technologies and business requirements applied to procurement. Some examples of where standards are being applied are:

Procurement Market Standards for supplier registries and catalogues, market networks and communities.
Systemic Qualities Standards for reliability, security, portability, communicability and management.
Procurement Process Standards for documentation, legal contracting, interpretation of legislation, process workflow and choreography.

Private Sector Participation

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 bidders 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.

Ongoing e-GP Systems

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.

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 bidding documents.
8) Access to the system for registered buyers and suppliers is free or low cost.
9) Electronic download of bidding 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 bidding 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.

Benefits of e-Government Procurement

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.

International Lessons

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. Determining the non-functional requirements is a task for which the Government should seek technical advice independent of any service provider. Some or all of these requirements are often the subject of a service level agreement (SLA). and a risk analysis to assist the development of any such agreement should be performed and 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 behavior 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 centers 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 Nepal, 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 nine 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 nine components are outlined in the table below.

STRATEGIC FOUNDATIONS	e-GP COMPONENTS
Institutional Capacity (the capacity for Government to set directions and lead and resource the changes required).	**1.** **Government Leadership** (vision, sponsorship, resources, stakeholder support and implementation support). **2.** **Human Resource Management** (education, skills development, expertise and career development).
Governance (putting the rules, management support, performance monitoring and evaluation to support e-GP in place).	**3.** **Planning and Management** (strategic planning and re-engineering of management protocols and processes). **4.** **Policy** (setting intent and guidelines that can be consistently applied). **5.** **Legislation and Regulation** (supporting rules and the external and internal monitoring of the efficiency, performance and compliance in relation to the total approach to e-GP).

Business Functionality and Standards (sustainable infrastructure, support services and common standards are developed to ensure accessible, integrated and consistent procurement services can be put in place).	**6. Infrastructure and Web Services** (ensuring reasonable access to, and quality of e-services and their sustainable development and maintenance). **7. Standards** (development of management, procurement and technical standards to ensure consistency of the approach to e-GP and interoperability across the systems involved).
Private Sector Development (ensuring the private sector is enabled to both participate and be involved in e-GP)	**8. Private Sector Integration** (suppliers are enabled and have incentives to participate in e-GP).
Application of Technology (appropriate, integrated, sustainable and modifiable technology is phased in to provide tendering, contract management and purchasing services).	**9. Systems** (the planning, selection, development, implementation and support of e-procurement systems to provide tendering, contract management and purchasing services).

In the assessment, each component is broken down into individual subcomponents. The respondents provided comment (evidence) to establish a level of readiness for each subcomponent. These levels were then amalgamated to describe the readiness level for each component. An example of how the component Government Leadership is built up from its subcomponents is shown below.

COMPONENT 1: GOVERNMENT LEADERSHIP

SUBCOMPONENTS	FINDINGS				
The degree to which	**Y**	**P**	**N**	**Comment**	**LoR**
a) The Government has set a vision and objectives for procurement.					
b) The Government's vision and objectives were developed in consultation with the key stakeholders in procurement.					
c) The Government's vision and objectives have been made public.					
d) The Government has issued plans for procurement modernization.					
e) The Government has nominated a sponsor for procurement modernization and change.					
f) A lead agency is available to provide leadership for public sector procurement management and modernization.					
g) The lead agency has adequate resources to provide its leadership role (for example, an implementation group).					
h) The lead agency has the authority to manage and modernize procurement.					
i) The lead agency is currently providing leadership to resolve some key issues in procurement (such as policies, governance issues, human resources management, standards adoption, third party involvement and application of technology).					

j) The Government is involving a range of key public and private sector and community stakeholders to support procurement management and modernization.					
k) Overall the Government has the capacity to lead, resource, and implement procurement modernization.					
l) Other related subcomponents					

Findings

Government Leadership

- The GoN has sponsored a number of projects to reform public procurement. These include the development of a new Public Procurement Act (PPA) 2007 that was recently proclaimed and a new set of regulations to support this Act. Additionally a review of some procurement documents is to be approved by the Cabinet. Initial training at the procurement officer level has been conducted.
- Some consultation with the private and public sector on objectives for public procurement took place as the PPA was developed.
- An integrated plan for the development of e-GP is not yet in place. There have been integrated activities to reform the current procurement environment, and strategy development in the areas of e-Government and ICT development and harmonization with neighbouring countries.
- A lead procurement agency, the Public Procurement Monitoring Office (PPMO), is provided for in the PPA but has yet to be established. It will be under the Prime Minister's Office.
- Procurement appears to lack a high-level sponsor in Government. It currently does not have a critical mass of resource to drive procurement reforms, or the implementation outcomes that will arise from the e-GP project. Resources to support training will be an issue.
- Some consultation with the private sector has previously occurred in relation to the PPA but no formal process to systematically involve the private sector is in place.

Human Resource Management

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

- Some initial training of advanced trainers (120) and procurement officers (210) has been achieved by the National Administrative Staff College (NASC) working with the Administrative Staff College of India. The NASC has set up a procurement faculty. This is an important step as procurement is currently seen as an administrative function not a profession in its own right. The PPMO will be responsible for this training.
- Some training on the regulations has also been conducted by the Financial Comptroller Office (FCGO). The Information Technology Professionals Forum (ITPF) has also conducted training for the High Level Commission for Information Technology (HLCIT) and some suppliers on the use of the e-Tendering System that was being used at the time.
- There are no available comprehensive training courses for procurement managers on strategic procurement.

- The range of people with expertise on strategic procurement and implementation available to the Government is limited and is unlikely to be sufficient to support the implementation of current and any future planned reforms in procurement. There are plans within the ICT Policy 2004 and a current ADB initiative[6] to assess the needs and design training to raise the ICT expertise capability in Government. This expertise will assist the implementation of e-GP.
- No evidence was found that the career structure and skills of government procurement managers and staff had been reviewed recently. Procurement was not seen as a career by most respondents.
- No formalized program for procurement training and development is available to suppliers.
- A change management strategy to assist procurement modernization has yet to be developed.
- There was almost unanimous agreement from respondents that a wider range of procurement education and training needed to be made available to procurement specialists, public sector procurement 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.
- A small but important start has been made to provide limited, well structured, training but the real magnitude of this issue has yet to be addressed. Formalized training for procurement managers and staff at the work and tertiary levels needs to be developed as does training for suppliers.
- 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. The ICT planning currently being undertaken by Nepal must address this issue.
- A career structure in procurement managers and staff needs to be established. It is the current procurement workforce that will have to implement the intended changes. They will be exposed to new skill areas and responsibilities. They will also have perceived fears for their job security, which while unfounded, need to be addressed.

Planning

Overall, some effective planning and management has taken place in relation to key supporting components of procurement reform. Most of the reform initiatives are yet to be implemented. This reform may not be achieved unless a strategic implementation plan and matching resources to consolidate, manage and monitor the outcomes expected are put in place.

- The GoN has assessed the ICT environment from a policy perspective utilising the ITC policy statements of 2000 and 2004 and the development of the Information the Telecommunications Policy of 2004. The SASEC ICT Development Master Plan of 2005 looked at harmonization of ICT infrastructure between India, Nepal, Bangladesh and Bhutan.[7] This plan advocates the development of a SASEC e-Government Procurement Gateway,

[6] Preparing the Information and Communications Technology (ICT) Development Project, ADB Aug 2006

[7] SASEC ITC Development Master Plan (Draft) ADB, May 2006

with India to research possible standards to be applied. A Technical Assistance Terms of Reference is currently being developed by the ADB to progress this project.

- The Nepal e-Government Master Plan 2006,[8] a collaborative project between the Korean IT Promotion Agency (KITPA) and Nepal's High Level Commission for Information Technology (HLCIT), has reviewed the Nepal environment and made recommendations in relation to implementing e-Government services and e-procurement in particular. The development of e-Government Procurement services are ranked 14th in priority and are in the 2nd level of services to be implemented.
- The HLCIT has been established to provide policy and strategy direction for the development of ITC at the national level.
- Country Procurement Assessment Review (CPAR) surveyed procurement in Nepal in 2002 and a number of reforms was implemented. The Japan Special Fund supported a Technical Assistance Report[9] to identify areas for improving governance in Nepal. Public procurement was identified as an essential government service that required significant improvement in the legislation, regulation, and monitoring of compliance and performance.
- Other than involvement in the development of the PPA, the private sector does not seem to have been involved in the planning of ICT and e-Government.
- Currently there is no e-Government Procurement Plan in place.

Management

- The current management of procurement is the responsibility of the FCGO and individual agencies. It is generally under-resourced and lacks unity of purpose.
- The new PPA[10] makes provision for the establishment of a Public Procurement Monitoring Office with the following responsibilities:
  (a) formulation of policies related to public procurement, to issue the directives, instructions, technical notes and manuals for implementing this Act;
  (b) issuance of standard forms of contract, standard bidding documents, and standard pre-qualification documents, for mandatory use by all procuring entities implementing public procurement procedures;
  (c) collecting from procuring entities information on public procurement activities and monitoring the observance by procuring entities of this Act and the Regulations;
  (d) providing interpretations of this Act, the Regulations and other instruments governing the public procurement process;
  (e) recommending and facilitating the implementation of measures to improve the functioning of the public procurement system, including the introduction of information and communications technology, the establishment of one or more websites dedicated to public procurement etc.;
  (f) issuance of a Public Procurement Bulletin, in printed and electronic versions, to be used for the dissemination of the Act, Regulations, directives, articles, technical guidance notes, and the like;
  (g) recommending appropriate procedures for coordination in procurement of goods, works and services in Nepal;

[8] Nepal e-Government Master Plan, Korean IT Industry Promotion Agency, Sept. 2006

[9] Nepal: Preparing the Governance Reforms and Decentralised Cluster Program, ADB/JSF Technical Report, Aug 2006

[10] Public Procurement Act 2005 (draft)

(h) developing human resources and professionalism for public procurement, including by arranging training programs for public officials and bidders concerning public procurement, and qualification and certification, and career development schemes for public officials involved in procurement;
(i) conducting debarment proceedings;
(j) soliciting the views of the business community on the effectiveness of the procurement system on a regular basis through consultative bodies;
(k) presenting an annual report to the Council of Ministers regarding the overall functioning of the public procurement system;
(l) cooperating with international institutions and with other foreign entities on matters associated with the public procurement system;
(m) planning and coordinating foreign technical assistance in the field of public procurement; and
(n) such other functions as may be assigned to it by the Council of Ministers.

- The PPMO is to be headed by a person with the rank of Secretary to the Government of Nepal. It will not be involved in operational procurement or conduct reviews of procurement activities. It has provision to introduce e-procurement.
- New Procurement Regulations 2005[11] have been drafted to support the PPA and address most of the process shortcomings that were identified in the CPAR 2002. Currently, most respondents saw the procurement process as being inconsistent across government agencies.
- The procurement process used is governed by the following guidelines:
  - Less than 100,000 NPR: direct purchasing
  - 100,000 – 1,000,000 NPR: three written quotes
  - Greater than 1,000,000 NPR (USD 15,000): public tender
- Standard bidding documents are available in major centers for some sectors including Works, Goods and Services.[12]
- The public currently has limited access to information on contract award.
- Many respondents indicated there were corrupt practices at all levels of government procurement both on the buyer and supplier side. Collusion by suppliers was specifically identified.
- A number of policies and strategies in relation to ICT, governance, and e-Government and its links to e-procurement are currently being developed. The procurement environment has been assessed by a CPAR in 2002 and readiness to make the transition to e-GP is the subject of this report. If sufficient resources are applied to implementing the developing plans, then e-GP can be implemented within the national ICT and e- Government strategies for Nepal. A specific strategy for e-GP will be required.
- The current e-Government Master Plan ranks e-Procurement as 14th priority and this appears to ignore the impact that reform of procurement may have. Public procurement probably consumes some 10 to 15 percent of GDP and is widely perceived as being inefficient and with low integrity.
- The PPMO needs to be established as a matter of urgency to provide leadership and a critical mass to resource the implementation of the PPA, fulfil the functions assigned to the PPMO, and manage the Implementation Strategy for e-GP. Some external assistance may be required to raise the expertise of the

[11] Procurement Regulations 2005 (draft) Government of Nepal

[12] Public Works Directives, Parts I, II and III' Standard Procurement Documents 2002

new PPMO so it can quickly be effective. The planning and management of e-GP is very dependent on the implementation of the provisions of the PPA.

- The new Procurement Regulations need to be distributed and supported with training for both government procurement staff and suppliers. This will assist the delivery of a consistent procurement process across government agencies.
- If the e-GP agenda is to be bought on quickly, then these regulations should be modified to match a procurement process that is supported by procurement systems. This is not a large task.
- There appears to have been little private sector involvement in the planning for procurement and developing the process.

Policy

Overall, little policy and strategies have been developed to provide direction for, and integration of, government procurement with other e-commerce issues. A comprehensive statement of policy on public procurement, how it will be communicated and implemented, monitored, and evaluated, has not yet been established. 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 projects with few benefits being achieved.

The objectives for public procurement stated in the PPA may form the basis for establishing policy:

(a) Maximizing economy and efficiency in public procurement, and obtaining best value for public expenditures;
(b) Promoting economic development of The State of Nepal, including capacity building in the field of public procurement, and development of local industries;
(c) Promoting competition and fostering participation in public procurement proceedings by qualified suppliers, contractors and consultants;
(d) Providing equal access without discrimination to all eligible and qualified providers of goods, works and services and fair and equitable treatment of all bidders;
(e) Promoting integrity, fairness, accountability and public confidence in, the public procurement process; and
(f) Achieving transparency in the procedures, process and decisions relating to public procurement.

Legislation

A comprehensive new Public Procurement Act 2007 (PPA) has been recently gazetted that addresses the following issues:

- principles to be applied to public procurement including, planning, standardization of process, fair competition, improved process transparency and integrity, and public access to information;
- the establishment of the PPMO and its role and responsibilities;
- professionalism in procurement;
- key steps for the procurement process for works, goods and services;

– alternative types of procurement;

– reducing fraudulent practices;

– handling complaints;

– establishment of an Independent Review Board;

– process for changing the regulations.

This legislation is based on the UNCITRAL Model Procurement Law and the WB approach to procurement.

An Electronic Transactions Act 2005 has been passed by Parliament. It establishes the use of electronic documents. It also makes provision for the use of Digital Certificates but does not set up a mechanism for the creation of Digital Authorities. This legislation is technology neutral.

There is some supporting legislation in place including the Civil Service Act 1993, Prevention of Corruption Act 2002, and the CIAA Act 1991 which set up the Commission for the Investigation of Abuse of Authority (CIAA).

Regulation

Overall, the new legislation and it regulations appear to be well structured, and if implemented, would provide most of the legislative support required for the functioning of the current approach to procurement and the introduction of e-GP. The establishment of the PPMO is critical to this implementation.

The developing approach to comprehensive regulation of public procurement appears to be fragmented in that the PPMO, Independent Review Board, the CIAA and the government agencies themselves are all involved in some way. A regulation strategy showing how these parties would work together and how the regulatory procedures would be enforced needs to be developed. The introduction of e-procurement systems would assist the regulatory process by improving the transparency and integrity of the process and providing comprehensive information on which to monitor procurement activities. The establishment of a separate procurement regulatory authority could be considered.

Effective, well-resourced management, monitoring and enforcement of the legislation and regulations will be critical to the success of the reform process and any introduction of e-GP. If this is not done then procurement initiatives are in danger of providing a façade behind which poor performance, unethical practices, wastage of funds, and low confidence in the government procurement process will flourish.

However, based on both observation and comments from nearly all the respondents, there will need to be a very significant increase in the resources available to the GoN to successfully implement and sustain these legislation and regulatory initiatives.

- There are general regulators of corruption such as the CIAA. The PPA makes provision for the establishment of an Independent Review Board that can review procurement activity. The PPMO, when established, will be able to monitor government agencies, investigate and debar suppliers, and report annually to the Government.

- The Office of the Auditor General is auditing all government agencies in relation to compliance and performance in relation to procurement. Agencies report annually on program implementation.
- No comprehensive procurement information is available to Government as yet to identify trends and assist decision making.
- Government agencies have devolved responsibility for procurement.
- An appeal process for suppliers has been established in the new PPA. Suppliers can first appeal to the chief of the procurement entity involved, which must respond within five days. If the supplier is not satisfied with these responses it can within a further ten days then appeal to an independent review board. The supplier will be required to pay a fee for this appeal but will be refunded the fee if its appeal is successful.

Infrastructure and Web Services

Up-to-date information on this component has been difficult to find. No comprehensive infrastructure surveys appear to have been done since 2004. The table below identifies many of the subcomponents in relation to the key infrastructure and web services, and relates them to the readiness levels used in this assessment. The data has been based on figures from research by the e-GP team[13] and international reports,[14] together with the views from respondents, who are either users and/or developers of the infrastructure and services. The figures should be treated with caution but are probably conservative. The profile applies to whole country, where 85 percent of people live in rural areas. The profile for major cities and towns would be at a higher level on many issues.

Readiness Levels of Infrastructure & Web Services in Nepal (Feb 2004)

	Indicators	Levels of Readiness in Nepal			
		L1 none/little	L2 small	L3 some	L4 adequate
1.	Internet subscribers (% pop)	<0.05	<1.0	<10.0	>10.0
2.	Internet users (% pop)	<1.0	1-3.0	4-10.0	>10.0
3.	Number of ISP providers /million people	<1	<2	<3	>3
4.	PC penetration (%pop)	<1.0	<3.0	<10.0	>10.0
5.	Modem transfer speeds generally available	e-mail only	9.6-14.4 Kbps	14.4-28.8 Kbps	28.8-56.0 Kbps
6.	Availability of data network	Little or no network	A few agencies with LAN	Networks in major centers	Networks link many centers
7.	Availability of public Internet centers	None	Few in large locations	Few in most locations	Some in most centers
8.	Comparative (regional)cost of Internet access	Very high	High	Marginally above	Comparable
9.	Telephone fixed line penetration (% pop)	<2%	<8%	<40%	>40%

[13] Fuji, K, Research on ITC Infrastructure, Nippon Koei Co. Ltd, Feb 2007

[14] Information and Communication Development, Global Trends and Issues, World Bank, 2006.

10.	Mobile phone penetration (% pop)	<0.5%	<5%	<14%	>14%
11.	Coverage of telephone service (%pop)	<10%	10-30%	31-50%	>50%
12.	Quality of service (faults /100 lines)	>100	50-100	10-50	<10
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
14.	Availability of hardware	All components imported	Many components imported	Some components imported	Few components imported
15.	Availability of software providers	0	1-9	10-50	50+

- Internet access is readily available in the major cities through the network and via Information Centers but it is restricted in rural areas. This has real implications for the large percentage of suppliers who are small contractors (SMEs) and live in rural areas.
- The Internet and telephone services are characterized by breakdowns due to an unreliable power supply and rolling blackouts due to power rationing.
- Many government ministries and departments are connected to the Internet and have their own websites. Importantly, the large agencies that procure for Government tend to have a broadband connection, an interactive website, and good access to the networks that are available. There appears to be wide differences of the quality of infrastructure available to each ministry.
- The Government has a major shortage of IT professionals available to it. The Nepal e-Government Strategy recommends that the Information Promotion Fund be used to establish curricula in high schools and universities to substantially raise the level of ICT expertise available in the country. This will take some time to produce results.
- The current telecommunications and Internet infrastructure is developing but there are many policy, technical and business issues to be addressed before a national infrastructure is achieved that is integrated, reliable, has sufficient speed and bandwidth, and is widely accessible.
- There does not appear to be up-to-date, appropriate information on all aspects of the infrastructure to assist those who wish to provide e-services using the infrastructure. This would apply to e-Procurement services along with many other e-Government and e-Commerce services.
- Despite the above issues with the infrastructure, an e-Tendering system has operated in a number of government agencies in the recent past. The problem with that system has largely been lack of resources to manage it and policy as to its use. There would be some frustration in using the system in the current infrastructure environment where the specific electronic transaction was particularly time sensitive. This does not generally apply to e-Tendering except in the time crush that inevitably accompanies the lodging of electronic bids.

Standards

Little has been achieved as yet in the area of standards. The ICT policy recommends setting up a national standards organization. The development of

national standards is complex and difficult, but is essential if the long-term effectiveness and efficiency of e-services, including e-GP, are to be sustained.

- The issue of national standards for the ICT platform, procurement and management does not appear to have been addressed as yet. Some discussions on this issue have taken place between the FCGO, ITPF, Nepal Bureau of standards, and the Federation of Nepal Chambers of Commerce. The Nepal e-Government Strategy 2006 strongly recommends the priority setting of national standards in relation to systems, computerization, authentication, and the planning and management of IT. The SASEC Report on regional harmonization of regional ITC platforms recommends that standards be developed on a regional basis.
- Some procurement standards on quality of materials have been developed in the construction sector

Private Sector Integration

Few private sector respondents (2) were involved in this assessment. Public sector respondents commented that little or no real consultation had taken place with the private sector on procurement matters. The exception to this was the consultation with industry sector organizations on the development of the PPA.

- Private sector respondents were most critical of the time cost in engaging in public procurement. Currently there is no effective appeal mechanism available to suppliers and they have to rely on the long process of taking their complaints to Court.
- Information on procurement regulations, guidelines, documents and procurement opportunities are available to suppliers in hard copy and electronic form in some ministries.
- The private sector attitude to introducing e-GP could not be ascertained in the time available. Public sector respondents saw collusion among suppliers as a major problem.
- Some ad hoc training had been provided for suppliers on the existing process.
- Small to Medium Enterprises (SME) would have difficulty in accessing e-procurement systems given the limited distribution of the ITC network.
- There is little information on the attitudes of the private sector to making the transition to e-GP. The Government does not appear to have a formal approach to discussing major economic issues such as procurement with the private sector. There are many unresolved issues.

The involvement and support of significant stakeholders in the private sector is critical to procurement reform and the transition to e-GP in particular. 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.

Systems

Nepal has an e-Tendering system that appears to have most of the required functionality but not the policies, leadership, resources, support or training available to operate it successfully.

An e-tendering system was developed by the ITPF in 2005 under agreement with the Government, and was implemented by Main Roads (www.bolpatra.gov.com.np). In 2006 the system was handed over to the control of the HLCIT and its staff was trained in its use. The system was originally supported with buyer and supplier training by the ITPF.

At present the system is not used, or only partly used, in government ministries. The reasons are numerous and include:

- The HLCIT, a policy agency, did not have sufficient resource to support the system
- There was no legislation in place to support the use of electronic documents (but this problem possibly could have been resolved).

There were different views as to whether there should be a single government portal or each agency should use the system in its own right. The outcome was that not all public tendering opportunities were advertised in one place and coordination was difficult.

The table below presents the functionality of the system as developed by the ITPF. This functionality, if confirmed, would give this system almost the full functionality found in e-Tendering systems worldwide. If the right environment was created, then the system might be relaunched, particularly if it has support from the private sector.

	System Functionality Available	
1.	Single registration of suppliers	**Y**
2.	Registration of buyers	**Y**
3.	Online Help Desk facility to support use of the system	**Y**
4.	Access to procurement policies, regulations and guidelines	**Y**
5.	Access to procurement market research information for buyers & suppliers	
6.	Users can revisit site without loss of data	**Y**
7.	General advertisement or procurement information and opportunities	**Y**
8.	Provision of targeted information to suppliers (eg opportunities)	**Y**
9.	Access by buyers to supplier e-catalogues	**Y**
10.	Transmission of purchasing requests by buyers to suppliers	**Y**
11.	Receipt of purchasing information from suppliers	**Y**
12.	Advertisement of bid documents	**Y**
13.	Template documents for the use of supplies are available online	
14.	Template documents for the use of buyers are available online	
15.	Master bidding documents or requests for quotations are stored securely in the system	**Y**
16.	Downloading of procurement specifications and process requirements, bid documents, or auction specifications or requests for quotations	**Y**
17.	Requests for quotations sent to suppliers on line	**Y**
18.	Provision of addendums & changes available to suppliers	**Y**
19.	Receipt and answer of questions (buyers or suppliers)	**Y**
20.	Uploading proposals/responses or e-bids	**Y**

21.	Acknowledgement of receipt of proposal/request or e-bid	**Y**
22.	Secure storage of proposals or bids in a Tender Box or other secure arrangement	**Y**
23.	Caters for restricted tendering or quotation processes	
24.	Invalid bids, quotations are recognized and the relevant suppliers notified	
25.	Evaluation of bids online	
26.	Notification of successful bids or quotations	**Y**
27.	Payment for purchases and contract payments can be made online	
28.	All online communications are logged, date and time stamped and can be made available for audit or resolution of disputes.	**Y**
29.	Online training is available for suppliers	**P**
30.	Online procurement demonstrations are available online for education and training purposes	**P**
31.	Can manage auctions	**Y**

ANNEX 3: STAKEHOLDERS' WORKSHOP AGENDA AND LIST OF PARTRICIPANTS

A TECHNICAL WORKSHOP ON
PLANNING FOR THE TRANSITION TO e-GOVERNMENT PROCUREMENT

(Friday, June 22, 2007)
Venue: *Radisson Hotel*

Friday, June 22, 2007	OPENING SESSION Chief Guest: Mr. Rameshore Prasad Khanal, Acting Secretary (Revenue), Ministry of Finance
09:30 a.m.	Registration
10:00 a.m.	Welcome Address -- Mr. Bigyan Pradhan, *Acting Country Director, World Bank*
10:15 a.m.	Highlight on Current Government Initiatives in Public Procurement Reform -- *Mr. Sushil Prasad Sharma, Financial Comptroller General, FCGO*
10:30 a.m.	Key Note Address on Implementing Procurement Law and e-Procurement -- Mr. Rameshore Prasad Khanal, *Acting Secretary (Revenue), Ministry of Finance*
11:00 a.m.	TEA/COFFEE BREAK
	TECHNICAL SESSION -- PLANNING FOR THE TRANSITION TO e-GOVERNMENT PROCUREMENT (CHAIRMAN: Mr. Sushil Prasad Sharma, Financial Comptroller General, *FCGO*)
11:30 a.m.	Key Procurement Issues Facing Nepal – the Value Proposition -- Dr. Paul Schapper, Consultant, World Bank
11:50a.m.	Discussions
12:30 p.m.	LUNCH BREAK
01:45 p.m.	Findings, Recommendations and Implications from e-GP Readiness Report -- Mr. David McDermont, Consultant, World Bank
2:15 p.m.	Discussions – Questions & Answers
3:00 p.m.	Key Implementation Issues and Priorities to Support the Introduction of e-GP in Nepal – Action Plan -- Dr. Paul Schapper, Consultant, World Bank Discussions
4:15 p.m.	Summing up and Next Steps: Chairman's Remarks -- Mr. Sushil Prasad Sharma, Financial Comptroller General, FCGO
04:30 p.m.	HIGH TEA and END OF WORKSHOP

e-GP Readiness Assessment Workshop
List of Participants
Friday June 22, 2007

Sl No.	Name	Designation	Organization	Signature
1	Mr. Sushil Prasad Sharma	Financial Comptroller General	FCGO	
2	Mr. Rameshwor Khanal	Acting Secretary (Revenue)	MOF	
3	Mr. Devraj Pathak	Joint FCG	FCGO	
4	Mr. Jayadev Shrestha	Joint FCG	FCGO	
5	Mr. Rudra Kumar Shrestha	Joint FCG	FCGO	
6	Mr. Diwakar Rimal	Deputy Financial Comptroller General	FCGO	
7	Mr. Padam Raj Bhatta	Deputy Financial Comptroller General	FCGO	
8	Mr. Bhava Krishna Bhattarai	Deputy Financial Comptroller General	FCGO	
9	Mr. Phanindra Raj Regmi	Deputy Financial Comptroller General	FCGO	
10	Mr. Janardan Neupane	Deputy Financial Comptroller General	FCGO	
11	Mr. Shiva Prasad Pandit	Deputy Financial Comptroller General	FCGO	
12	Mr. Bhagirath Pandey	Deputy Financial Comptroller General	FCGO	
13	Mr. Shakti Prasad Shrestha	Consultant	Telecom Sector Reform Project	
14	Mr. Dinker Sharma	Joint Secretary	Ministry of Physical Planning and Works	
15	Mr. Shambhu Uprety	SDE	Department of Education	
16	Mr. Shambhu K.C.	SDE	Building Maintenance Construction Division Office	
17	Mr. Suresh Pradhan	Senior Instructor	Revenue Administration Training Center	
18	Mr. Kishore Jung Karki	Under Secretary	Ministry of Physical Planning and Works	
19	Mr. Dhurba Dahal	Under Secretary (Account)	Ministry of Local Development	
20	Mr. Krishna Bahadur Khadka	Director	Nepal Administrative Staff College	
21	Mr. Puskar Wagle	Project Manager	IT Professional Forum	

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22	Mr. Krishna Dev Yadav	Senior Eng.	Nepal Engineering Association	
23	Mr. Jyoti Raj Dhungel	Section Officer	Nepal Chamber of Commerce	
24	Mr. Saroj Devkota	Vice Chairman	High Level Commission for Information Technology	
25	Mr. Durgesh Pradhan	Account Officer	Ministry of Finance	
26	Mr. Purusottam Ghimire	Under Secretary	Ministry of Science & Technology	
27	Mr. Rajesh Sakya	President	IT Professional Forum	
29	Mr. Binod Dhakal	Program Er.	Computer Association of Nepal	
29	Mr. Nowal Anand Baidha	Center Member	Federation of Contractors Association of Nepal, Anam Nagar	
30	Mr. Kul Prasad Pandey	Assistant Director	FNCCI	
31	Mr. Deepak Man Singh Shrestha	CDE	Department of Roads	
32	Mr. Anup Regmi	Senior Engineer	Nepal Telecom	
33	Mr. Biplav Man Singh	President	Computer Association of Nepal	
34	Mr. Dilip Agrawal	CEO	World Link Communicatio ns	
35	Mr. Pavan Shakya		Internet Service Providers Association of Nepal, c/o Worldlink	
36	Mr. Ramesh Kumar Sharma	Joint Secretary	Ministry of Peace and Reconstruction	
37	Mr. Babu Ram Gautam	Director	Office of the Auditor General	
38	Mr. Durga Prasad K.C.	Executive Director	Nepal Engineering Consultancy Services Ltd.	
39	Mr. Ki Hee Ruy	Head, Project Administration	Asian Development Bank	

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40	Mr. Naren Chand	Procurement Officer	Asian Development Bank	
41	Mr. Suresh Kumar Regmi	Managing Director	Professional Computer System	
42	Ms. Christine Zhen-Wei Quing	ICT Specialsit	World Bank	
43	Mr. Narayan Sharma	Procurement Consultant	World Bank	
44	Mr. Bigyan Pradhan	Sr. FM/Operations Specialist	World Bank	
45	Mr. Kiran Ranjan Baral	Sr. Procurement Spcialist	World Bank	
46	Ms. Neena Shrestha	Program Assistant	World Bank	
47	Surendra G. Joshi	S. T. S.		
48	Prem Pd. Shrestha	Mechanical work		