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MULTI- COUNTRY VIRTUAL KNOWLEDGE EXCHANGE IMPLEMENTATION OF E-GOVERNMENT PROCUREMENT SYSTEMS

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ADB

PARTICIPATING COUNTRIES and PROCESS

Four Countries participated. They are implementing systems as shown below.

- Democratic Socialist Republic of Sri Lanka (SLI) – 2018 on promise.lk & promise.training.lk
- People's Republic of Bangladesh (BAN) -2011 on eprocure.gov.bd
- Kingdom of Bhutan (BHU) – 2017 on egp.gov.bt
- Federal Democratic Republic of Nepal (NEP) – 2013 on bolpatra.gov.np

Process: Draft Knowledge Exchange Framework document sent to each country for comment and responses. This information was condensed onto one document for the two 3-hour Virtual Knowledge Exchange Sessions. The final document was incorporated in the ADB report.

Some 30 participants attended one or both Sessions.

E-GP KNOWLEDGE EXCHANGE FRAMEWORK

The Framework covers all the major components and sub-components that would be addressed in **implementing an end–to-end best practice** e-Government Procurement System. The key components used were:

1. **Vision and Planning**
2. **Government and Institutional Leadership**
3. **Policy and Development Focus**
4. **System Development**
5. **System Functionality**
6. **System Technology**
7. **Governance**
8. **System Implementation**
9. **Human Resource Development**

A framework provides a full context for the knowledge exchange.

1 VISION AND PLANNING

i. All countries identified identified the Scope and Strengths of their existing systems. Weaknesses: Poor procurement planning. Limited availability of resources, and resistance to change by some vendors.

ii. All reviewed other country e-GP Systems.

iii. All have a centralized e-GP system with decentralized procurement management by the PEs.

iv. All identified the procurement resources they had available.

2 GOVERNMENT AND INSTITUTIONAL LEADERSHIP

i. Three countries have established procurement policies. SLI still developing them.

ii. Policies have been developed in consultation with stakeholder groups.

iii. System development has supported reforms in legislation, documentation, security, and electronic transactions. SLI and BHU do not have a Procurement Act at present.

iv. All have an e-GP Management Organization for implementation.

v. NEP is using Open Contracting Data Standards, SLI and BAN are considering them.

vi. Budget for Implementation: SLI-$0.135m so far, may rise to $3.9m, BAN-$4.7m, NEP $2.0m, BHU-$3.6m. (low by international standards)

vii. All have access to independent external auditors.

3 POLICY AND DEVELOPMENT FOCUS

i. **Data Security** -BAN & NEP have dedicated data centers. SLI & BHU data stored in a system within country.

ii. **Value for Money**

- SLI-Slow procurement process is a major problem
- BAN-average process time reduced 100 to 57 days. Costs reduced 6.9%.
- NEP-Not measured yet.
- BHU- Process time reduced.

iii. **Domestic Preference** -3 countries have it. SLI only for manual procurement.

iv. **Partial Transparency**– all have public procurement guides, SLI and BAN bidding times, contract award published on system. NEP and BHU publish Annual Procurement Plans.

4 System Development

i. **Development Strategy** - SLI, BAN, NEP used phased customed development by a local consulting firm. BHU customized the BAN system.

ii. **Key interacting Agencies** –Business Registration, Audit, Business, Construction and Planning organizations the most common.

iii. **Vendor Registration** – All online, single identified registration with details and verification. BAN has fees-local vendors $50, PEs free, International vendors $100. Registration renewal for vendors $25.

iv. **Additional Modules to e-Tendering** - BAN Contract Management Module, Contractor Data Base. Others yet to develop additional modules.

v. **Workflows** – BAN yes, Others yet to be developed.

vi. **E-Database for e-Tendering** – All have it. It needs to be expanded to cover whole procurement cycle.

vii. **Accessible website** - All have their own e-GP website.

viii. **System Security Testing** – All have access to external independent testing.

5 SYSTEM FUNCTIONALITY

As per MDB e-Tendering Requirements 2019

i. **Online Services** – All countries have: online system access, advertising, SBANs and guides, correspondence, and e-submission of bids and public bid opening and public contract award.

ii. **Bid Securities** - three countries, SLI yet to implement.

iii. **Vendor Bid Management Module** - all countries provide it.

iv. **Bid Evaluation Report** - all countries provide it.

v. **Information Security Management** - BAN meets ISO 27001-13 standard, other countries use encryption and decryption.

vi. **Authentication** - SLI and BAN use identity and password. NEP and BHU partially comply.

vii. **International Procurement Vocabulary** - All use it.

viii. **Monitoring of System** – Not well developed. BAN, NEP, BHU use Help Desk and training feedback. SLI yet to develop.

6 SYSTEM TECHNOLOGY-1

Technology	Countries	Technology	Countries
1) Secure Socket Layer to link users to procurement website	All countries	**6) Digitally signed bids**	BAN, NEP, BHU yes. SLI no.
2) Storage of password in MD5 / encrypted	All countries	**7) Storage of bids in encrypted fashion**	All countries
3) Digital Certificate based or Electronic Signatures	SLI-e-signatures, BAN-both, NEP DigiCert SSLI, BHU-not available	**8) Time stamped electronic tender box**	All countries
4) Digital Certificate can be mapped just once	SLI-not implemented, BAN-not applicable, BHU not available	**9) Server time mapped to National timer server**	All countries
5) Role based access to documents and decisions	All countries	**10) Time stamping of documents or use of Hash Keys**	SLI, BAN, and BHU. yes. NEP not yet.

6 SYSTEM TECHNOLOGY-2

Technology	Countries	Technology	Countries
11) Security alerts	All countries	**16) Audit trail kept**	All countries.
12) Firewall for protection	All countries	**17) Error handling to monitor system**	All countries.
13) Site hosted on a dedicated server with reputed internet service provider	All countries	**18) Anti-Cartel detection**	Not used in all countries.
14) IP based user access	SLI, NEP, BHU yes. BAN for bank users only.	**19) Independent Technical testing and audit**	All countries.
15) Tamper detection	All countries.		

6 SYSTEM TECHNOLOGY-3

Technologies adopted in e-GP Development in each country for the following:

Application development	**SLI**- PHP (Hypertext Pre-processor) **BAN**- Java EE (Enterprise Edition) **NEP**- Java Spring Framework **BHU**- (COTS/scratch development, language and database) COTS/Scratch: Customized from existing source code. Language: Java/Spring.
Database Management System. application	**All Countries**-MySQL (Structured Query Language for Programming)
Hardware for hosting	**SLI**-Cloud Service environment **BAN**- server as RDBMS (Relational Database Management System). **NEP**- Operating System : Red Hat. **BHU**- Architecture: Monolith (Phase I, II) and Microservices (III) hosting: JBOSS/APACHE.

7 GOVERNANCE

Tends to focus on just the e-Tendering Process

i. **Effective Management of Procurement** – All countries rely on a capable e-GP Management Organization and e-GP System.

ii. **Authentication of Vendors** – all countries have a secure process.

iii. **Transparency-** all countries rely on visible data, secure login, authorization and audit.

iv. **Internal Audit-** all countries.

v. **Independent External Audit of Procurement Mgt and Functions-** BAN, NEP yes. SLI, BHU not yet.

vi. **Independent Appeals Tribunal** -BAN, NEP yes. SLI, BHU not yet.

vii. **E-Complaints/ Database**-not fully developed, key issue.

8 SYSTEM IMPLEMENTATION

i. **High Level Implementation Plan** – All countries developed one.

ii. **Competent Procurement Management Organization**- All countries have one, but some resource constraints.

iii. **Competent System Developer** - All countries but SLI and BHU are amending the Developer Contract to cover technical changes and additional system features.

iv. **Piloting of System** – All countries did this.

v. **Consultation on Plan with Stakeholders**- All countries did this.

vi. **System Piloting/Rollout** – All countries piloted the system before rollout.

vii. **System Developer Contract Changes** - BAN, NEP no major changes. SLI, BHU new requirements added to contract.

viii. **Update Reports on Implementation of System** - All countries did this.

9 HUMAN RESOURCE DEVELOPMENT

i. **Focus of Training** - all countries use online and face to face training. Key focus on using the system. Some planning and contract management training to come.

ii. **Agencies Providing Training** - e-GP organization, some institutions, some private companies. Needs a wider base and content in the future.

iii. **High Level Training Plan** - All countries have one.

iv. **Government Support for Training** - BAN yes, other countries in progress.

v. **Training Capacity** – BAN sufficient, other countries need more resources.

vi. **Online Training**- critical, is it possible to share online training across countries?

SOME KEY LESSONS LEARNED BY COUNTRIES

i. e-GP implementation planning and contract structure should look at entire procurement cycle, even if only the e-Tendering Phase is implemented first.

ii. Realistic resources are required to avoid time blow outs and system problems.

iii. Low public IT/computer literacy has to be addressed.

iv. Strong support and consultation from the PEs and business groups, and related institutions is required.

v. Training is best done online to support access, testing, changes and re-training.

vi. Implementing a Contract Management module along with e-Tendering is important.

vii. Integration with other systems (e.g Finance, Banking) should be considered with e-Tendering.

viii. The technology underlying e-GP is constantly changing. (eg. MAPS, Cloud, SaaS)

ADB

IMPROVING ONLINE KNOWLEDGE EXCHANGE

- Our survey; participants scored process 8.5/10 overall.
- Identify target issues/components to be addressed, and seek input from participating countries
- Have participating countries register potential questions and submit them before the online exchange
- Zoom Issues

a) Send submitted questions to all participants

b) 2-hour sessions maximum-otherwise brain fade.

c) Realistic question time and future follow up meetings by participants critical

- Knowledge Exchange improves implementation (faster, no repeating of mistakes) and reduces costs.

REVISED ORDER FOR e-GP COMPONENT FRAMEWORK

First

1 Vision and Planning > 2 Government and Institutional Leadership > 3 Legislation and Policy Development > 7 Governance

Second

4 System Development > 5 System functionality >6 System Technology > 9 Human Resource Development

Third

8 System Implementation

CONSULTANT'S COMMENTS UNDERLYING ISSUES

1. **Avoid low financing of e-GP Implementation-** Procurement 15-20% Government Budget. Annual cost of poor planning, financing, management, and corruption cost much more than system development.
2. **Adapt a proven system** – many problems resolved, end to end system, country can still involve local input to maintain the system
3. **Early consultation** with Procurement Entities, International and National Vendors, Participating Government Institutions (e.g. Finance, Governance)
4. **Well developed database**-supports complaints, audit, research, procurement improvement

THANK YOU