



**Capacity Building Programme
Government Procurement Reform
19-21 December 2006, Seoul, Republic of Korea**

**PROCUREMENT TRANSFORMATION
GLOBAL TRENDS AND ISSUES**

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December 2006**

Acknowledgements

The author gratefully acknowledges the following contributors for the data in this paper, which was provided from the International e-Procurement Systems Survey.

- The Asian Development Bank, in collaboration with the World Bank and the Inter-American Development Bank, for funding and supporting the survey in the Asia Oceania, South American and European Regions.
- The procurement personnel in the respondent countries for their input to, and assistance with, the survey
- My colleagues at Curtin University, the ADB, WB and IDB, for their assistance in developing the survey.

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The views expressed in this document are purely those of the writers and may not, in any circumstances, be interpreted as stating an official position of The Asian Development Bank (ADB), The Inter-American Development Bank (IDB) or The World Bank (WB).

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A) INTRODUCTION

1 Background

This paper has been written to support the presentation on *Procurement Transformation-Global Trends and Issues* delivered at the United Nations Governance Centre, Capacity Building Programme on Government Procurement Reform, held 19-21 December 2006, in Seoul, Republic of Korea.

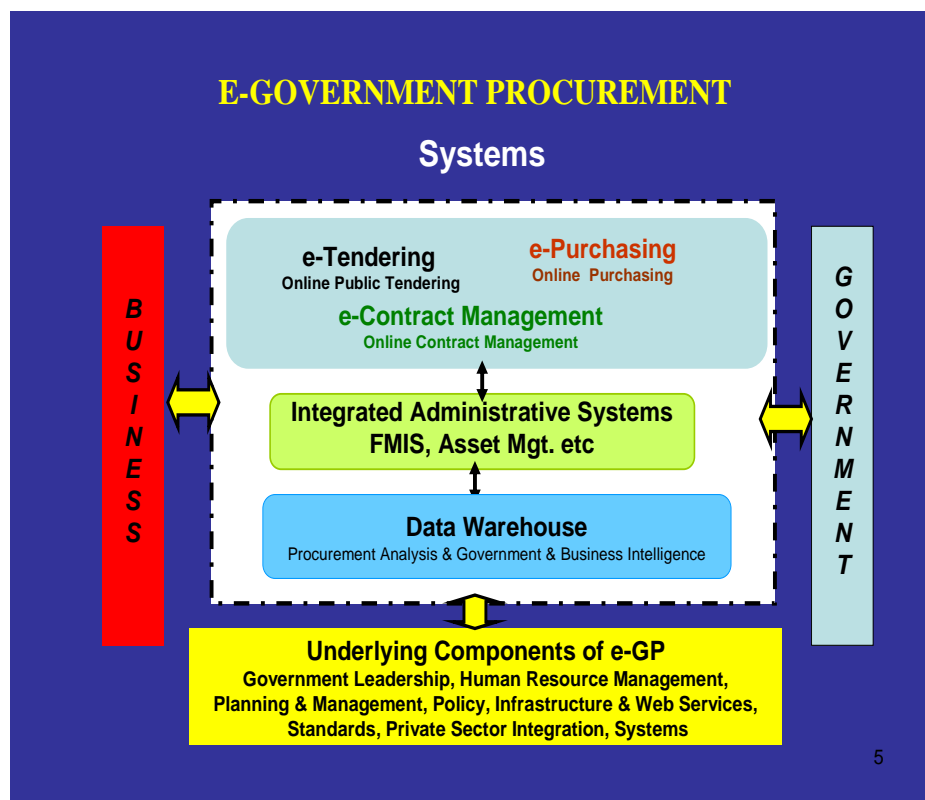
The transformation of government procurement has been taking place in some twenty countries since 1998. It has principally involved the introduction of e-procurement systems and supporting legislation, improved governance through, better planning, policy, regulation, management and skills development, collaboration with suppliers, and the development of national IT infrastructure and access to the Internet. A further 30-40 countries are currently considering this transformation to what is commonly called e-Government Procurement (e-GP).

2 What is e-Government Procurement (e-GP)

“eGP is the use of Information and Communications Technology (especially the Internet) by governments in conducting their procurement relationships with suppliers for the acquisition of goods, works, and consultancy services for the public sector.”

The technology is typically made up of e-procurement systems with a purpose built database, which can be linked to other corporate planning, financial and supply chain systems. The technology is supported by underlying components related to leadership, Planning, governance, infrastructure, private sector involvement, and procurement management. Diagram 1 represents the relationships involved.

Diagram 1



The full procurement process in generalised form can be represented as follows.

PLANNING	Identify Need Establish Business Case Plan Purchase
FORMATION	Develop Bidding Docs Invite/Receive Bids Evaluate Bids Negotiate & Perform Due Diligence Finalise & Award Contract
MANAGEMENT	Transition Procedures Contract Operation Review Contract Extend or Close Contract

3 Sources of Information

The information on procurement trends and issues was drawn from:

- 3.1 The international experience of International Governance Solutions Ltd that includes:
- a) 10 years as senior strategic government procurement executives in Australia prior to 2002
 - b) E-procurement system development and implementation in Australia, UK and Argentina
 - c) E-GP assessments in 10 countries including China, Sri Lanka, Fiji, Armenia, Azerbaijan, Bangladesh
 - d) E-GP Implementation Strategy development in 10 countries including Thailand, Bangladesh, Indonesia, Armenia, Kuwait
 - e) ITC infrastructure harmonisation in India, Nepal, Bhutan and Bangladesh
 - f) E-Procurement system surveys in Asia/Oceania, Europe, and South America.
- 3.2 The results of e-procurement systems surveys conducted in Asia/Oceania and elsewhere. The countries involved in the global survey are shown in Table 2.

Table 2
Countries that Participated in the Survey

North & South America	Asia & Oceania	Europe
Argentina Brazil Chile Mexico	Australia (NSW) Hong Kong India (Indian Rail) Korea Philippines Singapore	Finland France Italy Norway Romania

The data in this paper is drawn mainly from the soon to be released Asia/Oceania survey¹ and some surveys of the Australian States. . The data for the other two regions is currently being analysed and will form part of the final report on the survey. The full survey will be available on the Multilateral Development Bank procurement website www.mdb-egp.org in early 2007.

B) GLOBAL TRENDS AND ISSUES

4 Vision, Assessment and Planning

4.1 Internationally, the vision set for government procurement by most countries usually contains the three elements of:

- process integrity and transparency;
- process efficiency and effectiveness; and
- industry development both locally and internationally.

Most outcomes achieved to date have been related to the first two elements. Industry development is difficult because it involves a balance between economic efficiency of markets and greater participation and distribution of income.

These objectives are achieved by addressing some nine key planning components in the procurement environment that underlay the achievement of a sustainable transformation to e-GP. These components are:

- Government Leadership
- Human Resource Mgt
- Planning and Management
- Policy
- Legislation & Regulation
- Systems development and implementation
- Standards
- Infrastructure & Web Services
- Private Sector Integration

4.1 The key to planning is to assess the current state of these components as a prelude to developing a strategic implementation plan. Most of the countries currently surveyed had done this, and a further 10 have, or are planning, to do so. Assessment also has the benefits of:

- Building understanding of the key issues of planning scope, implementation issues, resource requirements, barriers, and attitudes to change.
- Identifying, and raised awareness, of the public and private sector stakeholders who will be involved in the implementing the transformation to e-GP
- Providing the key data on which to develop a specific strategic implementation plan.

¹ ADB: International Survey of e-Procurement Systems in the Asia Oceania Region Feb 2007

- 4.2 It is important to note that system implementation is just one key component and has proved not to be effective in reforming government procurement when pursued in isolation. Of the countries surveyed, almost all used a comprehensive approach to implementation planning. Management and governance issues must give direction to the application of technology.

5 Achieving Key Outcomes

- 5.1 Governments focus on procurement reform to reduce opportunities for corruption, improve procurement effectiveness and efficiency and improve market participation by suppliers. However it needs to be acknowledged that:
- a) Procurement is a major area of government spending that may involve up to 15-20% of GDP per year.
 - b) Procurement is often a very corrupt process with millions of dollars (up to 30% of its budget) going to no effective end.
 - c) Achieving key procurement outcomes is strongly related to good governance. “Three governance themes that are critical to development assistance effectiveness and poverty reduction are:
 - public financial management
 - procurement
 - combating corruption through preventive, enforcement, and investigative measures”²

6 Reduced Corruption, Improved Integrity and Transparency

- 6.1 Procurement, with its high visibility, application of international loans, and the fact it can be very successfully transformed into a valued public service, makes it a good candidate for governance reform and reducing corruption. The survey findings support the following conclusions:
- a) In all countries surveyed there were strong perceptions that the procurement process was now fairer, more consistent, and transparent, in that the process and its outcomes were more visible to the public.

If successive Transparency International Perceived Corruption Indices are taken as a guide, then generally the countries that are perceived as being least corrupt have invariably implemented e-GP. However, there are also many other factors such as open governance, effective enforcement of regulations, high ownership of mobile phones, and freedom of expression that could be linked to this outcome.

More research needs to be done in this area.
 - b) Having e-systems is no guarantee of reduced corruption, unless there is supporting governance, management control, and performance monitoring.

The key opportunities for corruption in the procurement process are at the planning, bid seeking and contract management phases. E-Tendering and e-Procurement systems only impact corruption to any real extent at the bid seeking and evaluation phases of the procurement process. E-Contract

² ADB: Governance and Anticorruption Plan II, July 2006

Management Systems, on the other hand, can provide a higher level of management control, audit, and reporting of information, which could substantially reduce opportunities for corruption.

- c) Half the countries surveyed had comprehensive legislation to support e-GP. Legislation is required to make the use of electronic documents legal and provide measures to regulate behaviour in the procurement cycle. Legislation in itself may only slowly reduce incidents of inappropriate behaviour because of its “after the fact” application. The enforcement of legislation was not seen as fully effective in half the countries surveyed.
- d) The technology of the systems themselves contributes to better governance and reduced opportunities for corruption. The security technologies of these systems are very robust and there are very few reported incidents where security has been significantly breached. Public Key Infrastructure (PKI) is mostly applied to authentication of sender and receiver, but is not infallible. It relies on the issuance of digital certificates from what are competent but still unregulated sources. The question as whether this level of security is required, and what is actually achieved, is still open to debate.

The systems surveyed all have functionality to collect a wide range of procurement information. This can be used to make government decisions, monitor market trends and issues, and monitor individual and agency performance. However, only a third of the systems are independently audited and reported to an independent source. Internal audit has its place and can be effective, but without some independent external scrutiny major transgressions can take place. Most systems have inbuilt functions that monitor the technical capacity of the system. Performance reports tend to be submitted annually.

Importantly, only a third of the systems surveyed were effectively monitoring government agency performance.

Overall, the existing technical capacity of the systems to greatly assist “best practice” in government procurement will not be realised, unless the dedicated and trained resources are moved to the management, analysis and reporting functions of government procurement. These resources can be offset by the reduced resources now required to operate the procurement process.

7 What Type of Systems?

- 7.1 The systems surveyed all share very similar functionality, with e-Tendering systems sharing 27 of 40 functions identified, and e-Purchasing systems sharing 33 of the 36 functions identified. Most systems are custom built web applications developed and commissioned in the period 1999-2002. They were developed by private sector vendors working closely with key government procurement agencies. The development time for e-Tendering systems was between 4 and 12 months depending on size and whether procurement responsibility was centralised or decentralised. For e-Purchasing systems it was 9 to 39 months. The larger systems were processing up to 43 billion USD per year in government procurement. The systems are easily scalable.

Most countries have achieved effective functionality with regard to system access, information transmission, security, and conducting transactions. Less emphasis has been given to supporting the systems with online training, the ability of the system

to support audits, provision of information on the procurement market place and linking effectively to other corporate systems other than payment and invoicing.

- 7.2 The architecture of these systems is based on a range of commonly available products, many of which are common to other types of systems. The implications of this are that there are a wide range of products to support the customisation of systems. Additionally, this should make it easier to technically integrate e-procurement systems with other corporate systems (eg. finance).

A similar situation exists with the communication standards applied. Most systems use commercially available products some of which (eg. XML, OCI and UNSPSC) are becoming recognised as de facto international standards.

- 7.3 System performance is very good and is commonly based on measures of:

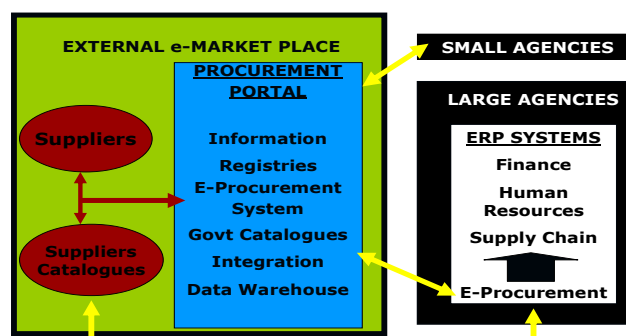
- System responsiveness (time to respond)
- Transaction processing time
- System availability
- Mean time between failures (reliability)
- System resource usage

Availability of 99.7% + is common. Reliability is measured in the range of less than one outage per month up to less than one per year.

8 Interfacing of Systems

Ideally, e-Procurement systems should be able to interface easily with other procurement systems such as supply chain management, supplier procurement systems, and financial systems related to accounts, payment, and budgeting. About half the systems surveyed had achieved interfacing with financial systems but little else. Diagram 2 shows the possible relationships involved.

Diagram2
Interfacing of E-procurement Systems



Overall, the integration of e-Procurement systems with other systems is still in its early stages. The reasons for this include whether the focus is on e-Market aggregation of government procurement to achieve value for money, or the efficient management of the supply chain within organisations, or both. There is often a lack of common standards for interfacing systems, a range of management and technical issues that have to be addressed (eg catalogue development and maintenance), and

interoperability problems due to the often proprietary nature of many of the established financial systems within organisations.

Large government agencies with significant procurement budgets want to have good interoperability between their corporate financial, procurement and resources systems to assist the efficient and effective delivery of their services. They only want to interface with marketplace procurement portals to advertise opportunities, access information (eg. catalogues) or deposit data into the government procurement data base. They also want to access some dedicated suppliers directly.

On the other hand, e-market place portals with their own e-procurement systems and supporting catalogues, databases, and registers ideally provide a system that can be accessed by both government buyers and suppliers. This enables aggregation of government procurement (eg common use contracts) and the centralisation of standards for reporting, registers, and catalogues. It also enables small government agencies, which do not have the system and procurement capability of large agencies, to procure through the e-market place portal.

While this e-market place situation may appear ideal in some countries there have been problems. These problems have been:

- The inability to achieve good interoperability between e-market place procurement systems and the financial systems within organisations. This may have been caused by resistance from some enterprise systems vendors and/or the proliferation of different systems across government agencies.
- The lack of government will to mandate the use of procurement systems and processes in all government agencies.

Some governments are merging both approaches. This is assisted by mandating common codes for registries, items and reporting formats and the use of bridging software to facilitate interoperability. Additionally, the needs of small government agencies may be assisted by the shared services concept used by some governments. This places government agencies into groups where procurement in key areas (eg. IT products and services) is then carried out for all agencies in the group by a single bureau service. It has the effect of creating large procurement organisations.

The key issue from all of this, for developing countries, is that if the opportunity arises to develop e-procurement on a single platform then many of the above problems, delays and expense can be largely avoided. It also underlines the importance of defining and supporting the development of technical and business standards early in the implementation strategy.

9 Business Issues

- 9.1 Most systems are government funded and owned, and were developed in co-operation with the private sector. Half the systems are hosted by the private sector.
- 9.2 Access to most systems is by PC with two systems also using mobile phones. In the countries surveyed, all of which had well developed infrastructure, there were no significant problems with the quality and distribution of the infrastructure and networks. In developing countries this may be a problem when viewed nationally. It may not be a problem if systems are piloted within the Capital and large cities, where infrastructure is generally more developed, and the majority of government agencies and suppliers are located.

- 9.3 Few countries in the survey measured client satisfaction
- 9.4 A few countries charge low scale fees to suppliers and buyers to use the system. The charging of fees is debatable in that:
- suppliers may refuse to pay them because the service was free in the past;
 - the cost of collecting the fees may outweigh the benefits received; and
 - governments can make substantial savings from other aspects of e-GP.
- 9.5 Most of the countries surveyed report on agency procurement performance. This is a key area in monitoring compliance, trends, addressing problems.
- 9.6 Only a third of countries surveyed supplier satisfaction with the system; those that did recorded satisfaction levels of 70-80%.
- 9.7 One third of countries mandated the use of the systems and most were now considering that option.

10 Costs

Costs proved to be difficult to measure because:

- Establishing the size of a system depends on many factors that are not linear by their nature (eg centralised or decentralised procurement)
- Some data was considered confidential and much of the data was not collected at the level of specificity the survey was trying to measure.

The summary data from the six systems surveyed is shown in Table 2.

Table 2
Costs (Million USD) for System Development, Implementation and Annual Operation

No	System Stage	Small System < 10,000 Suppliers			Medium System 10-50,000 Suppliers			Large System >50,000 Suppliers		
		e-T	e-P	e-T and e-P*	e-T	e-P	e-T and e-P	e-T	e-P	e-T and e-P
1.	Development	1.50		0.51	0.5	40.5	8.1			35.0
2.	Implementation	3.40		0.56	4.2	5.7	3.4			4.96
	Total costs	4.90		1.07	4.7	46.2	11.5			38.3
3.	Annual Operation	0.80		0.37	4.3	4.5	2.4			5.5

The data is inconclusive. Based on the most comprehensive data obtained a stand alone e-Tendering system can be developed for 0.5 to 1.5 M. Medium and large size integrated e-T and e-P systems cost in the order of 8 and 35M respectively. The implementation costs are difficult to quantify, as it depends on the scope and comprehensiveness, and effectiveness of the implementation strategy used. These costs can be up to four times the system development costs. Annual operation costs were 10-16% of the total cost to implement.

There appear to be economies of scale in implementing and operating large systems. To confirm this relationship would require that more cases be investigated.

More research needs to be done in this area.

11 Implementation Strategies Applied

11.1 Most countries used a comprehensive integrated approach to implementation. The strategies addressed all the key underlying components of e-GP but to different degrees. Two thirds of countries addressed at least 29 of the 58 implementation activities identified. Two thirds of the countries implemented the systems as a pilot

11.2 The most effectively implemented components were:

- Leadership and planning
- System implementation
- Governance-policy and legislation
- Infrastructure (not an issue)

11.3 The least effectively implemented components were:

- Management –training, use of information
- Governance-regulation- audit, performance monitoring, enforcement
- Standards

12 Key Benefits from Using the Systems

The key priority benefits identified by service providers and users are shown in Table 3

Table 3
Benefits in using the System

	Providers of e-Procurement Services and Systems (6 Countries)	Users of e- Procurement Services and Systems (5 Countries)
1.	Reduced time for the procurement process (6)	Improved transparency of the process (4)
2.	Reduces cost to provide the procurement service (6)	Reduced time for the procurement process (3)
3.	Larger pool of suppliers, increased competition	Reduced errors in process and documentation for buyers (2)
4.	Access to better information for decision making and assessment of issues (4)	Improved access to procurement opportunities via a single portal (2)
5.	Improved transparency of the process (3)	Access to price comparisons (1)
6.	Better consistency of process via standard process and documentation (3)	Increased participation in market (1)
7.	Improved engagement/communication with suppliers (2)	Better work integration for buyers(1)
8.	Better audit trail of the process and transactions (1)	
9.	Reduced errors in process and documentation (1)	
10.	Reduced use of paper (1)	

13 Initial Problems experienced

Overall the number of respondents identifying initial problems was small; less than 30% of the total 34 respondents.

The key initial problem identified by both providers and users was a lack of initial supplier confidence. This directly reflects deficiencies in the awareness and training programs in the implementation strategies applied, in that supplier concerns about electronic based processes and how to use the systems were not adequately addressed.

Most of the key problems identified are management problems that can be addressed by having an effective implementation strategy.

14 Measuring Procurement Outcomes

14.1 The measurement of system outcomes is still developing and generally only three countries demonstrated a comprehensive approach to this issue. Some of the outcomes are encouraging, if they can be further demonstrated by more comprehensive measurement over time.

14.2 While some measures were only reported by a very few countries, some positive outcomes have been achieved. The majority measure is shown in each case as follows:

- advertising of opportunities (100%);
- availability of documents for download (100%);
- publication of contract award (100%);
- bids submitted online (100%);
- payments made online (100%);
- purchases made via electronic catalogues (100%);
- reductions in the time for the process (25%);
- reductions in cost of a standard transaction (30-70%);
- suppliers that won business (50%)
- increases in participation rates (70%)
- percentage of suppliers satisfied with the process (75-80%)

Most of what is measured are outcomes from the process as measured by the system. Where external measurement was required (eg. reductions in costs) there were fewer measures, possibly reflecting that this area was not well resourced.

15 Lessons Learned

Based on the responses from the 6 countries who responded the key lessons learned were:

- The need to provide awareness, training and education for buyers and suppliers. This issue requires significant time and resources to be done well and probably reflects why it was not well implemented in most countries. It needs to be started very early in the implementation strategy (5).
- Support from government needs to be at a high level, committed and well resourced (4).

- Assessing the procurement environment first assists developing an effective implementation plan (4)
- Provide a timetable for phasing out the paper based system to underline confidence in the system and the commitment to e-services (4)
- Mandate the use of the systems for all government funded agencies from the start. This will demonstrate confidence in the reform process (3).
- Re-engineer the current process to be supported by electronic systems as the process does change (2).
- Develop and resource a procurement data base from the start as the information becomes a powerful instrument for decision making, understanding the market, monitoring compliance and performance (2).

16 Overall Conclusions for Procurement Transformation

The key issues for developing countries are:

- High level, committed, long term, government leadership is essential.
- E-procurement is about much more than systems.
- Understand the existing environment before planning change and encourage stakeholders to participate in that change.
- Comprehensive implementation plans work best, and can be phased in to match the resources available.
- Good awareness, education and training programs are key drivers of the effective uptake of e-GP.
- Pilot the system first and learn about the support requirements.
- Procurement information databases are a strong driver of achieving good performance and good practice.
- Planning for interoperability and defining standards are critical to achieving long term benefits.
- Shift resources from operating the process to the partially neglected areas of procurement planning, performance management, and contractual review.
- Engage small business to improve participation and competition in the market.
- Mandate the systems across government.
- Start with e-Tendering systems as they are the easiest to implement and provide early benefits to both buyers and suppliers (improved transparency, reduced costs and time).
- E-Contract Management systems have a lot of potential to improve the process. They can be built into e-Tendering systems.

C) ATTACHMENTS

1 Profile: David McDermont BSc. MEd. MBA.

David is a Principal of International Governance Solutions Ltd, which has specialised in public sector governance and service reform and the assessment, development and implementation of e-GP strategies and systems. He has 24 years experience as a senior public and private sector manager in the areas of education, resource development, public sector reform, contract management and strategic procurement. David has consulted in the areas of organisational development, service reviews, contract development and negotiation, e-procurement capability assessment and strategies, and reforming procurement processes since 1999.

He has conducted procurement assessments and advised on e commerce planning, implementation and reform in the UK, China, Fiji, Sri Lanka, Bangladesh and Jamaica, and developed e-GP strategies for the government of Thailand and three major Multilateral Development Banks (WB, ADB, and IDB).

David has also worked on the implementation of procurement systems in Australia, the UK and Argentina. He is the current Chairman of the Western Australian Association for International Development.

He is currently developing standard bidding documents for the procurement of IT products and services for the WB, ADB and IDB as part of their harmonisation of procurement strategy.

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