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### **Electronic Government Procurement (e-GP) Opportunities & Challenges**

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#### **Introduction**

1. According to Forrester Research<sup>1</sup>, worldwide online trade was estimated at USD 12.8 trillion in 2006. Following the explosive growth of e-commerce in the private sector, governments all over the world have started to pay close attention to e-GP as a tool to modernize and improve their public procurement systems.
2. The use of electronic means to enhance the management of the public procurement process is one of the central components of public sector reform programs due to its potential development impact. Keeping in mind that governments are the single largest purchaser of a national economy and that the public procurement systems in low- and middle-income countries are typically far away from spending money in a transparent and efficient way, the application of digital technology offers opportunities for improvements that the public sector cannot afford to ignore. Benefits of e-GP are in line with the objectives of internationally recognized public procurement systems: enhanced transparency & compliance, increased performance & quality, and economic development.
3. Realizing the full potential of these technological advances in the area of public procurement is a challenge in itself. To perceive these developments simply as technological issues is to misunderstand their reach and relevance for policy, training, infrastructure, design, production and delivery, as well as technical literacy and awareness. As established ways of doing business and managing government procurement have long traditions and significant change will often encounter professional and vested interests, the most important ingredient for change will be government leadership, vision and change management capabilities.
4. This note draws on lessons learned from e-GP initiatives in low- and middle income countries with the objective to (i) provide an overview of the development impact resulting from e-GP program adoption, and (ii) emphasize the need of understanding successful e-GP implementation and regulation as an integral part of the public procurement reform agenda.

#### **Development Impact**

5. Breaking down the physical barriers of space and time, e-GP allows a more transparent and efficient information flow as well as improved access to information and services. Beneficiaries include not only governments and suppliers but also the public at large in having access to transparent information on the public expenditure of taxpayers' money.

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<sup>1</sup> <http://www.forrester.com>

6. E-GP facilitates higher quality outcomes for public procurement through improved accessibility and interoperability, which enable:
  - greater business access and competition for government expenditure (creating commercial benefits for business and price and quality gains for government);
  - integration and automation of many workflow processes for transactions and other supply chain management activities improving efficiency and reducing processing costs; and
  - greater and easier access to real time and historic information for management and audit (enabling higher quality decision making and planning as well as greater transparency and accountability).
7. The implementation of e-GP offers the opportunity of adding value to the relationship between government buyers and private businesses. An effective e-GP program can deliver a broad range of benefits to taxpayers, the economy and the community generally. Online technology provides the potential to significantly reform the accountabilities and performance of public procurement systems.

### ***Enhanced Transparency & Compliance***

8. At an early stage, e-GP can provide access to a whole range of public procurement information at low cost and independently of time and location. Governments achieve a high level of transparency if they use the Internet for the free disclosure and distribution of public procurement information. Such information typically include the relevant legislation, policies and guidelines, procurement plans and notices, bidding documents, minutes of procurement activities, and contract award results. In reducing the asymmetry of public procurement information, e-GP contributes to increasing the competition in terms of quantity (participation) and quality (openness and fairness).
9. The application of online technologies can ensure compliance with the existing procurement policy and legislation. An e-GP system can automate the required procurement procedures thus allowing neither purchasing agencies nor bidders to deviate from the public procurement process. In this way, e-GP helps governments to reduce the opportunities for corruptive practices.
10. While enhanced compliance contributes to avoiding corruption and fraud, the transparency of real-time procurement information allows the early detection of corruptive and fraudulent activities. In addition, e-GP contributes to reducing corruption and fraud by conducting the procurement process online and collecting all procurement data into a securely operated electronic system. Consequently, in-person contacts between purchasing agencies and bidders are no longer required, the risk of manipulating procurement information and documents can be minimized, and the availability and completeness of public procurement audit trails can be improved.

### ***Increased Performance & Quality***

11. The benefits of online technology for the efficiency and effectiveness of government operations reflect the impact of e-GP on the cost of transactions and value-for-money outcomes. Typically, countries report efficiency gains from 10 to 20 % of the total volume procured through electronic means resulting from the reduction of transaction costs and prices.
12. The potential impact of e-GP on the cost of transactions is linked to savings that are related only to workflow and include significant savings in time due to the automation of the procurement procedures for both sides - purchasers and bidders. The fact that bidders do not have to travel any more to submit a bid in paper, does not only prevent physical attacks on bidders on their way to submit the paper bid, but also saves bidders a lot of time. Transaction costs of the public procurement process drop considerably by using the less expensive Internet rather than print media as public procurement information channel and reducing paperwork in general.
13. Price reductions can be achieved as a result of three intrinsic e-GP features: price transparency, stimulation of competition, and innovative public procurement procedures. Price transparency by

disclosing contract award results online has reportedly avoided the conclusion of overpriced public contracts and contributed to adjusting prices for goods, works, or services in line with true market price levels. The online publication of procurement notices provides an effective tool to reach out to private businesses in the market thus increasing the participation in public procurement. To this end, increased competition contributes to reducing the prices paid by the government. Innovative approaches in the area of public procurement include the managed aggregation of demand and electronic reverse auctions, when lower prices can be attributed to aggregated purchases and to online negotiation respectively.

14. In addition to the measurable outcomes, e-GP can be expected to provide significant but less quantifiable benefits through greatly improved management information and analysis. Currently, most large government organizations will have only limited insights into the wealth of public procurement information scattered around in multiple data formats and different archives and places. The application of digital technology for procurement information disclosure and transactions lays the foundation for the collection of those data, which provide the basis for performance measuring and monitoring. Besides the safekeeping of public procurement information and data, e-GP ensures a much higher quality of public procurement reporting and decision-making.

### ***Economic Development***

15. The level of transparency, compliance, performance, and quality of public procurement due to the application of e-GP can achieve a dimension, which does not only provide for the development of a public procurement system that meets internationally recognized standards but also establishes the basis for a sound market economy with significant gains in productivity and competitiveness.
16. The efficiency gains due to the application of e-GP can have a clear economic impact. The total public procurement volume of a national economy typically counts for 10 to 20% of the GDP. Procuring only 10% of all public purchases through electronic means with a moderate 10% in price and cost reductions would result in total annual savings equal to one percent of the GDP.
17. With government accounting for a substantial proportion of the economy, the speed of take-up of technology by the economy will be significantly influenced by the rate of government adoption. To this end, e-GP catalyzes e-commerce and encourages the participation of small and medium enterprises, promotes the use of modern technology and the implementation of a national technological infrastructure, and supports the development of appropriate capacity and skills with the overall objective of economic growth and development.

### **Implementation Challenges**

18. The complexities and risks of e-GP program implementation are frequently misunderstood. Effective e-GP implies that changes occur across areas of personnel and executive behavior, skills, regulations and legislation, operational policies, and business behavior. Few, if any, of these changes will occur simply through the acquisition of some hardware and software, and if this is the understanding and intended starting point to e-GP then jurisdictions may find that the funds might better be spent on other priorities.
19. The full benefits resulting from e-GP adoption will only be realized through significant changes in the organization of public procurement operations and as such will require effective change management and excellent leadership bringing about collective commitment across government constituents and partnership with the business community. In the absence of such change management and leadership, the outcome may be at a net cost with technologies operating alongside or simply replicating traditional operational methods.
20. Rather than being a technological add-on to an already complex environment, e-GP needs to be understood as a tool to reform public procurement underpinned by an appropriate policy and legal framework, effective buyer and supplier activation including strong awareness and capacity building

programs, technological infrastructure development, established standards, and sustainable operational e-GP applications.

21. Only if governments understand the potential benefits of e-GP and demonstrate professional leadership and political will in managing the e-GP program adoption as an integral part of reforming their public procurement systems, they will be able to tap the full potential of e-GP and move forward their development agenda on the basis of increased public procurement governance and performance standards.

## **Practical Issues**

22. The following questions reflect some major issues which the e-GP Working Group of the Multilateral Development Banks has been repeatedly faced with when assisting countries in introducing the use of electronic means in public procurement.
23. ***Does e-GP really improve governance and reduce corruption?*** There are multiple examples where the use of electronic means for public procurement reduced the opportunity of corruptive, fraudulent, collusive, and even coercive practices. Bad practices such as attacking bidders on their way to the bid submission, manipulating access to procurement notices, submitting overpriced bids, bypassing mandatory public procurement procedures, colluding with competitors, or bribing public procurement officials can be prevented by using e-GP systems. However, e-GP is not a guarantor for improved governance and reduced corruption. Strong political will, leadership, and management are required in order to design and implement appropriate e-GP systems which ensure a maximum of transparency and compliance. Interestingly, a recent study<sup>2</sup> on the introduction of e-GP in 14 countries showed that, in most cases, there is “little penetration of procurement technologies back into the management systems” thus missing the opportunity “to support good monitoring of procurement performance and compliance, market trends, and planning future government procurement”.
24. ***Does e-GP really save money?*** The same study found efficiency gains such as reduced costs and time among the key benefits of e-GP. While it is easy to understand the potential cost and time savings for purchasing agencies and suppliers as a result of automated transactions and price reductions; it is not easy to quantify these efficiency gains. Countries typically report savings of up to 20% due to a combination of increased price transparency, use of e-Reverse Auction systems, and reduced transaction costs; while other countries report savings of about 10% due to increased competition and reduced transaction costs. Most of the countries report these savings on the basis of estimates, since it is quite cumbersome to quantify the savings as a result of subtracting the cost of online public procurement from the cost of traditional paper based public procurement.
25. ***Does e-GP eliminate procurement officials?*** The introduction of e-GP requires a sound implementation plan which, among others, needs to address the concern of a considerable number of public procurement agents who fear the loss of their job when public procurement is moved online. The e-GP implementation plan should include appropriate programs, e.g. awareness raising, capacity building, retraining, or professional reorientation programs, in order to resolve these fears.
26. ***Are there security risks?*** Integrity, confidentiality, non-repudiation, and authentication are critical attributes of public procurement systems. Technology is available to ensure security of e-GP systems, if applied appropriately; but attention needs to be paid in order not to create a situation of unfair competition by using certain technologies. Public Key Infrastructure, for example, is a technology which provides a high level of security through encryption and digital signatures. Authentication on the basis of digital certificates, however, requires interested suppliers to go and get the digital certificate which can put them at a competitive disadvantage with other suppliers. There is no higher security risk if the authentication during the bidding process is based on an electronic signature without certificate and verified as part of the due diligence during the post-qualification procedure.
27. ***What if my suppliers are not connected to the Internet?*** Since non-discrimination is one of the basic public procurement principles, e-GP can only be adopted if the infrastructure allows suppliers to

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<sup>2</sup> MDB e-GP Survey ([www.mdb-egp.org](http://www.mdb-egp.org))

participate in public procurement. All countries are aware that it does not provide any benefit if an e-GP system is designed and implemented without addressing infrastructure constraints. Some countries have decided not to make the use of an e-GP system mandatory but leave it up to the bidders to opt for the electronic or the traditional paper-based approach. Interestingly, this approach does not help to build confidence among bidders in an e-GP system. In other countries, legislation mandates the use of electronic means for public procurement. While this does not raise major issues in countries with good infrastructure, it constitutes a risk of excluding suppliers from competition in countries with infrastructure constraints. Typically, these countries address the connectivity or accessibility issues by providing Internet access points for potential suppliers. There is also evidence that the announcement and introduction of e-GP in a country activates the majority of suppliers to get ready and connected for the web-based government business.

28. ***Is new legislation required?*** The use of electronic means in the area of public procurement needs to be supported by appropriate legislation as the basis of the legal validity of electronic procurement procedures and documents. While many countries support the use of electronic documents and signatures in their Cyber laws, an increasing number of countries modify their public procurement legislation to include electronic procurement. Some public procurement laws provide a short paragraph on the use of electronic means in public procurement and refer to related policies and procedures as part of the secondary legislation; whereas other public procurement laws support electronic procurement in a more comprehensive and prescriptive way. Europe's public procurement directives and the current revision of UNCITRAL's procurement model law both are good examples of how to address the use of electronic means in public procurement legislation.
29. ***Is e-GP expensive?*** The identification of the cost of e-GP in the 14 countries participating in the MDB e-GP survey proved to be difficult since cost records were not or only partly available on sufficient levels of detail and considered to be commercially sensitive. In addition, it is a challenge to quantify the initial cost beyond the design, implementation, and operation of an e-GP system, i.e. the cost of setting up an appropriate policy, legal, and institutional framework as part of the e-GP program implementation. Investing in the required infrastructure can increase the cost considerably even though the infrastructure could be shared with other applications. According to the MDB e-GP survey, the costs for developing and implementing an e-GP system (e-Tendering and e-Purchasing) range from USD 1.07 million for a small system with less than 10,000 suppliers to USD 39.96 million for a large system with more than 50,000 suppliers. The annual operation costs amount to USD 0.37 million and USD 5.5 million respectively.
30. ***Who pays for the e-GP system?*** Governments select different business models in order to cover the costs of an e-GP system. In some countries, the initial investment and recurrent operation costs are financed from the government budget while in other countries, revenues are generated from system users to cover the cost of operating an e-GP system. Some business models include a public-private partnership approach, i.e. a private firm providing e-GP application services. The outsourcing of fee-based e-GP systems can only be successful if they are part of a sustainable business model which offers a win-win situation for both the government and the operator of the e-GP system. In addition, user fees need to be kept on a reasonable level in order not to run the risk of distracting interested suppliers.
31. More information on the opportunities and challenges of e-GP can be found on the website <http://www.mdb-egp.org>, which was developed under the leadership of the Heads-of-Procurement Harmonization initiative of the Multilateral Development Banks. The website provides guidance and tools for the design and implementation of e-GP programs based on international experience.