European Bank
for Reconstruction and Development

Are you ready for eProcurement?

Guide to Electronic Procurement Reform

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Preface

Electronic procurement in the public sector (eProcurement) is the business-to-government tendering and sale of goods, services and works through online platforms as well as other networking systems, such as electronic data interchange and procurement planning facilities. Typically, eProcurement solutions allow for registered and qualified economic operators – suppliers and contractors active in the market – to compete for public contracts in response to tenders published online by contracting entities. In essence, eProcurement replaces traditional bureaucratic paper-based public procurement procedures with interactive online processes (online e-tendering and reverse e-auctions) making procurement processes accessible to all interested suppliers and contractors, uniform, less time consuming and cheaper for all stakeholders.

In 2010 the European Bank for Reconstruction and Development (EBRD), through its Legal Transition Programme, conducted an assessment of public procurement regulatory frameworks in the EBRD countries of operations. The assessment highlighted that much of the recorded "success stories" in public procurement reforms was linked to the implementation of electronic procurement and that since the 2008 financial crisis governments' interest in electronic procurement has increased. In addition to rapid eProcurement reform, as observed in Albania and Georgia, several national public procurement regulatory frameworks have gradually been updated to include electronic solutions for the public procurement sector (Armenia, Cyprus, Estonia, FYR Macedonia, Lithuania and Turkey).

The EBRD would welcome a greater take-up of electronic procurement within its countries of operations and since 2012 the EBRD Legal Transition Programme supports technical cooperation projects related to electronic procurement reforms. These projects involved designing eProcurement reform strategies and road maps (Armenia, Bulgaria, Ukraine), drafting new eProcurement legislation, developing acquisition plans for eProcurement tools as well as providing business and policy advice during implementation of national reform projects (Armenia, Tajikistan, Ukraine).

We advocate reforming public procurement so that it is more open and accessible to international trade through more extensive application of information and communication technology (electronic procurement) for public sector.

Where eProcurement tools are available, business-to-government transactions can be initiated, advertised, tendered and completed online, with real time recording of the decision making process available for monitoring and audit, while bureaucracy and formalities are kept to an absolute minimum.

With online eProcurement procedures in place, new electronic procurement tools (which cannot be efficiently exploited without an e-commerce environment) can be employed: eauctions[1], e-purchasing based on framework agreements[2] or e-catalogues[3]. In addition to purely economic advantages, the eProcurement procedures link financial planning and public finance management with procurement and public contract management, creating "'a money tracking system'" for the public sector. However, to achieve the best results eProcurement reform has to be a part of the sector reform process, with correctly applied eProcurement tools. Successful adoption of eProcurement policy requires the revision of national public procurement legislation to make it "'technology neutral"', and to enable e-commerce by government entities, re-defining procurement eligibility rules and prequalification procedures as well as tendering process.

The aim of this guide is to provide information on and assistance with key aspects of designing and implementing national eProcurement reform project.

The advice presented in the guide arises from the principles of the MDBs' "Handbook on e-Government Procurement", as published by the Asian Development Bank in 2011 applied and tested by project teams in technical cooperation projects across the EBRD region (Armenia, Bulgaria), and research completed in Cyprus, Georgia, Portugal, Turkey and Ukraine in an attempt to identify "success factors" of their respective eProcurement reform projects.

1 e-auction is an interactive online reverse auction that involves the use of electronic means for the presentation by suppliers of new prices (or new values for quantifiable non-price elements of the tender) resulting in a ranking or re-ranking of tenders.

2 An e-purchasing framework agreement is a modern procurement technique enabling the awarding of recurring public contracts for the delivery of goods or services online, on the basis of a legally binding agreement, concluded in a public procurement tender, in order to increase transparency and efficiency of procuring small value contracts.

3 e-catalogue for public procurement is an electronic database, which contains the standardised terms and conditions for public contracts, as well as technical specifications as pre-determined by the contracting entities, to be awarded in simplified, but highly competitive, electronically conducted procurement procedures, including electronic auctions.

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GLOSSARY

- public procurement: the process used by governments, regional and local public authorities or bodies governed by public law (financed, supervised or managed for more than 50 per cent by public authorities) to obtain goods, services and works;
- contracting entities: all contracting authorities on central, regional or local level, bodies governed by public law or associations formed by one or more such authorities or one or more such bodies governed by public law as well as contracting entities in the utilities sector;
- procurement officer: person responsible for the creation and management of calls for tenders, the preparation of the awarding criteria for the call for tenders, the drafting/preparation/publication of notices, etc.;
- opening staff: responsible for the opening (or unlocking) of tenders for a call;
- evaluation staff/tender committee: responsible for the evaluation of tenders for a call, as well as the conclusion of a competition by selection of the winner(s) and publication of the contract award notice;
- economic operator: any natural or legal person or public entity or group of such persons and/or entities, including any temporary association of undertakings, which offers the execution of works and/or a work, the supply of products or the provision of services on the market;
- candidate: an economic operator that has sought an invitation or has been invited to take part in a restricted procedure, in a competitive procedure with negotiation, in a negotiated procedure without prior publication, in a competitive dialogue or in an innovation partnership;
- open procedures: those procedures whereby all interested economic operators are given adequate notification of contract requirements and all such tenderers are given an equal opportunity to submit a tender;
- restricted procedures: those procedures in which any economic operator may request to participate and whereby only those economic operators invited by the contracting authority may submit a tender. Therefore, it is a two-stage process: in the first stage, interested economic operators are able to request to participate, while in the second stage the shortlisted economic operators are invited to respond to an invitation to tender. The tenders are then evaluated and the contract is awarded;
- competitive dialogue: After a selection process, where any economic operator may request to participate, the contracting authority conducts a dialogue and negotiates with the candidates admitted to that procedure, with the aim of developing one or more suitable alternatives capable of meeting its requirements, and on the basis of which the candidates chosen are invited to submit a tender;
- negotiated procedures: those procedures whereby the contracting authorities consult the economic operators of their choice and negotiate the terms of contract with one or more of these;
- dynamic purchasing system: a completely electronic process for making commonly used purchases, the characteristics of which, as generally available on the market, meet the requirements of the contracting authority, which is limited in duration and open throughout its validity to any economic operator which satisfies the selection criteria and has submitted an indicative tender that complies with the specification;
- e-auction (electronic reverse auction): a repetitive interactive online process that involves the use of electronic means for the presentation by suppliers of new prices (or new values for quantifiable non-price elements of the tender) resulting in a ranking or re-ranking of tenders;

- technical specifications: specifications that provide a clear, accurate and full description of the requirement and standard to which goods, works or services should conform. Contracting authorities can define the required characteristics of goods, works or services, such as quality levels, environmental performance levels, design for all requirements (including accessibility for disabled persons) and other parameters. There are number of options of how to do this, including by reference to standards or functional requirements, including environmental characteristics.
- call for tender: a document or set of documents published on an official journal, in press or any other media, which lets potential bidders know of all administrative, economic and technical conditions under which a contracting authority wants to purchase certain goods or contract specific services or works. Calls for tender are used in several procurement methods and constitute a phase of the procurement procedures design to obtain proposals or bids which will be evaluated to select a winning bid and award a contract;
- invitation to tender: letter sent to shortlisted candidates in a restricted procedure or competitive negotiated procedure inviting them to submit a tender;
- tender: a written offer/binding proposal to supply goods, perform services or execute works for an agreed price;
- lot: one of a number of categories of goods or services into which a single procurement process has been divided. The use of lots potentially allows for multiple providers to be contracted following one procurement process;
- contract: contracts for pecuniary interest concluded in writing between one or more economic operators and one or more contracting authorities and having as their object the execution of works, the supply of products or the provision of services. The contract shall clearly define the scope of goods, works or services to be supplied or performed, the rights and obligations of the client and of suppliers and contractors and should include, inter alia, appropriate revisions for guarantees of performance and warranties, liability and insurance, acceptance, payment terms and procedures, price adjustment, liquidated damages and bonuses, handling of changes and claims, force majeure, termination, settlement of disputes and governing law;
- procurement document: any document produced or referred to by the contracting authority to describe or determine elements of the procurement or the procedure, including the contract notice, the prior information notice where it is used as a means of calling for competition, the technical specifications, the descriptive document, proposed conditions of contract, formats for the presentation of documents by candidates and tenderers, information on generally applicable obligations and any additional documents;
- selection criteria: selection criteria related to an economic operator's overall capacity to perform a contract, for example, legal and financial standing and available resources to perform the contract. There are different categories of selection criteria, i.e. eligibility criteria, financial and economic standing, and technical and professional capacity. The technical capacity criteria can be used to check whether economic operators have the environmental technical competence to perform the contract;
- award criteria: criteria according to which the contracting authority will compare offers and base its contract award;
- "'lowest price'": award criteria for contracts that are based on lowest price alone. In this case, both the price proposal and the technical proposal are submitted in a single envelope, and full post-qualification is feasible;
- "price and other criteria": the tender proposal judged best in terms of the criteria laid down for the contract, e.g. quality, technical properties, aesthetic and functional qualities, after-sales service and technical assistance in relation to the price offered. In this case, the technical proposal and the price

proposal must be submitted simultaneously in two separate envelopes. First, technical bid is opened and evaluated. Financial offers are opened at the later stage of the procedure and only for those bidders who are found technically qualified. Qualification may take place during evaluation;

- centralised purchasing activities: activities conducted on a permanent basis, in one of the following forms:
  (a) acquisition of supplies and/or services intended for contracting authorities,
  (b) award of public contracts or the conclusion of framework agreements for works, supplies or services intended for contracting authorities;
- electronic means: electronic equipment for the processing (including digital compression) and storage of data which is transmitted, conveyed and received by wire, by radio, by optical means or by other electromagnetic means;
- Common Procurement Vocabulary (CPV): it shall designate the reference nomenclature applicable to public contracts as adopted by Regulation (EC) No 2195/2002, while ensuring equivalence with the other existing nomenclatures;
- NUTS code: The Nomenclature of territorial units for statistics, abbreviated NUTS (from the French version Nomenclature des Unités territoriales statistiques) is a geographical nomenclature subdividing the economic territory of the European Union into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units). Above NUTS 1, there is the "national" level of the Member States;
- e-purchasing framework agreement is a modern procurement technique enabling the awarding of recurring public contracts for the delivery of goods or services online, on the basis of a legally binding agreement, concluded in a public procurement tender, in order to increase transparency and efficiency of procuring small value contracts;
- e-catalogue for public procurement is an electronic database, which contains the standardised terms and conditions for public contracts, as well as technical specifications as pre-determined by the contracting entities, to be awarded in simplified, but highly competitive, electronically conducted procurement procedures, including electronic auctions.

1. Introduction

Key points

- Public procurement expenditure accounts for a significant percentage of national GDP
- The success of eProcurement reform project is linked but not limited to the implementation of ICT solution
- Numerous benefits follow from the successful execution of an eProcurement reform project
- eProcurement reform is a transformational initiative impacting government and suppliers alike
- Lessons learned from successful recent reform projects are available and four success stories are included in this guide.

1.1 What is public procurement?

Everyday expenses of governments as well as major public infrastructure projects are commissioned as public contracts. The challenge for governments is to develop a legal regime for public procurement that will balance the transparency safeguards and efficiency instruments in the process. All of the stakeholders – the public sector contracting entities, the suppliers and contractors and the general public - have to be aware of the fundamental principles of transparency and fair competition in public procurement. Transparency and competition play an important role in ensuring the achievement of the best results while spending public money.

All public procurement processes have three main stages:

Pre-tendering

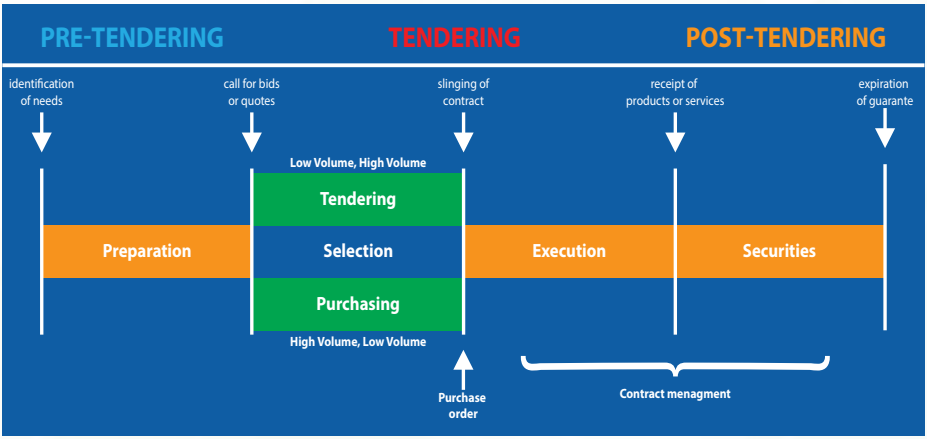
- **Preparation:** Determination of the need to be met and identification of the works, goods and/or services to be obtained in order to do so. This first stage concludes with a precise specification of the goods or services, budget and the procurement method for bid reception.

Tendering

- **Selection**: The search for the best-evaluated bid through the tendering or purchasing methods.
- **Price quotation**: This method is used for the procurement of standardized standardised common use goods, works and services. It involves high volume and low value contracts.
- **Tendering**: This method is used for the procurement of specializsed common use goods, works and services. This type of procurement has a high economic impact since involves low volume and high value contracts.

This stage concludes with the signing of the contract, in the case of a tendering process, or with the issuance of the purchase order or the delivery of the service, in the case of a price quote.

Figure 1. Public Procurement Process



Post-tendering & Contract Management

- **Implementation:** During this stage, the supplier delivers the goods or services. The executing agency verifies their validity and makes the corresponding payments. It concludes with the final acceptance of the good or service concerned.
- **Warranty period:** Provision of after-sale services in respect of the good or services acquired over the time period stipulated in the contract or purchase order. This stage is completed when the guarantee expires.

The figure appearing on the following page depicts the stages of the government procurement process, including its two selection options.

Three stages of the process remain unchanged regardless new procurement practices rapidly emerging in the market and revisions in legal standards that follow suit. The last few years have seen key international instruments for public procurement updated: the 2011 UNCITRAL Model Law on Public Procurement has replaced the 1994 version; the 2012 World Trade Organization revision of the Government Procurement Agreement enters into force in 2014, and the European Union adopted new directives on public procurement on 15 January 2014.

1.2 What is eProcurement?

The new procurement policies are aimed at making public procurement deliver better value for money and providing tools for economic development, while safeguarding transparency of public contracts at the same time. The new approach to regulating procurement is based on introducing electronic procurement (eProcurement) for default mandatory use in public sector.

Electronic procurement is the use of information technology, especially the Internet, by governments in conducting their contracting of works, goods, and services as required by the needs of public sector. eProcurement procedures break down the physical barriers of space and time and allow a more transparent and efficient information flow and wider access to information and services. These information technology facilities include the Internet, online bidding and auctions, online shopping malls and e-catalogues. eProcurement, online procurement procedures which are automatically recorded in real time, enhance both transparency and efficiency of public contracts.

Thanks to commonly available Internet-based technologies, improvements in transparency and accountability do not come at an additional cost, but the opposite; more transparent online procurement procedures are bringing better value for money (far more than covering the investment cost of eProcurement tools) benefiting from economies of scale and higher level of competition for government tenders.

In addition, eProcurement supports economic development by ensuring more open and equal access to procurement opportunities for local and international economic operators and contractors alike, including small and medium sized enterprises (SMEs).

Governance. With the help of e-procedures, all procurement processes can be monitored by anyone wishing to do so. In other words, processes, decisions and results of government procurement operations can be viewed online (as they take place) by potential suppliers, the general public and the government itself.

This provides the ground for creating indicators and making comparisons. These activities promote accountability and efficiency. They also are an incentive for new providers and increase the level of trust, which encourages competition.

Efficiency. eProcurement implies standardisation, streamlining and integration of processes. This helps in the reduction of administrative costs and processing times. Furthermore, an increment in competition and the reduction of costs for suppliers promotes important reductions of the prices of goods and services procured.

By increasing the effectiveness of public investment, eProcurement systems maximise this investment (more investment for the same level of expenditure) and can ease the tax burden borne by a country's citizenry (implementation of the necessary investments at a lower level of expenditure).

Balanced Development. An eProcurement solution must allow government procurement to be a commercial incentive that therefore encourages productivity and competition, increases anti-trust mechanisms, facilitates the development of SMEs (less entry barriers to government markets), and promotes local and regional economies (better use of economies of scale and location).

An electronic procurement process comprises as a minimum three key areas: e-tendering, e-purchasing and e-contract management.

- **e-Tendering:** A solution designed to electronically enhance the processes of public tendering for the procurement of specialiszed works, goods, and consulting services **that are of high value and low volume**. It starts when a government agency issues a series of procurement documents containing its specific procurement requirements.

- **e-Purchasing:** A solution designed to electronically facilitate the procurement standard goods and services that are of **low value and high volume**. Key components of the system tend to be complex and require substantial system development. Catalogues are a basic standard for this type of procurement. The process goes from the publication of items online by the suppliers, to the electronic selection, order, reception and payments by the purchasing side.
- **e-Contract Management:** is the electronic enhancement of the management of receivables, payments, contract settlements, contract variations, performance securities, and auditing and control activities.

Until recently, a key investment focus of most governments has been on physical infrastructure. This traditionally has meant very large investments in roads, ports, etc., with long-term rates of return. However, this focus is changing, with interactive and communication technologies playing an increasing role in productive capacity. Just one decade ago information technologies were a minor component of new capital investment worldwide but now represent more than half of such investment in some countries.

These technologies are not just another piece of infrastructure or capital, but represent a profound shift in the means of production, the scope for broad community participation in commercial and social activity, as well as the methods and roles of government itself.

Online technologies are increasingly providing the means for enhancing intellectual capacity, just as the industrial revolution has enhanced physical capacity.

The consequences of these developments potentially transform the ways in which governments interact with their constituents, manage their affairs and ensure good governance. Therefore, capacity building is increasing also meaning the take-up, adaptation and exploitation of online technologies.

1.3 International standards for eProcurement and the MDBs' role

Current international public procurement legal documents, including the 2012 test of the World Trade Organization Agreement on Government Procurement, the 2014 Public Procurement Directives of the European Union and the 2011 UNCITRAL Model Law on Public Procurement argue that a single online point of access to procurement information for all public procurement stakeholders is crucial. This can be provided by an online web-based portal, offering, as a minimum, information on procurement opportunities and procurement decisions and interactive online standard documents, forms and templates.

In terms of regulating public procurement cycle five key common components of the eProcurement framework constitute e-Notices, e-Communication, e-Submissions, e-Tenders, and e-Records. The eProcurement solutions for the tendering process can be further supplemented by electronic solutions for the pre-tendering phase (buyer's profile, aligning financial and procurement planning) and for the post-tendering phase (e-Ordering, e-Invoicing, and ePayments).

In the research, five basic elements were identified as being common and essential components of the eProcurement regulatory framework: e-Notices, e-Communication, e-Submissions, e-Tenders, and e-Records (see Box 1.).

Box 1. Five key elements of electronic procurement in the public sector

e-Notices:	Notices on procurement opportunities should be readily accessible to the public online (until the expiry of tender submission deadline), and preferably free of charge.
e-Tenders:	Tender documentation and information on procurement decisions should be readily accessible to the public online, preferably free of charge.
e-Communication:	All electronic communication from tenderers should be accepted, without any additional formalities or requiring the visit to contracting entity in person.
e-Submissions:	Expression of interest, proposals and tenders should be submitted online without any additional formalities or requiring the visit to contracting entity in person.
e-Records	Contracting entities should be required to record procurement decisions in real time and ensure that selected procurement records are readily accessible to the public online, preferably free of charge.

The eProcurement solutions can be further supplemented by electronic solutions for the pre-tendering phase (buyer's profile, aligning financial and procurement planning) and for the post-tendering phase (e-Ordering, e-Invoicing, and e-Payments).

In this context it needs to be mentioned that the Multilateral Development Banks (MDB) reviewed their guidelines for electronic procedures in 2011. The MDBs' "Toolkit on e-Government Procurement" was originally developed in 2004 as a set of MDB requirements that should be complied with in order to obtain an approval to utilise a national electronic procurement system for MDB-financed projects. Since these requirements were formulated by the MDBs as a tools to be used to fight corruption and to promote greater efficiency of procurement function, before long the MDB requirements began to be recognised as a market standard for eProcurement solutions within the public sector, in particular in the Latin American and Asian countries. Presently, one of the key goals of the MDB Toolkit updated in 2011 is to ensure that cross border exchange and international trade is strengthened, as opposed to restricted, by the implementation of eProcurement policies by national governments. Also, comparative analysis of the MDB Toolkit and international public procurement policy documents confirm that MDB Toolkit offers standards well-aligned with the 2011 UNCITRAL Model Law on Public Procurement, the mandatory provisions of the 2012 GPA and the 2014 European Union policies on electronic procurement. The MDB standards for e-tendering and electronic reverse auctions are tangible and comprehensive and since organised in the checklist can help translate general policy requirements into specific business advice for developing national electronic procurement project. The MDB standards for electronic tendering and reverse auctions can be found in Annex 1 to the Guide. The MDB guidelines for purchasing via online framework agreements are presently under development and are scheduled to be published in June 2016.

1.4 What is the objective of eProcurement reforms?

In most cases, a national governments' interest in adopting eProcurement solutions in order to reform the public procurement sector is driven by one or more of the following policy considerations: value for money, good governance, and/or economic development.

Several success stories, specifically those of Brazil, Korea, Japan and Portugal (where comprehensive eProcurement reform was implemented in 2009), and in the EBRD region Albania and Georgia (2009-2010), clearly demonstrate the far reaching benefits of incorporating eProcurement as a part of wider public procurement reforms. It has been proven that when appropriate reforms, including correctly applied eProcurement solutions (online procedures and e-tools), are implemented across the public sector, these reforms can deliver all three key policy objectives: value for money, good governance and economic development.

1.5 eProcurement may enhance both transparency and efficiency of procurements

eProcurement, based on online procedures which are automatically recorded in real time, improves governance in the public sector by increasing transparency, accountability, and integrity of the public procurement function. This increased transparency does not come at an additional cost by benefiting from economies of scale, as eProcurement scheme serves the entire national public sector. In fact, the opposite is true: eProcurement is cheaper than conducting paper-based procurement procedures for the same contracts. eProcurement tools, such as online notification, online submission of proposals and tenders, e-auctions and e-purchasing, increase competition as well as the economy and efficiency of procurements. In addition, both eProcurement online procedures and tools may support economic development by ensuring better and more equal access to procurement opportunities for local and international tenderers, including small and medium enterprises (SMEs).

1.6 Lower transaction costs: all stakeholders benefit

The transition from paper-based public procurement to eProcurement brings with it several improvements, including clear and uniform allocation of roles and responsibilities and transparency. In addition, eProcurement procedures, re-designed for online interactive work, offer streamlined and quicker decision-making. In addition, authorisation and approval mechanisms and confidentiality safeguards are well established and clearly specified. A further benefit is that by employing eProcurement, a single online point of access is provided to all stakeholders facilitating easy access to essential procurement documents: interactive, ready-to-work notification templates, tender documentation templates, terms and conditions for all types of contracts, standard technical specifications for the most popular goods and services purchased by the public sector.

1.7 Implementation of eProcurement reforms

Implementation of electronic procurement is a transformational initiative, cutting across the entire public sector and the local business community. A well planned change management mechanism is required to shift from traditional manual and paper-based handling of public procurement processes to undertaking public procurement through an electronic procurement platform. Government officials and the business community will have to be made adept in using the chosen electronic procurement platform/s. Any potential/possible gaps in computer literacy and Internet availability will need to be addressed. Moreover, existing legislation governing public procurement will need to be suitably amended to facilitate and enable electronic procedures. In addition, concerns raised by stakeholders - both internal and external to the government - concerning electronically conducted procurement will have to be alleviated through education and training, capacity building and change management initiatives.

1.8 Knowledge transfer

Governments who have successfully completed the implementation of an eProcurement system will acquire a wealth of practical experience in transitioning from the traditional manual system to the new electronic procurement. This experiential knowledge is very valuable to governments in the process of planning or implementing an eProcurement reforms as it may help to address their local concerns. Peers in eProcurement implementation will have devised ways and means to address the many challenges commonly faced. Although it is recognised that no one size fit all, the best practices in addressing these challenges can be identified and incorporated in new reform projects. Thereby, the learning curve in implementation could be minimised. To facilitate access to best practice there are four case studies of very successful electronic procurement reforms in Cyprus, Georgia, Portugal, Turkey and Ukraine included in the guide. Each presents different scope and objectives but also underlines common theme: these success stories share their attitude to reform management.

1.9 How to use the Guide?

The aim of this guide is to provide an overview of keyaspects of the eProcurement reform project, including planning, developing and implementing electronic procedure in public procurement sector.

Learning from successful implementations we strongly believe that cornerstones of the prosperous eProcurement reform project are (a) enabling policy frameworks, (b) realistic business model; (c) practical functional requirements, (d) sound technical requirements and (c) rapid implementation.

This Guide does not advocate the adoption of a particular path for implementation of electronic procurement procedures in the country. The circumstances and motivation underlying implementation of national eProcurement reforms will differ from one government to another, and will provide important inputs required to determine eProcurement strategy suitable to local market. Instead, the guide seeks to identify key decision areas for eProcurement implementation and attempts to provide the inputs required for decision making. For this reason the Guide is organised into three sections, discussing strategic legal and regulatory, business and technology decisions involved in each eProcurement project.

2. The Case for eProcurement

Key points

- Public procurement expenditure accounts for a significant percentage of national GDP.
- Savings from public procurement will have a significant impact on a country's economy
- To achieve the desired eProcurement reform outcomes defining the reform timeframe and objectives is essential
- Qquantitative and qualitative benefits are realised from the execution of an e-procurement reform project
- eProcurement reform is cross-sectoral and requires political backing, leadership, and change management skills

2.1 Summary

Public procurement is a big business. The money spent on public contracts belongs to tax payers and it is incumbent on governments to minimise the money spent on public procurement and achieve value-for-money when procuring goods and services. The OECD (2007) cites public procurement as "the government activity most vulnerable to waste, fraud and corruption due to its complexity, the size of the financial flows it generates and the close interaction between the public and the private sectors". Therefore, savings achieved from better utilisation of funds allocated for public procurement can have a significant impact on the economy.

A study by the European Union shows that 10 per cent of savings in public procurement would turn budget deficit of three member countries to a surplus value with no Eurozone member country running a budget deficit in excess of 3 per cent (European Commission 2004a).

Public procurement transactions are typically governed by well-defined procedures. Adherence to these pre-set procedures by procurement entities is transaction intensive. Optimisation of government procurement procedures can reduce transaction costs significantly, especially considering that cost of transaction amounts to 45pet cent of GDP in a modern economy (MDB 2004d).

The introduction of ICT, more specifically eProcurement has the potential to significantly improve transparency, efficiency and effectiveness in public procurement.

2.2 Governments and public administration: major ICT trends

Several major ICT trends are layered throughout developed, developing and transition countries reform programme of work including e-GP reform projects. These trends include:

- E-services: Increasing efficiency and transparency by delivering services electronically
- Integrated e-government: through the virtualization of delivery and by using standard off-the shelf products and solutions
- Green ICT / Smart Way: Improving green attitude and reducing environmental costs
- Cloud computing: Enhancing the virtualization of the infra-infrastructure
- Competitiveness enhanced by ICT: Developing clusters and ICT competence at national levels

2.3 Development and execution of eProcurement reform project

The development and execution of e-GP reform is a transformational initiative, cutting across government departments and the supplier community. Consequently the development and implementation of e-GP reform policies supported by a planned and sustained programme of change management is required to shift from traditional public procurement processes to electronic regime.

For example, procurement officers and the supplier community will have to be trained in the use of the chosen procurement platform, with issues concerning network connectivity and availability addressed. In addition, legislation governing public procurement will need to be amended to enable e-GP reform to occur. Moreover, concerns raised by stakeholders concerning e-GP reform will have to be alleviated through education, capacity building, and dedicated change management initiatives.

The success of the adoption of eProcurement is by and large due to the constructive commitment of all stakeholders. Governments who have completed reform projects will have acquired a wealth of experiential knowledge in overcoming the challenges of reform execution. The evaluation of completed reform projects have identified that the key issue for many governments was the lack of integration of information along the procurement process making it impossible to control and monitor. The research identified that the solution to this issue was to develop an 'end-to-end' business and technological model to ensure transparent and cost effective procurement processes, but also the construction of the knowledge base that is needed to support strategic decisions towards public expenditure reduction and cost optimization.

Although it is recognised that no one size fit all, best practice in addressing the challenges faced in the execution of eProcurement reform projects should be reviewed and where applicable adopted.

2.4 eProcurement reform objectives

In order to ensure that a government achieves the desired outcomes from employing eProcurement in national public procurement system, defining the objectives of the implementation and their corresponding performance measures is essential.

For major acquisitions, such as large infrastructure projects, eProcurement tools can be used to advertise procurement opportunities, manage selection process, contract and planning information, and document flows. The objectives for this level of procurement are management and planning information, and transparency and efficiency.

For the much more common lower value procurement, the role of eProcurement tools is to manage competitive bidding amongst a significant range of suppliers, via framework agreements or reverse auctions. The objective of eProcurement in this case is the promotion of competition, price reductions, administrative cost decrease and strengthening of transparency by the use of online processes. In both cases overall transparency and efficiency of the procurement process can be strengthened. In addition e-Catalogues may be used for common, standard off-the-shelf products regularly ordered by the public sector.

However, few of these objectives are achieved without an underlying reform strategy that introduces new procurement methodologies, procedures, workflows, and improved monitoring and analytical capacity of management. Additional objectives can centre on eProcurement yielding more accessible management information (MI) that could be used for planning and budgeting, as well as audit. Moreover, eProcurement can be instrumental in encouraging a more rapid tale-up on on-line technologies by enterprises and thereby promoting economic development.

Consequently, governments need to encourage increased participation and competition amongst the supplier community regarding public procurement opportunities.

Public procurement is much more than a mere transaction focused activity. The procurement policies and practices of government impact the economy and business, in transition countries in particular. Governments may use public procurement as a policy tool for economic development; promoting the development of Small and Medium Sized Enterprises (SMEs), and developing expertise of local business. The public perception of governments' performance is influenced by the extent to which procurement transactions are conducted in a transparent and efficient manner (World Bank 2003).

2.5 Benefits of eProcurement reforms

Following the successful implementation and ongoing operation of electronic procurement systems the governments have reported numerous benefits. Benefits can be described in qualitative and quantitative terms. The qualitative benefits are not readily measurable; however the quantitative results in some cases report savings ranging between 5per cent-20 per cent of public procurement expenditure. With public procurement accounting for a substantial part of the national economy the benefit / cost ratio should be overwhelming even without considering the qualitative benefits. In general, governments sought a return on their investment through achievement of benefits targeting three key objectives: governance, effectiveness (value for money), and economic development.

Benefits reported by Cyprus and Portugal

Cyprus and Portugal were awarded by the EU Commission as recognised examples of successful implementation of the eProcurement systems under the EU policies, but Cyprus and Portugal have different institutional structures and employed different implementation models. In Cyprus, there is a single public procurement authority – Public Procurement Directorate of the Treasury of Cyprus managing a single eProcurement platform implementation. In Portugal, there are several central purchasing bodies, with central government unit managing multi-platform implementation based on framework agreement service contracts with eProcurement platforms providers.

Common elements across both Cyprus and Portugal eProcurement reform models are:

e) support decentralised general procurement processing requirements for contracting authorities but also support centralised framework agreements for certain types of commodities;
f) employ single standardised procurement business process with standard documents and templates;
g) support pre-defined technical specification libraries for all centralised procurement commodities;
h) provide free access to suppliers and contractors (except for framework agreements in Portugal).

Portugal and Cyprus differ in the following areas:

a) In Cyprus the single eProcurement platform was paid for by central government and is provided free of charge to all Contracting Authorities, whereas in Portugal the contracting authorities have to select eProcurement Platform Provider from the list of certified platform providers and then pay a service fee for using the platform for conducting their public procurement;
b) In Cyprus the eProcurement was implemented as a stand-alone system with very little emphasis on interoperability, whereas in Portugal interoperability was seen as a key requirement;
c) In Cyprus qualified electronic signatures are not required whereas in Portugal they are required during the tendering stage. Regardless their different approach to electronic signatures in both countries public contracts are still signed on paper.

		Governance	Value for Money	Economic Development
Tangible benefits	1. Lower Prices – decrease in public spending		✔	
	2. Faster procurement process - shorter tender cycles		✔	
	3. Reduced administration costs	✔		
	4. Standardisation and optimization of inventory	✔		
Intangible benefits	1. Free access for suppliers and contractors			✔
	2. More competition		✔	
	3. Enhanced transparency	✔		
	4. Greater accountability	✔		
	5. Improved process management for government	✔		✔
	6. User-friendly for suppliers and contractors			
	7. Improved management reporting, monitoring & audit			
	8. Automatic collection of market data	✔		

Some of the potential benefits of a well-conceived and competently implemented eProcurement are presented below against the three primary eProcurement scheme objectives. Based on feedback from Portugal and Cyprus, obtained in 2014, five years into their electronic procurement reform projects, some of the key benefits reported include: as follows.

This list is not exhaustive and only seeks to provide a flavour of the reported benefits achieved. Also it needs to be noted that the above mentioned benefits can be achieved by employing different reform models and management structures. However, during the implementation and operation of an eProcurement scheme it is inevitable that challenges will need to be overcome to before any benefits are realised.

2.6 Challenges of eProcurement

The advantages of eProcurement are only achieved where there is a genuine desire to reform existing procurement practice. Effective reform requires political backing, effective bureaucratic leadership, expertise, and procurement skills. In addition, where the introduction of eProcurement technology is not accompanied by the reengineering of work practices then expected benefits may not be achieved.

There are several key challenges that governments need to consider when implementing an eProcurement reforms. These include:

Cost: the cost of an eProcurement system development, depending on the selected implementation model, can be expected to range from around US$1 million up to US$15 million or more. However, malpractice or poor management in the development and implementation of the eProcurement system can multiply this cost.

Stakeholder objections: There were cases when stakeholders on both sides of the market have raised objections. The reasons for these include religious objection to the Internet, resistance to greater transparency and competition. In addition, there can also be concerns about lack of remote connectivity, low levels of computer literacy, data security and fraud.

Procurement reform: One of the most prevalent misunderstandings by governments is the failure to appreciate that the [added] value of implementing eProcurement tools is its capacity to facilitate procurement reforms. Without reform, the electronic procurement system will yield few gains. Imposing technology onto a traditional management framework and procedures mirroring manually handled paper-based tenders will achieve little. Most reported benefits have been the results of stronger management and coordination facilitated by technology, rather than from technology per se. For this reason, as for much of e-government generally, eProcurement should be undertaken as part of a procurement reform strategy, not as a technology plan. A reform strategy should be driven by reform objectives, a business case, leadership and resources, and by clearly defined accountability for performance outcomes as defined by the objectives. An eProcurement strategy is usually more of a management than a technological challenge as it is required to holistically address all aspects related to procurement and recognise electronic procurement as a major procurement management initiative.

Defining the objectives: Defining the reform objectives and its success indicators is an essential part of strategic planning. It is essential that reform objectives are explicitly targeted as it opens up the full scope of the potential developments and brings to the fore all of the underlying issues. There were also cases when good technology has been developed but without strategic objectives, resulting in multiple systems between various departments and geographic areas and leading to a fragmentation of services, and a dissipation of the potential for leveraged buying and planning and analysis.

3. Strategic considerations: legal and regulatory, business and technology

Key points

Government policy towards the development and implementation of eProcurement should support the objectives of the scheme. Put differently, policies that guide the various aspects of an eProcurement implementation should be fully consistent with promoting:

- Good Governance - transparency and accountability
- Value-for-Money - economy and efficiency
- Economic Development - access, competition, supplier development

For governments preparing to implement an eProcurement reform there are several strategic policy and commercial factors to consider. The understanding of these factors will be key to the successful implementation of any selected eProcurement reform model.

Figure 2. Three step eProcurement reform methodology

This section provides an overview of the main factors regarding these three strategic areas commencing with an overview of factors concerning policy development.

3.1 Step 1 – Legal/Regulatory

This step in the process addresses the importance of the regulatory structure of the public procurement reform project and political and institutional leadership as critical elements in implementing an eProcurement solution.

It is sometimes assumed by governments starting their eProcurement reforms that changes in legal framework necessary for the eProcurement implementation can be limited to one new provision in the primary law permitting use of electronic communication in public procurement procedures. This is a critical mistake. In order to benefit from introducing eProcurement tools in national public procurement system it is necessary to review the existing legal framework and optimise procurement process for an e-commerce environment. In most cases, this will require redesign of procurement methods and incorporating new business processes in the public procurement legislation as well as operational policies.

The review of the legal framework should not be limited to amending methods for communication but structured to examine key stages of public procurement cycle: pre-tendering, tendering and post-tendering. The objective of the legal update should be focused on how to employ technology to achieve more competition, streamline decision-making, improve predictability and speed up the procurement process. In other words, it is necessary to understand that, for instance, a real-time recording of electronic process allows simpler approach to achieve better results than with elaborate manual procedures, and without compromising on accountability and transparency mandatory for procurement in public sector.

To properly support the implementation of electronic procurement, the government needs to review and update existing rules and regulations guiding the manual procurement process to reflect the new practices to be followed when accessing tender information, registering for a bid, responding to bids, and opening bids. The new practices and guidelines will also need to define the roles and responsibilities of each party in the procurement process: the procuring agency, the supplier and the eProcurement system. **The transition to eProcurement is a business re-engineering process that involves the creation of a new business service operation and should be part of an overall procurement reform process.**

The transition to eProcurement will reflect changes to a number of common procurement practices and introduce new issues associated with the support and operation of an electronic business service. Procurement policies and rules should be redefined to include management practices and transactions in the electronic environment and operating circumstances that were not present under the manual process.

Although not exhaustive these policies should include:

- Application Usage
- User roles and responsibilities
- The malfunction of government e-facilities
- Electronic contract development
- Online catalogues
- Online pre-tendered contracts
- Electronic tender bid opening protocols
- Electronic tender management security
- E-quoting search protocols
- SME engagement and facilitation
- IT Security Policy
- Digital Signature Certificate (DSC)
- E-contracting
- Business Continuity Planning
- Disaster Recovery Planning
- Backup Policy
- Archival Policy
- E-Payments/ Receipts policy
- Mobile technology options

In the latest revisions in international public procurement policy standards, the 2014 directives on public procurement of the European Union in particular, suggest that implementing electronic procurement requires substantial changes in legal and regulatory framework in addition to investing in technology and infrastructure. The key questions for legislative reform are related to how the public procurement cycle should be integrated with public finance management process, which procurement methods should be incorporated, how procurement procedure should be aligned with contract type and value, whether SMEs' participation in public procurement market is a priority for the government and finally how to ensure efficient review of complaints and monitoring of electronically conducted public procurement.

The legislative programme will shape the implementation schedule, and may affect the overall development of the eProcurement scheme. The implementation of new laws will require significant effort and time to pass through the legislature or parliament. Therefore, the governing law for eProcurement should not deal with the working details of the eProcurement system. The working details of the eProcurement system should be governed through secondary legislation - policies and regulations. However, it may be possible to initiate some useful elements of eProcurement without legislative amendment and an eProcurement strategy should recognise this in its schedule of phased implementation. The preferred alternative is to shift as much as possible of the legislative programme to the policy framework which can be supported through regulations and guidelines, and therefore more easily and readily adaptable to future innovations in technology or business practice

The legislative framework should combine any existing legislation and regulations into a common law supporting the implementation and use of the eProcurement scheme. The law should provide high level guidance to the public entities on managing the entire lifecycle of the public procurement.

New legislation should provide an overall policy level guidance for conducting public procurement and include the following objectives:

- Ensure the procedures, processes and decisions relating to public procurement are open, transparent, objective and reliable
- Obtain the maximum returns from public expenditures by promoting competition, fairness, honesty, accountability and reliability in public procurement processes
- Ensure good governance by: enhancing the managerial capacity of public entities in procuring goods and services, ensuring the equal opportunity for producers to participate, establishing a clear process for filing complaints or grievances

Importantly, legislation that is not directly relevant to eProcurement may nevertheless be critical to its implementation.

Although the eProcurement reform requires the adoption of new policies and processes, the additional work generated in complying with these requirements is positively balanced by the reduction in transactions required to undertake a public procurement exercise with a traditional paper based system.

Success of legislative reform goes in parallel with institutional leadership. To develop and implement an eProcurement system requires the reform leader to have responsibility for this service.

The basic core legislative requirements for eProcurement and e-Commerce provide legal status for:

- Electronic documents
- Electronic signatures, if used

In addition to the basic requirements relating to e-documents and e-signatures, a number of other legislative reforms could be added and include the following areas:

- Electronic records management
- Consumer protection and privacy
- Laws pertaining to legal evidence
- Data protection and confidentiality
- Intellectual property, copyright
- Codes of practice

Legislation may be required to ensure such a role and that the reform leader has the authority to design, develop (or commission) and implement the eProcurement system.

Strong leadership is essential first to design eProcurement reforms' objective, next to manage reform implementation and finally to keep national eProcurement scheme operational.

Different institutional frameworks have been designed to achieve it, but it is clear from success stories included in the guide that without empowerment of institutions responsible for eProcurement reforms, 'top down' support and discipline in central administration and clear reporting lines reform can easily fail.

3.2 Step 2 – Business considerations

The business case captures the government's vision for eProcurement – how what eProcurement reform model should be selected, what resources are available for the reform project and how national eProcurement scheme will be operated to ensure its sustainability.

The key business considerations for the eProcurement reform project relate to methods for acquisition of eProcurement platform to be used by national contracting entities and suppliers and include:

- **Integration Strategy:** the eProcurement reform is undertaken as a last stage of e-Government reform in the country and the eProcurement platform is integrated into national e-Government network or the eProcurement reform is undertaken as a first stage of e-Government reform in the country and the eProcurement platform should be designed to work independently/in isolation from other national e-Government services;
- **Single or Multi Provider Strategy:** eProcurement will be based on a single eProcurement Platform serving all contracting entities in the country or several providers will be involved in enabling eProcurement procedures to be conducted by contracting entities;
- **Coverage Strategy:** the electronic online procedures will replace all or selected existing paper-based procedures, meaning that some or all stages of public procurement cycle: pre-tendering, tendering and post-tendering will be conducted in the eProcurement format for all procurement methods;
- **Acquisition Strategy:** eProcurement reform is based on acquisition of eProcurement services from commercial eProcurement platform operators already established in the local market (no high start-up cost, annual service fee) or the eProcurement reform will include acquisition of the eProcurement platform or platforms by the government (significant start-up cost, no annual service fee);
- **Management Strategy:** regardless what type of ownership or provider model is selected, the reform needs to allocate institutional responsibility for acquisition of eProcurement services or platforms and roles in deciding upon purchasing strategies for the public procurement sector in the country;
- **Development Strategy:** in case of acquisition of eProcurement platform the eProcurement application is purchased as a complete solution for a fixed period of time and no major development /integration is envisaged or the eProcurement platform is purchased to be significantly altered/developed and integrated with other applications over long term.

3.2.1 Choice of business model: centralisation vs decentralisation

The implementation and on-going support of an eProcurement scheme require an investment by government. Although governments can realise significant savings from operating public procurement electronically, startup costs, depending on the selected implementation model, can be substantial and new costs are incurred annually with the maintenance and development of the eProcurement platform/s in use in the country.

In addition to regular maintenance and support costs, each change of public procurement legislation and national public procurement institutions brings additional costs of adapting the eProcurement platform/s to alterations in national public procurement system.

The most common approaches used for the acquisition of the eProcurement platform/s include:

- **Government owned and operated:** A government developed and operated eProcurement solution that may or may not have been delivered by third-party partners. For more information on how this model operates please refer to case studies on Cyprus and Georgia.
- **Government managed service:** A government managed eProcurement solution that is operated and owned by a third-party partner. For more information on how this system operates please refer to the case study on Turkey.
- **Shared service/"Software as service":** A third-party eProcurement service that is fully managed, owned and operated by the third party and used by one or more governments and suppliers. For more information on how this system operates please refer to the case study on Portugal.
- **Public private partnership (PPP):** A government eProcurement solution that is managed, owned and operated by a third-party service provider, often with the intent to transfer the platform back to the government in the future. For more information on how this system operates please refer to the case study on Ukraine.

The choice of model is associated with the amount of risk and cost government is willing to undertake when implementing its eProcurement reform. Whoever takes ownership for developing and maintaining the eProcurement scheme needs to have the capacity and resources to manage the attendant risks. The eProcurement platform/s often becomes a critical part of government service operations, supporting the procurement and delivery of goods, services and works projects required to sustain the government.

With selection of the centralised business model, when a single eProcurement platform is acquired by the central government on "government owned and operated" or "government managed service" basis and available free of charge to all entities in the public sector covered by public procurement legislation, the central government bear all the (a) initial start-up cost and (b) operational costs of implementing eProcurement in the public sector in the country, unless fees are introduced for suppliers and contractors. Unfortunately, a general flat registration fee for suppliers and contractors, even small one, makes eProcurement reform unpopular with the private sector and thus is not recommended.

An alternative to funding the entire reform from the central government budget is to support initial start-up cost of the eProcurement platform/s acquisition from the central government budget and introduce service

charges for contracting entities on the administrative level, based on their usage of the electronic platform services, in order to share operational costs proportionately across the national public sector.

In the centralised model, based on "software as service" or PPP acquisition it is also possible to avoid initial startup costs (these will be covered by commercial platform operators) and operational costs of implementing eProcurement reform may be covered through service charges for contracting entities based on their usage of the electronic platform services with service charges payable not to the government but directly to commercial platform operators.

Another funding option becomes available with introducing central purchasing based on online framework agreements. In this model eProcurement services remain free of charge for contracting entities but upkeep of the eProcurement platform/s is funded from (a) actual savings achieved by the central purchasing unit and/or (b) fees payable by suppliers who have been awarded framework agreements calculated as a percentage of their earning from deliveries completed under framework agreements.

Whichever model is selected, it is important to remember that eProcurement systems fundamentally provide a service to support the procurement process as predefined in legislation and that the system operation is independent from the management of the national public procurement sector. Regardless of the business model selected, the governments are still responsible for the management of business services being delivered and will still need an operations management unit responsible for managing the eProcurement service operation even when the service is fully outsourced to a third party.

3.2.2 Choice of business model: custom development vs "off the shelf" systems

Electronic procurement platforms are available as off-the-shelf systems, produced by commercial platform operators in variants compliant with procurement methods imposed by major policy regimes (GPA standards, EU standards, etc.), as a shared "software as service" environment, or can be subject to custom development for specific client.

In order to decide on the expected eProcurement reform timeline it is important to underline that custom development of an initial eProcurement implementation may take one to two years to get up and running, including the scoping of requirements, development, piloting and roll-out implementation. Localisation of the "off-the-shelf" systems, with minimal customisation could technically be available for use in a much shorter period.

Similarly, custom development requires initial investment and the necessary expertise and institutional resources to support the development and operation of a service. Implementation cost of this model is typically higher than the use of "off-the-shelf" or shared service environments through a contracting or partnership relationship with a private sector platform operator.

When using existing "off-the-shelf" systems or shared services environments, the supplier or private sector platform operator is responsible for providing relevant electronic procurement services but governments need to understand the extent of the system or service it is acquiring and what the limitations may be with regards to customisations, costs and the ability to integrate with other government systems and weight it against how this model can help to alleviate some of the operational risks and funding needs of the eProcurement reforms.

Governments have been able to successfully establish partnership arrangements or framework agreements with commercial platform operators to deliver and support an eProcurement system funded primarily through transaction fees. The government must also fully understand the contractual relationship and terms of the agreement with regards to their rights and ownership of the system and/or data and provide for a transition plan at the end of the contractual relationship.

3.2.3 Single eProcurement platform or multiple platforms

eProcurement can be based on a single eProcurement platform with a single business process serving all contracting entities (state and utilities) in the country or several platforms, certified and with standardised business process prescribed in public procurement legislation and standard templates and tender documents. In short, there are two systems from which to choose.

3.2.3.1 Single system

A single system approach would provide the most effective option where the primary objective is to establish an open, transparent system to support its existing well-functioning procurement regime. A single system is easier to manage and provides the opportunity to implement standard practices and monitor all activities. A single system would also simplify integration with other e-government systems as the systems would be interacting with a common system interface, and would reduce any duplication between processes or data management functions, providing a more seamless environment for suppliers conducting business with government.

The decision whether to opt for a single or multi-platform model also needs to take into consideration typical volume, procurement structure and procurement methods most frequently used in national public sector. In some countries, the state budget is spread evenly across central government and the typical procurement volume and procurement structure in each government department is very similar, thus advocating a single platform model. In other countries, some departments within government (and contracting entities in the utilities sector) may have significant procurement volume to support their own eProcurement system implementation to better serve their specific supplier community and their own internal information and financial management systems.

In terms of procurement methods, there are several standard procurement methods recognised by international public procurement legal instruments (there are 18 procurement methods to select from in the 2011 UNCITRAL Model Law on Public Procurement), but very seldom they are equally popular with contracting entities.

If the local market has a preference for specific procurement method or there is a national policy in place to promote using selected procurement methods, a single platform supporting few procurement methods may be a rational choice in terms of cost, especially as a first stage in rolling out eProcurement in the country.

The advantages of the single platform model is that it:

a) Enables management of all procurement related documents, statistics and audit trail in a single place.
b) Simplifies integration with other e-Government systems e.g. business registration, financial management information systems or tax systems etc.
c) Facilitates standardisation of procurement processes and data collection and reporting, thus reducing training costs.
d) Allows a common user experience for contracting authorities and economic operators – making user training and capacity building for both much easier to achieve.
e) Manages centralised framework agreements within the single platform without investing in additional platforms.
f) Is much better suited to a country with a low level of eProcurement maturity and experience as they are more able to develop the skills to manage a single platform.
g) Will provide considerable savings in training costs because contracting authorities and local suppliers and contractors will only be required to learn how to use one platform.
h) Can reduce implementation and maintenance costs as the supplier of the platform has to factor in less risk and cost to account for an unknown take up of their particular platform.
i) In the case of "software as service" (cloud-based) reduces duplication of investment costs for multiple on-site servers and management from different eProcurement platform providers.

The disadvantages of the single eProcurement platform model:

a) High initial investment, but suits "greenfield" countries where there is no eProcurement in operation before reforms.
b) If acquired on a government owned and operated basis, it can lock in government to a single supplier who may exploit their monopoly position. Unless the contractual arrangements are robust, this might expose the government to significant cost escalations at a later date.
c) Can expose the government to significant risk if the single platform provider goes out of business or withdraws from the service contract.
d) Can discourage innovation and future enhancements of the platform if the supplier of the platform again wishes to exploit their monopoly position.

For more information on single platform implementations please refer to case studies on Georgia and Turkey.

3.2.3.2 Multiple system

The implementation of multiple systems, even though each system on its own may support a large contracting entity with a significant volume of procurement conducted annually, can increase the overall cost of eProcurement and without proper management of data exchange and interoperability issues may potentially create a closed or exclusively regional system, leading to difficulties in the supplier community. Suppliers may be subject to different registration processes and if the government wants to establish a single supplier registry for all systems, it will need to establish accepted process and data requirements to service each system.

Multiple systems, again without proper management of data exchange and interoperability issues, may limit the ability to establish a national monitoring scheme to properly analyse procurement data collected from different eProcurement platforms , and thus limit the ability to ensure a full transparent process is applied across all public sector organisations in the country.

Advantages of multi-platform eProcurement model:

- Low initial cost: suits "brownfield" countries where significant investments have been made on platforms that are already operational.
- Low switch costs: no lost investment when government decides to change procurement law or introduce new procurement procedures.
- Short implementation cycle: all central government needs to do is prescribe in public procurement legislation standardised business process and develop standard templates and tender documents and select suppliers who will be providing eProcurement platform services, upon successful certification of their platforms.
- Encourages competition between different eProcurement platform providers during the implementation phase, thereby encouraging improving the quality of service they provide.
- Well suited to being implemented under a central framework agreement for eProcurement platform operator services, without a need to purchase the platform.
- Well suited to a country with mature eProcurement software industry and a larger government procurement spend.

Disadvantages of Multi-Platform eProcurement model:

a) If not taken into consideration while planning the reform, creating central information database and data exchange in the multi-platform system can be costly and complicated.
b) If not taken into consideration while planning the reform, the multi-platform system can make collaboration and sharing of information between contracting authorities more difficult.
c) The multi-platform system requires local market maturity and experience in e-commerce.
d) Contracting authorities and economic operators need to learn how to use different platforms and processes to do the same tasks e.g. prepare and submit a tender online.
e) Central purchasing unit will need to purchase separately an additional eProcurement platform/module for operating central framework agreements, with the associated additional cost and complexity.
f) Can be an obstacle to introducing a cross government procurement planning tools that could be used for aggregating demand for framework agreements.
g) Increased training costs due to the fact that contracting authorities and economic operators need to learn how to use more than one eProcurement solution.

For more information on multi-platform implementations please refer to case studies on Portugal and Ukraine.

Not all models or approaches will work in all environments. When selecting the implementation approach, governments need to take into consideration the various technical and business challenges that exist, volume of their annual procurement transactions, procedures used and availability of commercial eProcurement solutions on their local market.

The approach for a system implementation should be driven by business needs versus technical needs as the implementation of eProcurement is a business issue and mixed models can be easily implemented; such as a reform model recommended for Bulgaria.

In the case of Bulgaria the number of contracting entities in the local public sector, the total volume of procurement transactions per year and the procurement methods preferred by contracting entities suggest that there is a rationale for a mixed eProcurement model consisting of a central platform supporting planning and reporting and basic procurement methods for decentralised procurement, a central platform for operation of electronic framework agreements, already existing and owned by the central purchasing body and less frequent procurement methods (reverse auctions, competitive dialogue, dynamic purchasing systems) of interest only to a small number of specialised contracting entities and the utilities sector to be supported via individual "'software as service" arrangements based on contracts with commercial eProcurement platform operators.

3.3 Step 3 – Technology

Summary

Step 3 focuses on analysing challenges in selection of eProcurement technology and associated tools (applications and infrastructure). The technology decisions are closely linked and need to take into account consequences of business decisions described in Step 2 above.

The application of enhanced procurement methodologies and more effective monitoring and control systems possible in the electronic environment may require changes to the way in which procurement is regulated. Traditionally, public procurement has been governed by procedures-based regulations that define the allowable processes in detail. This framework requires effective performance-based indicators and governance systems that must be technologically enabled. eProcurement thereby enables government procurement to become performance-based rather than procedures based, requiring a broad reform of procurement legislation.

3.3.1 Software architecture

The eProcurement technology architecture should provide public sector buyers, suppliers and the general public with secure access to an integrated range of procurement tools - systems and services allowing participation in the public procurement process. eProcurement software is modular and somewhat customisable, with an eProcurement platform seldom constructed from a single product/application. There are common components to any eProcurement platform: contracting entity and supplier registration, notices and tender documents publication, search capabilities, submission mechanisms, evaluation support, electronic catalogue management, order and payment systems, etc. (with many of these system components potentially interacting with other modules and external government systems).

Whatever the system's configuration and wherever it physically and managerially resides, there is a core functionality to ensure that electronic procurement platform provides a seamless, end-to-end procurement process that extends from the procurement planning, publication of requirements, through the selection of suppliers or products, and possibly through to delivery and payment. The 2014 European Union directives on public procurement (2014/24/UE and 2014/25/UE) recommend end-to-end electronic procurement process based on principles of transparency, proportionality, security, traceability and interoperability.

- web portal
- e-register
- e-notification
- e-tendering
- e-auction
- e-purchasing
- e-payments
- e-catalogues
- e-information services
- direct purchasing and quoting
- transaction history, process and supplier performance scorecards
- procurement and planning and inventory

The OECD Recommendation of the Council on Public Procurement (Recommendation VIII, 2015) says that governments should employ recent digital technology developments that allow integrated eProcurement solutions covering the procurement cycle and pursue eProcurement tools that are modular, flexible, scalable and secure in order to assure business continuity, privacy and integrity, provide fair treatment and protect sensitive data while supplying the core procurement functions.

Equally or potentially even more important is the capacity to access, organise and analyse procurement information. It is this capacity which provides the most potential for adding value to this activity.
The so-called Business Intelligence Tools/Procurement Management Information System is the eProcurement system essential component that provides for contract management, tracking, planning, performance assessments, audit and reporting.

3.3.2 Key technology decisions

The key technology decisions include the following functionalities of the eProcurement platform/s:
a) business requirements;
b) technical requirements;
c) data storage needs;
d) interface/communication requirements in terms of new interoperability standards;
e) presentation layer requirements.
f) transaction workloads;
g) network capacity;
h) communications speed, reliability, security;
i) physical compatibility.

The reasons most often cited for the failure of eProcurement initiatives implemented as facultative options are that (a) contracting entities were not interested in any electronic options if they were allowed to use less transparent paper-based procedures and (b) the initiative has failed to attract enough suppliers to create a "critical mass" of users that will justify – and sustain – the initial and future investment.
Low supplier participation may simply be because the government agency implementing the eProcurement platform has not done the necessary "outreach" or provided opportunities for training.

More often, the reason for poor supplier participation is structural, and can be attributed to one or more software-based concerns:
- The software chosen was too difficult to implement and so had poor availability and value.
- Use of the software (including fees) was too expensive.
- The software was simply too difficult to access or use from a supplier's point of view.

Depending on the business model selected, the involvement of third parties in the delivery and support of an eProcurement program creates a variety of new business relationships between the service providers, governments and suppliers. A government needs to ensure any ensuing relationships and associated business practices are properly protected, and that they support the interest of the participating parties.

With a framework as comprehensive as an eProcurement system, it can be worthwhile considering the issues of implementation and continuous operation.

Some of the primary considerations which form an important part of the eProcurement reform design include features mentioned in the OECD Recommendations quoted below:

- **Scalability:** It will be important for governments to choose software that is able to expand the volume of both users and transactions if required.
- **Flexibility and Customisation:** following implementation of the eProcurement system the software platform should be able to accommodate more modules or changes to existing modules as they are required.
- **Security and Data collection:** the key component of the eProcurement system will be its content. Governments need to consider required levels of data security and interoperability as well as the type of reporting and data business analysis it wants from its eProcurement scheme;
- **Special requirements:** these can include multiple languages, many small suppliers, many big or small contracting entities, direct links to other e-Government services.

The business case also provides some clarification in terms of distinct competencies and skills (business and IT) i.e. which procurement functions will be made electronic, who performs them and how they will be performed. It should answer the question to which extent should the process be automated and how much offline activities are permissible.

3.3.3 Operational management

The implementation of any eProcurement scheme introduces a third party to the procurement process – the eProcurement tools. The eProcurement tools have little to do with the actual procurement being conducted, as the system does not create the procurement requirements nor does it create a response to the requirements. The eProcurement system collects and distributes information and initiates transactions to and from other systems.

When implementing eProcurement schemes governments need to realise that operational management and support of the selected eProcurement model is an activity that will be required throughout the eProcurement systems life, which is presently estimated to span up to 10 years.

Governments need to plan how on-going service delivery will be managed, with the system requiring on-going product planning to address new functional needs and technology changes.

To ensure eProcurement platform/s smooth operation the following issues have to be addressed first while designing eProcurement reform project and afterwards on operational basis:

- Application Management (fixes and enhancement releases).
- User support.
- Training and development.
- Performance support.

The governments need to take into account the risks associated with using a third-party software or service, particularly as they relate to data security and business continuity. These risks can be mitigated through the contractual arrangement with the supplier/commercial platform operator, ensuring the government's rights ensuring that on-going business requirements are properly addressed.

3.4 Readiness assessment

Readiness is defined as the ability of the entity to deliver and operate the feature in order to deliver the expected value. In case of eProcurement reforms the exercise should assess current readiness, not future readiness.

Readiness is assessed in the following categories:

- **Regulatory and Legal**: This covers the entire legal framework from laws to regulations down to contracts and licenses.
- **Organisational**: This is the current readiness of the extended organisation to support the operation of the particular feature. The assessment should consider aspects such as standard operating procedures, change management, training, culture and prior experience.
- **Technical**: The current technical ability to develop, deliver and operate the system. The assessment should consider factors such as available skills, resources, technical infrastructure and legacy applications.
- **Market**: This is the readiness of any impacted third-parties to integrate with, or use the system. The assessment should consider technical, legal and organisational readiness.

3.5 Change management and capacity development

The introduction of eProcurement represents a significant change from manual processing used by contracting entities and suppliers to new electronic processes. In addition, to the use of the eProcurement system, capacity building should focus on the procurement process in general and how the eProcurement system is applied as part of the procurement process.

Change management, capacity building and implementation issues need to be considered as part of the overall reform cost regardless of the selected eProcurement reform model.

The approach to change management and capacity building should be based on the outcome of the readiness assessment completed during eProcurement reform preparation and will require a communication, training and support program.

One of the main challenges when introducing a new system is changing the mind set of procurement officers to accept new business model and practices. The success of an eProcurement scheme is also dependent upon the participation of the supplier community. Participation will occur when there is an interest in the local business community to participate in public procurement, and increased participation when the business community becomes aware of the changes in government procurement practice to a more open and transparent electronic environment.

A complete communication, training and support program is critical to the initial system implementation and on-going operation. It is also important to ensure that contracting entities have the necessary resources required to use the eProcurement platform/s such as computers and a supporting network infrastructure.

4. eProcurement Reform Design and Implementation Plan

Key points

- The eProcurement reform should be driven by business objectives
- Implementation of the eProcurement platform/s should form part of an overall public procurement reform strategy
- A Reform Leader should be assigned with the mandate of instituting the eProcurement reform strategy
- Implementation of the eProcurement reform will introduce significant change management issues
- A dedicated Project Management Unit will be required for the preparation and delivery of the eProcurement reform, including acquisition of eProcurement platform/s

4.1 Summary

Successful implementation of any eProcurement reform is not just through the implementation of the selected IT system to support procurement processes , but through a public procurement reform programme that addresses the overall government objectives of transparency, governance, efficiency and business development.

This section provides an overview of the key areas that should be considered when implementing a national eProcurement scheme.

4.2 Developing an eProcurement reform strategy

The introduction of technology within the traditional procurement environment alone cannot bring about the potential benefits that electronic procurement solutions can provide. Government objectives should set the basis for a public procurement reform strategy and should focus on issues concerning design, standards, management and governing policies for national public procurement system.

The implementation of eProcurement tools is one part of a national procurement function which is based on the legislative framework, rules and regulation, enforcement measures that governs procurement operation as a business service.

The eProcurement reform should be the central component for a public procurement reform strategy and support the interaction between government and the local supplier community.

A well designed and implemented eProcurement tools may help to bring together various government operations, from financial management and payment processing to contract management and monitoring functions, all through one single point of access.

A comprehensive eProcurement strategy can provide a level of openness and transparency in the public procurement system that cannot be realised through existing dispersed manual operations.

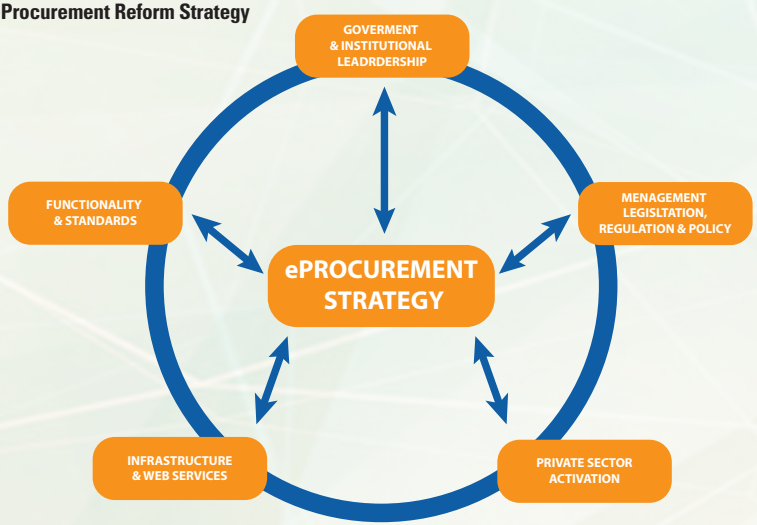
Development of a reform strategy for an eProcurement implementation should focus on the key components of the reform project. These include:

- Leadership
- Governance
- Infrastructure
- Functionality and standards
- Private sector activation

In addition, to the reform strategy, Governments should also take into consideration the need for capacity building of procurement professionals to ensure resources have the skills and knowledge to conduct and manage the new electronic procurement processes. Implementation of eProcurement represents a significant change management exercise. Moreover when a system is applied across organisations or throughout a jurisdiction, the implementation becomes more complex and challenging.

To ensure successful implementation, the eProcurement reform project requires strong leadership and support throughout its full business life cycle. To fully support the implementation, governments should be fully transparent with regards to the approach taken. The reform objectives and reform strategy should be clearly defined and made publicly available as part of the dedicated eProcurement web portal.

Figure 3. **eProcurement Reform Strategy**



Common success factors in different evaluated eProcurement reform models include:

- reform implementation is more successful when eProcurement tools support few but most popular procurement methods/largest contracting entities/sectors and cover entire public procurement process (examples: Georgia, Ukraine, Turkey);
- reform is best received when eProcurement tools are simple and user-friendly and participation in public tenders does not require certified electronic signatures (examples: Cyprus, Georgia, Ukraine);
- if e-Government in the country is not well-developed, self-contained eProcurement platform/s is easier to implement (examples: Cyprus, Georgia, Ukraine);
- initial access to eProcurement tools is free of charge for contracting entities and suppliers (examples: Cyprus, Turkey, Ukraine). It will also work if flat registration fee is payable by all stakeholders but calculated below previous costs of participation in paper-based procedures (Georgia, Ukraine) or fee is chargeable only to successful suppliers and calculated based on volume of their transactions under framework agreements (Portugal, Turkey);
- public procurement business process has been updated and standardised and is based on self-declarations (examples: Cyprus, Georgia, Portugal, Ukraine)
- eProcurement tools support decentralised procurement of individual contracting authorities but also support centralised electronic framework agreements operated by the central purchasing body (examples: Cyprus, Georgia, Portugal).

The portal should clearly outline the reform programme and implementation schedule. The basic framework of the eProcurement reforms targets the main components of government procurement, namely: procurement planning, e-tendering, e-purchasing, contract management and reporting. The approach and timing for each component is dependent on the abilities, resources of the implementing agency, and support in the form of governance, legislation and funding allocated to the reform programme.

4.3 Leadership and institutional structures

Political leadership and sponsorship is a decisive factor when launching and sustaining an eProcurement system. Establishing sound leadership and an organisational structure with the authority to develop and implement the necessary governing rules, laws and policies to support an eProcurement system is critical to its success.

4.3.1 Reform Leader

A Reform Leader should have the oversight and management to ensure that it can define and properly address the objectives of the government in an efficient manner. Most Reform Leaders will operate with a steering committee and report to the Prime Minister or the Minister of Finance (examples: Cyprus, Georgia, Portugal, Turkey). The head of Reform Leader should be a senior official who can promote and drive the project forward, with the ability to secure legislative and financial support from the government for implementation and ongoing operation of the eProcurement scheme.

The functions of the Reform Leader include:

- Develop and set the policy and rules guiding the implementation of the reform strategy that will be supported through the eProcurement system.
- Establish a dedicated Project Management Unit (PMU) which has the necessary support required to complete its duties.
- Develop and implement - through the PMU - the eProcurement system ensuring the service is reflective of government objectives.
- Capacity building - including training and certification - of all resources in the new procedures and practices supporting the new eProcurement system.
- Involvement in the long-term planning of the system ensuring that both policies and regulations continue to evolve with the actual eProcurement system and new technology options.

4.3.2 Project Management Unit (PMU)

The PMU will be responsible for the planning and executing the delivery of the eProcurement system including defining the project scope, deliverables, creating a project implementation plan and identifying assessing and managing risks. The implementation plan should outline all of the activities associated with the delivery and ongoing operation of the system.

The PMU will require the support of the Reform Leader to establish the appropriate support organisation for the eProcurement project, which typically includes a dedicated project manager and implementation team. The Reform Leader will need to ensure that all resources allocated to the project have the skills and knowledge necessary to deliver the project.

For many Reform Leaders the experience and skills required will not be available, and a third-party service provider/external support will be used to deliver the system or parts of the system. In this case it is essential that the PMU needs to work closely with that organisation to develop the implementation plan and deliverables.

The delivery of the system provides the PMU with opportunities to maximise additional benefits arising from implementation of the eProcurement system including:

- **Process re-engineering:** The PMU should review existing procedures and integrate the eProcurement with other systems, as appropriate according to level of development of the e-government service on the local market.
- **Change management:** This will be a major function of the PMU. Change management (CM) activity will be required to embed business change to procurement processes. The PMU will need to develop a CM plan and ensure that all stakeholders adopt the system and engage with its future development and enhancement.
- **Engaging stakeholders:** The PMU will need to engage with key stakeholders. Consultation with and buy-in from key stakeholders will facilitate effective transition to the eProcurement system.
- **Project control:** The procurement process is the responsibility of the government. If third-party service providers are applied in the delivery of the eProcurement system, the government needs to recognise that procurement is not a function or responsibility of the third party.

- The PMU will define the roles and responsibilities of both the government and the third party, ensuring each party has the capabilities they need to support those roles.
- **Back-up and security planning:** The PMU should ensure that backup, recovery processes and disaster plans form part of an operation test plan conducted regularly.

Without the full support of a dedicated PMU ensuring the overall delivery of the system, the government will have difficulty realising the full benefits of an eProcurement reform or achieving full participation by the target agencies.

4.4 Implementation plan for eProcurement reform

Key points

- Decide on primary and secondary objectives for national public procurement policies
- Undertake a review of national public procurement business process according to primary and secondary objectives
- Undertake a reform readiness assessment
- Select procurement methods to be conducted electronically and standardise their procedures for electronic workflows
- Decide on regulatory technique and objectives for new public procurement legislation
- Select an eProcurement reform model appropriate for local market
- Select an appropriate acquisition and operating model for eProcurement platform/s
- Decide on an interoperability strategy for eProcurement platform/s in relation to other existing e-Government initiatives
- Decide on the scope of functionalities of the eProcurement platform/s
- Decide on technical requirements for the eProcurement platform/s
- Develop change management and reform communication strategy
- Develop capacity building strategy

Summary

The eProcurement reform implementation plan should enable government to design and implement public procurement reform project, including introduction of eProcurement tools in the national public procurement system. The key legislative and regulatory decision for the eProcurement reform project relates to public procurement legislation and institutional framework organising local public procurement sector in a way suitable for local market. The key business considerations relate to public procurement business process and methods for acquisition of eProcurement platform/s to be used for conducting public procurement in the electronic format. The key technology decisions relate to business requirements, technical requirements, data storage needs, interface and communications requirements in terms of interoperability standards and eProcurement system deployment planning and application management.

4.4.1 Legal/Regulatory actions

a) To implement public procurement reform project new legislative basis is necessary and should be developed based on the review of national public procurement business process according to primary and secondary objectives for procurement policies established by the government. **Before legislative drafting is undertaken procurement methods should be selected and optimised and standardised for electronic procurement processes.**

In case of the EU Member States the electronic procurement standards are set in the 2014 EU directives and the new primary and secondary legislation compliant with the directives is necessary as a basis for the eProcurement reform project.

The new primary public procurement law should:

a) regulate decentralised procurement process for contracting authorities in state and utilities sector but introduce appropriate centralised purchasing based on framework agreements for certain types of common goods and services;
b) adopt new procedural rules for all public procurement methods, including post-qualification and electronic communication, as prescribed by 2014 EU Directives;
c) introduce new procurement methods, specifically electronic procurement methods as prescribed by 2014 EU Directives;
d) establish institutional structures for enabling eProcurement procedures and tools to be used by all contracting entities for public procurement in state and utilities sector in the country, while providing free of charge access to all economic operators;
e) establish institutional framework for central purchasing, based on electronic purchasing and/or framework agreements and e-catalogues and dynamic purchasing systems for small value contracts;
f) establish new institutional framework for regulatory and reporting obligations introduced by the 2014 EU Directives.

b) Effective reform implementation will also require new institutional structures to be established as a part of the reform projects. In reviewed best practice cases units responsible for (a) public procurement policy development; (b) eProcurement reform implementation and operational management; (c) public procurement monitoring; (d) review and remedies procedures and (e) centralised purchasing, were created.

c) Centralised purchasing based on electronic framework agreements has been introduced as a part of the reform project and proved to be a significant success factor in the implementation of the eProcurement reform and major source of economic and administrative savings.

The new secondary public procurement legislation is necessary to provide for:

a) standard tender documents and notification and reporting templates for all procurement methods. A set of standard procurement documents should cover as a minimum PIN, EOIs/Invitations for pre-qualification, Bid summary notices, Requests for proposals/ bid documents, Bank guarantee formats, Letter of award, Contract standard terms and conditions, Contract formats, Procurement summary reports;
b) implementation procedures for managing centralised purchasing and methodology to identify common goods and services for centralised purchasing and preparation of standard technical specifications for all centralised procurement;
c) implementation procedures for establishing different types of framework agreements and contracting under online framework agreements, including e-catalogues;
d) implementation procedures for establishing dynamic purchase systems for low value contracts, including e-catalogues;
e) procedures for acquisition and management of eProcurement platforms and electronic public procurement information, no matter whether government ownership model or service based multi-platform implementation model is selected;
f) implementation procedures for electronic procedures, rules for use of the eProcurement platforms and roles and responsibilities in ensuring uninterrupted access to eProcurement procedures and tools for all market stakeholders. The eProcurement system – platforms and tools - must conform to the new EU Directive 2014 and:
g) all actions in an online procurement procedure must be real-time recorded and the actors must be identifiable. All system data must be preserved so as to ensure that it can be demonstrated and verified that the integrity of documents is maintained, fair procedures are followed, and that infringements or attempts to infringe are clearly detectable i.e. any new eProcurement platform must contain comprehensive reporting and audit logging facilities;
h) central purchasing, i.e. framework agreements, are required to be solely electronic; use of qualified electronic signature may be useful but there are simpler solutions for eProcurement that will both widen the use of platform and still meet the EU legal requirements for the electronic data and document exchange.

d) New manuals and templates. In addition, tertiary regulations will be needed to provide guidance for contracting entities in order to help them adjust their internal procurement decision-making process to new business process on the eProcurement platform/platforms. This should include guidelines explaining (a) new procurement process and (b) new procurement methods and manuals how to use standard tender documents and templates while preparing individual tenders and framework agreements for goods, services and works. Preparation of general terms and conditions for specific types of framework agreements should also be considered as it will facilitate implementation of new procurement practice. Guides and manuals should be published online by national public procurement regulatory authority. It should include video tutorials to eProcurement procedures conducted on the platform/platforms that can be used by both all contracting entities and economic operators.

4.4.2 Business Case for the reform project

eProcurement reform can be implemented successfully as a stage of e-Government reforms (Portugal, Turkey) but also as a stand-alone system (Cyprus, Georgia, Ukraine), providing future interoperability, data exchange and integration with other e-Government services is being planned in advance.

Costs, benefits and complexity are key questions for the eProcurement project implementation.

If time is of essence the stand-alone "of the shelf" eProcurement solution will be cheaper, faster and easier to implement and manage. Also, the business decisions for the eProcurement reform project should take into consideration an estimated total cost of the reform implementation and operation throughout a life cycle of the selected eProcurement platform/s or switching costs, if shared services, software as service or PPP model are employed for national eProcurement scheme. Current best practice, as well as some international policy standards (the EU 2014 directives), recommend an "'end-to-end" eProcurement supporting uniform business process for all public procurement based on standard tender documents, as this will facilitate an efficient implementation of the reform and decrease in development, training and operational costs for national eProcurement scheme.

The functional scope of the eProcurement system shall cover pre-tendering, tendering and contract award. It still remains a common practice that public procurement contracts are signed traditionally on paper. However, the eProcurement functionalities should enable post-award procedures such as contract management and reporting. Presently, enabling e-invoicing and e-payments remains optional and can be implemented in the next stages of the reform project. There is a need for establishing a central data depository and exchange database and procedures regardless which eProcurement platform/s acquisition model is selected for national reform project. The best practice suggests that the central database should be in-house or government managed and enable communication and data exchange with all eProcurement platforms operating on the local market and supporting decentralised public procurement and centralised purchasing based on framework agreements. This can be achieved by employing mandatory data exchange standards and procedures as well as specific technology solution, such as API protocols, commonly available on the market.

Current best practice requires the eProcurement platform/s to support most popular or mandatory procurement methods in the national public procurement regime, such as open tender or framework agreements and include a schedule for introducing other procurement methods in the later stages of the reform project or permitting these procedures to be provided by commercial platform operators on "software as service" basis to individual contracting entities interested in more complex procurement procedures.

Each eProcurement reform model has a number of advantages and disadvantages and governments' decision on the reform model should be based on analysis of cost, benefits and risks involved in each model against local market characteristics. **Regardless of which reform model and eProcurement platform/s acquisition strategy is selected, the eProcurement reform project should allocate institutional responsibility for facilitating eProcurement reform implementation and financial resources to fund eProcurement reform preparation, implementation as well as national eProcurement scheme operational management expenses during eProcurement platform/s entire life cycle.**

Some successful implementations (Portugal, Cyprus) suggest that central purchasing units can be efficient eProcurement Project Implementation Units and effectively manage eProcurement project implementation and provide for management of the operation of national eProcurement scheme for both centralised and decentralised procurement. However, while central purchasing unit can be effective and efficient eProcurement Project Implementation Units they seldom make good Reform Leaders. The case of Spain and Austria highlights that central purchasing unit may not possess capacity for developing a successful national-wide public procurement reform strategy and implement eProcurement platforms and tools only for use under centralised purchasing.

4.4.3 Technology decisions

4.4.3.1 eProcurement platform/s functional specification

Presently, there is a clear understanding under international public procurement instruments, including the EU public procurement policies which main functionalities exactly should be incorporated in an eProcurement system specification in each phase of the public procurement cycle.

The list of functional standards opens a key and general requirement for a single point of access. Current international best practice and most of binding legal instruments require that eProcurement platform/s allow free access though a single online portal for all stakeholders. These stakeholders include domestic and foreign suppliers; civil society and the general public related to the public procurement system (institutional frameworks, laws and regulations); specific procurements (notices, call for tender, award announcements) and the performance of public procurement systems (benchmarks, monitoring results). It is also required that published data should be meaningful for stakeholders' use (OECD Recommendations, 2015).

Standards for pre-tendering

Based on the analysis of current international standards as well as a review of best practice in the countries where the EBRD operates and which have successfully implemented eProcurement solutions, the eProcurement pre-tendering procedures should adhere to:

a) Interactive online notification templates, supporting drafting and automated publication of procurement opportunities, contract awards and other public notices;
b) interactive online tender documentation templates, supporting drafting and enabling automated publication of tender documentation;
c) interactive online terms and conditions for all types of contracts, supporting drafting and enabling automated publication of tender documentation;
d) standard online e-catalogues for popular goods and services, supporting and simplifying the development of product and service descriptions for public contracts;
e) standard annual procurement plan forms, supporting development and enabling automated publication of the procurement plan.

Standards for tendering

Current standards for e-tendering are best described in the 2011 MDB Toolkit, which recommends that e-tendering procedures ensure:

a) reliable online notification of procurement opportunities, based on standard contract notice forms and including mandatory real time updates to notifications of procurement opportunities;
b) single point of access to online notifications of procurement opportunities and search engines which allow for effective sector, product and market browsing, free of charge;
c) availability of up-to-date tender prequalification forms and tender documentation (except for two-stage and negotiated procedures, where only the initial technical or functional specification is made available), free of charge;
d) uniform, online, and free of charge identification and authentication systems for submission of expressions of interest, proposals and tenders;
e) confidentiality and assurance of information security for all submissions, including financial proposals, ensured by the use of encrypted electronic safe boxes;
f) online participation in tender opening sessions, available to all tender participants and the public;
g) online evaluation process, with the pass/fail evaluation of technical proposals and automated evaluation enabled for the lowest price tenders and a semi-automated evaluation process for "price and other criteria" tenders;
h) real time records of prequalification, evaluation proceedings, and procurement decisions;
i) uniform online forms for submission of applications for review, enabling electronic payment of review fees, if required;
j) real time notification and information for tenderers at every stage of the procurement process, including contract award notices and online access to selected procurement records, free of charge.

Standards for purchasing tools are well developed in all international documents. These include e-catalogues and e-ordering based on framework agreements. In addition, some eProcurement tools such as dynamic purchase systems and pre-qualification systems[4] have been regulated only by the EU directives.

Basic e-tendering functionality should include:

- All tendering information on a single site
- Online registration for contracting entities and suppliers
- Online search tools
- Open and free of charge access to all bidding documents
- Electronic bid submission
- Electronic reverse auctions

Regarding framework agreements, current best practice calls for e-catalogues, available under general and individual framework agreements, and electronically conducted purchasing of products and services by registered contracting entities.

4 Pre-qualification is a system of provision of information on economic operators, as recommended by the EU Public Procurement Directives. In part, it is a legally binding certificate confirming an economic operators' eligibility to tender for specific public contracts as long as they satisfy a determined set of requirements established by public sector clients. With a pre-qualification system in place, the public procurement process is streamlined and time efficient, as individual pre-qualification by the contracting entity is no longer required.

In the case of a general framework agreement or dynamic purchasing systems, purchasing of products or services will be based on a competitive comparison of offers registered in the e-catalogue (e-quotations) or an e-auction, where all registered and pre-qualified suppliers will be invited. This is an area which requires further work and standard setting, as no standard procedures for contract management (ordering, acceptance of delivery, invoicing, payment authorisation and processing) or contract performance monitoring have yet been developed by international bodies.

e-purchasing functionality is relatively complex because there is a need to integrate workflows and transactions, as well as to manage a wide variety of information flows for many buyers and many sellers.

Minimum e-purchasing functionality should include:

- Online registration
- Purchasing policies availability
- Buyer authorisation management
- Online catalogues
- Online price quotations and information flows
- E-Purchasing transactions
- Data warehousing
- Reverse auctions

Standards for post-tendering

The e-contract management function aims at improving internal efficiency and transparency for both government and suppliers and contractors. The contract management functions include regular contract administration and contract performance monitoring as well as requesting amendments and extensions to the signed contracts.

Minimum e-contract management functionality should include:

- Contract registration and management
- Monitoring of contract performance and payments
- Management of contract amendments and extensions
- Management of contract completion and final evaluations
- Management of contract performance guarantees
- Contract templates and best practice guides

Ordering, acceptance of delivery, invoicing, payment authorisation and payment processing form another part of the contract management. Presently, if processed electronically, they constitute separate modules/ applications, not necessarily included in the typical eProcurement platform. The same applies to reporting, monitoring and audit. These functionalities dedicated to enforcement function should provide real time access to procurement records, including public contracts, for the financial control and audit personnel. Standardised monitoring templates and reporting checklists facilitate effective monitoring and support auditing with access to accurate and real time records.

Reporting and market analysis tools are also useful for contracting entities in order to obtain accurate market data and provide reliable inputs into individual procurement planning and aggregation of strategic procurement to be managed by central purchasing units.

Any eProcurement portal should be available through standard PC configurations using Windows, open source options with no additional software other than a standard browser required, or downloadable software available free of charge through the eProcurement portal.

In terms of model functionalities for monitoring and auditing of electronically conducted public procurement, there is no global standard readily available, but in this context the OECD Leading Practitioner's Working Group on public procurement performance indicators should be mentioned.

It is recommended by OECD that evaluation of the effectiveness of the public procurement system from individual procurements to the system as a whole, at all levels of government where feasible and appropriate should be conducted regularly. Governments should assess periodically and consistently the results of the procurement process and collect consistent and up to date and reliable information and use data on prior procurements, particularly regarding price and overall costs in structuring needs assessments, as they provide a valuable source of insight and could guide future procurement decisions (Recommendation X, OECD, 2015).

In addition to functionalities required for supporting public procurement business cycle, the eProcurement platform/s implementation plan should also take into consideration **the administrative support and help desk** functionalities necessary for operation of the eProcurement scheme.

Key component of the functional design are data security issues and the recording of system log records which should track any activity by a user that affects the content of the data collected in the system, as well as when a user connects and disconnects from the system. System log files provide a critical tool for the system audit process.

Functionalities supporting the operation of the eProcurement platform/s and the users: contracting entities and suppliers and contractors should include:

- user management
- new organisations, contacts, approvals
- and rejections
- data management
- default selection list
- commodity classification management
- reporting tools
- publication of other information
- regulations, announcements, FAQ, Help text etc.

Some system implementations include "Act As" functions that allow a system administrator to impersonate a user in order to remotely assist with the setup and configuration of an organisation and its matching profile. System security policies need to be developed for system administrators to ensure their activity is monitored and controlled by the application.

4.4.4 eProcurement platform/s technical specifications

Successful implementation of an eProcurement platform/s and the adoption of its various processes will be dependent on its ability to operate with and connect to users and other systems. There are three key areas to consider.

4.4.4.1 User Technology

eProcurement focuses on the development and implementation of Internet web-based services. The available telecommunication infrastructure and mobile Internet is an important consideration for the implementation of eProcurement tools.

- Reasonable connectivity and the availability of web services are needed to provide users with reliable access and support at comparatively affordable prices.
- The availability of Internet services may affect some of the features and functions of the eProcurement system, and the system may need to support more than just Internet access and e-mail. Generally available software and Internet browsers as well as mobile enabled Internet technologies should be preferred.
- Additional options to support access to the system should be considered including: Internet kiosks and mobile Internet access.

4.4.4.2 Interoperability

Interoperability of the eProcurement platform/s with both other systems and individual users will be determined by the standards applied with the system implementation. The benefits of the system could diminish if access is restricted due to cost, licenses or lack of interoperability with other systems and applications.

Government policy and management direction should help to define some of the different systems being considered as part of the eProcurement reform, for example, e-payments and e-invoicing. From a management perspective, it is essential that there is a strategic plan to link the eProcurement scheme with other e-Government initiatives.

In addition, interoperability of data and records is an important consideration. The reason for this is the fact that procurement data will need to link with other government applications and information. Systems will only be able to exchange data if both systems have a copy of the data item and in the prescribed machine readable format.

Moreover, the reporting and analysis available from the system is dependent on the data collected and generated. The underlying value of the system will be driven by the data and system objectives which should therefore identify the functions and information to be supported.

In this regard, the "Open Contracting" Initiative recommends a modern approach to interoperability of data and procurement records. More information and recommended standards are available at: http://www.open-contracting.org/

4.4.4.3 Security

Security standards, including methods for authentication and digital signatures, are key decision areas related to the technical standards of eProcurement infrastructure.

The different options affect the basic requirements for connecting to and using the system and the option selected should be compatible with other e-Government initiatives, if operational.

4.4.5 Road map for acquisition of the eProcurement platform/s

The MDB Road map for acquisition of platform is designed to guide through contracting of eProcurement platform and has four consecutive phrases.

Each one of them alone is able to create a huge impact. However, the optimum will be reached when all four are operational.

The phases are, in sequential order, as follows:
a) Preparation.
b) Tendering.
c) Contract Management.
d) Purchasing.

Each one of these phases has several stages. The template road map provides no more than an indication of the route to follow. It is a basic tool that will have to be adapted to fit the specific conditions, strengths and weaknesses, and prior level of development of eProcurement in each individual case.

The eProcurement reform starting situations usually are the following ones:
- Institutional capacity: leadership dispersed and not specialised in eProcurement.
- Governance: dispersion of policies, norms and regulations.
- Functionalities: lack of standards and too many ways to contract.
- Infrastructure and web services: low connectivity and atomisation of systems.
- Third party integration: increasing conflicts between the public and private sectors, business community distrust in the existing procurement systems.
- Evaluation: controlling and monitoring difficulties and overlapping

The strategic foundations are built in order to reach the following conditions:
- Institutional Capacity: integral leadership of the government with human resources specialised in eProcurement
- Governance: Integral policy of eProcurement, legal norms and regulations integrated, consistent and adapted to the new procedures.
- New functionalities: standardisation and simplification of tools and procedures. Specialised functionalities and organisations for tendering, contract management and purchasing.

- Infrastructure and web services: massive connectivity and computer science applications standardised and accessible to all.
- Third party integration: cooperation between central government, local governments and private sector; participation and active monitoring of the citizens, training.
- Evaluation: on line monitoring and integral control.

Template Road map forms an annex 2 6 to the Guide and for the reasons of practicality is available only in the electronic version.

4.4.6 Piloting

The implementation of an eProcurement system represents a significant change management exercise. The implementation of the eProcurement platform/s should therefore be managed using a phased approach supported by piloting eProcurement platform/s with selected contracting entities from different levels of government hierarchy.

The pilot should set the foundation for an open, transparent and competitive procurement environment that creates awareness among and educates users within both the buying and supplier communities. Governments adopting an eProcurement should not expect all target users to be capable of switching to the new system immediately; the process of transition will take time.

Starting with a small pilot group of contracting entities will help the Reform Leader to better understand the user environment, training needs, support services and IT infrastructure required. Contracting entities will also have time to coordinate the change in process with the supplier community so that all stakeholders can register on the eProcurement platform/s and learn the new process. A pilot approach helps to validate the "proof of concept" for the eProcurement platform and makes it easier to expand the system to other user groups.

5. Management of the eProcurement scheme in operation

5.1 Risk management

Risk management is critical to the successful implementation and operation of an eProcurement scheme.

There is always a risk for failure with any eProcurement platform due to potential security breaches or operational errors. The issue is not whether a system failure may occur; the issue is how the failure in operation or delivery of t services will be managed.

The three main areas of risk include:

- **Data Integrity:** Security and integrity during the collection and management of data and the eProcurement application is paramount for establishing a high level of trust with the system. Procedures and controls need to be in place to manage risk to data including clear separation of duties and access controls to ensure no user may have any unauthorised access to any data.
- **Availability and system recovery:** Operations are not only related to the technical management and development of the platform. The system operation will also require help desk support 24 hours per day, addressing issues immediately. All of the risk management functions need to be tested regularly to ensure the operational team is prepared and recovery procedures are in place to address issues as they occur.
- **Contractual risk:** Many organisations will engage a third party to undertake specific requirements of the scheme or deliver the system as a whole. When using third parties, Governments also need to consider long-term business operations such as knowledge, transition, rights and ownership as part of their initial contracts to mitigate any operational risk that may occur at the end of a contract.

In addition, some business risk will be associated with intellectual property rights to the system or rights to continue using the system and the supporting infrastructure.

For most governments, eProcurement tools represent a new cost. This means budget requirements and continuous funding will be required to ensure the continuity of service. Governments should recognise that supporting the operation or management of an eProcurement system over a long period of time will require resources and funding each and every year of the operation, whether the system is managed internally or with a third party.

5.2 Monitoring of eProcurement operation

Ongoing monitoring should be an integral part of the eProcurement platform/s operations. Reviews and evaluations should be undertaken regularly to ensure the eProcurement scheme meets its objectives.
The system should be continually monitored to ensure:

- The initial objectives and targets are being met.
- The justification of the business case is being met.
- There is compliance by all contracting entities.
- There is improvement to performance indicators.
- There is improvement to economic activity.

Statistical information provided by the eProcurement system will provide the necessary information to analyse current public procurement activity and forecast future purchasing requirements.

Through monitoring of the eProcurement scheme operation the PMU should be able to assess the service delivery and monitor adoption by government and local business to help identify areas for service delivery improvement in market sectors and segments where there is low participation. Moreover, monitoring will allow the PMU to consider different options for the renewal of third-party eProcurement platform service providers, or the re-tendering of a new service delivery based on activity levels.

The current best practice for monitoring of public procurement conducted in electronic environment involves concepts of "open data" and ensuring access of general public/civil society to public procurement information and records. The monitoring system should ensure visibility of the flow of public funds from the beginning of the budgeting process throughout the public procurement cycle to allow (i) stakeholders to understand government policy priorities and spending and (ii) policy makers to organise procurement strategically (OECD Recommendations, Recommendation II.iii, 2015).

Any evaluation of the eProcurement system should be outcome-based in terms of the following objectives:

- governance
- value for money
- economic development.

6. eProcurement Reform in Georgia: Everyone Sees Everything

6.1 Before the reform

The first Law on State Procurement (LSP) in Georgia was adopted in 1999 and based on the 1994 UNCITRAL Model Law. Unfortunately, the 2006 amendments removed most of UNCITRAL standards and by 2008 the public procurement in Georgia was a high-risk environment that needed substantial reforms to bring it up to international best practice, as reported by the World Bank. Indeed, the public procurement system was legacy of the post-Soviet period. Corruption, nepotism and discrimination were accepted behavior;and lack of access to procurement information and manual processing of tenders gave plenty of opportunities to extract bribes from suppliers and contractors. Administrative cost of the procurement system was also very high due to extensive bureaucracy. Suppliers had to to obtain qualification documents from various administrative bodies and pay a tender participation fee (200 Georgian Lari, GEL[1]). Administrative barriers discouraged companies from participating in tenders and bribery created a caste of privileged suppliers. The number of tenders was decreasing (from 3139 in 2007 to 1923 in 2009), while direct contracting was flourishing and prices in awarded public contracts were kept high.

With extensive bureaucracy (20 million paper documents accumulated by the State Procurement Agency[2] by the beginning of 2011) and small staff of the State Procurement Agency (SPA) it was impossible to provide any monitoring of public procurement procedures. The SPA was in practice unable to supervise contracting entities and lack of monitoring was causing further increase in corruption behavior.

Procurement market before the reforms:

- cost and technical requirements for participation in public procurement was too high (72 per cent of respondents)
- too much documentation/information requested (70 per cent of respondents)
- handling of contract payments too long (70 per cent of respondents)
- lack of transparency (59 per cent of respondents)
- no easy access to procurement information (54 per cent of respondents)
- procurement notifications incorrectly formulated (50 per cent of respondents)
- procurement officers with insufficient training (26 per cent of respondents in the capital city, Tbilisi, 70 per cent - in the rest of Georgia).

1 *Approximately US$ 120*
2 *Now known as the CSPA - Competition and State Procurement Agency - following the merger of State Procurement Agency and Free Trade and Competition Agency in January 2012*

6.2 Ge-GP Reforms

The Ge-GP reform aimed to achieve five simple goals, in line with international best practice:

- **Transparency** - it was necessary to ensure that public funds were spent in a transparent and efficient way and that civil society had unrestricted access to procurement information. *Everyone Sees Everything* was meant literally: any document related to public procurement should be accessible to the general public by online publication;.
- **Non-discrimination and fair evaluation -** it was necessary to introduce procedures that would treat all suppliers equally and would exclude the possibility of discrimination by restricting subjective decision-making;.
- **Simple and easy-to-follow procedures –** the participation of paper-based tenders was associated with complicated procedure and waste of time and money. To remove administrative barriers new procurement procedures were to be simple, logical and easy to understand;.
- **Getting rid of the papers -** the manually processed paper procurement records were non-reliable and non-manageable as a source of information on public procurement and introducing online workflows and dedicated databases enabled both better access to information and better quality monitoring and analysis.
- **Getting rid of corruption -** public procurement is inherently prone to corruption risks and bribery can occur at different stages of the process, from formulation of tender requirements, to awarding of public contracts and their management. It was necessary to remove the systemic grounds for corruption.

6.2.1 Legal and regulatory framework

In order to enable eProcurement reforms a new law was drafted and enacted in 2010. Before reforms, the LSP stated that tender was due in the case of goods and services with a value exceeding GEL 100,000 (around USD US$ 60,000) and works with a value exceeding GEL 200,000 (around USD US$ 120 000). After the reform, tenders have to be conducted electronically if their estimated value is more than GEL 5,000 (around USD US$ 3,000). The use of the e-Procurement system is mandatory by law through two procedures: electronic tendering and simplified electronic tendering, including a reverse electronic auction. Electronic tendering is applicable for contracts of GEL 200,000 (around USD US$ 120,000) and above, whereas simplified electronic tendering is used for contracts of less than GEL 200,000. The main differences between the two procedures include the scope of the required qualification documents and the minimum number of days for bid preparation (20 days for electronic tendering and three working days for simplified electronic tendering). Two more procedures, suitable for complex projects: two-stage tendering and design contest were introduced by amendments adopted in 2015.

Ge-GP simplified procurement procedures; administrative requirements are now minimal compared to the paper-based system. According to the legislation, the list of obligatory documents to be obtained by suppliers and contractors should be well justified. In electronic tenders, qualification criteria and compliance with technical requirements are verified on pass/fail basis only for the winning bidder. No travel to visit contracting entity is required before winning a tender; winner of the tender has to visit contracting entity once, to sign a public contract. The tender participation fee is $30, which is four times cheaper than it used to be in paper environment.

6.2.2 Institutions and funding

The procurement system in Georgia is decentralised and the public procurement law cowers procurement financed from state, Autonomous Republics and local budgets, including grants and loans of international donors.

The SPA, national public procurement authority is responsible for coordinating and monitoring of procurement. It supervises legal compliance, provides complains review, develops legal acts, develops and delivers training programs, and so on. SPA a governmental agency and the head of SPA is appointed by and reports to the Prime Minister. The SPA is also an owner and manages of the electronic procurement platform developed in-house as a customized dedicated solution to implement electronic public procurement.

Development of the Ge-GP platform was funded from the state budget and its maintenance and development is covered by the SPA from income generated from tender registration fees.

6.2.3 Business and technology considerations

To introduce an electronic system for public procurement in Georgia several reform models were considered. Firstly, an off-the-shelf, rather expensive foreign solution, which meant the gradual launch of e-Tenders. Alternatively, an in-house system development of customized customised solution, within the shortest possible time and at the minimal cost, which would match dynamic and liberal business climate of Georgia. The preference was given to the in-house option and as a result, in less than one year electronic bidding replaced paper based tenders in Georgia. The reform was launched in January 2010 and in October 2010 the first e-Tender was announced. From 1 December 2010 all tenders were conducted electronically. The number of tenders rose remarkably: 1,923 tenders in 2009, while in 2011 the number of electronic tenders exceeded 33,000.

The registration process is kept quick and easy. Participating in any electronic tender in Georgia from any place in the world, requires only a computer with a web browser and Internet access and a credit card (for identification purposes and payment of tender fee). The Ge-GP system is multi-bilingual and the most information is available in Georgian, English and Russian. Information related to state procurement is open and accessible in the Ge-GP system to general public and watchdogs.

The Ge-GP system publishes online:

- annual procurement plans of all 4,016 contracting entities in Georgia;
- contract notices and contract award notices;
- full tender documents;
- bids and qualification documents;
- decisions of tender evaluation panel;
- all relevant correspondence;
- all public contracts and changes to the contracts;
- payments related to public contracts processed by the State Treasury.

The availability of this information can help suppliers prepare for bids and plan their sales strategies. More than 28,000 registered active users (2015) – both contracting entities and suppliers and contractors – make use of the Ge-GP. The official web site: www.procurement.gov.ge is permanently among the top most visited government electronic services in Georgia.

6.3 Some results of the reform

6.3.1 Savings

One of the main outcomes of the Ge-GP has been down to the highest level of transparency of procurement procedures decreasing risks of corruption. Within a short periodperiod, the level of corruption decreased. Since electronic tenders were launched, only a few instances of corruption schemes were detected and investigated. By March 2013 the savings generated by the Ge-GP amounted to USD US$ 220 million, which was around 12 per cent of the total value of the announced tenders. In 2015 savings reached 1 billion GEL and 14 per cent of estimated procurement value.

6.3.2 Open access to local and foreign suppliers and contractors

Since December 2010 the number of visits from foreign countries recorded on the Georgian platform exceeded 250,000. The number of foreign companies registered at Ge-GP exceeded 300, while the number of public contracts awarded to foreign bidders by 2012 amounted to 100.

6.3.3 Monitoring and market analysis

The new e-Procurement system has radically transformed collecting procurement data from contracting entities. Since 2011 this information is transmitted to the Ge-GP Business Intelligence Module automatically, from active online forms used by contracting entities to conduct their tenders and does not require any additional processing by the contracting entity. Consequently, the SPA is able to process this data and produce more than 70 real-time reports on different aspects of public procurement in Georgia. The system can generate annual or quarterly reports for several indicators, . Ffor example: the number of procuring entities suppliers and tenders; , estimated value by total and for each coded commodity; , service or construction works; , contracted price; , savings in GEL and by percentage; , breakdown of tenders by type and by most savings top procuring entities; , most successful bidders; , number of successful appeals; , number of rejected appeals, and so on. Most of these real time reports is are available online and accessible free of charge (and hassle) to general public.

Figure 10. **eProcurement reform results in numbers**

2010 January	Developed *eProcurement* system in-house in one year
2010 August	Georgian eProcurement system launched in test mode
2010 October	First e-tender announced
2010 December	Paper tenders abolished; Only only e-tenders allowed
2010 December	Establishment of the Dispute Resolution Board, a public procurement review body; and launching of the e-module for submitting procurement complains online
2011 October	US$ 100 mln USD in savings generated
2011 December	Multi-lingual eProcurement system was introduced
2015 November	More than 28tousands ,000 of registered users in the Georgian eProcurement system
2015 November	1 Billion GEL savings, 14% per cent of the estimated procurement value

6.3.4 Increased level of competition

The average number of tenders announced through the Ge-GP annually is more than 30,000 e-Tenders per year. Compared to paper tenders, the average number of tenders per year has increased more than 10 times. In 2011, the overall value of the contracts awarded through the Ge-GP amounted to 66 per cent.

Remaining 34 per cent were concluded in direct contracting, outside eletronic procurement system but recorded on the Ge-GP for monitoring and statistical analysis.

The average participation rate per tender is still not very high and the highest level of competition is achieved in tenders on procurement of cleaning services (CPV category 909) and construction works (CPV category 454), about 2.55 per tender on average. Still, as reported by the SPA in November 2015, in half of the tenders only one bid is received. A relatively low level of competition might be explained by the rapid increase of average number of tenders per year in recent years and because the majority of local companies are still not registered at the Ge-GP. For example, by the end of 2012 the majority of suppliers registered at the Ge-GP were formed as a limited liability companies (LLCs). These 6,893 LLCs amounted to around 62 per cent of all Ge-GP suppliers. The indicated number of LLCs being active as taxpayers in 2012 is just 12 per cent of all Georgian LLCs. The number of registrations at the Ge-GP is constantly increasing every year (more than 3,500 suppliers were registered in 2012). However, there is still room to increase the number of registered suppliers, and consequently the level of competition. At the same time, there are is already a large number of suppliers which took part in hundreds of tenders, showing other suppliers how easy is it to submit a bid and win a public tender in Georgia.

6.3.5 Modern approach to review of public procurement complainsreview – Dispute Resolution Board

In Georgia there were nine complaints in 2010, but 128 in 2012 and 870 in 2015. Since creation of the new review body, the Dispute Resolution Board (eDRB) trust in objective and fair treatment of complaints have increased. This trend is stil continuing, clearly indicating the increase of the public trust to eDRB activities.

In post-Soviet countries a complaint against contracting entity is unlikely to be made filled if there is a low degree of trust in the review body's impartiality, in the transparency of the review decisions, and in the assurance that if a complaint is upheld there will be no recriminations when bidding in the future.

The latest figures from eDRB indicate that the number of complaints is on the increase in 2013 and the 10-day decision-making period is being consistently achieved, due to participation of civil society organization organisation in the review procedure.[3]

It is also important to mention, that the majority of intially received complaints were justified and decisions were successful for complaining suppliers and contractors. The eDRB ensures expedient, impartial and efficient decision making within the shortest possible period. We know no country, where the state procurement related disputes are resolved in a more expedient and efficient manner and with higher participation of the civil society.

Lessons learned

- The maximum transparent system of procurement was created and easy-to-follow public procurement procedures were implemented within the shortest practicable period.
- The full involvement of civil society became possible both because of open access to the eProcurement system and procurement related information (everyone sees everything) and direct participation in the monitoring of procurement procedures (everyone can stop a tender by submitting an online complain, if contracting entities decision is questionable) and public procurement review process (there are civil society organisations participating in the complaints review process at Georgian eDRB).
- The geographical inequality of suppliers and contractors, where regional companies were almost unable to participate in tenders announced outside their region due to logistic and high participation costs associated with paper-based tendering procedures, was eliminated in Georgia. Previously, there were only occasional cases for regional companies to win a tender announced in the capital or another region. After the reform, as a result of the simplification of tendering procedures and low participation cost, there are thousands of cases when a company based in one region wins a tender in other region.
- The mandatory use of the eProcurement system and automatic data collection from procurement processes created a new environment for 'business to government' transations and modern procurement practice. Non-discriminatory environment promotes competition between local and foreign companies. The introduction of the electronic tender guarantees, which are now widely used in Georgia, was initiated by the launch of the Ge-GP system.
- In summary, Georgia is now one of the few countries in the world where paper-based tenders have been fully eliminated and 100 per cent electronic tenders were introduced within a particularly short period of timeperiod. True, there is still high percentage of direct contracting used by the government, but this is more related to political decisions then existing capacity for using only electronic tenders for all public procurement in Georgia. Although the Georgian eProcurement reform has rather a short history of few years, the major importance of the electronic system is in ensuring predictability and unprecedented transparency of public spending. Considerable savings are speaking for themselves. Very transparent, non-discriminatory and objective evaluation process promotes competition and almost fully excluded cases of corruptive practices in public tenders in Georgia.

3 Assessment Report 2011, Review of the implementation of the PFM SPSP, The European Union's ENPI Programme for Georgia, p.34

7. Portugal Did IT: eProcurement reform in the EU internal market

- All public bodies use eProcurement to fulfil their needs
- All public contracts are concluded through electronic tenders or by purchasing from centrally managed framework agreements
- All proposals are opened at the same time
- All competitors know which proposal won and why

7.1 Before the reform

The traditional paper-based procurement system in Portugal was functioning reliably, as in every other country in the European Union, but neither efficiently nor effectively. It was an expensive, complex and slow process that required multiple levels of bureaucracy and caused unnecessary public spending. In Portugal the change was driven by private sector stakeholders, business lobby and the civil society, as there was a wide consensus that public markets were too closed, too difficult or too complicated to cope with. The fact that the public procurement reform was developed side-by-side with a new e-Government strategy helped a lot, as the strategy aimed to deliver a better and leaner public administration[1]. This political ambition was a very important driving force and it mandated implementation of the eProcurement concepts.

7.2 eProcurement reform: Legal/Regulatory Framework

Portugal started a major reform of its public procurement in 2007. In this context, the adoption of eProcurement was part of a broader reform project and introducing new model of public procurement function in Portugal. At the same time, eProcurement was one of the key elements of the reform project and proved to be a very powerful one.

The public procurement reform project of Portuguese government was based on three major pillars:

a) **The new legislation:** Public Procurement Law of 2008, the Code of Public Contracts, aimed to transpose the EU Directives 2004/17 and 2004/18, but also to consolidate and modernise regulatory structures for public procurement.

b) **The new institutions:** ANCP[2], (*Agência Nacional de Compras Públicas, EPE*), the National Agency for Public Procurement which was created in 2007 and took on a role of (a) regulatory authority and (b) a management entity for mandatory electronic National Public Procurement System (*SNCP* –

1 Several actions in this field: (a) "Simplex" modernisation programme; (b) the interoperability concept between public services implemented by AMA (Agência para a Modernização Administrativa) and (c) the position of Portugal in the eGovernment rankings. Portugal is considered as a role model at European level in what concerns public electronic services and transparency in public procurement matters.

2 As of 1 September 2012 ANCP merged with two other public organisations to form ESPAP, the Institute for the Shared Services of the Portuguese Public Administration. ESPAP took entirely the role of ANCP and is now responsible for the management of SNCP and for the development of FA. In this presentation, it was decided to maintain past references to ANCP or the Agency, for consistency purposes.

Sistema Nacional de Compras Públicas) as well as (c) central purchasing unit for central government administration.

c) **The new electronic process:** as of 1 November 2009 the use of eProcurement platforms was introduced for all public entities (central, regional/local government as well as state-owned companies) for all public contracts above €5,000.

The combination of these three pillars was fundamental to the design and implementation of reforms. The top-down approach and the empowerment given to ANCP, its managerial power over the SNCP based on eProcurement were key to consolidation of procurement processes and implementation of the reforms.

Type of Entity	eProcurement (e-tendering and e-awarding)	National Public Procurement System (SNCP)
Central administration and public entities	Yes Mandatory	Yes Mandatory
Municipalities, regional and local entities	Yes Mandatory	Voluntary
State-owned companies	Yes Mandatory	Voluntary

7.2.1 Law and operational policies

A legal framework was produced using principles governing public procurement and eProcurement in the European Union and incorporated some specific features including electronic certified signatures, electronic documents transmission, opening and warehousing or time and deadlines management with time stamping. In a short, legislation focused on reliability of the electronic process and an integrated legislative package was developed including:

1. Code of Public Contracts: Decree-Law 18/2008. Transposition of EU Directives 2004/17 and 2004/18.
2. Regulations establishing SNCP, the National Public Procurement System: Decree-Law No. 37/2007: Defines SNCP and creates ANCP, as the responsible entity for the management of the system[3], Regulation 330/2009: regulates the functioning of the National Public Procurement System, other regulations defining goods and services covered by framework agreements;
3. Specific eProcurement regulations:
    - Decree-Law 143-A/2008: concerning electronic platforms and data communication form.
    - Regulation No. 701-A/2008: approves the main standard forms of public procurement related contract notices that are published in the "*Diário da República*" (*Portuguese Official Journal*).
    - Regulation No. 701-B/2008: set-up of an advisory committee in charge of monitoring application of the Code of Public Contracts.
    - Regulation No. 701-D/2008: defines the model of statistical data to be reported by contracting authorities to ANCP or INCI.

3 With the mentioned merger of ANCP, Decree-Law 117-A/2012 created ESPAP and established the role of this Institute in the management of SNCP, amongst its other competences.

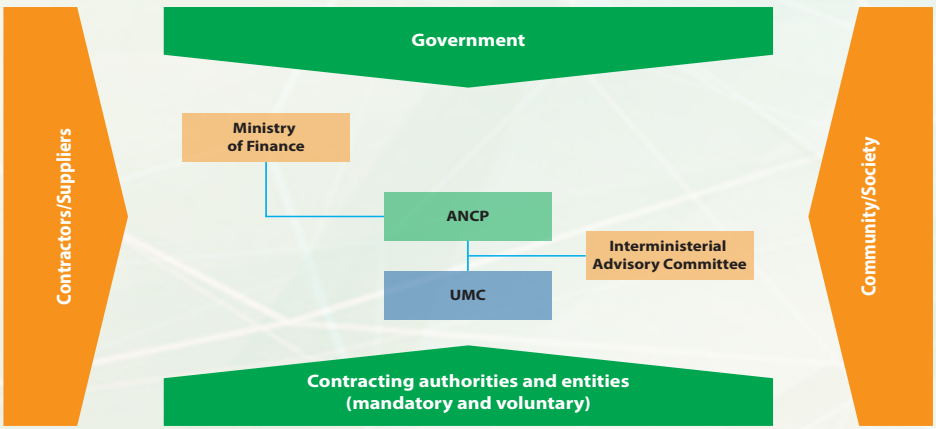
- Regulation No. 701-E/2008: defines the model of the data reports to be completed and provided by contracting authorities in the Public Procurement Portal (www.base.gov.pt).
- Regulation No. 701-F/2008: regulates the establishment, operation and management of the Public Procurement Portal.
- Regulation No. 701-G/2008: sets out the requirements and conditions of utilisation of electronic platforms by the contracting authorities and regulates the terms of operation for those platforms.

This package of legislation was established between 2007 and 2008, and entered into force on 1 November 2009. In order to enforce the reforms, the Portuguese legislator provided for severe sanctions for non-compliance, including that any contract not formed through eProcurement was null and void (the toughest sanction in Portuguese Administrative Law) and also disciplinary fines for public sector manager who failed to implement new policies.

7.2.2 Institutional framework

The ANCP's major objectives were defined in two sets: first, *economic goals* by increasing savings in public procurement (contributing to sound and better usage of tax payers' money); and second, *environmental goals*, by gradually incorporating environmental requirements within the selection/qualification and award criteria in public tenders. At the same time, SNCP, the National Public Procurement System took into consideration the key stakeholders in the country and actively involved the major contracting entities in the reform. In design the SNCP is a hybrid system, with ANCP as a central management unit operating a network structure of key stakeholders. The network includes the UMC (*Unidades Ministeriais de Compras* – ministerial purchasing units), set up in each ministry and acting as a mini central purchasing unit and a focal point between the ANCP and contracting authorities in central government administration. While mandatory for the central government, the SNCP can be used by other public bodies on a voluntary basis.

Figure 11. The Portuguese Public Procurement System (SNCP)



The major features of the SNCP system are:

- Participation prescribed by law: Mandatory entities – central administration and public entities and voluntary entities; municipalities and local entities, state-owned companies or regional authorities.
- Aggregation of procurement by ANCP or the UMC.
- Acquisition under framework agreements (FA) established by the ANCP for demand aggregated across the central government, standardised and purchased benefiting from economies of scale.

Working under the umbrella of the Ministry of Finance, the ANCP was responsible for setting up the SNCP, training the UMCs and coordinating the Interministerial Advisory Committee, responsible for the approval of the National Purchasing Plan, upon ANCP's aggregation of information and calculation.

The top priorities identified for ANCP were:

a) Launching public tenders with the aim of awarding FA for goods and services commonly purchased by public administration. The strategy aimed at creating value, financial gains and savings and cost reductions through the implementation of FA, which would facilitate the tendering process, by fastening time frames, easing rules and presenting a predefined set of products. This process combined with the centralisation under the UMC promoted synergies and economies of scale as a result of a concentration process.

Figure 12. Objectives, measures and benefits of SNCP

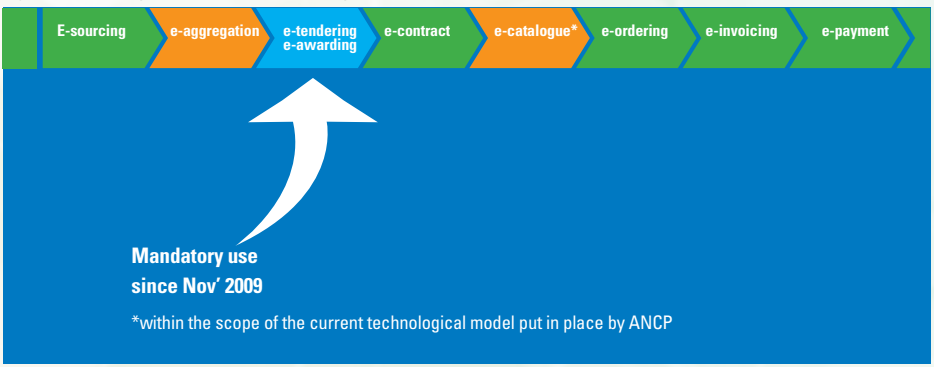
Objectives	Measures	Benefits
Public expediture	"FAs for the major pending categories Goods and services standarization"	Reduction and rationalization of public expediture and consumption Controling Public Dept
Saving	"Awarding mainly based on the lowest price criteria Definision of maximum price and minimum technical specification as using quality and SLA pattems"	Reduction of public dept balance
Efficiency	"Purchasing process simplification IT innovation through e-procurement Suppliers selection"	"Dematerialization of business process Allowing Public Administration modernization and increasing e-Goverment"
Competitivness and quality	"Suppliers selection based on economic, financial, technical, enviromental, quality and SLA related criteria Possibility of grouping and subcontracting Subdivision in lots – regional and by goods or services"	"Markets coppetitivness development Supplires diversity and SME basis as used Best market condition for Public Administration Green Public Procurement goals"
Management information system	Management information through suppliers to ANCP, MPU and contracting authorities (mandatory)	"FAs performance monitoring Ongoing improvment of purchasing Process"

b) Developing a technological model to provide full support to FA procedures and call-offs by electronic means, adding transparency and efficiency to the process and reducing transaction costs.
c) Designing Public Procurement Information System, providing statistical information and reports on public procurement for both internal management and the EU requirements.

7.2.3 eProcurement reform: Business and Technology Considerations

In Portugal in the definition of the eProcurement reform strategy, the main focus was to cover the central components of the procurement cycle, namely tendering and awarding phases. Another major goal was to promote transparency and information to stakeholders and citizens. Following the reform, all awarded public contracts were required to be published in a BASE web portal[4]. Other components were also added to SNCP, including eAggregation and eCatalogue, or a reporting and monitoring system for obtaining savings and evaluating the performance of the FA. These additional tools are used by ANCP for the management of the system and made available to the entities in the SNCP. As the system is financed by fees paid by the suppliers[5], these tools were necessary to calculate the turnover of purchasing under the FA and payment processing to the suppliers.

Figure 13. The e-procurement model components



7.3 Multi-Platform Model implemented on "Software as Service" basis

Selection of the multi-platform system rather than developing a new single proprietary platform in Portuguese case was based on the assessment of the availability of commercial eProcurement platforms in the country, with several years of experience. These platforms were initially developed for the construction market (e-tendering) but in the end started to offer electronic purchasing solutions as well.

4 *www.base.gov.pt The portal (base) is defined in the Code of Public Contracts and is jointly managed by INCI, the Institute for Construction and Real State, and the ANCP. Direct award contracts are only effective after publication in the portal.*
5 *Fees vary from 0.5 per cent to 3 per cent, depending on the FA, average fee is 1 per cent.*

Another decisive factor was the political will to reform national public procurement system in a short period of time and with limited budget available to support these reforms. Therefore, in order to decrease "time to market" and to provide adequate operational capacity for the entire national public sector, it was most rational to engage commercial platform operators on the "Software as Service" basis within a framework agreement regulated by the procurement law. Based on this legal instrument contracting authorities specified their individual demand for eProcurement platform services and contracted these services either directly or through some price-comparison procedure.

To implement selected reform model, the ANCP launched an international public tender in 2008 to establish a FA for eProcurement platform services.

The use of a FA with second stage competition as the procurement instrument was considered to be an optimal business tool. This tool would allow to qualify commercial eProcurement platform operators, establish standardised set of eProcurement platform services (including e-Tendering and e-Purchasing and required service level agreements), stipulate certification requirements and licence conditions while at the same time benefit from second competition stage in terms of improved proposals for prices and terms and conditions of eProcurement platform services.

All platforms selected for FA were required to be certified. In Portugal the accreditation process is conducted and the licence is issued by CEGER, a dedicated public agency in charge of the government electronic services. To ensure compliance with licence terms, each commercial eProcurement platform operator is required to undertake annually a security audit of basic functionalities: (a) eAccess – authentication of all users by digital certificates; (b) eSubmission – assure that all documents submitted have digital signature and are encrypted; (c) eNotification – assure electronic communication for all public entities and (d) suppliers and chronological data assurance for each tendering process.

In June 2009, five months ahead of the chosen date for mandatory use of eProcurement, the FA became available to allow public entities to choose their eProcurement platform service provider. Consequently, contracting authorities included in the SNCP were required to use this FA awarded by the ANCP to contract eTendering services for their own procurement procedures. Other contracting entities were allowed to contract eProcurement platform service provider outside the FA established by the ANCP.

Cost of eProcurement platform services for Portuguese contracting authorities depends on the number of users, number of procedures run, number of modules/scope of usage (eTendering, eAuction, eOrdering, etc), whether services are tailored for the specific needs of the contracting entity and if so, to which extent and other individually agreed terms and conditions, such as usage costs borne by the contracting entities or shared with economic operators; fixed fee per period or variable fee per tender. Consequently, scope and cost of services is varied and depends on individual requirements of each contracting authority.

This model requires opening competition on regular basis so it is possible to change providers and prevent creating local monopolies. In July 2012 the ANCP successfully concluded the process of changing the eProcurement platform service provider for the SNCP, after launching a call-off under the FA. The project was then executed under a thorough change management programme, with a dedicated multi-disciplinary team.

7.3.1 eProcurement reform forms a part of the e-Government reform programme

The eProcurement reforms in Portugal were not a stand-alone process, but an important part of e-Government project that started earlier, in the beginning of the 21st century. Therefore e-Government considerations were taken into account while designing eProcurement reform strategy, namely in respect to improving interoperability and accessing other government systems developed under the e-Government initiative. Also, while eProcurement reform started in 2007, it was based on the national programme for electronic purchasing (PNCE) initiated in 2003. This programme had several components, including eProcurement Pilot Projects, eTendering, eAuction and eCatalogue platform studies. In order to reduce implementation costs of the eProcurement reform it was decided to take advantage of the electronic signatures included in the existing Citizen's Card (*Cartão do Cidadão*) and these electronic signatures offered by the national ID card system can be used to access eProcurement platforms in Portugal.

7.3.2 Centralised purchasing based on eProcurement tools

The SNCP was designed for national coverage and use, and it is available, free of charge, to all entities in the country, mandatory or voluntary. The cost of the eProcurement platform services for supporting central purchasing conducted by the SNCP is entirely borne by the ANCP. There are no costs involved for the contracting authorities or economic operators. To set up the eProcurement model and its components (namely ePlatform, eCatalogue, SRVI – the monitoring and reporting system, SIG – the management information system, the aggregation of demand tool and the users' accreditation system), ANCP invested around €1 million between 2008 and 2012.

There are two types of users in the SNCP's ePlatform:
a) Contracting authorities that can run all types of tenders (the ANCP and the UMC)
b) Contracting authorities, which can only run tenders under FA (mandatory and voluntary entities).

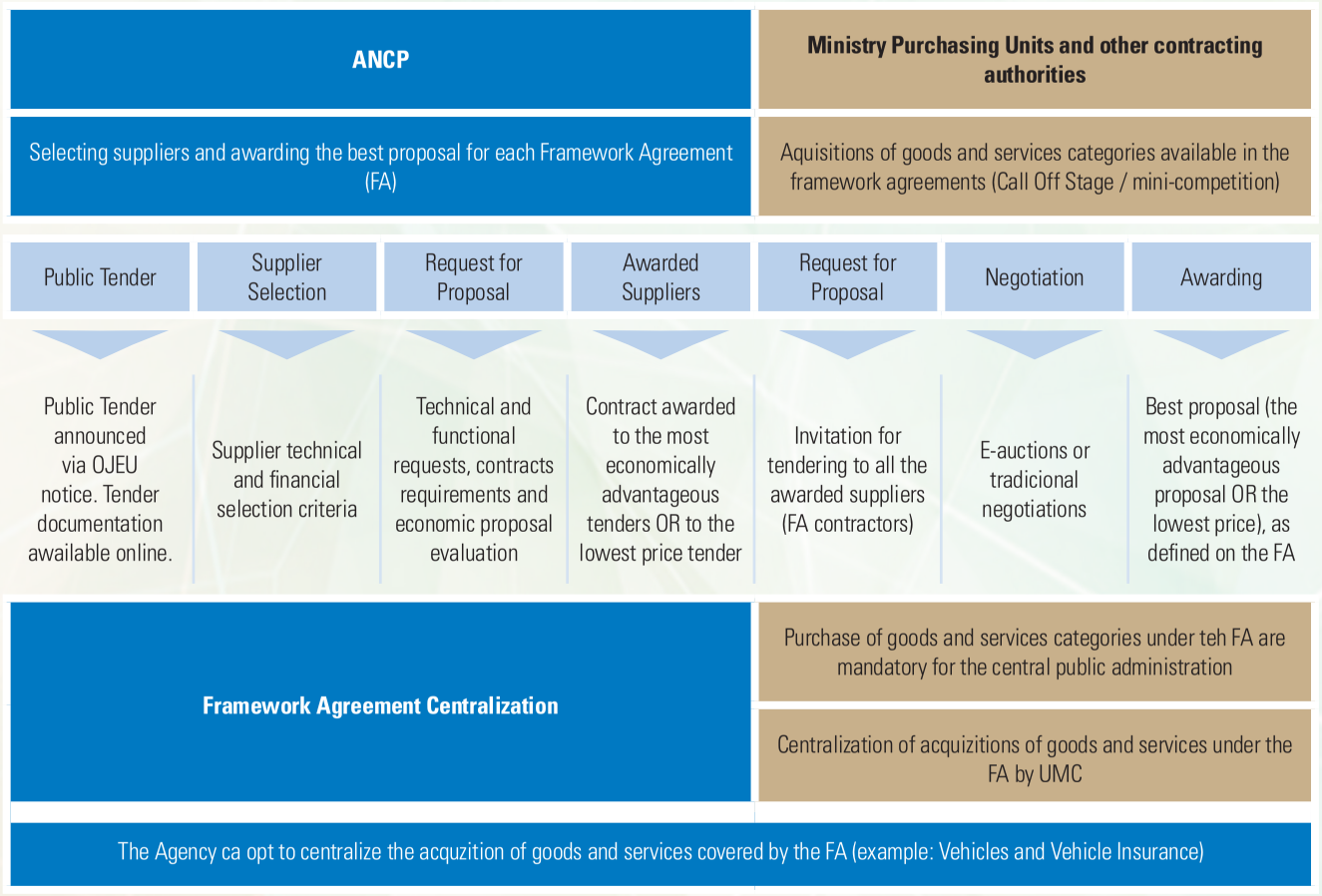
Each contracting authorityand each supplier must report all procedures and call-offs under the FA online to ANCP, conducted in the platform. ANCP is also allowed to audit and verify the data reported.

7.4 Implementation challenges and change management

The Portuguese road towards eProcurement wasn't straightforward and without obstacles. In fact, the new public procurement concept brought changes that affected procurement officials and local suppliers and contractors. It caused disruption and required habits to be changed, especially when it came to learning new eProcurement procedures and tools.

Change management played a key role in the deployment of the process and each stakeholder had to play his part in developing new practice. Change management plans and training programme were developed by the ANCP and the eProcurement platform operators, offering their services under the FA. In addition, some *ad-hoc* public relations actions were undertaken to reduce concerns and fears.

Figure 14. Centralized Model – Framework Agreement (FA) for Contracts and Acquisitions



To implement the SNCP, a master plan was elaborated, including:

a) A roadshow in the regional cities designed to enlighten contracting authorities, public servants, economic operators or commercial associations and to explain the mission and role of the ANCP, the objectives and coverage of the SNCP system and the roles of stakeholders. The roadshow started in November 2009 and ended in April 2010. Eight events were held in seven cities, with around 1,200 participants from more than 500 public and private organisations.
b) Training sessions and capacity building seminars for procurement officials aimed at improving skills in operating eProcurement tools , as well as improving knowledge about the SNCP and the use of the centralised FA. This process is run by the ANCP since 2008 and is still ongoing.
c) Annual conferences on public procurement with national and international experts, aiming at presenting the status of the public procurement reform, the evolution of the SNCP system, sharing experiences and collecting feedback from users.
d) Bilateral exchange of experience with other European public procurement regulatory authorities and central purchasing bodies to share common practices, experience and strategies for public procurement innovation.

7.5 Key benefits

The success of eProcurement reform in Portugal was based on the political support and commitment of all stakeholders. Clear changeover plan and business support resulted in stakeholders trusting the SNCP system and eProcurement tools incorporated in the national eProcurement scheme.

Electronic procurement is perceived as an improvement because it simplified relations between business community and public entities in the tendering process, improved standard tendering documents and reduced administrative effort and transaction costs for all participants. It also improved monitoring procedures and increased transparency in the contracting process, which is appreciated by the general public.

The new eProcurement scheme allowed Portugal to:

- Increase transparency and security through streamlined procurement processes and rigorous workflow management.
- Increase competition and access, reducing the barriers that small and medium-sized enterprises face when competing for public sector contracts by promoting the participation of SME in the FA.
- Increase efficiency with faster transactions and paperwork reduction.
- Centralised FAs achieve significant financial savings in public spending.

The SNCP managed by ANCP, now ESPAP, evolves and improves its results. The strategic plan for 2007-2010 has been accomplished in terms of centrally managed frameworks launched and savings achieved. In terms of savings and public spending covered, the system achieved respectively €185 million between 2009 and 2011, 12 per cent above the target, and a coverage of 80 per cent of the Portuguese public spending on purchasing goods and services. Over last year's voluntary participation by municipal and regional entities has also

increased. Lastly, in terms of green procurement, targets set in the national strategy either for the number of pre-award procedures with environmental criteria or for the value were exceeded.

7.6 The Way Forward

eProcurement is facilitating improvements in managing public spending and the objective is to achieve complete eProcurement coverage of the public procurement cycle. The plan is to develop an end-to-end technological model to ensure not only transparent and cost effective procurement processes, but also knowledge base supporting strategic decisions towards public spending reduction and optimisation[6].

Under the 2014 EU directives new policies major goals are set towards targeting the following:

a) "Single sign on" for all public procurement activities - includes all components of the public procurement chain in one single web-based tool, for all public entities.
b) Single access point - establishes one access point and data management for the different stakeholders.
c) Management information system - obtains real time data monitoring and control for the entire procurement process.

The implementation of this model will boost three key strategic dimensions:

- On the financial side - by obtaining savings and public expenditure reductions both in the short and the long-term, while delivering value and sustainability.
- On the political side - through completely transparent, rigorous and efficient procurement processes.
- On the social side - by providing a better service for all stakeholders, achieving their buy-in and contribution, alongside a fundamental cultural change in the public administration towards the effective use of taxpayers' funds.

Lessons learned

- The major lesson from the Portuguese eProcurement reform project is that only by combining legal, technological, business and processes transformation, it is possible to achieve a successful reform.
- Endorsement from key ministries, public commitment, comprehensive and clear implementation plan involving all major stakeholders, and a good communication strategy, were main success factors.
- The selected reform model was well aligned with local market capacity and institutions responsible for reform implementation benefitted from local business support
- The model designed for national centralised purchasing was collaborative and competitive. It helped to quickly achieve reform objectives which in turn persuaded contracting authorities that reform is worth of their support

6 This strategy was approved by the Portuguese Government as one of the measures of the IT reform, under Resolution for the Council of Ministers, n° 12/2012, February 2012

8. eProcurement in Turkey: step by step

- "Top down" reform approach
- eProcurement reform as a part of e-Government project
- Reform project funded from fees paid by suppliers and contractors awarded public contracts
- Sector piloting - facultative use of eProcurement platform

8.1 Before the reforms

Kamu Ihale Kurumu (KIK), the national public procurement authority was interested in electronic public procurement since it was established in 2002. Basic online features, such as tender register, list of blacklisted suppliers and preparation and publication of procurement-related notices were introduced by 2004, under the Tender Information System.

In 2006, it was updated to the Public Procurement Platform (PPP) and offered a new procurement opportunities search engine and access to KiK's review decisions. Still, there was no uniform registration for contracting entities and suppliers, tender documents were not available online, and it was not possible to prepare, submit and evaluate tenders electronically.

In addition, the KIK, being a self-funded regulatory body, was unable to verify whether all successful tenderers, awarded a contract above approximately €125,000 paid their 0.05 per cent of the contract value to the KIK.

Figure 15. The local public procurement market

- Public procurement in Turkey is regulated by the Public Procurement Law No:4734 (PPL), which came into force on 1 January 2003 and has been amended several times since;
- Public contracts signed through public procurement procedures are regulated by Public Procurement Contracts Law No:4735.[1];
- Kamu Ihale Kurumu (KIK) was established in 2002 is a national regulatory authority and the review body;
- Total public procurement sector in Turkey is worth approximately €40 billion and 7 per cent of the national GDP (2011);
- €27.4 billion (2011) is tendered under the national public procurement law;
- €7.4 billion (2011) is spent by direct contracting, without any competition;
- €5.2 billion (2011) is procured within exemptions included in the PPL;
- Total annual number of tenders is 137,000 (2011)[2]

1 *Public Procurement Authority, "Public Procurement Regulations", www1.ihale.gov.tr/mevzuat*
2 *Public Procurement Authority, "Public Procurement Monitoring Report, 2011", March 2012, www.kik.gov.tr/ihale_istatistikleri-45-1.html*

8.2 eProcurement Reform: Legal and Regulatory Framework

The KIK introduced eProcurement under the bigger umbrella of eGovernment initiatives in Turkey. The "public procurement in electronic environment" was included in the information society strategy (2006-2010) and approved by the Prime Minister's High Planning Council in 2006. The strategy set a target of 90 per cent of electronic procedures by 2010 and made the KIK responsible for the eProcurement reform project[1].

Next, in 2009 the Prime Ministry eGovernment Advisory group included the eProcurement reforms in the 11 high priority eGovernment projects. "Development of an Electronic Public Procurement System" and "Operation and Extension of the Applications provided within the EPPP" were included in the 2009 and 2010 Annual Government Programs[2]. Also in 2010, the Council of Ministers approved the National Strategy to Enhance Transparency and Fight Against Corruption (2010-2014).

8.2.1 Legislation and Operational Policies

Even though the Government insisted on speedy reform implementation, it was impossible to introduce electronic procedures under the existing PPL, designed for paper-based procedures. The Law No:5812, which amended the PPL, was enacted in November 2008 and introduced Electronic Public Procurement Platform (the EPPP), a national eProcurement system and new electronic procedures: dynamic purchasing system and electronic reverse auctions. Dynamic purchasing system is an online procedure for purchasing standardized goods via the EPPP, similar to dynamic purchasing systems in the European Union directive 2004/18/EC. Electronic reverse auctions were introduced to be used after the initial evaluation of tenders in open, restricted procedure and negotiated procedure.

The 2008 law has also empowered the KIK to manage the eProcurement reform and issue secondary legislation related to electronic eProcurement system and its implementation. In December 2010, a communiqué was issued that prescribed procedures for online procedures. Next, in February 2011, the KIK issued an Electronic Procurement Application Regulation.

In essence, the following rules were introduced:

- In order to register and use the EPPP all contracting authorities and economic operators are required to sign a service agreement with the KIK;
- A web browser and an internet connection are sufficient to access the EPPP after completing registration;
- Use of eSignatures is mandatory for downloading of tender documents and submission of tenders electronically;
- The system is intended to cover entire procurement cycle but is developed and implemented in stages. First, registration on the system and pre-tendering procedures should be digitalised, including needs assessment and procurement description, tender document preparation and downloading, tender notice submission and publication. The eTender submission and eTender evaluation phases should be enabled when users learned how to use the system;
- Tender evaluations should be recorded in the system for all paper-based documents.

1 *State Planning Organization, "Information Society Strategy (2006-2010)", July 2006, Ankara, TURKEY.*
2 *State Planning Organization, "Annual Government Program of the Year 2009", October 2008, Ankara, TURKEY.*

- When a contracting authority decides to use eSubmission and eEvaluation, paper-based tenders are not allowed;
- eSubmission and eEvaluation are permited for goods procurement in open procedure and dynamic purchasing system;
- All transactions on the EPPP are recorded and the EPPP records are deemed legally valid, unless technical error is proven;
- Qualification inquiries about economic operators are made via the EPPP, if relevant e-government services are available. Hard copy documents are not required if tenders are accepted electronically;
- All notifications and submissions from contracting authorities to economic operators shall be made via the EPPP, and are time-stamped;
- Confidentiality, security and personal data protection are guaranteed by the KIK; information on economic operators can be used only for tendering purpose and is not shared with third parties.

8.3 eProcurement Reform: Business and Technology Considerations

8.3.1 Single platform, custom-built, outsourced and 'government managed'

To implement the eProcurement reform in Turkey a single eProcurement platform model was selected and its acquisition was undertaken under 'government managed' contract. The platform was a custom built solution, in order to make it interoperable with other e-government services. In May 2009, the KIK signed a service contract with a local IT supplier, outsourcing the software and systems development but retaining management of the EPPP. The EPPP design, development and test work of the custom designed platform was completed by 1 September 2010. The first electronic tender was launched in March 2011, in pilot in the healthcare sector, covering medical instruments.

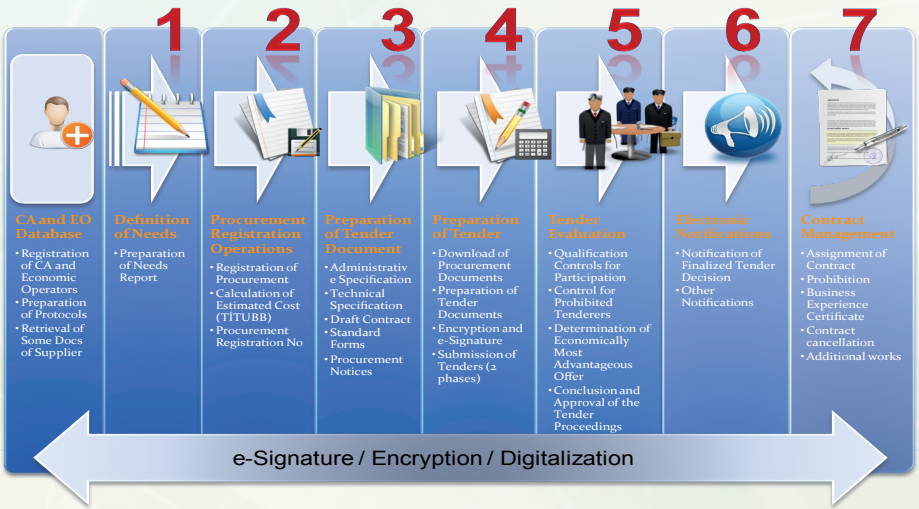
8.3.2 Interoperability

It was a reform objective that the EPPP will be interoperable with other e-government applications. Presently, the EPPP is interconnected with the Turkish Revenue Administration (information about the tax debts due, identity of legal persons, balance sheet and income statements), the Social Security Institution (information about social security premium debts due), the Ministry of Health - The Pharmaceuticals and Medical Devices Data Bank (information about sellers of medical devices and goods sold by them, including quality certificates and authorisations given to sell those goods by producers), the General Directorate of Population and Citizenship (information about identity of real persons), and the Treasury's General Directorate of Public Accounting (information about identity of contracting authorities).

In addition, the EPPP is linked to 27 commercial banks in Turkey in order to obtain and process bid bonds and bank reference letters in tenders that are submitted and evaluated electronically.

Figure 16. e-Procurement in 7 stpes

Contracting authorities:	Suppliers and contractors:
• preparation of a needs report to describe what will be procured • tender registration and a unique tender registry number given for each tender • tender document preparation using a wizard based on template administrative specifications working in accordance with regulations • tender notice submission, preparation and publication • recording of tender commission members • recording of tender document sales and downloads by eSignatures • recording of tenders submitted • recording of tender evaluation records and minutes of tender commissions • qualification inquiries from systems of related organisations • blacklist confirmations of successful tenderers and contractors • contract award information submission to the PPA and publication of contract award notices • preparation of business experience certificates for contract awardees who have successfully fulfilled a contract • recording of direct procurement value information every month • notifications (such as addendums and contract award decisions) to be submitted to tenderers who are registered in the EPPP • addition and deletion of users and assigning of roles to users such as procurement personnel and tender commission member.	• search for tender opportunities and tender notices • downloading of tender documents by eSignatures, which makes it unnecessary to visit the contracting entity and purchase the paper-based tender document • eTender preparation and submission for tenders where tenders are accepted electronically • notifications that are received from the contracting authorities • addition and deletion of users and assigning of roles to users such as personnel in charge of the use of EPPP.



8.4 Change Management and Reform Implementation

The KIK used various techniques to smooth the transition process to electronic procurement. The change management activities can be summarised as follows:

- Seven months before launching first pilot tender, thee contracting entities and economic operators were notified to register in the EPPP;[3]
- Also seven months in advance to the pilot, an EPPP Call Centre was opened to assist contracting entities and suppliers in signing a service agreement with the KIK and registration process as well as using various functionalities of the EPPP. The EPPP Call Centre can be reached from a single number, 444-0-545, anywhere in Turkey;
- In July 2010 all contracting entities and economic operators were reminded about official launching of the EPPP on 1 September 2010, so that they could finalise their registration process and plan their tenders accordingly.
- Online training resources, videos and online manuals for all EPPP functionalities as well as Frequently Asked Questions & Answers, were made, available in September 2010;
- The KIK conducted a series of "face to face" training sessions for contracting authorities and suppliers and contractors, and continues to provide training services to new system users.

8.5 Interim results and plans for the future

According to a survey conducted in March 2012, 89 per cent of contracting authorities reported that the EPPP Tender Document Preparation module decreased mistakes in their tender documents.[4]

Local suppliers and contractors in Turkey saved approximately €17.6 million per year simply because of accessing tender documents online on the EPPP instead of purchasing a copy of tender documents from contracting entities.

With tender documents published online the average number of tenders increased to 5.6 compared to 3.3 in typical paper-based procedures (2011). The improved competition resulted in systematically improving estimated value/actual contract price ratio, which demonstrates a reduction of contract price from what was estimated by the contracting authority before launching a tender on the EPPP[5].The combination of increased competition and decreased estimated value/actual contract price ratio resulted in savings for contracting entities – it is estimated that €0.57 billion was saved per year by contracting entities.[6]

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3 The announcements made on the EPPP can be seen on the "Announcements" section of the EPPP available at the main EPPP web site: www,ekap.kik.gov.tr/EKAP/index.html .

4 Public Procurement Authority, "EPPP Usage Survey 2012", p. 3, March 2012, Ankara, Turkey, available at www.ekap.kik.gov.tr/EKAP/Ortak/belgeler/20120404_EKAP_Kullanim_Anketi.pdf

5 Public Procurement Authority, "Public Procurement Monitoring Report, 2012 First Half", August 2012, Public Procurement Authority, "Public Procurement Monitoring Report, 2011 First Half", August 2011, Public Procurement Authority, "Public Procurement Monitoring Report, 20120First Half", August 2010, available at www.kik.gov.tr/ihale_istatistikleri-45-1.html

6 Kocberber G. and Solak F (2011) Dış Denetim Quarterly Journal, "Bir E-Devlet Projesi Olarak EKAP", July-September 2011, p.61, Ankara, Turkey.

The 0.05 per cent of the public contract value fee payable to the KIK increased from €10.8 million to €15.4 million per year, thanks to improved control of spending on public contracts.[7]

The EPPP pilot in the healthcare sector demonstrated significant benefits but it constitutes a beginning of the eProcurement reform in Turkey since eProcurement is still used on voluntary not mandatory basis.

In terms of platform functionalities, next steps include development of electronic contract management procedures, covering records of contract amendments and cancellations and price differences due to inflation and development of electronic auctions and dynamic purchasing systems which are provided for in the PPL but have not been implemented in practice. There is also a need to standardise technical specifications for commonly purchased goods and dedicated index system is needed to accurately conduct unit price analysis. Also, the 2012 Annual Government Program included developing electronic procurement processes for framework agreements in cooperation with the Ministry of Health (MoH), since framework agreements are used by contracting entities under the supervision of the MoH.[8] This new pilot is undertaken by the KIK, the MoH and volunteer contracting authorities in the health sector.

In terms of interoperability, integration with the Ministry of Justice and the Turkish Standards Institute, to inquire information such as judicial records and quality certificates is in progress.

Figure 17. eProcurement reform results in numbers (2014)

- Registered contracting entities: over 29.000,
- Registered economic operators: over 90.000,
- Registered users: over 500.000,
- Tender notices published: over 85.000,
- Black list confirmations: over 1.600.000,
- Contract award notices: over 190.000,
- Daily hit of EKAP: 90.000,
- Total number of visitors:84 million,

Lessons learned

- With, top down, approach, a very strong support from central government is essential. Legal changes necessary for initiating eProcurement reform require amending primary legislation and without strong Prime Minister's support laws adopted in 2008 would not be possible. Similarly, the Prime Minister's decision to include the eProcurement reform into 11 high priority e-Government projects made it easier to allocate financial and technical resources.
- With, large public, sector and high number of contracting entities, implementation of a single platform and a step by step approach were considered an easier option to implement. Facultative use of the EPPP enabled contracting entities to make decision about using specific eProcurement functionalities at their own pace. It is true that some contracting entities still run paper-based procedures but chaos caused by radical change in the procurement system was avoided.
- The EPPP focused on digitalising entire public procurement cycle and thus improved significantly public procurement management process for public administration.

7 *Public Procurement Authority, "EPPP 2011 Annual Report", p.6, April 2012, Ankara, Turkey available at www.kik.gov.tr/kurum_faaliyet_raporlari-25-1.html .*

8 *State Planning Organization, "Annual Government Programme of the Year 2012", October 2011, Ankara, Turkey.*

- Reform leader and its operational management capacity is very important: the EPPP Call Centre, online training resources and video manuals required substantial resources but helped to achieve reform objectives and were appreciated by stakeholders.
- To develop the eProcurement platform and provide a comprehensive service to stakeholders feedback needs to be systematically collected and reviewed. In case of the EPPP the Call Centre provides a lot of feedback and the EPPP continues to improve its existing functionalities and develops new functionalities as requested by the users.
- If a single platform is serving entire public sector thorough testing and piloting is a must. For each new feature and functionality a pilot is necessary; otherwise reputation risk is too high to bear.
- There is an ongoing infrastructure investment in hardware and database enlargement to consider. The KIK manages the annual EPPP operation costs easily because it is funded from fees paid by suppliers and contractors awarded public contracts.
- An eProcurement system should have a solid central database collecting all procurement related information and enabling accurate market analysis and in-depth statistical information for public finance management.

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9. ProZorro in Ukraine: a game changer

- Transparency - everyone can see everything with open data
- Modernity - innovative and globally attractive reform concept
- Convenience – easy access, no legal risks in the standardised process and time-efficient contracting
- Economy - satisfy the needs of the society at best prices

9.1 Before the reform

In Ukraine, the Soviet legacy and nomenclature management brought the public procurement system under the control of the ruling elite, with corrupt institutions and heavy bureaucracy camouflaging discretionary decisions about public contracts. A few failed reform attempts undertaken since 2006 did not manage to change a *status quo* and competition and transparency in public spending remained declarations being never implemented in practice. With annual public procurement budget amounting in Ukraine to $10-20 billion the problem was not only structural nepotism and bribery in public tenders but also vertical schemes channelling funds stolen from the state budget for shadow funding of political parties and corruption of the law enforcement.

After the Maidan revolution in spring 2014, because of the total lack of trust in compromised state institution, the reforms of public procurement sector in Ukraine were initiated by civil society activists volunteering to finally change the rules of the game and give private sector an option to do an honest business with the government.

Procurement market before the reforms

a) Public procurement involves more than 16,000 contracting authorities and more than 25,000 tender committees (central and local government, state-owned companies).
b) The total procurement spending was US$ 12 billion in 2014, half of which was above the thresholds.
c) Thresholds for competitive contracting: US$ 5,000 for goods and US$ 250,000 for works.
d) 43 types of public contracts exempt from competitive tendering.
e) More than 1.5 million transactions, of which about 100,000 were above the thresholds.
f) National regulatory body: Public Procurement Regulation Department of the Ministry of Economic Development and Trade of Ukraine.
g) Public procurement review body – Antimonopoly Committee of Ukraine.
h) Five procurement methods prescribed by law, with open tendering and negotiation with one supplier most frequently used.
i) eProcurement: procurement notices and contract awards published on the government web portal: www.tender.me.gov.ua. No electronic bidding and data access.

9.2 eProcurement Reform: Legal/Regulatory Framework

In 2014 the new Minister of Economic Development and Trade of Ukraine started reforming public procurement sphere by changing legislation in April 2014 in order to limit direct contracting (number of exceptions was brought down to 13 types of contract) and bring the legislation closer to the public procurement policies of the European Union (EU). Also, the new law revised a scope of application of the law covering more of the public sector in Ukraine and cleared the way for Ukraine's final offer to join the World Trade Organization's Agreement on Government Procurement (GPA). However, the law of April 2014 did not open doors to implementing electronic procurement (eProcurement) in Ukraine and creating more reliable institutions and for this reason legislative drafting was renewed.

A substantial role in the formation of the procurement policy was played by experts of the EU-funded technical cooperation project for the harmonisation of the Ukrainian procurement system with the EU public procurement directives. Initially, the project experts were quite apprehensive towards civil society initiative to reform public procurement sector using eProcurement. The EU experts believed that the eProcurement reform was not a priority for Ukraine and that it was secondary to procurement professionalisation, centralisation, monitoring, etc. However, some balance was found later on and the joint work on the legislation continued making it possible to find the right models for implementing necessary changes while remaining in compliance with the EU directives.

By the end of 2014, the joint efforts resulted in a new draft law including the implementation of e-procurement, as well as many general innovations such as self-declaration, the prohibition to require confirmations from open state registers, harmonisation of deadlines, opening of additional data, etc. However, this draft law was never adopted. The lack of a wider consensus and the unwillingness of the Members of Parliament to support the reforms prevented the legislative changes at that time.

Lack of regulatory framework was preventing eProcurement reform but the solution was found in the form of a project piloting electronic procurement below the threshold of the public procurement law. When this solution was suggested by the Deputy Head of Presidential Administration a quick analysis of the spending below the thresholds of US$ 5,000 suggested that such a pilot could bring tangible results and savings. Therefore, the eProcurement pilot project commenced in February 2014 with micro value procurement, not regulated by public procurement law and the pilot was included in the National Reform Council programme in order to produce an insight how to further regulate electronic procurement in Ukraine.

Considering the previous negative experience with the Parliament, amendments were divided between two draft laws:

a) Amendments relating to anticorruption, deregulation and GPA.
b) Amendments relating to e-Procurement.

First amendment was adopted in September 2015. The second draft law, presently under discussion in Parliament, is based on lessons learned from the pilot project and is intended to enable structural reforms in the public procurement sector based on mandatory use of eProcurement tools and open access to data on public procurement and public contracts.

The main elements of the new eProcurement regulation include:

a) Introduction of fully electronic procedures for all contracting authorities at all levels.
b) Four procurement methods: open tendering, negotiation, competitive dialogue and framework agreements.
c) Electronic process for public procurement complaints (E-review).
d) Dual system with different regulation above and below the GPA/EU thresholds.
e) Introduction of centralised procurement bodies.

9.3 eProcurement Reform: Business and Technology Considerations

In Ukraine, the main objective was to design a public procurement system avoiding usual trade-offs of procurement policies by applying electronic procurement methods. Only an eProcurement system can improve transparency and access at the same time, as with manual processing any new policy would either increase regulation and, therefore, hamper the access for private sector or decrease regulation making the life of corrupt participants easier. Therefore, the objective was to cover entire public procurement cycle, from planning to contract management, with standardised electronic process and ensure real transparency and open access to procurement information for stakeholders, civil society organisations and citizens in general.

With this objective in mind, the eProcurement reform in Ukraine was led by the civil society activists and the Transparency International Ukraine; it was based on cooperation among civil activists and local businesses that wanted to shape new reality.

In terms of reform model, the single platform model was unrealistic for Ukraine not only because of lack of time and start-up costs involved (there was no time to internally develop a customised solution and no state budget available for purchasing an 'of the shelf' product) but also because of concerns linked to unitary model – too much risk of creating a legal or natural monopoly instead of competitive service market. On the other hand, a fully competitive multi-platform model requires complex regulation, high capacity of contracting entities and strong central management to implement effectively. Therefore, an innovative solution was required; a new concept of multi-platform model (but linked in cooperation with central unit) was conceived. The hybrid, as named by project experts, Tato Urjumelashvili and David Marghania, had a strong business background and allowed to benefit from existing electronic procurement capacity in private sector in Ukraine (that is, big number of commercial electronic systems with significant number of registered suppliers and strong sector, with one of the best programming communities in the world) while avoiding shortcomings of other multi models where using electronic procurement did not achieve transparency objectives with complicated data collection for monitoring and market analysis. At the same time this model could be implemented based on cooperation of private sector and civil society, very important for Ukrainians who had a deep distrust of the state officials and Ukraine, where state in political crisis was unable to provide normal client-oriented services.

The hybrid model has also solved the problem of funding and proposed to build central unit from financial contributions of commercial platform operators. **The choice of the reform model was not in the least driven by general orientation towards a liberal economy and a reduced role of the state in the life of people.**

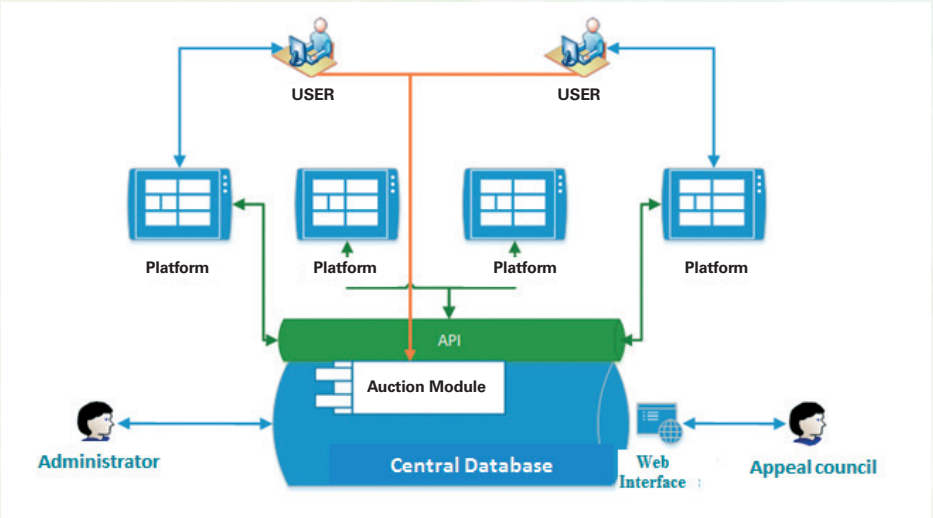
The hybrid model includes a single central database unit to which all commercial platforms are connected through a standard application programming interface, and the process stakeholders - i.e. contracting authorities and suppliers and contractors – are accessing the system through these platforms.

Full information about any public tender announced on any commercial platform is immediately recorded in the central database and is shared with all other platforms connected to the central unit. In this model stakeholders can use any commercial platform connected to the central database unit for asking questions and bidding. To achieve this effective exchange and access to information, all data formats, tender procedures, rules, etc. are strictly standardised and made uniform for all commercial platform operators.

Therefore, the hybrid model allowed achieving benefits normally linked with single or multi-platform systems:

a) there is a real competition between the commercial electronic platform operators, leading to an improved level of services;
b) all existing local market suppliers of the commercial procurement platforms are connected in a way that suppliers registered on commercial platforms have access to the public procurement market;
c) E-platforms charge suppliers a small access fee and use a part of this fee to pay for the administration of the central database unit, which motivates the commercial platform operators to develop their platforms in order to attract new suppliers while making the central database unit financially independent from political decisions;
d) full standardisation of workflows, procedures, data sharing protocols, etc. ensures data uniformity for subsequent reporting and market analysis.

Figure 18 ProZorro Project - the hybrid eProcurement model



9.3.1 Technology considerations

A key component of the hybrid model is a standard API interface that enables interaction between a single central database unit and commercial platforms as well as communication with the process stakeholders, who are accessing the ProZorro system through these platforms.

Also, to maximise impact of the eProcurement reforms on the market, a decision has been made to fully open the central database code using the most flexible open-source Apache 2.0 license. This code can be freely downloaded from: https://github.com/openprocurement. The opening of the source code facilitated joint improvement of the system by the community of Ukrainian programmers and the development of additional applications, as wel as created an opportunity for exporting the model to any country wishing to implement a similar system. In addition, the decision to use the Open Contract Data Standard (http://standard.open-contracting.org/) from the very beginning will make it possible in the future to link the Ukrainian system with other electronic systems, as well as to perform a general cross-country analysis of public procurement data.

To enable effective monitoring it has been decided to develop and launch a business intelligence (BI) module for the monitoring of the ProZorro procedures. This was facilitated by a donation of Qlik (http://www.qlik.com/), one of the best commercial BI systems in the world, this donation was possible because of the civil society initiative supporting the ProZorro. Presently, the monitoring system is actively developing and literally everyone, including watchdogs and general public can, check all the analytical data at http://bi.prozorro.org/ in the real time mode.

9.3.2 Institutional framework

In order to pilot the hybrid concept, in September 2014, a memorandum on the creation of a new Ukrainian eProcurement system was signed between the group of volunteers, e-platforms, the regulator and experts and brought the ProZorro Project into life. The ProZorro means “transparent” in Ukrainian and the ProZorro Project is managed by Transparency International Ukraine as an open-source system. The involvement of the leading anticorruption NGO guaranteed a “clean” funding for the project (the first funds for programming were contributed jointly by the commercial platforms) and emphasised the anticorruption focus of the reform initiative. Because of regulatory limitations explained above, on 12 February 2015 the ProZorro was launched for voluntary use by contracting authorities for micro value procurements. The pilot involved initially three contracting authorities, three commercial platform operators and offered one electronic bidding procedure: open tendering with post-qualification and a mandatory electronic reverse auction.

Initially, the ProZorro Project was run entirely as a civil society initiative, supported by the Transparency International Ukraine. Upon launching a pilot of ProZorro Project, a closer coordination with the Ministry of Economic Development and Trade of Ukraine was decided and in March 2015, two ProZorro Project volunteers were appointed to key regulatory positions in charge of public procurement reform. Project manager Olexander Starodubtsev became the Head of Public Procurement Department in the Ministry of Economy (national regulatory authority) and Kristina Gutsalova became the Public Procurement Reform Project Manager in the National Reform Council of Ukraine.

The simplicity of the procedures and "clean hands" label of Transparency International Ukraine won huge interest of local business community and the public procurement reform itself became one of the most successful reforms in the country. It is important to mention that this reform implementation model was very little cost-intensive. The first US$ 35,000 was received by Transparency International Ukraine from the first seven commercial platform operators who joined the ProZorro project in 2014 and funded programming of the single database unit (Presently, eleven commercial e-platforms are registered in the system, of which six are working in the productive mode). Afterwards, international donors contributed US$ 230,000 towards IT services necessary for development of the single database unit, help desk and project office. The EBRD funded the eProcurement experts and the EU-funded project contributed with advice of the EU consultants and legal support on the EU policies. This would not be sufficient to develop the ProZorro and implement the pilot if not for private donations (qlik.com) and volunteers from Ukrainian IT companies, business schools, and individuals who *pro bono* worked and continue working for the ProZorro Project.

9.4 Interim results and plans for the future

Since its launch in September 2014, the ProZorro Project has been very successful. The piloting exercise proved the hybrid concept operational, produced first savings and business community engagement far above initial expectations. By November 2015, the ProZorro pilot project based on voluntary participation by contracting authorities covered more than 15,000 procedures conducted, with a budget of more than US$ 150 million, involved 1,500 contracting authorities and saved more than US$ 20 million. To support the pilot, more than 30 training sessions were organised in regions in Ukraine, online public procurement training has been developed and a general public procurement professionalisation strategy is under development.

To enable extending electronic procurement for all public procurement the first law necessary for the reform have been adopted and Ukraine's offer for accession to the World Trade Organization's Agreement on Government Procurement (GPA) was approved by the GPA Committee on 11 November 2015.

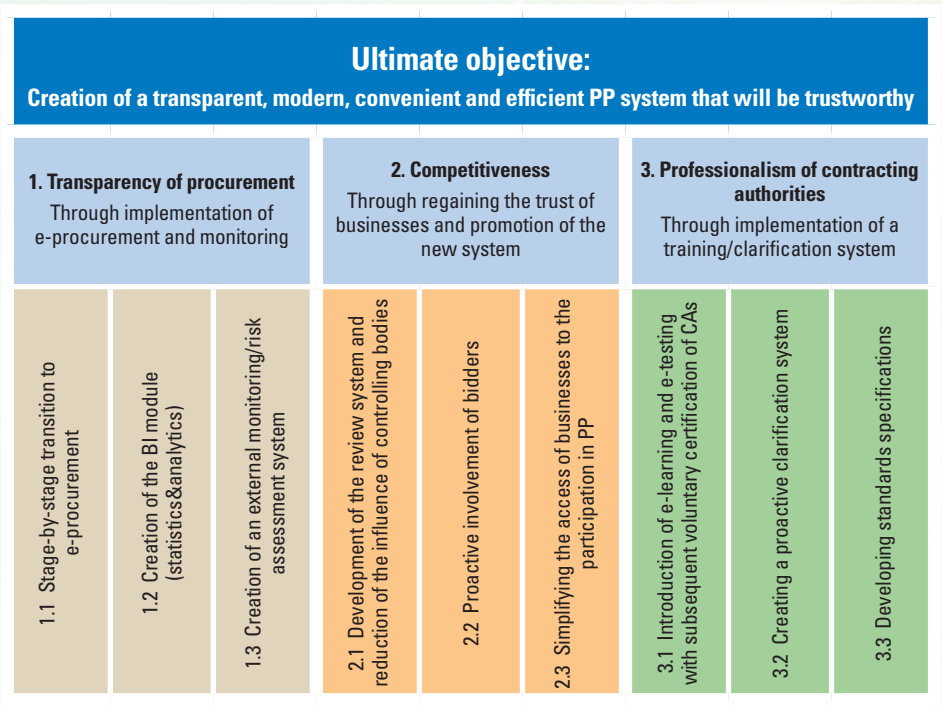
The pilot has successfully tested procedures for micro value procurement and these procedures can in principle be also used for small value contracts, below the GPA/EU thresholds. To cover entire public procurement cycle and high value procurement, additional procurement methods should be enabled for public procurement above the GPA/EU thresholds, including open tender, negotiated procedures without publication, competitive dialogue and online framework agreements with e-catalogues compliant with the GPA/EU standards. The ProZorro will also need to develop new modules for submitting complaints (e-review), procurement planning (e-planning), electronic payment and integration with the Treasury.

To offer a comprehensive eProcurement service upgrading of the old notice publication system to Open Contracting Data Standard is needed, new web-portal (design, layout, search), integration with e-government registers for qualification of suppliers and contractors as well as building a risk management system and a comprehensive security system, with dedicated e-signatures.

Taking into account political turbulences and the fiscal crisis, it is very unlikely that eProcurement reform would be implemented according to original schedule. On the other hand, the ProZorro Project keeps running in a pilot mode and enables all new eProcurement functionalities to be thoroughly tested on the micro value procurements. This makes legislative decisions more informed and reduces the risks associated with the scaling up of the system to cover all public procurement in Ukraine. As a separate reform topic, there is an intention to introduce centralised procurement organisations for aggregated strategic procurement. This initiative is postponed to the second stage of the reform.

There are also plans for developing the ProZorro Project in the international context. In the process of the joining the GPA and discussions of the GPA Secretariat it has been noted that fully open Ukrainian ProZorro system can be used as a basis for creating a single procurement portal for GPA countries.

Figure 19 Objectives, measure and benefits of ProZorro



Lessons learned

The reasons behind the successful eProcurement reform in Ukraine can be summarised as follows:

- The "bottom-up" civil society initiative ensured maximum flexibility and eliminated bureaucracy in the process of the reform model development and achievement a wide consensus with process stakeholders.
- Due to civil society engagement, volunteering and *pro bono* contributions of business community as main reform drivers, a lot of project expenses were covered by donations (e.g. the BI module, expertise, manual testing, etc.).
- The opportunity to test the e-system in the pilot project for micro procurement helped to address a lot of risks and uncertainties.
- The involvement of commercial platform operators allowed to:
    - secure the initial funding for the launch of the ProZorro Project;
    - substantially reduced the cost of the development and future maintenance of the system (since all support, client management, search for new suppliers, marketing, etc. are delegated to commercial platform operators and provided to the system as their business cost);
    - involve existing pools of suppliers and contractors registered on commercial platforms in public procurement tendering.
- The transformation of the reform coordinators from civil society activists/volunteers into public officials making the policy in the sector which allowed to:
    - legalise/formalise the already achieved results;
    - substantially accelerate the reform implementation;
    - unite/involve the country's best procurement experts;
    - secure necessary donor funding;
    - create new opportunities for the future of the Ukrainian procurement system.

Annex 1 – Best practice for electronic tendering and reverse auctions

1. MDBs standards for eProcurement tools – e-tendering

1.1.	**System Access**	
	1.1.1	System access shall be open, equal, and unrestricted to all users and members of the public.
		Those who want to submit information or receive online alerts or notifications of amendments or clarifications shall be offered an online enrolment facility.
		Enrolment shall be free.
	1.1.2	The principle of single sign-on shall apply. Single enrolment shall allow the multiple use of the same electronic systems for different public contracts from across the public sector.
	1.1.3	The eProcurement platform shall be interoperable through open standards with ICT products in common use.
		The eProcurement platform shall be an Internet based solution accessible online by users through readily available and commonly used browser software.
	1.1.4	Downloaded documents shall be readable through open standards with a range of commonly used office software.
		If specialized software is necessary to access information on the eProcurement platform, this shall also be downloadable free of charge and compatible with commonly used system and office software.
		Similarly, the requirements for online submissions shall require only open standard interfaces with commonly used office software, or the submission software shall be downloadable online free of charge.
	1.1.5	The eProcurement platform shall perform reliably and securely in time-sensitive, commercial application.
1.2	**Advertising Electronic**	
	1.2.1	The advertisement shall be posted online on a publicly accessible website that is well known nationally, well maintained, functional, and affords free and unrestricted access.
	1.2.2	The bidding period shall be measured from the date of online publication on the required websites.
		A secure log of these entries shall be available for audit as required.
	1.2.3	Where bidding is restricted or subject to pre-qualification, this shall be clearly disclosed in the bid advertising.
		The bid advertisements and results disclosures shall not be restricted.

1.3	**Correspondence, Amendments, and Clarifications**	
		Copies of all correspondence shall be kept for audit and the bid evaluation report:
	1.3.1	All clarifications and amendments of the bidding documents shall be posted online simultaneously onto a bid tracking page of the bid advertising website that is freely accessible to all.
		Bidders who have already expressed an interest should be directly informed electronically of any amendments.
	1.3.2	Amendments by any procurement officer will be tracked and recorded for audit.
		eProcurement platform shall ensure that only authorized changes can be made.
	1.3.3	In case of any amendments to the bidding documents entity, the contracting shall not replace the bidding documents 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 documents.
	1.3.4	Contracting entities shall track receipt by bidders when distributing pre-bid amendments and clarifications online.
	1.3.5	Where Contracting conduct online pre-bid conferences and clarifications, including for example online conferencing and chat facilities, such facilities shall not function after the bid submission deadline.
	1.3.6	Correspondence during bid evaluation for the purpose of clarification shall be done electronically with the normal restrictions against modification of the substance and price of the bid.
		Any correspondence of this type shall be directed through the chairperson of the evaluation committee.
		Confidentiality of the bid evaluation process shall be maintained.
1.4	**Bidding Documents**	**Contracting may distribute bidding documents by using electronic online systems (download from web site).**
	1.4.1	The use of standard bidding documents is recommended.
	1.4.2	While Contracting Authorities may offer the distribution of bidding documents in generally available electronic formats, they shall ensure that these documents are legally binding or can be traced to the Contracting Authorities' legally binding bidding documents.
	1.4.3	Contracting Authorities shall ensure the integrity of bidding documents in electronic format, and their online publication.
		Amendments shall be similarly secure and stored with the bidding documents. Contracting Authorities shall inform bidders where the legally binding bidding documents can be accessed.
1.5	**Submission of Bids/Proposals**	
		Contracting Authorities may offer enrolled bidders the use of online facilities through website to submit bids or proposals conditional on the following:

	1.5.1	There shall be security arrangements to ensure confidentiality (i.e. protect privacy by allowing only authorized persons access to the content at the authorized time) and integrity (i.e. not allow any modification) of bids or proposals submitted online.
	1.5.2	Bids or proposals submitted online shall be virus scanned before being uploaded and accepted into the online bid box, and where this causes a bid upload failure the bidder shall be notified immediately.
	1.5.3	Online submissions shall be received into an online bid box and maintained to high standards of security for long term record keeping and audit.
		At no time shall bids or proposals be in unencrypted format. Copies taken and decrypted for bid evaluation purposes shall not affect the integrity of the original record.
	1.5.4	There must be secure procedures to ensure that the settings are in accordance with international time-zone standards. A secure log of these processes shall be available for audit as required.
	1.5.5	Bidders shall be advised that their bids or proposals submitted online must be readable through open standards interfaces.
	1.5.6	Bidders shall be allowed to submit modifications to bids/proposals or withdraw previously submitted bids or 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.
	1.5.7	Contracting Authorities shall accept only those bids or proposals in electronic format the submission or modification of which is completed at the time of the bid submission deadline.
		Receipt of online submissions, including the date and time, must be acknowledged immediately.
1.6	**Bid Securities**	**In order to facilitate the procurement process when using electronic platform, bid securities are not encouraged, unless electronic payment facilities are provided for by the Contracting Authorities.**
		Contracting Authorities may employ other measures, such as requiring bidders to sign a declaration and/or sanctioning bidders who do not honour bids.
1.7	**Public Bid Opening**	**Contracting Authorities may use eProcurement platform to open bids or proposals:**
	1.7.1	A record of the bid opening must be kept in print copy and signed by individuals authorized to initiate the bid opening.
		Contracting Authorities shall make freely available the bid or proposal opening minutes online.
	1.7.2	Bids and proposals in electronic format shall be protected against access by unauthorized persons until the publication of the contract award.
	1.7.3	Contracting Authorities shall ensure that financial proposals submitted in two stage procedures shall only be accessed and opened after the evaluation of the technical proposals.

		The opening of bids or proposals in each stage of the public procurement procedure shall be subject to the same transparency.
1.8	**Bid Evaluation and Contract Award**	**The Contracting Authority may use pre-approved automated evaluation processes so long as the evaluation aligns with the criteria established in the bidding documents; is consistent with the principles of economy, efficiency, equal opportunity, and transparency and results in contract award to the lowest evaluated, responsive bidder.**
	1.8.1	A bid evaluation report shall be prepared and it may be transmitted electronically for review, if necessary.
		The bid evaluation report shall, contain electronic copies of other records.
	1.8.2	Contract awards notice shall be published online consistent with bid advertising.
1.9	**Information Security Management**	
	1.9.1	For any eProcurement processes engaged internally or through third parties, it shall 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.
	1.9.2	There shall be no outstanding audit issues that represent material risk to the integrity or security of any project.
	1.9.3	Contracting Authorities shall indicate in the bidding documents procedures to be followed in the case of any failure, malfunction, or breakdown of the eProcurement platform used for conducting public procurement process.
1.10	**Authentication**	
	1.10.1	The authentication process shall certify bidders for a reasonable period of time (at least one year) and bidders shall not be required to request an authentication for each bidding process.
	1.10.2	The authentication process shall be kept open permanently allowing bidders to submit the request for authentication at any time in order to allow them to register in advance for future bidding processes conducted on the eProcurement platform.
	1.10.3	The authentication process shall allow bidders to take all actions required for their authentication within their own countries, without the need to travel abroad in order to register.
	1.10.4	The authentication process shall accept an electronic signature or a digital certification issued by certifying authorities within the country of the bidder, or the process shall accept 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 shall be required).

	1.10.5	The authentication process shall not require bidders to submit mandatory information with origin outside the bidders own country.
1.11	Payment	Best practice provides free and open access to all information and allows bidders to submit bids online without any charges. However, nominal fee may be charged under the following restrictions:
	1.11.1	Members of the public and prospective bidders shall have open and free access to all procurement notices and bidding documents published online. No payment shall be required.
	1.11.2	A single, nominal fee may be charged as a condition of submitting a bid online. For the purpose of these requirements, "nominal" is expected to be an amount less or similar to that charged for obtaining paper bidding documents.
	1.11.3	Bidders shall be offered an electronic payment facility (e.g. electronic check, credit card) to avoid situations where bidders incur charges online, but must visit an office to pay for them. Bidders could be asked to have an account and be electronically invoiced for the fees resulting from the number of bids submitted during a period (e.g. month or year).
1.11	**Other Considerations**	
	1.11.1	Executing agencies may use e-reverse auction systems operated by a third party under a service contract arrangement. Third party service providers and their subsidiaries or parent companies shall be ineligible to be awarded contracts on procurement processes that are undertaken trough the said e-reverse auction system.

2. MDBs standards for eProcurement tools – e-auction

2.1.	**e-auction preparation**	
	2.1.1	The auction scope 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.
	2.1.2	The Contracting Authority must verify whether all operational conditions are met for starting the auction (e.g., if all participants are connected and whether conditions required for safe-guarding anonymity are in place).
	2.1.3	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
2.2.	**Bidding Specifications**	**The published specifications shall include, inter alia:**
	2.2.1	All conditions (e.g., the event and timing of the auction, rules for participation, valid bid increments, how to bid and whether the auction is divided into successive phases) as well as technical information needed to participate in the auction, the relevant information concerning the electronic equipment used and the arrangements and technical specifications for connection.
	2.2	The information which will be made available to bidders in the course of the electronic auction and, where appropriate, when it will be made available to them.
	2.3	Any other relevant information concerning the electronic auction process.
2.3.	**Advertising**	
	2.3.1	The notification of an e-reverse auction shall be posted on a publicly accessible web site that is well known, well maintained, functional, and affords free and unrestricted access.
	2.3.2	The notification should include all the specifications, terms and conditions for the proposed contract. A pro forma contract should be available online with the notification.
	2.3.3	The notification period will be measured from the date of publication on the required sites / media, and where these dates vary the date of publication will be whichever is later. A secure log of these entries should be available for audit as required website.
2.4	**Operation**	
	2.4.1	Shall be run the auction according to information specified in the invitation auction. The auction device shall collect electronically and without human intervention anonymous bids which shall be automatically ranked by the system. It shall inform bidders instantaneously of new ranking(s) as they occur, together with price in such a way that bidders are able to ascertain their ranking at any moment.
	2.4.2	Under no circumstances shall the identities of the bidders be able to be disclosed or identified by any party during any phase of the auction.

	2.4.3	If a bidder submits an invalid bid it will be notified online immediately with a message explaining why the bid is rejected.
	2.4.4	The Contracting entity shall close the auction in accordance with the option it has specified. Closure will be either (a) at the time and date as previously published, or (b) when a previously advertised time period has elapsed during which no new valid bids have been received. It shall immediately inform bidders about auction closure including any decision to extend the specified deadline. Under no circumstances shall the auction be closed before the deadline has lapsed.
	2.4.5	The Contracting entity shall monitor whether there is improper use of the reverse auction including for example evidence of collusion, interference with the proper operation of the technology, etc.
2.5	**Correspondence, Amendments, and Clarifications**	
	2.5.1	All pre-auction clarifications and amendments of the bidding documents, as well as any pre-auction conference minutes, shall be posted online onto the bid advertising website.
	2.5.2	Modifications to any of the procedures, operations, specifications or conditions by any operator will be tracked and recorded for audit. Systems should ensure that only authorised changes can be made.
	2.5.3	Where Contracting Authorities stage online pre-auction conferences and clarifications, including for example online conferencing and chat facilities, such facilities shall not function once an e-reverse auction begins.
2.6	**Access**	
	2.6.1	Access will be open, equal and unrestricted to all eligible bidders. The process shall also be transparent to all observes without restriction.
	2.6.2	Where suppliers are required to pre-qualify, the pre-qualification processes must be approved in accordance with the open and public bidding processes of the MDBs defined elsewhere in the e-bidding rules, request-for-quotation rules (for small value transactions) or other publications. A reverse auction shall not be used if pre-qualification has reduced the number of bidders to a level that materially affects competition, and under no circumstances shall there be less than three independent bidders.
	2.6.3	Where pre-qualification occurs an electronic invitation will be issued to admissible bidders simultaneously, informing them of the e-reverse auction. Prospective bidders must be contacted electronically at least 2 working days before start of the auction.
	2.6.4	Contracting entities shall not charge any fees to bidders other than for value-added services (e.g. automatic notification of business opportunities). In such cases bidders shall be offered an electronic payment facility (e.g. electronic check, credit card) to avoid situations where bidders incur charges online, or must visit an office to pay for them.
	2.6.5	The e-reverse auction system should be interoperable through open standards with ICT products in common use accessible by users through readily available and commonly used browser software. If specialised software is necessary, this should also be downloadable and not result in any compatibility issue.

	2.6.6	The system should perform reliably and securely in time-sensitive, commercial application consistent with the number of bidders participating.
2.7	**Bid Securities**	**In order to facilitate the procurement process when using electronic systems or means, bid securities are not encouraged. Contracting Authorities may employ other measures, such as requiring bidders to sign a declaration and/or sanctioning bidders who do not honor bids**
2.8	**Bid Evaluation and Contract Award**	
	2.8.1	Contract awards from reverse auctions should immediately be published online, together with the winner and the awarded price.
	2.8.2	There shall not be any negotiation during or after the e-reverse auction process is closed.
2.9	**Information Security Management**	
	2.9.1	For any e-reverse auction processes engaged internally or through third parties, it shall develop, maintain and implement an information security management system that conforms with international standards for information management and takes account of recognised 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.
	2.9.2	There should be no outstanding audit issues that represent material risk to the integrity or security of any project
	2.9.3	Contracting entities shall indicate in the bidding documents procedures to be followed in the case of any failure, malfunction, or breakdown of the electronic system used during the auction process.
	2.9.4	E-REVERSE AUCTION systems and information security shall ensure that secure records are kept of every process, procedure, transmission, receipt, transaction in terms of the content, executing individual and authorisations, time and date. These records shall be made available for audit on request.
	2.9.5	Time source. E-REVERSE AUCTION systems shall use an international standard for time, related to an external source known and available for all the bidders.
2.10	**Authentication**	**Where a Digital Certification/Signature is required the following shall apply:**
	2.10.1	The certification process shall certify bidders for a reasonable period of time (at least one year) and bidders shall not be required to request a certification for each bidding process.
	2.10.2	The certification process shall be 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.
	2.10.3	The certification process shall allow bidders to take all actions required for their certification within their own countries, without the need to travel abroad.

	2.10.4	The certification process shall accept an electronic signature or a digital certification/signature issued by certifying authorities within the country of the bidder, or the process shall accept 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 notarisation in consulate or embassy shall be required).
	2.10.5	The certification process shall not require bidders to submit mandatory information with origin outside the bidders own country.
2.11	**Other Conditions**	
	2.11.1	Executing agencies may use e-reverse auction systems operated by a third party under a service contract arrangement. Third party service providers and their subsidiaries or parent companies shall be ineligible to be awarded contracts on procurement processes that are undertaken trough the said e-reverse auction system.

The above standards are based on the MDB's 'Toolkit for e-Government Procurement', first published in 2004. The standards have been revised in order to enable use in the context of national public procurement and updated to reflect progress in public procurement policies. In this exercise, the original language of the 2004 standards have been preserved, except for requirements related to parallel communication on paper.

Annex 2 - Template Road Map

For the reasons of practicality Annex 2 is available only in the electronic version at http://www.ebrd.com/what-we-do/sectors/legal-reform/public-procurement.html

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