



**Good Governance for Development  
(GfD)  
in Arab Countries**

**1<sup>st</sup> High Level Seminar on E-Procurement**

**30-31 January 2006**

**Naples, Italy**

**MEETING DOCUMENT**

**COLLECTION OF COUNTRY PAPERS**

DRAFT AS OF 26 JANUARY

**Good Governance for Development in Arab Countries Initiative  
Working Group II on E-Government and Administrative Simplification**

**1<sup>st</sup> HIGH LEVEL SEMINAR on E-Procurement**

**Naples, 30-31 January**

**REQUEST FOR COUNTRY INFORMATION**

As part of the stocktaking of Arab countries' experiences on e-government and administrative simplification, the OECD Secretariat requests that countries submit short country fact sheets which will provide relevant background information for the meeting and will be further elaborated by the OECD Secretariat in view of the preparation of country Action Plans. The country fact sheets must follow the guidelines and structure below. As the papers will be circulated to Seminar participants prior to the next meeting, the OECD Secretariat requests that you please **submit your country paper no later than Monday, 16 January** to Marco Daglio ([marco.daglio@oecd.org](mailto:marco.daglio@oecd.org), tel: +33 (0) 145249876, fax: +33 (0) 145248563). Please contact Marco Daglio if you have any questions regarding the preparation of your country fact sheet.

**TOPIC**

The topic of the 1<sup>st</sup> High Level Seminar (30-31 January 2006) is "E-procurement". We ask that the country paper focus on some aspects related to the implementation of e-procurement systems: 1) the regulatory framework and 2) the organisational framework for implementing e-procurement; 3) simplification and re-engineering of administrative procedures connected to the implementation of e-procurement; 4) technical challenges in implementing e-procurement and 5) skills and human capacities for e-procurement.

**STRUCTURE OF COUNTRY PAPERS**

The paper should be approximately 3-5 pages (in English). In order to ensure comparability among papers, we request that you please structure the paper along the following lines:

- Question 1: Have you introduced the necessary laws and regulations to support e-procurement solutions at the national level (e.g. rules allowing e-auctions or e-bidding processes; legal requirements for identification of bidders and suppliers)? Which administrative tools and mechanisms (e.g. revision of existing laws and procedures) have you identified and used to

build up a sound regulatory environment for e-procurement? What are the major barriers to building such a framework and how have you overcome them?

- Question 2: What are the main features of your country organisational approach to e-procurement? Do you have a central e-procurement authority or e-procurement is decentralised across agencies and levels of government? What was the reason behind your decision to either centralise or decentralise e-procurement in your country?
- Question 3: What is your definition of e-procurement? What kind of procurement activity is e-enabled and at which stage?
  - Public agencies can electronically a) submit, b) collect, c) and evaluate tenders (e-tendering).
  - Public agencies can electronically access catalogues of services/goods from qualified suppliers (e-catalogues).
  - Public agencies can make orders electronically, be invoiced and pay electronically (e-ordering).
  - Public agencies can meet in an electronic marketplace to directly negotiate goods and services with suppliers (e-auctioning).
- Question 4: To what extent has the introduction of electronic processes for public procurement been accompanied by efforts to automate, simplify and re-engineer existing processes? Please briefly make a concrete example.
- Question 5: Has the introduction of electronic processes in public procurement led to any benefit to your organisation (as listed below)? What criteria have you used to measure them?
  - Greater simplification and transparency of procedures.
  - Reduced duplication of procurement functions and offices.
  - Greater transparency and accountability of decision making.
  - Benefits of scale due to consolidated purchasing.
- Question 6: Do you have a shared IT platform for e-procurement or have agencies developed their own solutions? Does your system integrate with buyer agency systems (i.e. ERP) and supplier systems? What are the main technical challenges in maintaining and developing IT systems which support procurement solutions?
- Question 7: Have you developed technical standards (e.g. for data exchange) and requirements to allow systems interoperability? Which actors have been involved (e.g. governmental agencies, private suppliers, national and international institutions) to develop them? How successful is the application of these standards?
- Question 8: How did you go about ensuring adequate protection of e-procurement systems and networks? What solutions have you implemented to allow users to identify themselves and use the e-procurement system?
- Question 9: How have you developed staff capabilities to handle the development, implementation, and maintenance of e-procurement systems? Please refer to the list below:

- understand public e-procurement policies and practices.
- understand technical requirements (e.g. technical/programming/help desk skills).
- develop managerial skills and process knowledge related to new systems.
- build and maintain relationship with suppliers and other stakeholders.

- **Question 1: Have you introduced the necessary laws and regulations to support e-procurement solutions at the national level (e.g. rules allowing e-auctions or e-bidding processes; legal requirements for identification of bidders and suppliers)? Which administrative tools and mechanisms (e.g. revision of existing laws and procedures) have you identified and used to build up a sound regulatory environment for e-procurement? What are the major barriers to building such a framework and how have you overcome them?**

**Algeria** is in the phase of preparing regulations to allow use of electronic signatures. In fact, a recent amendment to the civil "civil code" has accepted electronic signatures. But to apply this amendment, Algeria must install authentication and central institutions. A decree is in the process of being formulized. It is expected to:

- First: Create a central authority for authentication, which will be attached to the Precedence of the Republic.
- Second: Put in place the procedures for the organisms of certification.

This decree allows both public and private operations to provide certification services.

**Egypt** is now preparing the process to modify the law organizing tenders and reverse auctions to be aligned with the implementation of E-Procurement. The suggestions are the outcome of studying the current law and defining which articles must be changed to allow the use of E-Procurement, and to allow the re-engineering of different processes. The revision of current law has involved many concerned organizations:

1. Local organizations such as the Ministry of Finance, Ministry of State for Administrative development and some private sector organizations.
2. Foreign organizations such as USAID and World Bank.

The suggestions are as follows:

1. Legalize the use of E-signatures to be able to identify the suppliers and the bidders. (The implementation of the government CA is in progress).
2. Using the Internet as a medium to announce the existence of new tender instead of newspaper advertisements.
3. Legalize the use of encrypted bids over the E-Procurement portal instead of presenting the hard copy bids in a closed envelope.

Major barriers that might face implementation of these changes to the current law can be:

1. Low Internet usage by Egyptian suppliers.
2. Security issues.

The Ministry of State for Administrative Development set a strategy to overcome these barriers by leading an awareness campaign on using the internet, especially the E-Procurement portal, and emphasizing the security levels applied on the E-Procurement portal to secure the data on tenders and offers.

Public Sector Procurement in **Lebanon** is governed by a number of laws and regulations which address state tenders and public accounting. The provisions of these laws apply to all ministries, government administrations, local government units and public authorities, except those for which are covered by particular conditions in laws and decrees governing their establishment and operations, such as the Council for Development and Reconstruction (CDR) or international laws and grants.

In 2000, the Office of the Minister of State for Administrative Reform (OMSAR) received an IDF grant from the World Bank to draft a new public procurement law and related implementation decrees in line

with international public procurement best practices. Work on this initiative has resulted in a draft law and two implementation decrees, which have been reviewed by a Ministerial Committee. The major actors agree on the main directions of the proposal, which include the modernization of the procurement process, with a need to further elaborate and refine some elements; this will be addressed in a planned follow-up mission with stakeholder involvement.

Moreover, significant work is taking place around creating a basket of ICT enabling laws, which includes e-signature, security, data privacy, consumer online protection, cyber crimes, anti-spam and unsolicited marketing communication. The complete and timely passage of these laws by the Government of Lebanon will provide the necessary national policies required to move the plans for e-procurement and other e-government applications into more advanced stages.

**Morocco:** To support electronic trade and to set up the necessary conditions for its introduction into national commercial practices, the Moroccan regulatory framework should be amended in 2006 to include provisions relating to the electronic exchange of legal data.

Based on the recommendations of international organizations and European directives, this project:

- Confers on acts conducted electronically the same legal force as those conducted according to the classical processes, and implements related techniques of certification and cryptography.
- Forecasts the installation of an authority in charge of the implementation of the certification system.
- Envisages the obligations of providers of electronic certification and the holders of electronic certificates.

This legislation was debated by the Moroccan government on 19 January 2006 before being submitted to the Parliament. The promulgation of the legislation relating to the electronic exchange of legal data will certainly promote the development of the commercial electronic domain.

Based on the results of a survey conducted in March 2005 by the observatory of information technologies of the ANRT1, Morocco has 4 million Internet users (12% of the population), and 90% of Moroccan companies have been connected to the Internet. About 14% of those companies have systems in place to make purchases online and another 4% state that they intend to implement online purchasing and selling during the coming 12 months; this total represents 18%. This demonstrates that use of this mode of transactions will increase with the adoption of legislation on electronic trace and the multiplication of e-procurement portals.

For the **United Arab Emirates**, a Federal Law has been drafted by the Ministry of Economy and Planning on e-commerce; it is under review by the Cabinet. The Emirate of Dubai has passed the Electronic Transactions and Commerce Law, (Law No. 2) dated February 12, 2002 covering electronic transactions for the Emirate of Dubai. All government agencies in Dubai are required to use the tejari.com e-procurement system.

“Law No. 2 was created to lead to the attainment of the following objectives:

- a. Facilitate Electronic Communications by means of reliable Electronic Records;
- b. Facilitate and eliminate any barriers to Electronic Commerce and other Electronic Transactions which may result from uncertainties over writing and signature requirements, and promote the development of the legal and business infrastructure necessary to implement secure Electronic Commerce;
- c. Facilitate the transmission of Electronic Documents to Government agencies and corporations, and promote efficient

- delivery of services by such agencies and corporations by means of reliable Electronic Communications;
- d. Minimise incidences of forgery related to Electronic Communications including their subsequent amendment and chances of fraud in Electronic Commerce and other Electronic Transactions;
  - e. Establish uniform rules, regulations and standards with regard to authentication and integrity of Electronic Communications;
  - f. Promote public confidence in the integrity and validity of Electronic transactions, Communications and Records;
  - g. Enhance the development of Electronic Commerce and other transactions on the national and international level through the use of Electronic Signatures.”

For additional detailed information on the law, please refer to the following link:  
[http://www.tecom.ae/law/law\\_2.htm](http://www.tecom.ae/law/law_2.htm)

Barriers to such activity did exist for both government organizations and corporations. Some of these issues involved:

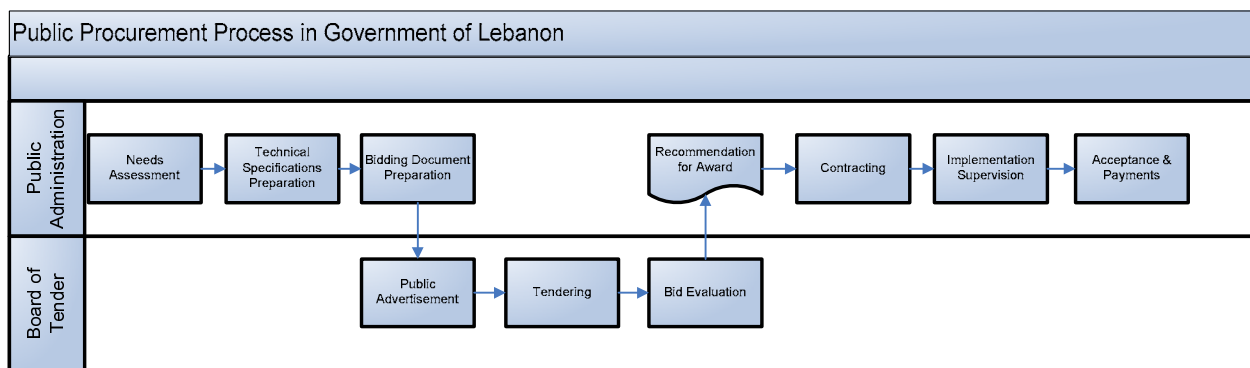
- The top inhibitors are lack of awareness, and lack of suppliers and buyers.
- Other inhibitors include:
  - ROI of new technology/infrastructure/etc. that facilitates e-commerce.
  - Change management of traditional purchasing practices.
  - Willingness of both buyers and suppliers (trading partners) to switch to online processes, in a country where Internet penetration is around 45% and regional rates can be as low as 3% to 5% in some countries.
  - Security of data transfer.

- **Question 2: What are the main features of your country organisational approach to e-procurement? Do you have a central e-procurement authority or e-procurement is decentralised across agencies and levels of government? What was the reason behind your decision to either centralise or decentralise e-procurement in your country?**

To start the implementation of E-Procurement in **Egypt**, the Ministry of State for Administrative Development was the organization responsible for supervising the implementation from the technical point of view; however, the process owner is The General Authority of Governmental Services (GAGS), Ministry of Finance. GAGS will be responsible for central procurement in Egypt for general items used by all government organizations. For items that can not be procured centrally, the E-Procurement system will allow for a decentralized operation. So, Egypt will implement both approaches according to business needs. We can summarize the use of centralized or decentralized approaches in Egypt for the following items:

1. General items (items used by all government authorities such as paper, toner, etc.) to be purchased in a centralized way.
2. Special items (items specific to an organization such as medical equipment, machinery, etc.) to be purchased in a decentralized way.
3. Any ministry can purchase some items for all organizations related to it in a centralized way.

Currently, the main actor in the public procurement process in **Lebanon** is the Board of Tenders at the Central Inspection, which is in charge of conducting public procurement tenders for the procurement of works, goods and services; by law, this agency is in charge of performing public tendering on behalf various concerned public administrations. The Board of Tenders has the responsibility for conducting the bidding process, starting with public advertisement through bid submission and finalized at bid evaluation with documented recommendations for award. The concerned public administration has the responsibility for the following phases: needs assessment, technical specifications preparation, bidding document preparation, contracting, implementation supervision, acceptance and payments. After receiving the bidding document from the concerned administration, the Board of Tender checks evidence of funding appropriation, conformity to laws and regulations, special conditions of contract as well as proof of their approval by the competent authority, bidding provisions that may restrict competition or favour certain bidders, and correctness of estimated quantities and prices. Following the public tendering procedures, the Board of Tenders participates in a joint committee with the concerned public administration to evaluate received bids, which results in a recommendation for award. After this stage, the Board of Tenders is no longer involved in any decision regarding contracting and follow-up.



Both the Federal and local government have a decentralized approach to procurement. The authority to purchase, based on the amount, is decentralized for various government entities. However, the e-procurement solution is centralized, due to the reasons below:

- The approach towards an ASP model for e-procurement that can serve all government entities.
- Lower cost of development and implementation by having a single application.
- Lower cost of hosting and data mining.
- Easier to implement unified standards & quality.

**Moroccan** public procurement is completely decentralized. The adoption of regionalisation as a governance mode will increase this situation.

In August 1997, the Moroccan government created the National Agency of Telecommunication Regulation (ANRT), which has been granted the authority to promulgate regulations on telecommunication, e-commerce, and encryption. Online public procurement should not derogate from this rule, even if the requirements of management and rationalisation of the costs would lead to the installation of regional or sectoral-based systems.

- **Question 3: What is your definition of e-procurement? What kind of procurement activity is e-enabled and at which stage?**
  - **Public agencies can electronically a) submit , b) collect, c) and evaluate tenders (e-tendering)**
  - **Public agencies can electronically access catalogues of services/goods from qualified suppliers (e-catalogues)**
  - **Public agencies can make orders electronically, be invoiced and pay electronically (e-ordering)**
  - **Public agencies can meet in an electronic marketplace to directly negotiate goods and services with suppliers (e-auctioning)**

**Egypt** is intending to implement E-Procurement for all procurement processes in a phased approach according to the following phases:

Phase 1:

The current project will enable the following functionalities:

1. Central public agency can collect electronic purchasing requisitions from different public agencies and prepare an electronic Request For Proposal (RFP).
2. Public agencies can submit the RFP on the portal and suppliers will be notified electronically of the new RFP.
3. Suppliers can submit their bids (technical and financial) on the portal. These bids will be encrypted until the tender closing date.
4. After the tender closing date, public agencies can unseal (decrypt) the bids and evaluate them electronically by using automatic evaluation (objective scoring); alternatively, public agencies evaluation members can enter the evaluation results on the portal (objective scoring).
5. Tender results and awarding will be done electronically through the portal, and electronic notifications will be sent to bidders with the published results.
6. Public agencies can access catalogues of services and goods provided by all Egyptian suppliers.

Phase 2:

After succeeding in implementing the current project, the next step will be to implement a new project with the following functionalities:

1. Public agencies can send electronic purchasing orders to suppliers and invoice and pay them electronically.
2. Auctions and reverse auctions can be implemented online through the portal.

e-Procurement, a government to business application (G2B) in the Government of **Lebanon**, is a key e-service application under the high-level e-Government strategy and implementation plan prepared by the Office of the Minister of State for Administrative Reform in 2003. It also falls under the Business and Economic Track of a comprehensive National e-Strategy Implementation Plan, formally presented to all national stakeholders (public sector, private sector, NGOs, and academia) in November 2005.

As such, e-Procurement shall build on the Government's commitment to open Lebanon's economy and liberalize its trade program. This will strengthen the partnership between the public and private sectors. Although the private sector is the driver for electronic commerce, an e-procurement initiative undertaken by the government will allow it to serve as the leading example for electronic commerce on the national level and hence foster the growth of this sector.

In this context, the Government of Lebanon identified an e-Procurement project with the purpose of enhancing the current procurement activities through studying, rationalizing, and planning procedures to achieve the following overall objectives:

- Standardizing procurement policy across the government.

- Facilitating the centralization of government procurement activities.
- Better management of budget.
- Minimizing maverick buying and increasing transparency and accountability.
- Realizing volume discounts.
- Reducing purchase order costs to the extent possible.
- Speeding approvals and reducing order-to-delivery cycles.
- Reaching improved and more accurate statistics to identify spending trends and negotiate better contracts.
- Increasing the productivity and capacity of current government procurement officers.
- Strengthening the partnership between the public and private sectors.

Currently, the public tendering process only advertises bids electronically on the Board of Tenders Web site. A pilot implementation was defined with the following benefits:

- Consolidating multiple requests to arrive at better offers from suppliers, as a result of volume discounts.
- Pre-qualifying a great number of vendors or suppliers to fulfill government orders.
- Enforcing purchasing policies (standard specifications) and controlling spending.
- Better tracking and monitoring of all transactions, generating accurate statistics, and monitoring spending on a national scale.
- Providing more organized, transparent and instantly auditable procurement services.

The result of this project proposal was a project document, signed in November 2005, between the Government of Lebanon and the Development Gateway Foundation and the Government of Italy for a pilot e-Procurement implementation grant.

The key components of the proposed pilot e-Procurement project are:

1. Assessing and improving the processes related to the procurement of goods. This will cover the on-site mapping of all the processes relating to the procurement of goods, highlighting the existing critical stages; the design of a workflow for the procurement of goods processes; and the definition of industry standard e-catalogues for goods.
2. Specialized training will cover high-level training of international e-procurement best practices, complemented with the specific processes related to the particularities of the Lebanese public procurement solutions.
3. ICT pilot implementation will cover the customization and implementation of a secure online e-Procurement workflow based on a commonly accessible electronic platform, which may be a web portal, openly accessible via the Internet. This platform will operate as a single access point for users (e.g. procurement officers, private sector suppliers, etc).

**Morocco's purchase online** system uses Internet technologies to put customers and suppliers in contact and to operate dematerialised commercial transactions. Taking into consideration the existing legal constraints – particularly on the level of the public purchase framework –online procurement is limited to the use of governmental portals, to inform of services' intended purchases through the publication of invitations to tender and also to download technical specification files.

In addition, the Moroccan Ministry of Finance, in its capacity as a public organization of control and payment, has allowed companies that have contracted a market to track their administrative situation online.

Services such as e-ordering and e-auctioning are not currently available.

The **United Arab Emirates** looks at the CIPS definition of E-procurement as an accurate definition:

“E-procurement is using the Internet to OPERATE the transactional aspects of requisitioning, authorising, ordering, receipting and payment PROCESSES for the required services or products.”

- Tejari is currently used to conduct all requisitioning, auctioning, catalogue ordering, authorization and acknowledgement of requirements. Tejari is in the process of developing and integrating an e-payment gateway that will facilitate collection of tender fees and subscription fees if applicable.

- **Question 4: To what extent the introduction of electronic processes for public procurement has been accompanied by efforts to automate, simplify and re-engineer existing processes? Please briefly make a concrete example.**

In **Egypt**, to implement the E-Procurement project all processes related to procurement were analyzed; some processes were simplified, but some will be automated as is because they are defined by law. After changing the law, some remaining processes will be re-engineered and simplified. The following is an example of a process that will be simplified in the new environment: the technical evaluation of the offers presented in any tender usually takes a long time to be accomplished because offers are huge and not structured and formatted in the same way, so the committee has to read them and summarize them in a single sheet to be able to compare offers and determine scores for the different bidders. The E-Procurement will simplify this process in the following manner:

- When preparing the RFP, the government organization prepares the standard sheet for the bidders to fill in their to make offers.
- When evaluating, the system will automatically show a comparison screen with all the offers from all bidders.
- Either evaluation is done automatically (objective scoring) or the evaluation committee can enter its scores on the portal (subjective scoring).

Introducing electronic processes into public procurement is a general tendency of administrations in **Morocco**. For example, in 2005, the Moroccan Ministry of Finance started the installation of a Budgetary and Countable Management Operating System in order to automate the budgetary system and accounting. At this time, a complete re-engineering process was performed to simplify the existing administrative procedures.

In the **United Arab Emirates**, the introduction of a comprehensive and integrated e-procurement system has greatly reduced the time needed to reach the market place for procuring. All processes are now fully simplified and automated.

For example, for one government department, Tejari experts have conducted an extensive vendor assessment activity to assess their supplier base and create a well-defined supplier performance management solution based on the EFQM model that incorporates the RADAR approach to achieving results.

For another government department, Tejari experts have analyzed and mapped the procurement process highlighting bottlenecks and areas for improvement where technology utilization may be optimized.

Another example is the use of Tejari e-procurement system by the Armed Forces, who were able to

- Achieve 40% savings of their fire fighting equipment and 14% savings for IT Hardware through structured online comparisons and negotiations.
- Achieve more transparency, shorter cycle time and new sources of supplies.

- **Question 5: Has the introduction of electronic processes in public procurement led to any benefit to your organisation (as listed below)? What criteria have you used to measure them?**
  - **Greater simplification and transparency of procedures**
  - **Reduced duplication of procurement functions and offices**
  - **Greater transparency and accountability of decision making**
  - **Benefits of scale due to consolidated purchasing**

E-Procurement in **Egypt** will introduce many benefits to governmental organizations such as:

- Increase transparency.
- Reduce duplication of procurement functions.
- Provide government needs with the best prices.
- Reduce the cost of tendering.
- Reduce the duration of preparing tenders and evaluating them.
- Simplify the tendering process.

The criteria used to measure these benefits are:

- Percentage of tender and award notices published electronically.
- Percentage of expenditure on supplies and services supported by e-tendering.
- Percentage of national expenditure on supplies and services collectively procured.
- User, supplier, and buyer satisfaction levels (using surveys).
- Percentage of electronic bids.

In **Morocco**, the public organizations adopted the possibilities offered by the Internet to diffuse on their institutional portals the previsionsal programs of purchase for the current year and invitations to tender. Mailing lists were implemented to inform subscribed suppliers of the intentions of purchase.

By adopting this mode of information, the Moroccan administration has contributed to a certain extent to expansion of competition and thus to greater transparency in the process of public procurement.

The **United Arab Emirates** have indeed benefited from all the issues listed. Our measurement criteria include:

- A fully documented procurement system that is known to all. (This provided us a basis for removing all duplicated activities within departments and unwanted steps.)
- Purchasing time compared to the old system. (This measure is also used to measure the cost of purchasing and the simplification of processes).
- Transparency and accountability has gained the most from e-procurement. Information that is readily available by all parties involved ensures any person making a decision is also accountable for any action taken. The reduction of “purchase dispute” is used as a measure for this.
- By having the information on purchases so readily available, we were able to analyse data more accurately. This allowed us to consolidate all our common purchase towards a “central contract” approach. The central contact provided us the bargaining power to reduce the cost of these common products.

- **Question 6: Do you have a shared IT platform for e-procurement or have agencies developed their own solutions? Does your system integrate with buyer agency systems (i.e. ERP) and supplier systems? What are the main technical challenges in maintaining and developing IT systems which support procurement solutions?**

E-Procurement in **Egypt** will be implemented on a single platform throughout government; it will be hosted in one organization and accessible through the Internet to all buyers (government organizations) and suppliers. The Ministry of State for Administrative Development is publishing a single ERP system for all government organizations and the E-Procurement system will integrate with this ERP in all government organizations.

The main technical challenges in maintaining and developing the IT systems are:

- Maintaining the E-Procurement servers up and running 24/7; this will be accomplished by creating a fail over redundant server farm and a strong backup strategy.
- A strong IT support team will be available to help all government organizations experiencing any technical problems; this support team will be available 24/7.
- Developing a modular system aligned with the current law and can be easily modified if needed.

In the **United Arab Emirates**:

- o Answer: The platform that the Government of Dubai utilizes for e-Procurement is Tejari's Marketplace. It is an Oracle Exchange application based on the Oracle 9i database and Application Server. Tejari Marketplace is hosted in Dubai on SUN Solaris infrastructure; Tejari Marketplace is a High Availability application: 24/7 availability; Business Intelligence is based on an Oracle Data-warehouse.
- o Furthermore, several Dubai government departments and private organizations have ERPs that can be and are integrated to the Marketplace, simplifying and streamlining the procurement process. The ERPs used are Oracle eBusiness Suite, Maximo, SAP, etc.

- **Question 7: Have you developed technical standards (e.g. for data exchange) and requirements to allow systems interoperability? Which actors have been involved (e.g. governmental agencies, private suppliers, national and international institutions) to develop them? How successful is the application of these standards?**

**Egypt's** technical standards and requirements to allow system interoperability were defined when the system was designed. The different actors who were involved in defining them are:

- Ministry of State for Administrative Development.
- Private Companies implementing the E-Procurement system.
- USAID – ICT program in Egypt.

The infrastructural requirements for an e-Procurement solution in **Lebanon** are available, because a large number of public administrations are networked. Moreover, the proposed project covers the installation of internal Local Area Network (LAN) systems and communications setups in the chosen public administrations on which data may be processed, consolidated and then forwarded to the Board of Tenders, in addition to the installation of a LAN in the Board of Tenders (the central system) for the collection and consolidation of data inflows from the other government entities participating in the pilot.

Technical standards, in particular data definition and exchange, were documented in 2002 as part of a comprehensive ICT Standards and Guidelines project, launched by the Office of the Minister of State of Reform, with the specific aim of improving the various ICT processes in the public sector and improving relationships with the Private Sector. The standards were developed by an international consultancy firm, which included national representatives working in the private sector, jointly with the professional staff members of the Office of the Minister of State for Administrative Reform. The implementation of those standards is currently ad-hoc, awaiting the launch of the global e-Government action plan for full generalization.

In **Morocco**, the electronic data exchange was implemented at the level of several sectors in both the public (customs) and private sectors (banks); this has allowed the integration of existing heterogeneous systems. Thus, technical standards (*e.g.* XML) were installed to operate these exchanges, based on new technologies. However, this mode of exchange was not yet implemented on the level of public procurement, particularly between the public and private sector.

For the **United Arab Emirates**, XML is the language standard for data exchange. Successful application of these standards has been realized.

- **Question 8: How did you go about ensuring an adequate protection of e-procurement systems and networks? What solutions have you implemented to allow users to identify themselves and use the e-procurement system?**

For **Egypt**, deploying a Government e-Tenders Portal on the Internet is no doubt a venture that requires strong security measures to reduce the risk of sensitive and critical data being accessed by unauthorized users/entities. Among the best ways to mitigate this risk is to provide multiple layers of security mechanisms, so that failure of a single mechanism does not result in compromising unauthorized access to critical information. We refer to this concept as deep data protection; it will be provided through Virtual Private Database, SSL, Selective data encryption, PKI support and auditing.

In the **United Arab Emirates**, Sensitive Data is encrypted (credit card Numbers and password) while stored in the database. Physical security: 4-Layer Physical security measures are in place including two levels of Biometric Authentication. The whole marketplace is hosted in a lights-off location at a 3rd party. State-of-the-art Network Security measures and tools including Intrusion Detection, Multi-layers of firewalls and 24/7 Security Monitoring. Tejari is a standard Oracle Exchange with an Oracle 9i database backend. Oracle 9i is the most secure Database server to date. Since security in Tejari is managed as an ongoing process, penetration testing is performed by 3rd parties to ensure compliance with the latest standards. Tejari is in the process of implementing Server Side Certificates based on SSL Technology.

All users of the e-Procurement platform must be members of the Marketplace. For membership status, legal trade licenses must be presented, along with yearly membership fees that vary according to privileges sought (no. of auctions allowed, no. of users, etc.)

Both the federal and local government are now reviewing a common Identity Management System that will allow for better data security and privacy.

- **Question 9: How have you developed staff capabilities to handle the development, implementation, and maintenance of e-procurement systems? Please refer to the list below:**
  - **understand public e-procurement policies and practices**
  - **understand technical requirements (e.g. technical/programming/help desk skills)**
  - **develop managerial skills and process knowledge related to new systems**
  - **build and maintain relationship with suppliers and other stakeholders**

To ensure the best implementation of E-Procurement in **Egypt**, some actions will be taken to increase the capabilities of the internal and external staff who are involved in the procurement cycle. These actions are the following:

- The procurement personnel in all government organizations that will be using the E-Procurement system will get training on basic computer skills, as well as all the E-Procurement system functionalities. (Managerial, executive and technical levels).
- A government help desk team will be developed and trained to solve any technical problems that may face any organization.
- A support team will be developed to maintain the servers.
- An awareness campaign will be conducted to train suppliers on using the E-Procurement portal, and a help desk will be developed to answer their enquiries and help them through the system.

In **Lebanon**, Human capacity development has been addressed in the e-Government strategy by a proposal for the establishment of a government-wide central operations and management unit, as well as field operational management units at the various ministries, agencies and international offices (details can be found in the e-Government strategy document at [www.omsar.gov.lb](http://www.omsar.gov.lb)). This will ensure sustainability, proper monitoring and evaluation, and the sharing of lessons learned nationally, regionally and internationally. Moreover, the proposed project covers specialized e-procurement policies and practices, specialized process knowledge for senior officials, as well as ICT technical training on the proposed solution.

In the **UAE**, all employees working with the e-procurement system will have to undergo a compulsory training on the use of this application. There is a dedicated help desk centre that deals with all issues pertaining to procurement (technical and non technical). Suppliers are also made aware of the system through various seminars and promotional documents.

As the UAE is currently undergoing a major project to improve its effectiveness and efficiency, our relationship with suppliers is also changing. The government is keen to outsource non-core government services. This has a major effect on how we deal with suppliers and maintain a long-term relationship with them. We are facing new challenges in building relationships with suppliers, as a new breed of suppliers are investing with the government. We are creating contracts that look at performance and service level rather just products and delivery time. New capabilities are required, and training becomes a very important investment. Currently we are working with various institutions of higher learning on training our managerial staff on new management techniques that will be brought by the technology. Our first program for senior management team was conducted by Harvard University over a seven-week period. Some of the main topics include public-private sector partnerships and international negotiations.

We are changing our relationship with our suppliers. More and more, we are now calling suppliers to participate in providing solutions for our purchases. We are now maintaining a closer relationship with them.