

## **THE WORLD BANK e-PROCUREMENT FOR THE SELECTION OF CONSULTANTS: CHALLENGES AND LESSONS LEARNED**

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**ABSTRACT.** This paper introduces and examines the implementation of the World Bank's electronic procurement initiative for the selection of consultants, which is expected to foster consistency of practice worldwide, increase transparency and competition, and minimize processing time and effort. Following the description of functionalities and benefits of the system, this paper discusses the challenges encountered and lessons learned during the implementation process in terms of critical success factors (CSF).

### **INTRODUCTION**

The World Bank Group (World Bank) is transforming its former, highly manual process of selecting consulting services into a robust e-Procurement solution as part of its procurement simplification and modernization agenda. The World Bank engages consultants and service providers for technical or managerial advisory services in all sectors

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from socioeconomic and environmental projects to reforms of state and financial sectors, privatization, information technology and infrastructure. To that end, the World Bank needs to manage the selection of providers and the resulting contracts with thousands of businesses throughout the world. To ease this process and improve efficiency, the World Bank has implemented a new electronic procurement solution for the selection of consultants, with the goals of fostering consistency of practice worldwide, increasing transparency and competition, and minimizing processing time and effort.

Electronic Procurement (e-Procurement) in this paper is conceptualized as a subset of e-Commerce. While e-Commerce is simply a transaction conducted electronically, e-procurement is the automation of many procurement processes via electronic systems, especially the Internet. The World Bank definition of e-Procurement is broad in that it accommodates the use of information & communication technology (especially the Internet) by governments in conducting their procurement relationships with suppliers for the acquisition of goods, works, and consultancy services required by the public sector” (World Bank, 2003). However, the focus of this paper will be on the acquisition of consultancy services rather than the acquisition of goods and works.

This paper will explore the relevant issues surrounding the implementation of an e-Procurement solution for the selection of consultants. Following the overview and background of selection of consultants, the paper will present a case study (project) and discuss the system functionalities and benefits of the solution. Using critical success factors as identified by Vaidya, Sajeev, and Callender (2004), the authors will explain the challenges encountered by the World Bank during the implementation of the solution, and suggest a research model for future research in this area.

## **OVERVIEW AND BACKGROUND**

### **The Philosophy behind ‘Selection of Consultants’**

The term ‘consultants’ includes a wide variety of private and public entities, including consulting firms, engineering firms, construction managers, management firms, procurement agents, inspection agents, auditors, United Nations (UN) agencies and other multinational organizations, investment and merchant banks, universities, research institutions, government agencies, nongovernmental organizations

(NGOs), and individuals (World Bank, 2004). These consultants help in a wide range of activities—such as policy advice; institutional reforms; management; engineering services; construction supervision; financial services; procurement services; social and environmental studies; and identification, preparation, and implementation of projects to complement borrowers' capabilities in these areas.

While the specific rules and procedures to be followed for employing consultants depend on the circumstances of the particular case, five main considerations guide the Bank's policy on the selection process (World Bank, 2004):

- The need for high-quality services;
- The need for economy and efficiency; \
- The need to give all qualified consultants an opportunity to compete in providing the services financed by the Bank;
- The need for transparency in the selection process; and
- The World Bank's interest in encouraging the development and use of national consultants in its developing member countries.

### **Methods of Selection of Consultants**

The method of selection should seek to develop mutual confidence and trust. Depending upon the various situations, different methods of selection of consultants have been suggested (FIDIC, 2003; Word Bank, 2004):

- ***Quality and Cost-Based Selection*** (QCBS): This method is based on the quality of the proposals and the cost of the services to be provided, and is appropriate when the scope of work of the assignment can be precisely defined and where the staff time as well as the other inputs and costs required of the consultants can be estimated with reasonable precision. QCBS is appropriate for assignments such as feasibility studies and designs where the nature of the investment is clear and well defined, known technical solutions are being considered, and the evaluation of the impacts from the project are not uncertain or too difficult to estimate.
- ***Quality-Based Selection*** (QBS): This method can be suitable for complex or highly specialized assignments for which it is difficult to define precise terms of reference and the required input from the

consultants. The fees paid to a consultant are invariably a small fraction of the total project life-cycle cost and yet the consultant's work is key to project success. For these reasons, it has been recommended that the preferred selection method for consulting services be the QBS method.

- ***Selection under a Fixed Budget*** (SFB): This method is appropriate only when the assignment is simple and can be precisely defined and when the budget is fixed.
- ***Least Cost Selection*** (LCS): This method is only appropriate for selecting consultants for assignments of a standard or routine nature.
- ***Selection-Based on the Consultants' Qualifications*** (CQS): This method may be used for small assignments for which the need for preparing and evaluating competitive proposals is not justified.
- ***Single-Source Selection*** (SSS): Single-source selection of consultants does not provide the benefits of competition in regard to quality and cost, lacks transparency in selection, and could encourage unacceptable practices. Therefore, single-source selection should be used only in exceptional cases.

However, QCBS is the preferred policy method as it uses a competitive process among shortlisted firms that takes into account the quality of the proposal and the cost of the services in the selection of the successful firm (World Bank, 2004). However, in practice it is not the most frequently used method. The World Bank's e-Procurement for the Selection of Consultants solution supports all of the selection methods, plus the ability to select Individual consultants, not associated with firms.

### **The Complexity of Consultants Selection**

Selecting the project consultant is one of the most important decisions an owner or client makes in the life of the project. The success of any project often depends upon obtaining the most able, experienced and dependable expertise available at an appropriate cost. The impact of selecting of consultants on the overall success of the project should never be underestimated. A consultant, be it an organization or an individual can make substantial contributions to sustainable development, by undertaking work that is performed less effectively by government entities, and by increasing the industry's maturity and effectiveness

(FIDIC, 2003). The best project results are achieved when there is a true professional relationship of trust between the client and the consultant who is expected to make sound, objective decisions.

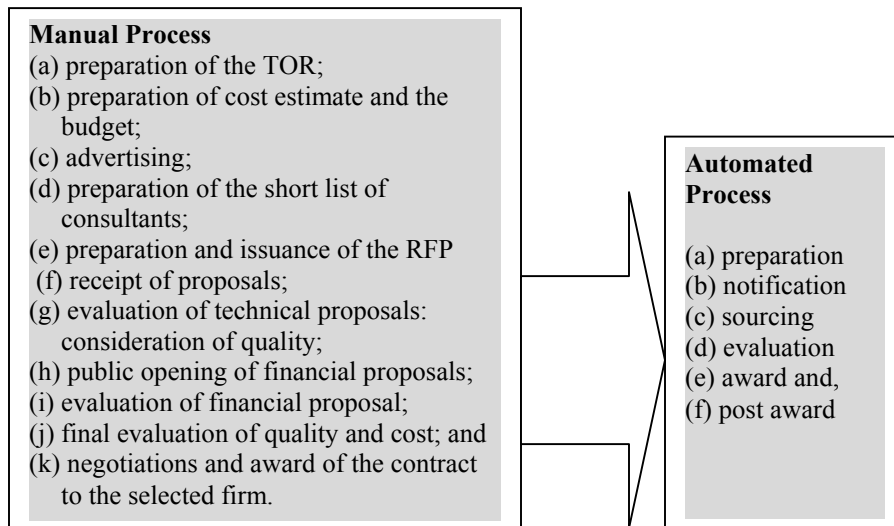
However, selection of proper consultant is not an easy process. Corcoran and McLean (1998) argue that selection of consultants requires the purchaser to assess a supplier's ability to deliver consultancy, which is an intangible product. Furthermore, the consultancy cannot be realistically tested prior to purchase and the level of associated complexity becomes obvious because of the buyer's limited experience with purchasing such a service (Corcoran and McLean, 1998). The main problem in purchasing consultancy services appears to relate to the purchaser's difficulty in judging what is being offered (Lunsford & Fussell, 1993). Besides these problems, the multi-faceted nature of the consultancy services (Gummesson, 1991) and the potential impact of the consultancy services on the reputation of the organization (Dunning, 1989) also contribute to making the purchase of the consultancy services to be riskier (Lunsford & Fussell, 1993). To combat these complexities, Corcoran and McLean (1998) suggest that purchasers and suppliers need to be aware of two aspects. First, they need to be aware of the issues purchasers are concerned about when assessing a consultant. Second, both purchasers and suppliers need to be aware of their style of interaction and its impact on purchase decision.

### **Process of Selection of Consultants: Manual Vs. Automated**

The World Bank's e-Procurement solution for the selection of consultants is seen as a way to address some of these concerns and suggestions. The transparent nature of the Internet truly makes evaluation and award stages of the selection process effective. The e-Procurement infrastructure and procedures can facilitate the achievement of the principles of efficiency, transparency, service quality and compliance in the consultant selection process required by the public sector procurement regulations. Furthermore, e-Procurement has the potential to promote operating efficiency in public sector procurement, and provide significant cost savings (Miami-Dade County, 2000).

Based on the QCBS method of consultant selection, Figure 1 depicts the various stages of the manual process – the e-procurement solution for the Selection of Consultants has the capability to automate these stages of the manual process and the resulting automated process is more effective in terms of speed and cycle time.

**FIGURE 1**  
**Manual Vs. Automated process for the Selection of Consultants**



Source: Adapted from World Bank (2004)

### THE WORLD BANK'S E-PROCUREMENT SOLUTION FOR THE SELECTION OF CONSULTANTS

#### The Project

The World Bank's e-Procurement solution consists of a web-based application that integrates e-commerce, procurement workflow and document management in a single solution. The proposed e-Procurement solution for the selection of consultants was intended to manage complex procurements in a decentralized, international environment, increasing transparency, enhancing compliance efforts and improving institutional memory (as data is systematically collected during the process). The new solution is expected to help the World Bank manage every step of the procurement process and to interact directly with consulting firms in a secured environment. In addition, consulting firms could monitor the procurement process online to view opportunities, express interest, obtain bidding documents and start the bidding process. The solution would be designed to interface with the Bank's legacy system to provide real-time information on Bank projects, trust funds and transaction systems.

The project team responsible for the new solution used an iterative approach to formulate the overall vision and develop requirements. The team first benchmarked the World Bank's current methodologies "as-is state" by documenting business processes and identifying technology capabilities. Next, the team defined the "future state" by creating process maps and storyboards, as well as determining the preferred technical architecture. This exercise resulted in the development of the technical specification, which was the basis for a competitive request for proposal process, resulting in an award to, Appian Corporation, a private software developer company for its procurement product. In parallel to the application build-out, the project team formulated a communications plan to educate users on the new systems, as well as upcoming changes and key dates. For each stakeholder group, the team chose the best communication vehicle and coordinated timing, along with defining the key message and the desired outcome.

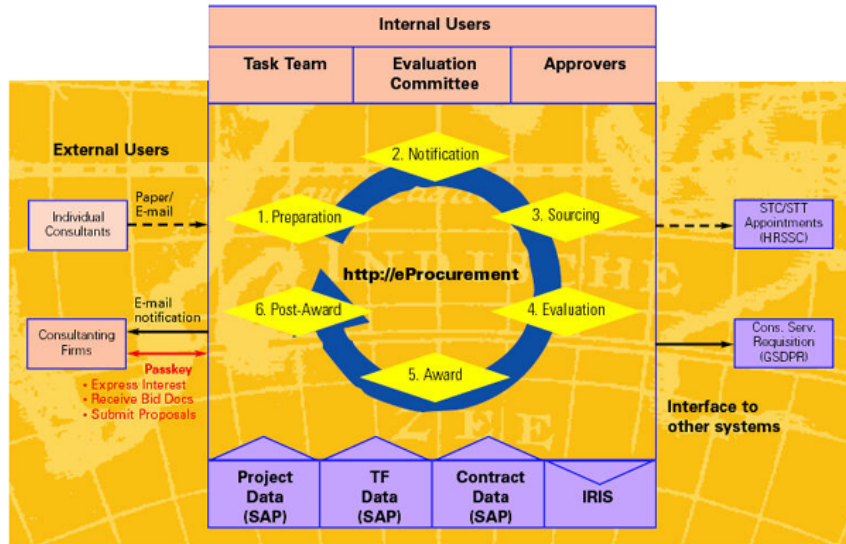
### **System Functionalities & Benefits**

e-Procurement for the selection of consultants is a web-based solution that supports task teams of the World Bank in the selection of consultants for operations financed by trust funds or the Bank's own budget. The Appian procurement software product consists of a core process engine, process design tools, document management, business rules, process reporting, community-based knowledge management, and other collaborative tools. The Bank found that this set of technology was much more configurable and adaptable to the complex nature of services procurements than traditional online transaction-based e-Procurement. The solution streamlines three selection scenarios: (1) selection and engagement of consulting firms; (2) selection and appointment of individual consultants; and (3) extension and amendments of contracts and appointments. The e-Procurement solution offers interfaces to the Bank's SAP Enterprise Resource Planning (ERP) system to pull appropriate project data, available trust funds, budget and existing contract data for each selection. The system also uses the Bank's workflow system that provides for online reviews of process documentation and approvals. Lastly, e-Procurement provides an interface to the Bank's central document archiving system to store important data correctly and safely.

## Process Description

Figure 2 provides a general overview of the system, the automated procurement process, its main users and interfaces with other applications of the World Bank.

**FIGURE 2**  
**General Overview of the e-Procurement Solution for the Selection of Consultants**



Source: Adapted from World Bank (2004)

As discussed above, the automated selection processes can be shown into six stages: (1) preparation, (2) notification, (3) sourcing, (4) evaluation, (5) award and, (6) post award and then automated with the help of an e-Procurement solution. The following sections briefly describe these automated stages.

- **Preparation:** In the preparation stage, the leader or member of a project task team enters all requested data into the system. Based on the wizard approach (questions asked by the system), the system



helps determine the appropriate procurement method (e.g., quality and cost based selection, direct selection, etc.).

- **Notification:** The purpose of this stage is to create an online advertisement where firms can express interest online. The system is designed to publish notification to several advertisement channels to enable maximum exposure of new procurement opportunities.
- **Sourcing:** At this stage the standard request for proposal (RFP) is created, cleared and issued to qualified firms. Firms can download the RFP documents, request clarifications online and submit their proposals. Firms' proposal submissions are sealed until the formal opening.
- **Evaluation:** e-Procurement provides the functionality of the online review and scoring of the proposals by an evaluation team, which is then combined with the financial score, based on pre-defined formulas. Each of these process steps is self-documented, forming the draft and final evaluation reports.
- **Award:** Once the evaluation is completed, a recommendation for award is requested and cleared, and if needed, a negotiation session with the firm can be conducted. Once finalized, the system automatically notifies all firms of the results and the e-Procurement solution interfaces into the Bank's back-office system to complete the contracting and payment processes.
- **Post-Award:** This phase is used to rate the attached performance of the firm. This information can be reviewed when considering the firm for a future selection.

### **Benefits**

The main benefits of e-Procurement for the selection of consultants include:

- Increased transparency of the procurement process, resulting in accurate audit trails;
- Simplification of the selection process by providing online guidance throughout the process and assembling all relevant information and documents in an electronic format;
- Automated compliance with the procurement guidelines; and

- Improved quality of institutional memory.

Although it is too early to provide evidence on potential savings in transaction costs, it will be interesting to do a future study on the impact of the e-Procurement solution on cost and time savings.

The use of e-Procurement for the selection of consultants offers a win-win situation for all parties involved. Task teams are guided through the selection process and can view trust fund agreements rules and ensure compliance; they can also receive authorizations and share information online. Managers can track and monitor the selection process because e-Procurement is linked to the Bank's internal ERP and archiving system. Donors benefit from a web-based tool that ensures compliance and increases transparency of consultant selection under trust funds. Consultants can view business opportunities, express interest, obtain documents, submit proposals and communicate with the Bank in a secure, online environment.

#### **E-PROCUREMENT SOLUTION FOR THE SELECTION OF CONSULTANTS: CRITICAL SUCCESS FACTORS**

##### **Critical Success Factors**

Critical Success Factors (CSFs) approach has been used for the purpose of this paper because it represents the areas or functions where events and actions must occur to ensure successful competitive performance for an organization (Butler & Fitzgerald, 1999). The concept of CSF became popular in the field of management information systems in the 1970s, when researchers at MIT investigated the importance of identifying CSFs to the design of information systems, and named their approach the "CSF method" (Cheng & Ngai, 1994).

For all information technology projects of this size and complexity, the World Bank follows an approval process including the creation of several documents such as a business plan, detailed project plan and the aforementioned technical specification document. Specific, critical success factors for the project can be derived from these documents and are summarized based on eleven critical success factors as proposed by Vaidya, Sajeev, and Callender (2004) and as outlined in Table 1.

**TABLE 1**  
**e-Procurement Critical Success Factors**

<b>Critical Success Factors (Variable)</b>	<b>Item Attributes</b>
End-users' Uptake and Training	User involvement, user support/communication, user training.
Supplier Adoption	Supplier e-Readiness, supplier adoption strategy and communication plan, suppliers' education and benefits demonstration, compliance to best practices with content and catalogue management.
Business Case and Project Management	Identification of business drivers, business process assessment and requirement, return on investment (ROI), total cost of ownership (TCO), risks identification and management, pilot projects.
System Integration	Information matching, sending and receiving of real-time information to other information systems Electronic commerce with suppliers.
Security and Authentication	Infrastructure authentication and authorization, confidentiality and integrity, security requirements.
Re-engineering the Process	Transparency improvement, Automated invoice payment and reconciliation, Compliance with purchasing procedures and standard.
Performance Measurement	Goals and targets, key performance indicators, Baseline measurement, progress monitoring.
Top Management Support	Management sponsor, involvement of the steering committee, investment in organizational change.
Change Management	Identification and management of key stakeholders e-Procurement impact assessment, potential barriers to implementation, organizational resistance.
e-Procurement implementation strategy	Sound procurement practices, opportunities for aggregation, a consistent approach to procurement Relationships with industry and small businesses.
Technology Standards	Technical standards, content standards, Process and procedural standards, compliance with the standards frameworks, interoperability.

Source: Vaidya, Sajeev and Callender (2004).

## **Challenges**

This section describes the challenges experienced by the World Bank project team in terms of the e-Procurement CSFs identified by Vaidya, Sajeev, and Callender (2004).

### ***End-User Uptake and Training***

To ensure the ultimate success of the e-Procurement project, the World Bank formed focus groups involving all stakeholders. The focus groups helped with initial software selection, confirmed each step in the development lifecycle, and provided feedback. These focus groups were essential in creating and refining the user interfaces, from the first storyboards through production launch. Focus group attendees also helped determine appropriate training resulting in the Bank creating a series of online training videos, 10 to 15 minutes in length, which staff can access before and during any procurement. In addition, demonstrations and hands-on clinics are offered throughout the year.

This group provided input on the training vehicles to be used. Therefore, the Bank opted to create a series of additional online training videos, 10 to 15 minutes in length, which staff can access before and during any procurement. In addition, demonstrations and hands-on clinics are offered throughout the year.

### **Supplier Adoption**

At the heart of the new solution is an online communication portal between the World Bank and external consulting firms. Key supplier bottlenecks were identified and targeted for online communication, including advertising opportunities linked to the ability for firms to express interest online, the downloading of bid documents, answering questions within a discussion list and proposal submission. While all interactions were recorded within the solution and accessible by firms at any time, communication was accomplished using email. Email notifications were sent to the firm's primary and secondary contacts to inform them of any changes to the selection process with a hyperlink to enable the firm to quickly return to the solution. Other key interactions were identified outside of the selection process for future extensions, including vendor registration, which is tied to online invoicing, and the ability to check payment status.

### ***Business Case/Project Management***

The business objective for the new, electronic request for proposal was to build a more efficient process that fostered consistency of practice and compliance worldwide. Additional goals included increasing transparency in the process and minimizing processing tasks within a decentralized procurement environment. Much discussion took place on using a total solution approach versus a smaller implementation with incremental improvements. In the end, it was determined that the solution would need to complete an end-to-end procurement to be successful, hence a ‘Total Solution Approach.’

### ***System Integration***

To access real-time information from the World Bank’s SAP R/3 system, the project team pioneered the use of basic Web Services at the Bank with the use of XML over an HTTP link into the appropriate process steps. These services ranged from exchange rate conversions within the financial proposal templates to real-time procurement auditing: For example, the system monitors trust fund provisions that the SAP R/3 system maintains in a database. Trust funds are monies that donors provide to the World Bank that are earmarked exclusively to support specific operations. In addition, a similar interface was created to enable all documentation collected during the selection process to be archived into the Bank’s document management system. The use of Web Services enabled the Bank to manage the selection process within the e-Procurement solution, without the need to duplicate or replicate data from other systems. Web Services also helped to validate the services for future projects.

### ***Security and Authentication***

Prior to the launch of the e-Procurement project, the World Bank adopted a set of security and authentication standards. The standards defined three types of users: self-identified external users, named external users and Bank staff. e-Procurement utilized the first standard, self-identified external users, for the registration process whereby firms expressed interest and submitted proposals. This standard enabled firms to create and administrate their own user IDs and passwords, with the added benefit of a lower, overall license cost to the Bank for an expected, high-turnover group. Once a firm self-registers, it can manage all communications over a secure, encrypted network.

### ***Re-engineering the Process***

The Bank's new e-Procurement solution automates the procurement process and increases information sharing between the World Bank and external firms. It combines business process management functionality with a portal framework. The business process management function both automates multiple, rule-based business processes and manages digital content that is stored, distributed and archived. The portal framework lets all procurement parties access an easy-to-use interface, securely collaborate and share data seamlessly across different applications. This combination helps the World Bank increase efficiency and transparency and achieves "best practice" status in e-Procurement.

To achieve the desired results, the project team examined each paper-based form used in the procurement process to determine if the form needed to be ported to the Web. In many cases, the paper form was simply converted into system templates to provide a standard and familiar format for information submission. Standardized formats simplified the sourcing process internally. If it was deemed that a document could not or should not be re-engineered, a process step was provided for end-users to upload the appropriate documents. For example, a firm's technical proposal was considered to be a document that firms would want to continue to create offline and upload for submission.

In addition to process forms, the project team also reviewed business rules. Many policies and procedures are required based on the decentralization of information and decisions. As e-Procurement captured documentation and decision-making in real time in a centralized location, several of these procedures were eliminated. For example, the team realized that attaching all paperwork to the requisition, including copies of email approvals, was redundant as the e-Procurement solution self-documented the entire process.

### **Performance Management**

Two sets of performance measurements were tracked, the first set on the project and the second set on the original goals. On the first set, success will be determined by whether or not the system is accepted throughout all the different Bank Units and the number of procurement selections within the system versus the number of selections done outside the system is one of the key measurements. Once a critical mass of

selections was completed, a mandatory usage date will be determined. For the original goals, a second set of measurements will evaluate competitiveness, transparency and compliance.

### ***Top-Level Management Support***

As with all projects, top-level management support was critical to the success of the World Bank's e-procurement project. To this end, the project started as a result of a request made by executive management and was sponsored by four key areas: operations procurement, trust funds, human resources and corporate procurement. Having four units involved enabled the break down of many organizational barriers and across, as well as up and down the organizational hierarchy. This was very important as the system's end-users are part of a matrix organizational structure based on project type and geographic location. Therefore, communication lines needed to occur from multiple sources to ensure maximum coverage. In addition, while top management support for the project was provided from multiple sources, messages on changes, benefits and project status for each source needed to be created and provided for distribution down the different channels.

### ***Change Management***

The World Bank hires consultants and service providers to provide technical or managerial services in all sectors, ranging from socioeconomic and environmental projects to reforms of state and financial sectors, privatization, information technology and infrastructure. With the Bank's decentralization process, project managers are responsible for selecting these consultants and the project team, as one step within their projects. The automation of the previously manual process resulted in numerous business process changes for these managers and other stakeholders. For this reason, the project team tried to minimize the impact to end-users with the goal of increasing acceptance.

Much care was taken to match the software application's terminology to the Bank's terminology and user interface standards. Communications were personalized for each set of stakeholders to highlight the benefits. During every demonstration and presentation, all comments and requests were recorded and then entered into the Web-based tracking system. The end result was an excellent knowledge base of frequently asked questions, future communications plans and future

releases – complete with original justifications and the original source. In some cases, future release ideas were fleshed out with full requirements documents that were also stored. The knowledge base will enable a quicker implementation of any idea if later approved.

### ***Procurement Implementation Strategy***

As the project team re-engineered paper-based forms into Web-based forms, the system became more intuitive and easier to use. These pages were reviewed and revised throughout the implementation to increase usability, reduce navigation training and match other system and Bank interface standards. Another aspect of the implementation strategy was the project teams' use of just-in-time communication and learning approach. The communications element raised awareness of the efforts throughout the Bank and included providing demonstrations and project updates during regular scheduled meetings and conferences. By being proactive and reaching out to meet with stakeholders during their meetings the project was well received. The just-in-time learning portion included creating techniques to train end-users as needed. These techniques included creating a series of online help, short training videos for each of the primary processes, walk-in computer clinics, and at your desk one-on-one help by appointment.

### **Technical Standards**

Using a competitive procurement process, the Bank licensed a customizable e-Procurement solution that combines business process management functionality with a portal framework. The new system would allow program managers and procurement officers to manage and monitor every step of the procurement process and interact directly with bidders, project managers, and evaluation team members, regardless of location. As part of the competitive procurement process, the Bank limited software solutions to those that would meet the Bank's future technology standards stack: J2EE™ and an IBM WebSphere® application server with an Oracle database.

### **e-PROCUREMENT FOR THE SELECTION OF CONSULTANTS: A RESEARCH MODEL AND FUTURE STUDY**

It will be interesting to examine the impact of each CSF on the e-Procurement for the Selection of Consultants process (tasks) and also on



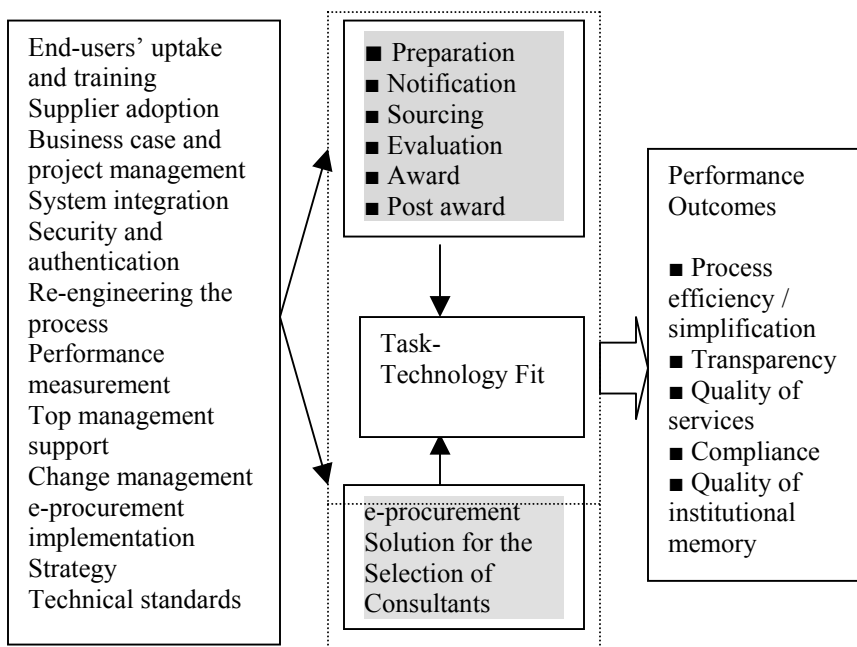
the e-Procurement solution for the Selection of Consultants (technology). Thus the fit between tasks and technology can be explained with the help of task-technology fit theory which defines task-technology fit as the “degree to which a technology assists an individual in performing his/her portfolio of tasks” (Goodhue, 1998). The theory has been further extended to refer “to the congruence between technology and task, that is, the extent the particular task can be performed effectively and efficiently with a particular technology” (Mathieson & Keil, 1998). It will also be interesting to assess the intensity of the performance outcomes (benefits) of the e-Procurement solution for the Selection of Consultants in relation to the process (tasks), and our future research efforts will be directed to this end.

In the next phase of our research, propositions will be developed based on the research model presented in the Figure 3 and the model/propositions will be tested with the operational data extracted from the e-Procurement solution itself and other organizational records.

### LESSONS LEARNED AND RECOMMENDATIONS

The e-Procurement system was deployed July 2004 and the World Bank is monitoring usage and processes to ensure that all transactions

**FIGURE 3**  
**A Research Model**



proceed smoothly. In conjunction with the budget processes, the Bank is also considering expanding the application's breadth and depth. Options include adding vendor management functions to automate the approval and monitoring of the overall supplier base, or using newly available communications capabilities to handle invoice and payment functions on the Web.

It is likely the World Bank will use the system to handle additional types of procurement, such as printing and graphics. Since all procurement processes are mapped and separated into autonomous steps, adding new procurement types into the workflow is as simple as designing the proper RFP templates.

Table 2 offers 'lessons learned' for the design and implementation of an e-Procurement system resulting from the implementation and rollout of the World Bank's e-Procurement for the selection of consultants solution, with regard to the respective critical success factors as proposed by Vaidya, Sajeev, and Callender (2004):

**TABLE 2**  
**Lessons Learned**

<b>Critical Success Factors (Variable)</b>	<b>Lessons Learned</b>
End-users Uptake and Training	Multiple training methods must be offered including online demonstration and labs – even for the most intuitive and easy-to-use-system.
Supplier (Consulting Firms) Adoption	Provide for manual processing to enable participation by firms that lack sufficient electronic capabilities.
Business Case and Project Management	Budget allocations are always a constraint when measured against desired features and functionality.
System Integration	Not all planned integration points were achievable due to limitations in the ERP system. For example, the requisition request for consulting services was modified from the standard SAP requisition. Re-engineering the requisition request was deemed out-of-scope for the initial release.
Security and Authentication	Provide for multi level security, authentication, secure communication, workflow and document control.

TABLE 2 (Continued)

Critical Success Factors (Variable)	Lessons Learned
Re-engineering the Process	Some exceptions to policies were acceptable and varied due to the decentralized decision-making process. However, these exceptions were not officially documented, resulting in a final system review of hard and soft stops. The project was also challenged by changing policy' throughout the implementation process.
Performance Measurement	Performance management goals and measurements should be used within the communication plan and continually referenced during the project implementation.
Top Management Support	Communication plans need to start early in the process to provide top management information on the project, status and implementation plans.
Change Management	Change management for each stakeholder needs to be determined and communicated via the appropriate channels.
e-Procurement implementation strategy	Change requests increase as users begin to demo the system.
Technology Standards	Sticking with the Bank's standard stack enabled quicker integrations to the Bank's infrastructure and reduced the learning curve for system administrators and technical support staff.

## CONCLUSIONS

In view of increased transparency, compliance, and simplification in selecting suitable consultants for the World Bank, the utilization of an e-Procurement solution is conducive to the selection process. The experience with the e-Procurement Solution for the Selection of Consultants has confirmed that the successful design and implementation of any such solution depends not only on the technological but also mainly on the human component. While technology is available on the market and can be used to build sophisticated and fully automated procurement solutions, it is about the ability of the human beings involved in the development and use of the solution that determines success. To this end, expectations from all parties' involved (i.e. top management, project management team, software developer, end-users

including the buy side and the sell side) should be based on common and realistic understanding. For example, end-users are often confronted with the rollout of several applications simultaneously. In this case, there were at least two more major applications - Client Connection and Operations Portal.

Knowing and understanding the specific situation of the end-users helped immensely to formulate an appropriate communications strategy in order to raise the awareness of the benefits of the e-Procurement solution and define a roadmap to roll it out successfully under realistic conditions. In this way, the frequent use of the e-Procurement solution will result from the end-users' buy in rather than from making it mandatory.

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