Analysis of the Portal for Managing NEEPCO Procurement Processes and Vendor Payment Details

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Received xxxxxx
Accepted for publication xxxxxx
Published xxxxxx

Abstract

This research will highlight challenges in the process of procurement, and also vendor payment details by North Eastern Electric Power Corporation, but more directly on the issues related to MSE support and the complexities encountered in purchases through the Government e-marketplace portal. The paper sets out to build upon developing a holistic improvement plan tailored to optimize procurement, improve transparency, and simplify payment procedures for better cooperation with suppliers. Utilizing a mixed-methods approach, the paper's goal is to conduct qualitative key stakeholder interviews, quantitative data analysis of procurement data and benchmarks against best practices in public sector procurement. Expected outcomes include an automated procurement system that eliminates inefficiencies, ensures timely payment to vendors, and strengthens support for MSEs. Improved communication strategies enhance vendor relationships, thus improving the services delivered to the various stakeholders. This research provides tailored solutions specifically for NEEPCO, in the light of other generalized solutions suitable for similar procurement challenges in other organizations and thus contributes to the discourse related to public sector procurement best practices, with a sharp emphasis on the sense of transparency, efficiency, and inclusivity of vendors.

Keywords: Procurement, Vendor Payment, NEEPCO, Government e-Marketplace, MSE Support, Public Sector Procurement, Transparency, Efficiency.

1. INTRODUCTION

The North Eastern Electric Power Corporation Limited is a power utility located in Shillong, Meghalaya. The corporation was established in 1976 and is aimed at hydroelectric power generation mainly in the northeastern region of India. The procurement processes of NEEPCO are found to be highly stressed and thus impede the productivity of operations and the vendor relationship. For example, in research, specific to vendor payment complexities and assistance for MSEs under the transactions on the

Government e-marketplace (GeM) platform, six micro-enterprises were engaged in open interviews. The complexity of such procurement practices not only hinders effective cooperation from the perspective of a vendor but also imperils the corporation's ability to meet promises to stakeholders. There exists a strong justification for this study because there is an urgent need to improve the efficiency of procurement in public sector organizations, which would make the success of sustainable economic development and powerful supplier relationships quite inevitable. The study would provide for a focused analysis of challenges specific to NEEPCO and find its way to actionable improvement. What's more, MSEs being crucial for economic development, something like that which falls within inadequate support within the procurement frameworks demands urgent attention. The research would work on developing an all-rounded improvement plan specific to the NEEPCO procurement process that would optimize transparency and ease payment procedures, thereby further supporting cooperative behavior among suppliers. Toward this, through a mixed-methods approach incorporating qualitative interviews with key stakeholders and quantitative data analysis, this study attempts to conceptualize best practices that can not only enhance NEEPCO's procurement but also become the model for other organizations facing similar challenges in their procurement processes. In this regard, the contribution of the study lies in the overall discourse on the best practices of public sector procurement, where it places a great deal of emphasis on transparency, efficiency, and inclusiveness in those relationships with vendors.

2. LITERATURE SURVEY

P2P stands for the procurement-to-payment cycle of steps incurred in the acquisition of goods and services by an organization. It covers all activities initiated from the time that a procurement request is made until the final settlement of payment is effected. Commonly included in this are requisitioning, sourcing, purchasing, receiving, and invoice processing. By making these steps streamlined and more efficient, organizations can contribute to efficiency, ensure cost control, and provide proper governance in the overall procurement cycle. The procurement process of an organization is, in fact, a success factor, for it ensures that the company gets what it wants across at the best possible price.

Procurement is a technique and structured method for streamlining an organization's procurement process so as to achieve desired results in saving the cost, time, and building win-win supplier relationships. Procurable items can be of various types, namely direct or indirect procurable items, reactive or proactive procurable items.

Procurement refers to the actions or steps an organization defines to acquire goods or services, from the point of requisition up to the approval of the purchase order and invoice.Of course, we often use procurement interchangeably with the phrase purchasing; however, if they were technically separated, they carry some subtle variations.

Although buying is the overall process of acquiring required goods and services on behalf of an organization, procurement refers to the activities related to the getting process and consists of the steps that need to be followed while reviewing, ordering, acquiring, and settling for goods/services. Procurement within an organization would be specific to its context and operation.

The innovative cycles of absorbing new technologies and ideas can raise the efficiency of an enterprise business, eventually leading to additional economic development. In recent history, the most up-to-date information and communication technologies (ICT) innovation changed business processes tremendously. Among them, electronic procurement, simply known as E-procurement, is one technology aid that helps a company gain what it requires. Electronic sales and purchase of goods or services in business-to-business, business-to-consumer, or business-to-government transactions may be defined as E-procurement. A procurement is said to be an advance in the delivery relationship between buyers and sellers (Subramaniam & Shaw, 2004; Saeed et al., 2005).

It involves the acquisition of every type of goods, services, and work that an organization needs, including selecting suppliers, managing contracts, and negotiating. Good procurement helps save a lot on costs, enhances the quality and delivery, and gives much better relationships between an organization and its suppliers. As such, optimizing procurement processes and strategies has remained the best approach to developing overall performance (Cao & Wang, 2022; Mohamud et al., 2023).

3. PROBLEM STATEMENT

The procurements are being dealt with a lot of difficulties while making payments to the vendors by NEEPCO. These have resulted in inefficiencies and delays, which impact its operational effectiveness and relations with the vendors. Among other issues, there is no facilitation of MSEs under the procurement framework, and issues associated with procurement are made through the Government e-marketplace portal. In the absence of an appropriate streamlined and transparent mechanism, NEEPCO is unable to acquire and manage the various data across the procurements which has reduced the capability of the entity

to effectively and efficiently fulfill commitments toward the vendors and stakeholders.

4. METHODOLOGY

The entire process of development of the online portal for procurement and vendor payments in this research study was taken up by considering the following key steps in a systematic manner:

4.1 Research and Requirement Gathering

Analysis of the existing procurements and payment systems of NEEPCO was done in detail through the following methodologies:

4.1.1 Stakeholders' interviews: procuring officers, finance managers, and vendors to understand the workflow, problems, and expectations.

4.1.2 Data collection: acquire historical data about procurement cycles, vendor management, and payment processes.

4.1.3 Benchmarking: the process of comparing an organization's current workflows to industry benchmarks to spot the areas that require improvement.

4.2 System Design and Architecture

The portal architecture was designed according to NEEPCO's specific requirements so that it would have an effortless interface with outside systems such as GeM. The above aspects have been concentrated during the design of the system.

4.2.1 Modular Design: Separate modules have been developed within the system that deal with vendor management, procurement, and payment tracking.

4.2.2 UI/UX Design: All procurement officers, finance teams, and vendors should have easy navigation.

4.2.3 Data Flow and Security: Storage of data and transaction flow has been ensured to be secure with compliance with the regulatory requirements.

4.3 Development and Implementation

The portal had been built on highly advanced technologies about robustness as well as scalability:

4.3.1 Front-end Development: Developing a responsive and accessible interface (e.g., HTML5, CSS, JavaScript)

4.3.2 Back-end Development: Implementing the core functionalities related to procurement, vendor management, and payment processing (e.g.,Node.js, Python, or Java.)

4.3.3 Database Design: Designing a structured database for managing procurement records, vendor details, as well as transactional data

4.3.4 API Integration: Interaction with the Government e-Marketplace or GeM

4.4 Testing and Quality Assurance

To establish the reliability and security of the system, a very tight testing phase was conducted as follows:

4.4.1 Functional Testing: Testing every module for correctness in their operations.

4.4.2 User Acceptance Testing (UAT): Involving the personnel of NEEPCO and the vendors to get feedback.

4.4.3 Performance Testing: Checking whether the system functions as desired under all conditions to scale up.

4.4.4 Security Testing: Identifying vulnerabilities to ensure appropriate security measures for data protection.

4.5 Deployment and Training

Once the system tested satisfactorily, it was rolled out on the infrastructure of NEEPCO as:

4.5.1 Deployment: Deploys the application on cloud servers to meet scalability and accessibility needs.

4.5.2 User Training: Organized sessions for end-users which encompasses procurement officers and vendors.

4.5.3 Monitoring: Tools developed that monitor the performance of the system and feedback from users

4.6 Evaluation and Continuous Improvement

After deployment, the effectiveness of the portal was analyzed based on user feedback and operations performance measures as shown below:

4.6.1 Review and assessment: Continuously monitors system efficiency, user satisfaction, and overall procurement performance.

4.6.2 Continuous Upgrades: Design and implementation upgrades based on various stakeholders' feedback ensure that the portal keeps pace with the requirements of NEEPCO.

5. CONCLUSION

With NEEPCO, its online procurement and vendor management portal is the most strategic leap in procurement management organization. In order to procure the power from NEEPCO, one has to go through three different websites each having specific functionality such as Vendor

and Bidder registration, Bidding and Auctioning and there is no specific portal for online payment so the payment transaction has to be done at an authorized bank and then the receipts has to be uploaded in the respective website. In the proposed portal we are planning to integrate Registration, Bidding, Auctioning and online Payment. Automation and digitization in procurement and payment workflows increase efficiency, transparency, and compliance. This appropriate streamlined and transparent mechanism also provides facilitation of MSEs under the procurement framework and supports them. This portal can be customized to other organizations as per their requirements and workflow and also this can serve as an example to other large public sector companies that face such challenges.

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