GePNIC – A Futuristic Technology Solution for Good Governance in India

{This article is an abridged version of the submission on "Government e-Procurement System of National Informatics Centre – GePNIC" made by Mr. Srinivasa Raghavan K, Scientist F, National Informatics Centre, Chennai, India, for the South Asia Procurement Innovation Awards.}

Summary

The Central Public Procurement Portal of Government of India is a single-point access for information on all procurements by various central government organizations and state government entities across the country. It facilitates electronic or e-tendering using the Government e-Procurement System of National Informatics Centre (GePNIC). Over 350 Central Government organizations, apart from 27 state governments and union territories are using GePNIC, which is also available on mobile phones with apps downloadable from Google Play or Apple stores. More than 2.7 million e-tenders worth over Rs. 402 trillion have been processed since the inception of GePNIC. The system, designed taking into account the procurement rules followed by India is customizable for the procedures followed by the World Bank, and Asian Development Bank, etc. It has features like mandatory use of Digital Signature Certificates, digital signing of all documents, two factor authentication, secured hosting, client-side encryption, multiple bid openers; 24 x 7 availability of portal and telephonic help desk, anytime and anywhere bidding,

- Centralized Information as all tenders of the country are assimilated in one portal.
- Organizations indicated huge savings in time and cost.
- Availability of step-by-step details of the tender life in public domain ensures complete transparency.
- A single product used by various organizations ensures uniformity in the tender process.

periodic SMS and mail alerts; mobile apps, online tender opening, online payment, and automatic refund in a user-friendly system; system-aided evaluation process, and on-the-fly reports / comparative statements.. Even with such a large user base and national outreach, NIC is providing individualized value additions as needed by various procurement entities including integration of e-procurement with ERP systems; end to end solution including online evaluation and contract management; electronic money transfer for bid security etc. This adaptability and evolving nature of features with such a wide outreach makes GePNIC a living innovation.

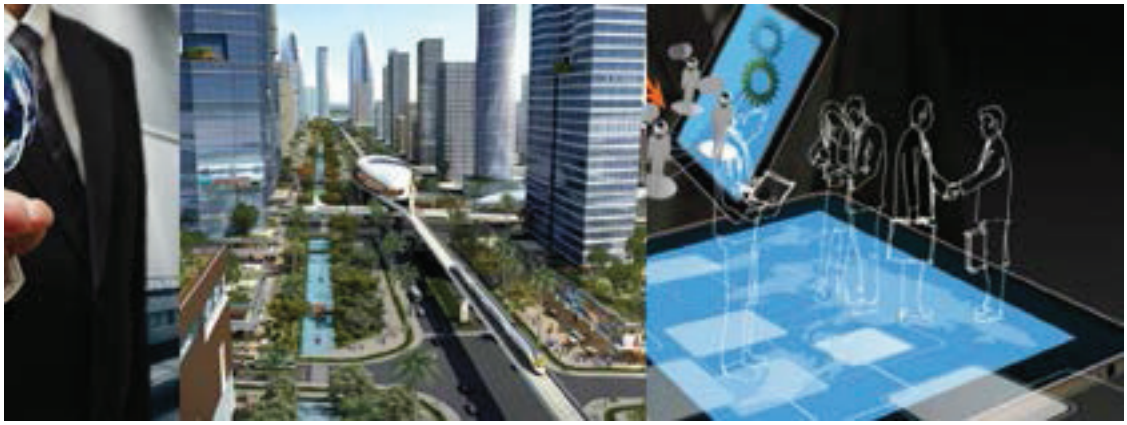
Background

GePNIC has been developed by National Informatics Centre (NIC) of the Ministry of Electronics and Information Technology (MeitY), Government of India, to cater to the electronic procurement / tendering requirements of Government departments and organizations. The tendering process is fully automated, which makes the process of evaluating a tender unbiased and cuts short the time required for awarding contracts. Variations made within the base system provide an integrated solution with e-tendering, e-reverse auction, and e-auction, as delivered to some of the public sector undertakings. This is a significant step in managing large procurements without any litigation. Tender-cum-auction process using GePNIC enables competitive bidding and has brought in lots of revenue for the government in sand mining and other tenders. As a result, the process is being followed by various other organizations across the country, leading to an increase in their revenue share too.

Challenges Addressed

As per a World Bank report, the overall procurement within India is 13% of its National Budget. Earlier, the government carried out procurement

through conventional methodology, investing huge human and other resources and consuming a lot of time, with little or no transparency. Mandatory adoption of the electronic medium for tendering with state-of-the-art security has ensured ample transparency and accountability by various stakeholders. Major challenges addressed by GePNIC through process reengineering and emulating best practices are adoption of standard bidding document, price bid templates, and directories on bidders, products, and locations. Front-end computer systems with necessary network connectivity, accessories, power backup facility, and back-end systems



having necessary capacity meet all the user requirements. Predictive analytics is planned to be included once base analysis is made available on the portal. Adaptability and resilience of the system to run over 100,000 bids a year has made the system a winner.

Impacts Generated

GePNIC has generated considerable impact by way of:

1. Centralized Information at One Point: All tenders of the country are assimilated into one portal.
2. Time and Cost Savings: Studies conducted by various organizations have indicated huge savings in time and cost.
3. Transparency: Availability of step-by-step details of the tender life in public domain ensures complete transparency. This has instilled faith and confidence amongst all stakeholders.
4. Uniformity in Tendering Process: As this is a single product used by various organizations, there is uniformity in the tender process followed. Workflow-based system ensures that no step of the tendering process can be circumvented.
5. Authenticity: Mandatory use of digital signature certificates, digital signing of all documents, two-factor authentication, secured hosting, and client-side encryption have ensured the authenticity of each task performed.
6. Bidder Convenience: The system is available 24 x 7 with help desk. This enables anytime and anywhere bidding with no physical threat; allowing fair, free, and fearless participation from vendors.

7. Data Assimilation and Analytics: This provides real-time graphs, trends, and statistics. Many new entrepreneurs have thus got encouraged to participate in e-tendering under Government of India's Make in India vision.

Level of Innovation

When work on GePNIC was taken up, there was no readymade system available, which could meet the varied requirements. Hence, NIC decided on development of the system addressing all requirements and overcoming every challenge. This led to many innovations like a) Mobile Apps, which enabled tendering and updates on the go. b) A Dash Board that provides descriptive analysis and key performance indicators on various parameters. This facilitates a detailed insight into various activities taking place within the system. c) Process innovation that facilitates quick bid opening, thereby ensuring quick and instant results. All documents uploaded are digitally signed and backed by the IT Act of Government of India. There are audit logs, time stamping, and role-based access with tamper-proof methodology. d) As suggested by the World Bank after a study across different states, product categories have been made uniform. There is a standard yard stick for similar works across various portals.

Provisioning of configurable functionalities has made GePNIC more versatile. Customized provisions, like integration with mobile technology, state/country-wide single registration of vendors for repeated participation in bidding, ability to integrate with other enterprise management systems, logistics and warehouse management systems, and Financial Management Information System (FMIS), among others, make GePNIC a continuously evolving and futuristic technology solution for good governance. The mobile interface adds to the system's openness and transparency.

Replicability

e-Procurement system of NIC has been developed as a generic product, which makes it replicable for all kinds of procurement needs of government offices in the country, whether Goods, Services or Works. As it is on an Open Architecture Framework, there is flexibility for scaling up and meeting the dynamic needs of the Government. Further, it has been designed taking into account the General Financial Rules (GFR) on tendering and, thus, adheres to various guidelines issued by the World Bank and Asian Development Bank. Some of the processes are deployed on Virtual Machines / Cloud to cater to the requirements of peak time load and other such critical resource-intense activities. With such capabilities, GePNIC can also be implemented initially in SAARC countries, followed by other nations.

Scalability and Sustainability

Various methods have been adopted for funding and sustainability of the system.

1. Certain State Governments have a process of registering bidders for a specified period, for which a nominal one-time fee is collected from bidders. This brings in continuous revenue without overburdening the bidder on the cost aspect.

2. For each bid, a small percentage on the bid value is collected for maintaining the system and meeting other requirements. However, this may overburden bidders.
3. The Earnest Money deposit (EMD) collected from bidders is deposited in banks. The interest earned during the deposit period is used for sustainability of the system. This does not have a direct impact on bidders' costs. These measures have been running for more than 10 years in certain instances, confirming the sustainability of the system.

Lessons Learned

Major learnings from implementation of GePNIC across the country can be summarized as follows:

- The system, driven from the top, has had a great impact on the speed at which it is being implemented.
- Bidders are able to bid on any site without relearning, as the product is the same all over.
- e-Procurement systems have a standardized approach to rolling out efficient processes. They serve not only the needs of procurement, but also all departments involved in processing and record keeping of various transactions.
- There must be in place a Core Committee or some such empowered decision-making body to take quick decisions on issues that may arise.
- Continuous process re-engineering is essential for value addition.
- Constant capacity-building measures have to be put in place.
- Key to successful and continued running of GePNIC is creating a strong support structure comprising help desks, system administrators, and IT support.
- Technology improvements by way of better performance, and enhanced features, like Mobile Apps and Data Analytics, will be very useful for end users.
- Item codification and standardization of bidder categories are also essential.
- Multi-currency templates are required for global tenders.