Digital transformation of
a marketplace

About Client
A state agency of the Indian government

Industry
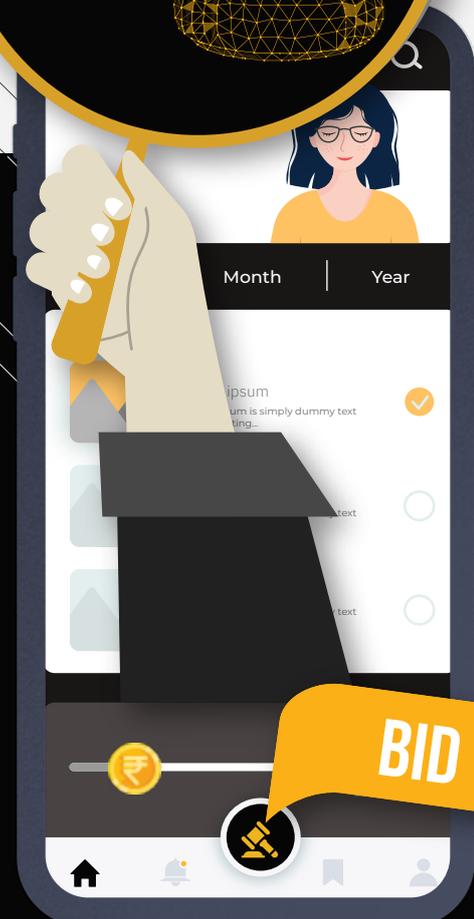## Government

Service
e-Auction

BID

Month | Year

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Business **Need**

The client's complicated, manual auction process that supported 5,000 users and 2,50,000 transactions a day was tedious, time-consuming, error prone, and lacked transparency. Hence, the client wanted an automated bidding system with a settlement process and a system to issue certificates for the import and export of the produce.

Business **Challenge**

The impact of digital transformation on the procurement departments has been huge, improving its performance and widening its scope. Electronic auctions (e-Auctions) are a major performance lever for procurement departments across the globe. e-Auction has had a transformative effect on procurement, leveling the playing field for all stakeholders (manufacturers, warehouses, auctioneers, and buyers), removing human biases from the equation, and making the process transparent, fair, and efficient.

The client, a state agency of the Indian government, promotes the cultivation, processing, and trade (domestic and international) of specific Indian produce and also acts as the marketplace where all key stakeholders engage and collaborate for a transparent and fair Farm-to-Market auction process. The client's existing manual auction process managing more than 5,000 users and 2,50,000 transactions a day, had the following shortcomings:

- Manual, lengthy, and time-consuming auction process

- Non-transparent system and price discovery, and lack of anonymous bidding led to rampant malpractices

- Delayed invoicing and settlement

- To address these challenges, the client wanted an automated bidding system with an integrated settlement process and import or export certificate issuance of the produce

Business **Solution**

NSEIT brought the immense force of digitalization to revolutionize the client's auction process through India's first fully automated e-Auction platform. Our end-to-end services included the application portfolio assessment, development, implementation, integration, modification, and maintenance of the software applications for the e-Auction solution and its allied services.

In the context of our application portfolio rationalization assessment, we analyzed the client's business needs and identified opportunities for optimizing their application portfolio to deliver greater value and efficiency. One of the key areas we focused on was the development of an automated bidding system with a settlement process and a system for issuing certificates for import and export of produce.
Our solution aimed at enhancing the overall user experience while ensuring the system's scalability and performance. To achieve this, we carefully evaluated the existing applications and their functionality, taking into consideration their business

value, technical debt, and maintenance costs.

The e-Auction solution we proposed aligned with the client's objectives and ensured compatibility with their IT landscape and future plans, delivering a streamlined and efficient platform. The agile, integrated, and robust e-Auction platform has the following features:

One-stop automated solution: The solution automated the complete auction cycle, including pre-auction, auction, and post-auction facilities, including the final delivery of the produce and its invoicing

Location agnostic: The solution enabled the stakeholders (manufacturers, warehouses, auctioneers, buyers, and auction admins) to operate anytime, from anywhere. This improved auction's efficiency and participation even from small size buyers

Fully automated feature-rich system: Online availability of auction catalog with a planner, offline bidding, and My Catalog feature and faster settlement process via electronic movement of contract notes and delivery orders. The system provides the provision to configure rules, auction types, etc. to automate the bidding process

User-friendly interface: A web interface for the manufacturers and warehouses to key in the invoices and arrival and weighment reports (AWRs) from their respective offices. The auctioneers and buyers login into a Windows-based application to create the catalog and bid in the auctions

Cloud-hosted: The application is hosted on the cloud enabling high availability, security, and cost savings. The cloud has also been instrumental in delivering a seamless user experience, while making the system highly scalable

Transparent, free, and fair process: The e-Auction solution ensures fair price discovery through buyer anonymity. It has also established visibility and transparency across all stakeholders. Further, the solution identifies demand and pricing trends using various marks compared to similar comparable marks via post-auction information

Digital payments: By removing cash transactions and implementing digital payments, we have been instrumental in supporting the government's vision of digital payments

Certificate interface: An interface for importers and exporters to upload their produce and warehouse details and instantly generate import or export clearance certificates

NSEIT utilized its extensive experience and technology expertise to craft the e-Auction platform that opened more opportunities for the client's business and shifted them to greater transparency in the new digital world. It connected stakeholders from different parts of the world and enhanced the auction process's transparency, fairness, efficiency, participation, and security.

The system enables:
- ❯ 250,000 auction transactions daily
- ❯ <10 millisecond latency
- ❯ >100GB data handling daily

Tech **Stack**

Microsoft .NET

Microsoft Visual C++

Microsoft SQL Server

C#

ASP.NET

Business **Impact**

>20% YoY increase in the trading of the produce

Fast, efficient, and fully automated auction process

Improved transparency and fairness in price discovery

Faster invoicing and settlement, supporting the government's vision of digital payments

Enhanced savings and reduction in transaction cost, establishment cost and time

>50% decrease in transaction time

Erased geographical boundaries

Enhanced participation and buyer anonymity

Improved flexibility, speed, performance, and ease of bidding

About **NSEIT**

NSEIT Limited is a digital native technology company that engineers world-class solutions to help our global customers accelerate their digital transformation journeys. Our key service pillars are Application Modernization, Business Transformation, Data Analytics, Infrastructure & Cloud Services, and Cybersecurity, through which we create intuitive digital experiences and tangible business impact. For over two decades, our innate drive for excellence has made us the partner of choice for global organizations. At NSEIT, we fuel digital progress.

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