

CASE STUDY

A Leading Ports & Maritime Association Reduces Processing Time by 60% with SAP ERP Transformation



Overview

As per the Indian Government's visionary Sagarmala Project, all major ports in India are envisioned as Smart Ports through the digitization of services and implementation of next-generation technologies. Poor stakeholder integration, coupled with legacy IT infrastructure, restricted scalability and innovation, and the absence of analytical reports and KPIs hindered informed decision-making and operational efficiency. The customer needed an SAP ERP system to ensure a paperless, transparent, and seamless operations regime for cargo tracking and performance monitoring. Also, a centralized, web-based Port Community System (PCS) was expected to be commissioned to enable smooth data flow between different stakeholders through a common interface.

Tech Mahindra's PortNxt Enterprise Business System integrated port operations with SAP ERP, enabling seamless stakeholder collaboration, faster vessel clearance, data-driven decisions, and paperless processes. This SAP-powered transformation ensured scalability, innovation, and compliance, aligning with the Sagarmala vision for smart, efficient, and business-friendly port management.





Client Background & Challenges

The apex Ports & Maritime Association was constituted primarily with the idea of fostering the growth and development of all major ports. Over the years, the customer has consolidated its activities and grown strength by strength, and is considered to be a think tank for the major ports with the goal of integrating the maritime sector.

Business Challenges

Given the scale of operations, they faced significant challenges, including:



Fragmented operations caused siloed systems and inconsistent workflows.



Legacy IT infrastructure constrained scalability, innovation, and modernization efforts.



Heavy reliance on manual processes and paperwork led to inefficiencies, delays, and errors.



Port personnel had limited exposure to modern digital systems and tools, leading to training and skill gaps.



Limited real-time visibility into cargo movement and port performance slowed the decision-making process.



Unavailability of analytical reports and KPIs restricted the management's ability to make informed business decisions.



Inconsistent stakeholder integration among shipping lines, customs, terminal operators, and logistics providers.





Our Approach & Solution

The PortNxt Enterprise Business System solution delivered an integrated Port Operations System combined with a comprehensive SAP ERP application, offering a holistic, real-time view of maritime operations with enhanced drill-down capabilities.

Standardized SAP ERP modules — covering finance, materials management, sales and distribution, port operations, and asset management — were deployed and integrated with the National Logistics Portal (NLP-Marine) for unified stakeholder engagement.

The centralized, automated SAP ERP system provided real-time dashboards, unified reporting, and predictive analytics. Standardized processes, master data management, and integration with PCS, Vessel Traffic Management System (VTMS), Radio-Frequency Identification (RFID), and CCTV systems ensured transparency, faster decision-making, and measurable improvements in operational productivity.





Business & Highlights

As a global leader in SAP and one of the Global Strategic Services Partners, our SAP ERP implementation has transformed the customer into a digitally enabled, transparent, and efficient enterprise.

The digitally transformed port ecosystem improved turnaround time and reduced congestion. It also enabled paperless operations with minimal manual intervention, real-time tracking of cargo and vessel movements, and enhanced ease of doing business for all port users.

The Key Outcomes Achieved

- ⤴ Increased vessel handling per annum by 10%.
- ⤴ Accelerated vessel clearance by 25% through improved vessel turnaround time (TAT).
- ⤴ Enhanced decision-making speed by 30% using unified dashboards.
- ⤴ Raised annual cargo throughput across all ports by 6-10%.
- ⤴ Automated financial processes for 10,000+ receipts and 7,600 invoices.
- ⤴ Streamlined payroll for over 1,700 runs per month and digital leave approvals, reducing processing time by 60%.
- ⤴ Optimized sales process handling 20,000+ sales invoices.

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