# Kerala Maritime Board – Enterprise Resource Planning (ERP) System

The Kerala Maritime Board has initiated steps for complete digital transformation by implementing an AI-Integrated Enterprise Resource Planning (ERP) system to establish operational transparency, safeguard assets, minimize revenue leakages, and create a single digital source of truth across its Head Office, regional offices, and various port locations.

## Module 1 – Administration & Policy Governance

- **Board Meeting & Resolution Management:** Automation of Board agenda preparation, minute generation, voting records, and automated tracking of action-taken reports on Board decisions.

- **Policy Decision Tracking & Electronic Workflows:** Digitized workflow engine for drafting, approving, and archiving policy decisions, file processing, and ensuring secure electronic transmission of data.

## Module 2 – Financial & Revenue Management

- **Double-Entry Accounting & Treasury System:** Fully integrated accrual-based double entry accounting engine handling general ledger, accounts payable/receivable, centralized treasury management, and automated bank reconciliation.

- **Budget Formulation & Execution:** Automated tools for annual budget drafting, fund allocation, real-time expenditure monitoring, variance analysis, and multi-stage write-off
Lifecycles.

- **Comprehensive Port Revenue Streams:** Digitized billing and collection mechanisms covering vessel dues, pilotage fees, berth hire charges, tug charges, crew change management, port land/building lease rents, and sand sales/royalty collection from dredging operations.

## Module 3 – Human Resource Management System (HRMS)

- **Employee Lifecycle Management**: Comprehensive digital employee records from onboarding to superannuation, tracking designations, transfer/vacancy workflows, and seniority-based criteria.

- **Payroll & Statutory Compliance:** Complex payroll automation engine processing monthly salaries, deductions, leave encashment, mid-period DA hikes, and seamless integration with SPARK.

- **Digital Service Book & Self-Service Portal:** Maintenance of electronic Service Books, automated leave tracking/approvals, profile updates, and internal grievance redressal mechanisms.

### Module 4 – Engineering & Infrastructure Monitoring

- **Civil Works & Milestone Tracking:** Comprehensive tracking of engineering projects executed under the Harbour Engineering Department and other government departments,including fund deposits, technical sanctions, physical and financial progress monitoring,and contractor bill processing.

- **Mechanical & Electrical Asset Compliance:** Lifecycle maintenance tracking for port equipment, tugboats, cranes, electrical utilities, periodic inspection schedules, and safety compliance records.

### Module 5 – Port Operations & Operational Support

- **Store & Inventory Controls:** Real-time stock tracking for port operations, fuel, spare parts, and office supplies, with automated reorder levels and stock deduction based on pre-configured consumption ratios.

- **Procurement & Contract Management:** End-to-end management of tendering processes, purchase orders, vendor evaluation, contract lifecycles, and performance tracking.

- **Auxiliary Support Systems:** Internal maintenance job card processing, maritime educational institution administration, and legal suit/court case management and tracking.

### Module 6 – Integration of Existing KMB Kerala Nouka IV & Dredging Module with ERP and Executive Dashboards

- **Non-Editable Digital Audit Trail:** Pre-configured system controls and immutable electronic logging for every transaction, approval, and file movement to facilitate seamless online auditing.

- **Role-Based Executive Dashboards:** Customized real-time analytics, KPIs, and visualization panels tailored for the Chairman, CEO, Board Members, and Department Heads for enhanced strategic control.

## Module 7 – External Systems Interoperability

- **Plug-and-Play Cloud Architecture:** Cloud-native microservices architecture adhering to the plug-and-play model for rapid deployment of core capabilities.

- **Third-Party API Integrations:** Secure, automated data integration with external entities including State Treasury, commercial banks, SPARK, and the K-SWAN network.