

AIRPORTS AUTHORITY OF INDIA (AAI)

Invitation of

Expression of Interest (EOI)

For

Submission of Technical Solution and Architecture for 'Selection of Managed Service Provider for Design, Development, Implementation and Maintenance of Unified Enterprise Application Platform for AAI'

Issued by:

Information Technology Directorate,

Airports Authority of India (AAI)

Rajiv Gandhi Bhawan, Safdarjung Airport

New Delhi – 110 003

Document Reference: AAI/IT/EOI/eAAI/2026

Date of Issue: 1st September, 2026

Tender ID (EOI): 2026_AAI_289434_1

BACKGROUND AND INTRODUCTION

About Airports Authority of India

Airports Authority of India (AAI) is a statutory authority constituted under the Airports Authority of India Act, 1994, under the Ministry of Civil Aviation (MoCA), Government of India. AAI is a Mini Ratna Public Sector Enterprise responsible for the management and operation of airports across India. AAI manages more than 162 airports, including 23 international airports, and provides air navigation services over approximately 2.8 million square miles of airspace.

AAI's core functions encompass airport operations, air traffic management, infrastructure development, aeronautical communication, aeronautical information services, airport security, and commercial activities.

Vision: To be the World's leading Airport Developer, Operator, and Air Navigation Service Provider.

Mission: To enhance air connectivity across the nation and be an environment-conscious, sustainable organisation using state-of-the-art and indigenous technology for cost-effective, modern, safe airport operations and air navigation services.

1.2 Project Genesis

AAI has envisaged **eAAI (electronic AAI)** initiative to enable digital transformation of various AAI processes and procedures through modernization as well as unification of Enterprise Applications, driven by AAI's commitment to effective utilization of its technological capabilities and to enhance operational efficiency across the organizational functionaries.

1.3 Key goals

The proposed solution is envisaged to achieve following goals:

1. **Need for Centralized Repository** — Establish a centralized data repository to eliminate fragmentation across siloed systems and improve operational efficiency and data accessibility.

2. **Billing & Collection Visibility** — Enable integrated billing and collection visibility by consolidating Aero and Non-Aero financial data across AIMS and SAP into a unified platform for improved financial oversight and reconciliation.
3. **Data Quality and Consistency** — Improve data quality and consistency by minimizing manual data entry, reducing duplication, and enforcing standardized data governance practices.
4. **Single Source of Truth** — Implement a single source of truth through creation of master data registries for HR, airport operations, Vendors, and project management.
5. **Decision Dashboards and Collaborative Tools** — Deploy real-time decision support dashboards and collaborative tools to enhance data-driven decision-making and reduce delays caused by information silos.
6. **Airport-related Master Data** — Standardize airport-related master data across all directorates to ensure seamless planning, coordination, and operational efficiency..
7. **Outdated and Unsupported Technologies** — Modernize legacy systems by upgrading/migrating AIMS, SAP ERP and EPIS platforms to secure, scalable, and supported technologies, mitigating cybersecurity and operational risks.
8. **Lack of Monitoring and Alert Mechanism** — Establish proactive monitoring and alerting mechanisms for contract milestones, asset serviceability, and system performance to improve operational reliability.
9. **Absence of Learning & Training Management System** — Implement a Learning and Training Management System (LTMS) to strengthen workforce capability, track compliance, and support continuous skill development.
10. **Suboptimal User/Employee Experience** — Enhance user and employee experience by introducing a unified, intuitive UI/UX framework and enabling mobile accessibility across enterprise applications.
11. **Infrastructure Scalability** — Develop a scalable cloud data center/infrastructure strategy with robust storage forecasting and elastic infrastructure to support AAI's growing digital and operational needs.

2. Objectives of Expression of Interest (EOI)

AAI invites Expressions of Interest (EOI) from reputable, leading, and experienced software Managed Service Providers / Vendors / Original Equipment Manufacturers (OEMs) / System Integrators to submit detailed **Technical Proposals** containing solution and architecture for the design, supply, implementation, customization, integration, training, and ongoing support of the **Unified** Enterprise Software Platform for AAI.

The primary objectives are:

- To assess the technical solution and market landscape of available COTS/SaaS/custom enterprise solutions relevant to AAI's functional requirements.
- To evaluate capabilities of available domain expertise among the prospective Respondents, and proposed solution fitment.
- To assess the market capability, refine the scope of work for inclusion in the upcoming intended RFP

AAI intends to implement a solution to achieve:

- Establish a centralized repository that eliminates data fragmentation and improves process efficiency and response times.
- Consolidate Aero and Non-Aero billing and collections into a unified system that provides end-to-end visibility and operational synergy.
- Improve data quality and consistency by reducing manual entry, eliminating duplicates, and enforcing validated data capture.
- Create master registries (single source of truth) for HR, Finance, Airport, Vendor, Customers and project data to ensure authoritative, consistent records.
- Deploy decision dashboards and collaborative tools that break information silos and accelerate coordinated decision-making.
- Standardize airport-related master data across directorates to enable seamless planning and operations.
- Modernize legacy platforms (including SAP ERP and EPIS) to reduce security risks and support long-term maintainability.

- Implement proactive monitoring and alert mechanisms for contract milestones, equipment serviceability, and system performance.
- Implement a Learning & Training Management System to close workforce skill gaps and ensure compliance training.
- Enhance user/employee experience by streamlining UX/UI across applications and delivering a mobile app for employees.
- Ensure sizing of scalable data-center infrastructure with accurate storage forecasting and capacity expansion capabilities.

3. Scope of Work

The scope of this work is to Design, architect, Develop, Commission and maintain a unified, modular, scalable, open standards based Unified solution (eAAI platform) covering Finance, HR, Commercial, Operations, Land and other Stakeholder including various AAI directorates, customers/vendors for meeting the Functional Requirements detailed in this document.

The scope shall also include Build, Configuration, Customization, Data migration from existing legacy /disparate systems with full reconciliation and sign-off, Integration with Operational Systems (e.g., AODB/AOCC/APOC/AFTN/AMSS/AMHS/ATM Automation Systems/ADS-B sensors, Slot Management System, 3rd Party data providers, Banks, Customers, Vendors, Government Systems like GST, Prayas Portal, MoCA website etc.)

The scope shall also include complete change management including initial as well as periodic Trainings, operational support, implementation support for a period of 10 years.

The Respondents shall preferably, make use of open standards in all systems, databases etc. to allow complete technology and data portability at all times, with no dependency on proprietary or vendor-locked components/systems.

Respondents shall respond to the full scope, clearly indicating their coverage. The proposed solution shall support phased rollout, modular implementation, and seamless integration across all AAI directorates, legacy systems, and external platforms.

The overall functional / non-functional requirements encompass the following modules, systems, and infrastructure components:

3.1 Module 1 — eAAI Portal (Internal, External & Mobile)

3.1.1 Internal Employee Portal

- Unified web-based portal as well as Mobile app serving as a single point of access for all AAI employees across CHQ, RHQ, and Stations.
- Integration with HCM/HRMS module for employee self-service, leave applications, transfer requests, document access, personal information updates, outside employment, passport and foreign visits, acquisition/disposal of movable and immovable property, reimbursements, and related services.
- Workflow-based digital approvals for procurement, proposals, grievances, POSH, ticketing, and directorate-specific business processes.
- Task assignment and management with automated notification engine for real-time communication and event-driven alerts.
- Integration with digital document management, collaborative editing, version control, digital signatures, and archival.
- Announcements, circulars, and internal communication broadcast.
- Workflow-based digital process management for internal as well as external processes for Airport Director, Airport Terminal Management, CNS Maintenance, Aviation Safety, Civil Maintenance, Aerodrome Licensing Management System, Complaint Handling, Electrical Maintenance, Corporate Social Responsibility (CSR), Voluntary Hazard / Occurrence Reporting System (VHRS), Causal and contributory factors, Voluntary Reporting System, Fire, Ground and Flight Safety, Legal, Operations, Quarter Management, Shift Supervisory Officer (SSO), Security, Terminal Management (Operations), Watch Supervisory Officer (WSO), Frequency Management System, Air Traffic Data Management (ATDM), Commercial directorates.
- Asset and Inventory management: Creation of Assets, Inventory, Allocation, De-allocation, Transfers, Trans-installations etc.
- New Development / Requirements for various directorates

3.1.2 External Stakeholder Portal

- Secure external-facing portal for customers (airlines, FTOs, concessionaires, land lessors etc.), Vendors, service providers, retired employees and other external stakeholders.
- The System shall provide secure, role-based, self-service external-facing web portals for external stakeholder (Airlines, Cargo Operator, Freight-Forwarder, Ground Handling Agencies, Concessionaires, Land Lessees, Service Providers etc.) federated from the internal employees portal.
 - Single window portal allowing each stakeholder organisation to view and download invoices, statements of account, ledger reports, Advance balances, security deposits, credit limits etc.;
 - Payment initiation through integrated net-banking / NEFT / RTGS / UPI/ other channels, with receipt/collection notifications;
 - Document upload and other statutory submissions required by the Authority;
 - Service request management with end-to-end tracking including resolution;
 - API access for high-volume stakeholders such as Major Airlines enabling System to System exchange of commercial/billing/statistical/operational data;
- Interface for various Applications (e.g., Night Parking, Slot, FTO, Land allotment etc.) from external stakeholders including Document upload, status tracking, and communication interface.

3.1.3 Mobile Application

- Employee centric mobile application for iOS and Android platforms.
- Functionalities mirroring the internal portal: leave status tracking, document submissions and tracking, announcements, training material access.
- Push notification support and secure multi-factor authentication.
- Multilingual capability from day one where applicable.
- Secure authentication (multi-factor authentication).

3.2 Module 2 — Human Resource Management System (HRMS)

A comprehensive HRMS covering the entire employee lifecycle from hire-to-retire:

Sub-Module	Key Capabilities
Recruitment & Onboarding	Organization structure, sanctioned-strength and manpower-budgeting module, with the organizational hierarchy, Automated merit list generation, applicant screening, vetting workflows, onboarding workflows, personal file creation
Employee Records, Employee Self-Service, Manager Self-Service	Comprehensive employee e-personnel file covering service history, qualifications, postings, and disciplinary records, Personal data updates, document downloads, approvals, Leave management, transfer requests, accommodation allocation, travel request submission with agency integration, Leave management, transfer requests, accommodation allocation, travel request submission with agency integration, Employee Assistant: Conversational AI for HR self service, leave applications, policy queries in multiple languages
Leave Management	Configurable leave types and entitlement rules for all type of Leaves (Earned Leave, Casual Leave, Half-Pay Leave, Maternity/Paternity Leave and other categories as defined /applicable) with accrual, encashment and lapse rules; ESS/MSS based leave application, approval, and delegation of approval; Integration with holiday calendars and, where applicable, shift/roster management; Leave Travel Concession (LTC) module integration including eligibility, block-year tracking, and claim processing

Performance Management	KPI tracking, appraisal cycles, feedback management, Configurable Annual Appraisal cycle and Appraisal templates with goal setting / KPI cascading from Organization, department and individual level; Self-Appraisal, Reporting Officer, Reviewing Officer and Counter signing workflow with feedback; Mid-Year review checkpoints and normalization support across departments; Linkage of PMS to increment, promotion eligibility and training recommendation; Representation/appeal against an appraisal outcome, integrated with the Grievance module; Appraisal record repository with role-based, time-bound visibility controls.
Transfers, Promotions & Postings	Cadre and career-progression management — seniority lists, Departmental Promotion Committee (DPC) workflow and cadre-restructuring support, Promotions, Transfer processing considering seniority, vacancy, and eligibility criteria, Transfer policy, vacancy and eligibility criteria, Transfer request, approval, relocation and joining-formality tracking
Medical Benefits Management	Medical benefit administration and claim processing for serving and retired employees
Payroll & Employee Payments	Payroll processing, salary calculation, tax deductions (TDS), disbursement, Re-imbursements
Employee PF Trust, EDCP and Pension Management	Administration of three AAI trusts: Provident Fund (PF), Gratuity, and Employee Deposit Linked Contribution Plan (EDCP) — transactions, advances, investments, accruals, payments, and refunds, Pension, NPS
Training & Learning	Training requirement, Approvals and records management, Integration with Learning Management System (LMS)
Travel Management	Travel request and booking integration with agency systems

Grievance management	Unified grievance management module configurable separately for internal employees and external stakeholders; Multi-channel grievance intake through web portal, mobile, e-mail with a unique tracking reference issued to every complainant; Auto-routing of grievances to the responsible department or designated executive based on category and the organizational hierarchy with a configurable SLA-based escalation matrix; Grievance analytics and root cause analysis; Integration with the Centralized Public Grievance Redress and Monitoring System (CPGRAMS) for government-sector grievance-redressal compliance, where applicable;
Vigilance and Disciplinary clearances	Vigilance and Disciplinary clearance workflows
Workforce Analytics	Dashboards for HR decision-making
Retirement/ Superannuation Management	Separation and exit management (resignation, termination, retirement, death-in-service) integrated with the Retirement & Superannuation module for post-retirement benefits, communications etc. Access to be revoked after retirement, Relevant module access to be given retired employees; Retirement forecasting and automated pre-retirement workflow as per configurable schedule e.g. 12 months or 6 month prior to superannuation; Automated computation of pension, gratuity, and Provident Fund settlement amounts with disbursal tracking; Cross-departmental "no-dues" exit-clearance workflow prior to final settlement; Generation of retirement-benefit documents and post-retirement medical-benefit administration; Pensioner/retiree self-service portal for pension slips, life-certificate submission, and grievance raising; Succession-planning dashboard that uses retirement forecasts to flag upcoming vacancies in key roles;

3.3 Module 3 — Aero / Non-Aero Billing & Payments System

A comprehensive and integrated billing as well as revenue management platform:

3.3.1 Aeronautical Billing

- Configurable tariff master capable of ingesting AERA-approved tariff orders for aeronautical charges such as landing, parking, housing, Route Navigation Facility Charge / Terminal Navigation Landing Charge for ANS, Passenger Service Fee, User Development Fee, etc.;
- Automated bill generation from operational data feeds like flight movement data, ATM statistics, passenger counts with manual override and adjustment workflow;
- Multi-stakeholder invoicing covering airlines, ground-handling agencies, cargo/freight forwarders, commercial/Land/Operations concessionaires, Car Parking, advertisers, real-estate/land lessees etc.;
- Statutory-compliant e-invoicing (GST e-invoice/IRN generation) with bulk and individual invoice issuance;
- Credit control, ageing analysis, automated reminders/dunning, and configurable interest-on-delay computation;
- Automated reconciliation of receipts against bank statements/virtual accounts and against the General Ledger;
- Advance billing, credit/debit notes, refunds, and security-deposit adjustment against dues;
- Real-time revenue dashboards by stakeholder category, location/station, and revenue head up;
- Billing of RNFC, TNLC, Landing, Parking, UDF, ASF and other aeronautical charges
- Billing, collection and accounting for AAI, NASFT (ASF), RACFT (RCS Levy) charges.
- Operator/Customer account management, tariff management, and invoice generation.
- Automated billing workflows to replace current manual processes.
- Real-time visibility on customer-wise billing and outstanding collections.

- Integration with ATM/Radar Systems, AMHS, AOCC, FIDS, ATFM, Type B messaging Systems, ADS-B sensors, third party data providers and other operational systems for data-driven automated billing.
- Reduction of manual intervention in data entry and billing processes.
- Support for Multi Year Tariff Proposal (MYTP) data generation for MoCA/AERA submissions, as applicable.

3.3.2 Non-Aeronautical Billing

- Billing related to Operations, Commercial, Land directorates and other miscellaneous bills
- Commercial space rentals, concessions, advertising, car parking and other non-aero revenue streams.
- Concession and lease-management module covering retail, food & beverage, duty-free, advertising, car parking, real estate/land lease, lounge operations etc.;
- Revenue-share / variable / minimum-guarantee billing models for commercial concessions;
- Computation of Revenue Share / Minimum Guarantee versus Actual billing and linked with variable such as footfall, Sales volume, billing etc. ;
- Terminal/Airport space, Land and Assets inventory management for commercial/land allocation and utilization;
- Contract/Lease renewal, Rate/License fee escalation and tracking with automated alerts;
- Commercial Licensee/ Land lease performance and compliance tracking such as Reporting of Sales, footfall conversion, Service quality scores etc.;
- Non-aeronautical revenue dashboards by category, location and concessionaire, integrated with the Billing Module.
- Replacement and migration of the existing REAP (Land and Lease Management) billing into the new Non-Aero Billing module.
- Integration with POS and other digital tools/technologies for seamless collection of base data for billing.

- Support for CapEx, OpEx, tariff based recovery based on CNS/ATM agreements with Non-AAI operated airports
- Support for PPP/JVC billing requirements based on various models like revenue share, Per-Pax and evolving business requirements.
- Support for opening balance and master data porting during migration.

3.3.3 Payments & Collections

- Automated collection payment processing and accounting.
- Security Deposit/ Bank Guarantee/ Credit facility management
- API-based real-time bank integrations for transfer and balance updates.
- Electronic Bank Reconciliation System
- GST/TDS filing and compliance.

3.4 Module 4 — Finance & Accounting System

A single, unified financial accounting backend supporting both Revenue and Expenditure functions:

- Multi-Entity, Multi-Location, Multi-Currency General Ledger with configurable Chart of Accounts (Assets, Revenue, Expenses, Liabilities, equities etc.) and Cost Centre / Profit Centre / Project wise accounting;
- Annual and multi-year Budgeting (Capex/Opex) with budget-vs-actual variance Tracking, budget control at point of commitment, and Re-appropriation workflow;
- Accounts Payable, TDS computation and Accounts Receivable with ageing, Dunning and Credit Control workflow;
- Fixed Asset Register with Capitalization, Depreciation (multiple methods), Physical verification and Asset Disposal workflow;
- Bank reconciliation (automated, multi-bank, multi-account) and Cash Flow forecasting and management;
- Statutory compliances GST (including e-invoicing and GSTR reconciliation), TDS/TCS, FCRA;

- Income Tax filings and other applicable indirect/direct tax obligations;
- Automated generation of statutory Financial statements i.e. Balance Sheet, Profit & Loss, Cash Flow, Notes to Accounts in formats required for statutory and CAG audit;
- Real-time integration with Billing, Revenue, Procurement, and Payroll modules to avoid duplicate data entry and ensure a single source of financial truth;
- Configurable approval/delegation-of-financial-powers workflow aligned to the AAI Delegation of Powers with full controls;
- General Ledger Accounting (G/L), Accounts Payable, Accounts Receivable, Asset Accounting, Bank Accounting & Reconciliation, Financial Closing and Reporting
- Accounts management, trial balance, and financial reporting.
- Master Data, Ledger Management, Compilation etc.
- Management of Advance / Security Deposits / Bank Guarantees / Letter of Credits
- Budgeting and allocation (CAPEX and OPEX).
- Bank integration for Automated Vendor and Third-party payments: domestic and foreign transactions, GST/TDS/FCRA compliance.
- Investment management and revenue/expense tracking.
- Automated financial scrutiny for error-free reporting and audit readiness.
- Electronic Bank Reconciliation System
- Governance, Risk and Controls – Maker/checker workflows, Risk alerts
- Compliance with CAG, Ministry of Finance, and ICAI accounting standards.
- Pay fixation, PRP normalisation, pay revision, leave encashment, and related finance workflows.
- Medical Trust, Pension Trust, NPS, and EDCP Trust management, including upcoming trusts.
- Configurable, rule-driven payroll engine supporting the Authority's pay structure, allowances, and deductions, with full audit trail of rule changes;

- Employees' Provident Fund (EPF) computation, e-challan generation and integration with the EPFO Electronic Challan-cum-Return (ECR) filing process;
- Administration of EDCPS through a configurable scheme-rules engine;
- Group Insurance Scheme (GIS) administration, premium deduction, and claims tracking;
- Gratuity and superannuation/pension fund computation and support for National Pension System (NPS) / Contributory Provident Fund (CPF) as per applicability to different employee categories;
- Medical facility administration: Empaneled Hospital network management, Cashless treatment authorization, OPD/IPD medical reimbursement claim workflow and dependent/family record management;
- Integration with Income-Tax computation and filing various Forms (such as Form 16, Form 24Q) and statutory deduction certificates;
- Self-service pay slip, Form 16, and tax-declaration submission through ESS;
- Loans and advances management (e.g., House Building Advance, vehicle advance, festival advance) with automated EMI recovery through payroll;
- Full-and-final settlement automation on separation/retirement, and bank-file generation for salary and benefit disbursement;
- Inventory management and asset/inventory valuation for operational units such as RCDU and similar units.
- Immutable system-wide audit trail capturing User, Timestamp, before/after values, along with reason for every create/modify/delete/approve action across all modules;
- Work flow for Annual audit planning, scheduling and execution with tracking Audit finding, Responsibility assignment and Closure;
- Workspace allocation with data extract capability to support audit by the Comptroller and Auditor General and other Internal/External auditors, Parliamentary Committee;
- Rule engine for Segregation of duties (configurable) for preventing assignment/combinations of conflicting roles;

- Exception and red-flag analytics such as Splitting of POs (for same items) avoiding approval threshold, Duplicate payments, unusual vendor/employee transaction patterns with management dashboards;
- Centralized compliance with automated alerts for statutory filings, License renewals, Contractual obligations etc.;
- Secure and Access Controlled evidence repository linking audit findings to underlying transaction records and supporting documents.
- End-to-end Contract Management: Indent generation, requisition, budget, approval, tendering/e-auction, purchase order, goods/service receipt, invoice processing and payment;
- Vendor Management: Registration, KYC/statutory document verification, empanelment, performance rating, suspension and blacklist tracking;
- Contract Management: Contract Milestone, deliverable tracking, liquidated damages / penalty computation, renewal and expiry, alerts;
- Invoice receipt through the Vendor Self-Service Portal (manual upload, structured submission, or API/EDI) with automated three-way matching with PO, Goods Receipts & Invoice and GST reconciliation;
- Configurable multi-level payment approval workflow with automatic TDS deduction and statutory compliance checks;
- EMD/ Security Deposits: Receipt of EMD, Security Deposits and Performance Bank Guarantees, validity/expiry tracking with renewal alerts, claim/invoication, forfeiture with automated accounting entries and refund upon no-dues clearance;
- Searchable registry of all EMD/SD/PBGs across departments and locations, linked to the underlying tenders/contracts/lease agreements;
- Monitoring and Compliance of statutory payment timelines in respect of MSMEs alerts;
- Vendor query/grievance handling specific to procurement and payment matters;
- Integration with GeM and the CPP Portal;
- O&M contract management with automatic billing triggers.

- User licensing shall not be a limiting factor for authorized users.
- Real-time integration with billing, HR, operational, and external systems.

3.5 Module 5 — Learning Management System (LMS)

- Learning Management System (LMS) supporting internal, external, and e-learning courses with online assessments;
- Competency mapping and Training Needs identification linked to role and organizational requirements, career-progression etc.;
- Training calendar, nomination, approval and training budget tracking;
- Tracking of mandatory/statutory/safety critical training such as AVSEC, System Rating/proficiency related courses, refresher courses, proficiency /rating expiry and renewal alerts;
- Training feedback, effectiveness and performance evaluation mechanism, linked to the employee's PMS and career progression record;
- Digital certificate generation and competency/Rating certification registry searchable by role, location and expiry status.
- Integration with HRMS System for training history and development records.
- Automated notifications for exam results and certification renewals.

3.6 Module 6 — Legal & Case Management System

- Case registration, assignment, and lifecycle management.
- Advocate management, time billing, and cost tracking.
- Legal case history and document repository.
- Automated alert for hearing dates, deadlines, and judgments.
- Reporting and analytics dashboard for legal matters.

3.7 Module 7 — Data Lakehouse, Analytics & Business Intelligence Platform

A centralized data management and analytics ecosystem:

- Unified data lakehouse consolidating data from all eAAI modules and operational systems.
- Master Data Management (MDM) providing a single source of truth for airport, customer, vendor, employee, project, ATM, CPMS, billing, finance, and security-related data.
- Automated data import, validation, and quality assurance processes.
- Real-time and scheduled reporting with customizable, drill-down dashboards.
- BI/analytics layer for decision support across all AAI directorates.
- Predictive analytics capabilities for traffic forecasting, revenue modelling, asset maintenance prediction, revenue studies, and optimisation use cases.
- Automated and integrated passenger data collection.
- Intelligent Process Automation: AI agents for various use-cases, e.g., automated billing reconciliation, payroll auditing, compliance checking and report generation;
- Predictive Analytics & Decision Support: AI models for traffic forecasting, revenue prediction, anomaly detection etc.;
- The System shall include a Data Lakehouse layer for analytics, Business Intelligence and Management Information System (MIS) reporting fed by the operational transactional database.
- The Lakehouse storage tier shall also use object storage, holding data in open file formats (e.g., Apache Parquet or ORC tec.) and open table format (Apache Iceberg, Delta Lake, or Apache Hudi etc.) over the object storage layer to provide ACID transaction guarantees, schema evolution, time-travel, and efficient upserts;
- The compute/query engine shall be independently scalable and replaceable without requiring migration of the underlying data;
- Support for both batch and near real time Extract, Transform, Load (ETL) and Change Data Capture(CDC) ingestion pipelines from the transactional ERP database into the Lakehouse;
- A self service reporting layer built on an open SQL based semantic layer, connecting to the Lakehouse;

- Data governance, cataloguing and lineage management using open standard/open source tools;
- Support vector embeddings and semantic search for AI applications;
- Provide a migration path to move the entire Lakehouse (data, metadata and catalogue) to an alternate compute engine or hosting environment without re-engineering.

3.8 Module 8 — Integration & API Layer

- Enterprise Service Bus (ESB) / API Gateway as the integration backbone.
- Integration between various systems such as:
 - ATS Message Handling/Switching System
 - AOCC/AODB/APOC
 - Airport Collaborative Decision Making (ACDM) systems
 - Slot Management system
 - ATM Automation Systems, ADS-B sensors
 - Banks, Payment Gateways, POS Systems
 - Third Party Data providers
 - Air Traffic Flow Management System (ATFM)
 - Common Use Passenger Processing Systems (CUPPS)
- Integration with government systems: E-Office, GeM, CPP Portal.
- API integration with banks for real-time payment and balance updates.
- Bidirectional integration framework for AAI and external stakeholder data exchange.
- Cybersecurity controls – Isolation of operational/critical information systems
- Centralized real-time integration capability and validation of data from all source systems.

3.9 Module 9 — Document Management System (DMS)

- Centralized digital repository for all AAI documents, including formats, agreements, tenders, circulars, records, and contracts.

- Project/contract-wise management of documents throughout their lifecycle, with integration to e-Office and email systems.
- Template and clause library management.
- Digital media repository and contract repository.
- Version control, access control, and audit trail.
- Digital signature integration for document authentication.
- Repository for draft/document templates and multilingual document support where required.
- Automated tracking of statutory document expiry (insurance, licences, bank guarantees, certifications etc.) with tiered reminders to both the stakeholder and the responsible internal owner;
- Retention policy enforcement and Write-Once-Read-Many (WORM) protection for statutory records;
- Optional integration with national document repositories (e.g., DigiLocker) for instant verification, where permitted by applicable policy.

3.10 Module 10 — Helpdesk & IT Support Management

- Single Point of Contact (SPOC) helpdesk with ticketing for all modules with severity classifications and incident/service/change request management.
- Integrated ticketing system accessible via the eAAI portal.
- Multi-level incident management: L1, L2, L3 severity classification and escalation workflows.
- SLA-driven response and resolution management. Alerts for potential SLA breaches/penalty calculation.
- Knowledge base and self-service capabilities.
- Coordination interface with OEM teams, DC/DR Support, Network Operations Centre, Cyber-Security Operations Centre, and end-user support providers.

4. EXISTING SYSTEMS — DISPOSITION STRATEGY

Respondents must acknowledge and propose strategies for the planned migration and subsequent disposition of following systems:

System	Proposed Disposition
SAP ECC EHP6 (FICO, HCM, MM)	Migration to new platform or upgrade path
AIMS (Airport Information Management System)	Replace/Migrate/Upgrade via Aero/Non-Aero Billing & new modules
EPIS (Pension Portal)	Replace/Migrate/Upgrade to new HCM/Finance system
REAP (Land & Lease Management)	Replace/Migrate/Upgrade via Non-Aero Billing module

5. KEY TECHNICAL AND ARCHITECTURE REQUIREMENTS

All proposed solutions must conform to the following architecture principles:

- 5.1 Latest India Enterprise Architecture (InDEA) Framework** compliance.
- 5.2 TOGAF Architecture Development Methodology (ADM)** alignment.
- 5.3 Deployment on Modern Infrastructure** — All systems must be cloud-ready and deployable on on-premise or private or sovereign cloud in colocation to be owned by AAI. No mandatory dependency on public cloud should be there in the proposed solution. Respondent to propose the complete infrastructure sizing and related Bill of Materials including Item, Description, Quantity, Unit of Measure without any price.
- 5.4 Scalable, Modular Architecture** — Microservices or service-oriented architecture preferred; modular design to allow phased implementation.
- 5.5 API-First Integration** — An API-first architecture exposing core business functions through well-documented RESTful APIs using the OpenAPI standards; A centralized API Gateway as a single-entry point for all internal and third party API traffic for all client requests, routing them to the appropriate services and provide throttling, versioning, monitoring and security enforcement; A product agnostic integration layer - Enterprise Service Bus or equivalent; Use standard open data exchange formats (JSON/XML etc.) for all interfaces; Support for asynchronous, event-driven integration for high-volume

operational data feeds using open message-queue/equivalent standards or open streaming platforms such as Kafka etc..

- 5.6 Data Sovereignty** — All application data, production data, containers, VMs, clones, and archived data shall remain under AAI's ownership.
- 5.7 Cybersecurity by Design** — Compliance with CERT-In guidelines, NCIIPC, STQC standards, and applicable Government of India cybersecurity frameworks.
- 5.8 Mobile-First UI/UX** — Responsive design; dedicated mobile application support.
- 5.9 Data Privacy & Compliance** — Compliance with applicable Indian data protection regulations and AAI's data governance policies. Respondent to propose Consent Management System, Data Privacy Notice Management, Data Discovery/Mapping, Classification, Data Principal Rights Management, Grievance Redressal, Data Protection Impact Assessment, Record of Processing Activities, Personal Data Breach Management, Workflow/DPDP Program Management, Data Breach/Loss Prevention/Reporting methodologies.
- 5.10 Audit Trails** — Immutable audit logging for all transactions and user activities.
- 5.11 Centralised Role-Based Access Control:** Role Based Access Control aligned to the AAI's functional hierarchy, administrative hierarchy, seniority, reporting lines, and financial/administrative powers as per Delegation of Powers, locational access, external stakeholders etc.; Segregation of duties preventing any single user from completing sensitive transactions, Time-bound and temporary access with automatic expiry, Full audit logging of every role and permission; Self Service access and approval workflow with periodic access certification by data/process owners;
- 5.12 Authentication, Identity, Key, Client-side Signing and Certificate Lifecycle Management:** Common Identity and Access Management integrated with AAI's directory for internal/external users, admin/self configurable Multi-Factor Authentication (MFA) with all available modern factors (OTP, TOTP, Biometrics, Authentication Key, Tokens, Push tokens, Certificates etc.), Adaptive Authentication, User provisioning, Identity Governance and Role-Based Access Control, A separate federated authentication zone for external stakeholders with self-registration, verification, and credential recovery workflows, logically isolated from internal employee identities; Configurable password and session policies (complexity, expiry,

idle timeout, concurrent session limits) aligned with applicable CERT-In guidelines; Privileged Access Management (PAM) for system/database administrator accounts, including session recording, password vaulting, privileged session management, approval workflows and Just-In-Time elevation. Solution must implement Certificate Lifecycle Management (CLM) enabling discovery, inventory, monitoring, renewal and automation of lifecycle of enterprise certificates. Solution must enable Client-sign digital signing such that private keys remain on user's device, ensuring non-exportability and compliance with Digital Signing standards.

5.13 High Availability & Disaster Recovery — The System shall be deployed on-premise or cloud at the designated primary Data Centre (DC), with Disaster Recovery (DR) at geographically separated sites capable of taking over operations with minimal data loss and downtime. The proposed system shall Include:

- 5.13.1** An Active-Active (or Active-Passive Hot/Standby) DC-DR architecture as the primary option, specifying the replication technology, expected Recovery Point Objective (RPO)/Recovery Time Objective (RTO) and consistency model used to reconcile concurrent writes at both sites. Any constraints/complexity in meeting Active-Active deployment should be brought out;
- 5.13.2** An additional option as alternative architecture (e.g., Active-Passive with hot Standby (or Active Passive warm standby) along with comparison of RPO/RTO, complexity, operational risk etc.;
- 5.13.3** Preferably containerized deployment of the applications and integration tiers, independent of hypervisor to ensure workloads can be moved between DC and DR or to an alternate infrastructure without application re-engineering;

5.14 Zero Trust Security Architecture: The proposed System shall implement

- 5.14.1** Support for adoption of zero trust security model in which every request is authenticated, authorised and continuously verified;

- 5.14.2** DMZ for external/stakeholder-facing components to having the core application and database tiers isolated in a separate internal zone and no direct external access to the database layer;
- 5.14.3** Just-in-Time access and the principle of least privilege with approval workflow granting the JIT access supported and implemented for third-party technical/support with time-boxed credentials, session logging.
- 5.14.4** Application and API security solutions in front of all external facing endpoints;
- 5.14.5** Comprehensive tamper evident logging of all third-party access for forensic audit;
- 5.14.6** Periodic Vulnerability Assessment and Penetration Testing (VAPT) of all components along with remedies;
- 5.14.7** Tools/services for Static and Dynamic Source Code analysis to ensure code security before release to production
- 5.14.8** Data masking/tokenisation of sensitive fields exposed through external-facing APIs/views.

5.15 Application Architecture: The proposed System shall be Designed:

- 5.15.1** Following Open Standards, micro services, Modular, Secure By Design allowing individual modules to be upgraded or patched without full-system downtime;
- 5.15.2** To use an open-standard technology stack, proposed application platform component shall not create irreversible vendor lock-in and must provide a credible migration/exit path;
- 5.15.3** To preferably use Containerisation using an OCI-compliant format (Docker or equivalent) and orchestration using a CNCF-conformant orchestrator (e.g., Kubernetes or equivalent), allowing workloads portability across on-premise, private infrastructure, or any future cloud environment without architectural rework;
- 5.15.4** To implement Configuration-driven business rules for workflow, approval, tariff rules, etc.;

5.16 Database Architecture:

- 5.16.1** The core transactional database shall be built following open standards on an ANSI SQL compliant Relational Database Management System;

- 5.16.2** Core business logic shall reside in the application layer rather than being embedded in proprietary stored procedures or vendor specific database extensions;
- 5.16.3** The database licensing shall be open-source or fully portable perpetual;
- 5.16.4** Standard connectivity (JDBC/ODBC etc.) shall be supported for all reporting and integration access;
- 5.16.5** The database schema, data dictionary shall be fully documented and owned by the AAI;
- 5.16.6** Database level encryption at rest shall be using open standard algorithms (AES-256) and encryption in transit (TLS 1.2 or higher).
- 5.16.7** The solution must also implement Database Activity Monitoring (DAM) component for protecting sensitive data, uncovering unauthorized access, and creating tamper-proof audit trails for Database level access/modifications.

5.17 Storage Architecture:

- 5.17.1** The storage layer shall be architecturally decoupled from the compute engine and application layer, enabling independent scaling and a future migration i.e. On-Prem to On-Prem or On-Prem to Cloud without application re-engineering;
- 5.17.2** All unstructured/object data shall reside on object storage, accessible through the standard APIs;
- 5.17.3** On Premise/cloud compatible platforms or equivalent open-standard implementations;
- 5.17.4** Storage tiering (for hot/warm/cold storages) implemented through standard lifecycle policies;
- 5.17.5** Support for data immutability for statutory records via Object Lock or equivalent open standard mechanism;
- 5.17.6** Encryption at rest (server-side AES-256 or higher) and in transit (TLS 1.2 or higher) for all object storage;
- 5.17.7** Backup and replication mechanisms shall be API-compatible.

5.18 AI-Ready Infrastructure and Automation:

- 5.18.1** Respondent shall bring out minimum requirements of GPU infrastructure and AI automation modules for deployment for:
- 5.18.2** Design and deployment of minimum GPU infrastructure for deployment of AI automation
- 5.18.3** Intelligent Process Automation: AI agents for automated processes, e.g., billing reconciliation, payroll auditing, compliance checking and report generation;
- 5.18.4** Predictive Analytics & Decision Support: AI models for traffic forecasting, revenue prediction, anomaly detection etc.;
- 5.18.5** Employee Assistant: Conversational AI for HR self-service, leave applications, policy queries in multiple languages.

6. EOI SUBMISSION REQUIREMENTS

Interested Respondents are required to submit the following:

6.1 Mandatory Domain Experience & Credentials: The participating Respondent must fulfil following criteria, as on the last date of submission of responses, for consideration of their solutions:

- 6.1.1** Having Average Annual Turnover of at least Rs 30 crore during last Three (03) financial years supported by Audited Balance Sheets and Profit & Loss statements of Last 3 Financial Years (2023-24, 2024-25, 2025-26). Audited as well as provisional statements (only for FY 2025-26) must be certified by CA with valid UDIN.
- 6.1.2** Having at least 100 Technical Manpower (Project Manager, Program Manager, Solution Architect, Enterprise Architect, Functional Consultants (ERP/HRMS/HCM/Finance/Billing/Revenue), Technical Lead, Full Stack Developers, Integration/API specialists, BI/Analytics, DBAs, Application Security specialists, UI/UX professionals, QC/Testing Professionals, DevSecOps Professionals, Forward Deployed Engineers, Infrastructure/Deployment Engineers or similar roles) on their own payroll, break-up of number & type of manpower to be certified by the head of HR of the respondent.
- 6.1.3** Possessing following verifiable certifications
 - 6.1.3.1** CMMI Level 5 verifiable on CMMI PARS Database

- 6.1.3.2** ISO 27001:2022 or latest verifiable on International Accreditation Forum (IAF) /Global Accreditation Cooperation Incorporated (Global ACI) CertSearch portal
- 6.1.4** Minimum **3 completed projects independently without sub-contracting or joint venture or consortium** in similar enterprise-scale digital transformation engagements, preferably in aviation, airports, government PSEs, or large infrastructure organisations
- 6.1.5** At least 1 completed project **independently without sub-contracting or joint venture or consortium** each for:
- 6.1.5.1** Migration/Implementation/Upgrade of SAP-ERP (HRMS/HCM systems and Financial/Accounting/Billing systems)
 - 6.1.5.2** Implementation of Datalakehouse/Datalake
 - 6.1.5.3** Migration/Implementation of Large Software Solution in Transportation/Aviation/Government domain
- 6.1.6** Detail of Reference projects with client name, scope, value, duration, and contact details to be submitted.
- 6.1.7** Respondent must submit the copies of relevant PO/WO/Agreements and completion certificates as supporting documents.
- 6.1.8** Only those solutions submitted by Respondents fulfilling the above criteria, validated by the supporting documents, shall be considered by AAI.

6.2 Organisation Profile

The participating Respondent must submit the organization profile including but not limited to:

- 6.2.1** Company overview, legal status, financial strength (last 3 years audited financials (Balance Sheets, Profit and Loss Accounts)).
- 6.2.2** Presence in India; registered office address and key contact details.
- 6.2.3** OEM partnerships and technology alliances.
- 6.2.4** Availability of Technically competent Key Resources
- 6.2.5** Technology stack and key OEM products / licenses.
- 6.2.6** Cybersecurity and compliance certifications (ISO 27001, CMMI, etc.).

6.3 IMPLEMENTATION APPROACH

Respondents must propose and submit strategy for:

- 6.3.1 Phased Rollout Plan** — Phase-wise implementation plan for all modules considering Scope of work, Technical Requirements, Disposition Strategy etc. (para 3, 4 and 5 of this document); detailed roadmap with timeline and milestones to be submitted.
- 6.3.2 Change Management approach**— One time, periodic, pre-release Training plan for AAI staff including Train the trainer, Training Power Users, Training for general users, Online repository of User Manuals, Walkthrough/Training videos, Self-help knowledge base ; handholding and knowledge transfer.
- 6.3.3 Data Migration Approach** — Strategy for migrating data from SAP, AIMS, EPIS, REAP and other legacy systems.
- 6.3.4 Testing & Quality Assurance** — UAT, performance testing, security testing, and certification plan.
- 6.3.5 Go-Live Support** — Parallel run strategy and cutover plan.
- 6.3.6 Post Go-Live AMC/ATS** — Annual maintenance, application support, and enhancement roadmap for a minimum of 10 years post go-live.

6.4 Technical Solution and Capability Statement

- 6.4.1** Solution architecture overview for proposed modules.
- 6.4.2** Strategy as well as Implementation approach including details outlined above.
- 6.4.3** Mapping of Open Source or Enterprise COTS software components with respective Modules
- 6.4.4** Proposal including benefits for On-premise Private Cloud vs MeitY CSP cloud vs Colocation vs Sovereign Cloud or any other hosting methodology
- 6.4.5** Integration methodology and API framework.
- 6.4.6** Proposed List, features and specifications of DevSecOps or related Tools/Technologies
- 6.4.7** Proposed List, features and specifications of Cybersecurity devices/services to be deployed with respect to the entire application stack
- 6.4.8** The bidder firm shall submit **Solution Model Declaration Matrix (Annexure A)** for every functional module listed in the EOI. Submission of this matrix is mandatory

with the Technical Proposal, proposal submitted without this will be treated as non-responsive.

6.4.8.1 For each module, the bidder shall declare:

- i) Solution Model/Approach: Bidders shall specify the proposed deployment/licensing model in **Annexure-A** using the following classifications:
 - a. Open-Source (Community Support): OSI Approved License;
 - b. Open-Source (Enterprise Support): OSI Approved License with commercial backing;
 - c. Proprietary COTS: Commercial Off-The-Shelf with proprietary Licensing;
 - d. Custom-Built: Tailored and developed specifically for this proposal;
 - e. Hybrid: Combination of models (exact components and individual models must be specified)
- ii) Solution be alignment with Open Standards, Distribution Agnostic architecture and state confirmation Compliant / Partially Compliant / Non-Compliant with explanation.
- iii) Proprietary COTS solution/modules/components with proposed License type (perpetual, concurrent-user, subscription based), Source-code Escrow arrangements and Exit / Migration path demonstrating no irreversible Vendor Lock-in.
- iv) Complete high-level documentation of technical stack including high level SBOM addressing the following areas (but not limited to)
 - a. Frontend (Web / Mobile SDKs)
 - b. Backend services
 - c. AI/ML components
 - d. WebRTC stack
 - e. Databases & storage
 - f. Third-party dependencies
 - g. Use of open-source components must include version details, license type, vulnerability management approach
- v) Data Residency and Data Sovereignty with justification on how Data Portability will be maintained and how third-party access (e.g. CAG Audit) will be provisioned & governed;

- vi) Degree of configuration versus customization for each module and the proportion of custom code as percentage of total module along with variable parameters, configuration requirements, and Code Level development requirements should be declared.
- vii) Identify any Third-Party software components embedded within the proposed module (including UI, Reporting libraries, Middleware etc.) along with their License model & Support;

6.5 Proposed Solution Coverage

- 6.5.1** Indicate coverage of each module listed in this document.
- 6.5.2** Indicate whether COTS, SaaS, custom development, or hybrid approach is proposed for each module including their Pros and Cons considering time, quality etc..

6.6 Team Profile

- 6.6.1** Key personnel proposed: Program Manager, Project Leads, Solution Architect, Functional Consultants, Technical Leads.
- 6.6.2** Relevant certifications and qualifications.

6.7 Complete Bill of Materials

- 6.7.1** Respondent shall mandatorily submit Complete Bill of Materials covering all possible Tools, Services, Technologies, Manpower required for executing of this Project **WITHOUT PRICING** in following format:

Sr No	Item	Description/ Usage / Mapping with requirement	Requirement in Stage of Project (Implementation / O&M etc.)	Quantity	Unit of Measurement	Remarks
1	2	3		4	5	9
xx	xxx	xxxxxxx		xx	xxxx	xx

7 GENERAL TERMS AND CONDITIONS

- 7.1 Non-Binding Nature** — This EOI does not constitute a tender or commitment to procure, AAI shall only consider the qualifying bids for technical solution. AAI reserves the right to

cancel or modify or not to proceed with respect to the EOI at any time without assigning reasons.

7.2 Confidentiality — All information shared with AAI as part of this EOI submission shall be treated as submitted in the public interest. Respondents must not disclose AAI's internal information received during this process.

7.3 No Canvassing — Respondents shall not attempt to influence the evaluation process. Any such attempt will result in immediate disqualification.

7.4 Consortium Norms — Consortium submissions are not permitted. A single entity must be the sole Respondent. Sub-contracting shall not be permitted.

7.5 Cost of Response — All costs incurred in preparing and submitting the EOI response shall be borne entirely by the respondent.

7.6 Intellectual Property — Any solution, design, or methodology ultimately implemented shall vest intellectual property rights in AAI as per contract terms to be defined in the RFP.

7.7 Compliance — Respondents must comply with all applicable Government of India and AAI rules, regulations, and procurement policies.

8 SUBMISSION DETAILS

EOI Submission Deadline	30 days from the Date of Publishing of EOI on CPP Portal. By 1 st October, 2026 1700 Hrs.
Pre-EOI Interaction	10 days from the Date of Publishing of EOI on CPP portal. Exact date to be notified on CPP Portal. Date & Time for the Pre-EOI Interaction: 10 th September, 2026 at 1130 Hrs Link to join the Pre-EOI Interaction: https://aai-aero.webex.com/aai-aero/j.php?MTID=mfbbdd7d16e1673b9236849fa786e13f9
Technical Presentations	To be notified to suitable Respondents
Mode of Submission	Online submission on CPP portal (https://etenders.gov.in). No other mode of submission or queries shall be considered.

EOI Inviting Authority	Executive Director (IT), Airports Authority of India, Rajiv Gandhi Bhawan, Safdarjung Airport, New Delhi – 110 003
Pre-EOI Clarifications (if any)	Respondents may seek clarifications on the CPP portal (https://etenders.gov.in) Between 1 st September, 2026 and 15 th September, 2026.

9 DISCLAIMER

This Expression of Interest is issued solely for the purpose of market assessment and solution finalization. It does not obligate AAI to award any contract or engage any Respondent. AAI reserves the right at its sole discretion to modify, amend, re-issue, or cancel this EOI at any time. The issuance of an EOI does not guarantee issuance of or participation in any subsequent RFP process.

All information provided in this document is based on AAI's current assessment and is subject to change based on evolving business and regulatory requirements.

This document is issued by the Information Technology Division, Airports Authority of India.

All queries regarding this EOI should be submitted on the CPP Portal for consideration.

Annexure-A: Solution Model/Approach Matrix

FUNCTIONAL MODULES					
Module	Module Requirement	Proposed Approach	Supporting Document(s)	Compliance Status*	Remarks
AAI Internal Employee Portal					
External Stake Holder Portal					
Mobile Application for AAI employees					
Human Resource Management					
Aero/ Non-Aero Billing & Payment System					
Finance & Accounting System					
Learning Management System					
Legal Case Management					
Data Lakehouse, Analytics and Business Intelligence Platform					
Integration & API Layer					
Document Management System					
Helpdesk and IT Management Support System					

Solution Architecture					
Architecture	Requirement	Proposed Approach	Supporting Document(s)	Compliance Status*	Remarks
Deployment Architecture					
Role Based Access Control					
Authentication and Identity Management					
API and Integration Architecture					
Zero Trust Security Architecture					
Application Architecture					
Database Architecture					
Storage Architecture					
AI Ready Infrastructure and Automation					

*** Compliance Status:**

- Compliant: The proposed solution fully meets the requirement as stated
- Partial — The proposed solution meets the requirement in part; the bidder must identify the unmet sub-clause(s) and propose a mitigation or timeline for full compliance.
- Non-Compliant — The proposed solution does not meet the requirement; the bidder must state the reason and bidder can propose alternate solution or seek change/revision.

Notes:

- Detailed/supporting document may be linked as Annexures.
- The matrix is indicative, the Respondent shall submit with additional items to be included in the Matrix if it is necessary for complete solution.