



KERALA STATE ROAD TRANSPORT CORPORATION
TRANSPORT BHAVAN, FORT, THIRUVANANTHAPURAM-695 023
Telephone No: 0471-2471011, (Extn : 250/271)
E-mail: edpc.krtc@kerala.gov.in Web: www.keralartc.com
NOTICE INVITING TENDER (NIT) e-Tender

No: S001-ITD01/106/2025-IT DIV-KSRTC-SWIFT-HQ

Date: 21.02.2026

TENDER FOR THE SELECTION OF SYSTEM INTEGRATOR (SI) FOR DESIGN, DEVELOPMENT, IMPLEMENTATION, INTEGRATION, TRAINING & SUPPORT OF A UNIFIED DIGITAL PLATFORM FOR KSRTC-SWIFT.

SECTION 1: NOTICE INVITING TENDER (NIT)

KSRTC-SWIFT, under the Transport Department, Government of Kerala, invites **e-Tenders** from eligible and experienced **System Integrators (SIs)** for the **Design, Development, Implementation, Hosting, Integration, Training, Warranty and Support** of an **Integrated Enterprise Digital Platform** for KSRTC-SWIFT encompassing modules such as HRMS, Fleet & Maintenance Management System (FMMS), Lease Billing, Financial Accounting System, Dashboards, Analytics, Mobile Applications, and related technology infrastructure.

This tender is issued as an end-to-end procurement for establishing a comprehensive digital ecosystem that supports KSRTC-SWIFT's operational, administrative, and financial functions in accordance with the principles of transparency, efficiency, and service quality expected under **Kerala Stores Purchase Rules (KSPR)**, Government of Kerala procurement norms, and all applicable IT Governance guidelines.

1.1 Summary of the Tender

1. **Tender No** :S001-ITD01/106/2025-IT DIV-KSRTC-SWIFT-HQ
2. **Mode of Tender**: e-Tender (Online submission only)
3. **Name of Work**: Selection of System Integrator for KSRTC-SWIFT Digitalization Programme
4. **Procuring Entity**: KSRTC-SWIFT (Head Office)
5. **Place of Submission**:
Office of the Chairman & Managing Director,
KSRTC-SWIFT Head Office, Transport Bhavan,
Fort, Thiruvananthapuram – 695023
6. **EMD Amount**: ₹1,00,000/- (Rupees one Lakh only)
7. **Tender Fee**: ₹7500/- (Rupees seven thousand and five hundred only)
8. **Contract Duration**: 1 Year (including warranty period)
9. **Bid Validity**: 180 days from date of bid opening
10. **Bid Type**: e-Tender; Two-stage evaluation system

11. **Website for download & submission:** www.etenders.kerala.gov.in
12. **Pre-Bid Meeting:** As notified in the portal
13. **Eligibility:** As per Section 4

1.2 Funding Source

The project shall be funded by KSRTC-SWIFT through internal resources or any other approved financial mechanism notified by the Government of Kerala. KSRTC-SWIFT reserves the right to revise, modify, extend, or cancel the tender process at any time without assigning any reason.

1.3 Scope of Procurement

The selected System Integrator (SI) shall undertake:

- Requirement Study & System Blueprint
- Design, Development & Customization of the entire digital platform
- Hosting in MeitY-approved/ISO27001-certified cloud which is provided by KSRTC-SWIFT
- Integration with KSRTC-SWIFT legacy and third-party systems
- Implementation across all depots, offices, and workshops
- User Training & Documentation
- Warranty & Support as per SLA

The details of scope are provided in **Section 5** of this tender document.

1.4 Applicability of Kerala Stores Purchase Rules (KSPR)

This tender shall be governed entirely by:

- Kerala Stores Purchase Manual
- Government of Kerala Procurement Rules
- Applicable circulars, amendments and audit instructions

Any conflict between this tender and KSPR shall be interpreted in favor of KSPR, unless expressly relaxed by competent authority.

1.5 MSME / Startup Relaxations

In line with Government of Kerala's Startup & MSME promotion policy:

1. **Startups registered under Kerala Startup Mission (KSUM)** may be granted relaxations in:
 - Prior experience
 - Turnover criteria
 - EMD exemption (subject to necessary certificates)
2. Micro & Small Enterprises registered with appropriate authorities shall receive benefits under applicable MSME policy guidelines.

These relaxations do not apply to technical specifications or financial obligations related to project execution.

1.6 Preference for Kerala-Based Firms

As per Government guidelines promoting local participation:

- Additional preference shall be extended to firms having a **registered office in Kerala**.
- Preference may also be given to firms that demonstrate previous successful implementation within Government of Kerala entities.

This preference shall not compromise quality, statutory compliance, or project capability requirements.

1.7 Rights of KSRTC-SWIFT

KSRTC-SWIFT reserves the right to:

- Accept or reject any or all bids
- Modify or cancel the tender
- Disqualify any bidder for non-compliance
- Seek clarifications or additional documents
- Award the contract in part or full
- Negotiate prices with L1 or eligible bidders
- Cancel the tender without assigning reasons

KSRTC-SWIFT shall not be liable for any expenses incurred by bidders during the tendering process.

SECTION 2: DEFINITIONS

For the purpose of this tender, unless the context otherwise requires, the following definitions shall apply:

2.1 “KSRTC-SWIFT”

Means **Kerala State Road Transport Corporation**, acting through its Chairman & Managing Director (CMD), Head Office, Transport Bhavan, Fort, Thiruvananthapuram, and includes authorized officers or committees empowered to act on behalf of KSRTC-SWIFT.

2.2 “Bidder / Tenderer / Applicant”

Means any eligible entity submitting a bid in response to this tender.

2.3 “System Integrator (SI)”

The successful bidder selected through this tender who shall undertake:

- Design
- Development
- Customization
- Hosting provided by KSRTC-SWIFT
- Integration
- Deployment
- Training
- Warranty
- Support

of the entire digital platform as per the Scope of Work.

2.4 “Digital Platform”

The fully integrated enterprise system comprising:

- Human Resource Management System (HRMS)
- Fleet & Maintenance Management System (FMMS)
- Lease Billing & Cost Recovery
- Financial Accounting
- Dashboards and Analytics
- Mobile Applications
- Hosting, security and infrastructure layers
- Integration components

2.5 “Cloud Hosting Environment”

Means a MeitY-approved, ISO 27001-certified data center hosted in India and provisioned by the SI, including:

- Production Environment
- Disaster Recovery (DR) Environment
- Backup & Storage
- Network Security Controls

2.6 “Contract”

The final agreement executed between KSRTC-SWIFT and the SI, including:

- This tender document
- Amendments/clarifications
- Work Order
- Minutes of negotiation
- SLA and performance requirements

All of these shall form part of the binding contract.

2.7 “Project Implementation Period”

Means the duration from the date of work order until Go-Live, including:

- Requirement Study
- Design
- Development
- Testing
- Deployment
- Training
- Stabilization

2.8 “Warranty Period”

A mandatory post-Go-Live period of **one year**, during which the SI shall provide support, bug fixing, performance tuning, and system optimization at no extra cost.

2.9 “Support Period / AMC”

Refers to the period after warranty during which the SI provides support, maintenance, upgrades, security patches, monitoring, backups, DR drills, and SLA-based services as specified in this tender.

2.10 “SLA”

Service Level Agreement specifying:

- Availability
- Performance
- Response times
- Resolution times
- Penalties

SLA compliance is mandatory.

2.11 “User Departments”

Means various KSRTC-SWIFT divisions including HR, Finance, Mechanical Engineering, Workshops, Depots, Fleet Operations, Commercial, and others.

2.12 “Bid Validity”

180 days from date of opening of the tender.

2.13 “Work Order”

Formal approval issued by KSRTC-SWIFT authorizing the selected bidder to commence work.

2.14 “Technical Bid”

The submission containing all documents required for technical evaluation.

2.15 “Financial Bid”

The BOQ submitted online, containing rate quotes for each component.

2.16 “EMD”

Earnest Money Deposit of ₹5,00,000 to be submitted as per tender rules.

2.17 “Tender Fee”

Non-refundable tender processing fee of ₹5,00,000.

SECTION 3: INSTRUCTIONS TO BIDDERS

3.1 General Instructions

1. Bidders must thoroughly read this tender document.
2. Submission of a bid shall be deemed acceptance of all tender terms.
3. Any inconsistency or omission must be clarified during pre-bid stage.
4. All bid submissions shall be made **online only** through the e-tender portal.
5. Bids submitted offline or incomplete bids shall be rejected.
6. All uploaded documents must be in searchable PDF format.

3.2 Language of Bid

All documents shall be in **English**. If any supporting document is in another language, it must be accompanied by a certified English translation.

3.3 Cost of Bidding

All costs associated with preparation and submission of the bid shall be borne by the bidder. KSRTC-SWIFT shall not be liable for such costs.

3.4 Amendment of Tender Document

KSRTC-SWIFT may modify the tender by issuing corrigenda. All corrigenda shall be binding on all bidders.

3.5 Clarification Requests

Bidders may seek clarifications through the portal. KSRTC-SWIFT reserves the right to accept or reject any request.

3.6 Confidentiality

All data shared or accessed during the procurement and implementation shall remain confidential and used strictly for the purpose of this project.

SECTION 4: ELIGIBILITY CRITERIA

The eligibility criteria are framed in accordance with **Kerala Stores Purchase Rules**, Government of Kerala procurement norms, and industry best practices for large-scale digital transformation projects. Bidders must satisfy all mandatory eligibility criteria and submit documentary evidence.

Failure to meet any mandatory criterion shall result in **disqualification**.

4.1 Mandatory Eligibility Criteria

4.1.1 Legal Entity

The bidder must be a **registered legal entity** in India under:

- Companies Act, 1956/2013
- LLP Act, 2008
- Registered partnership firm

Documents required:

- Certificate of Incorporation / Registration
- GST registration
- PAN

4.1.2 Experience in IT System Integration

The bidder must have experience in executing **at least three (3)** large-scale IT system integration projects in the last 5 years in India for Government/PSU/transport/enterprise sectors.

Each project must meet the following conditions:

- Scope must include design + development + hosting + integration
- At least one project must be for a Government/PSU

Documentary proof:

- Work Orders
- Completion Certificates
- Client references

4.1.3 Experience in Similar Functional Domains

The bidder must demonstrate technical capability in **minimum two** of the following domains:

1. HRMS
2. Fleet/Vehicle maintenance systems
3. Financial Accounting
4. Enterprise dashboards & analytics
5. ERP/Integrated digital platforms
6. Public transport systems / large mobility platforms

Documentary proof:

- Screenshots, URLs, System Architecture diagrams
- Completion certificates from client

4.1.4 Technical Capability

The bidder must have:

The bidder shall possess adequate in-house technical and professional capacity to undertake and sustain the scope of work during the entire contract period. The bidder must maintain a qualified and experienced team of full-time IT professionals, including but not limited to software developers, UI/UX specialists, cloud/DevOps engineers, and cybersecurity personnel.

The proposed team shall collectively demonstrate proven expertise in contemporary application development frameworks and programming languages (such as Java, Python, PHP, Node.js or equivalent technologies), user interface and user experience design, cloud infrastructure management, DevOps practices, and information security management.

The bidder shall ensure that the required technical resources are either employed full-time or formally empanelled and available for deployment throughout the project lifecycle. Documentary evidence regarding staff strength, qualifications, and experience shall be furnished upon request by the procuring authority.

Documents required:

- Self-declaration

4.1.5 Financial Capability

The bidder must have:

- Average annual turnover of **₹5 Crore** during last 3 financial years
- Positive net worth in the latest audited financial year

Documents required:

- Audited balance sheets
- CA certified financial statements

4.1.6 Cloud Hosting Requirements

Bidder must have proven experience hosting applications in:

- **MeitY-approved cloud environments**
- ISO 27001 certified data centers
- With DR and backup capabilities

Documentary proof:

- Cloud provider agreements / certifications
- Hosting architecture diagrams

4.2 Additional Eligibility Conditions

4.2.1 No Blacklisting

Bidder must not be blacklisted by:

- Central/State Government
- PSUs
- Government agencies

Self-declaration required.

4.2.2 Compliance with KSPR

The bidder must adhere to:

- Kerala Stores Purchase Manual (latest version)
- Relevant circulars from Government of Kerala

Compliance declaration required.

4.3 Relaxations for Startups/MSMEs

In accordance with Government of Kerala's Startup and MSME promotion policies:

- **Startups registered under Kerala Startup Mission** may be exempted from experience/turnover criteria, provided they demonstrate technical capability.
- **MSMEs** may claim EMD exemption as per applicable norms (with valid certificates).
- These relaxations shall not compromise technical quality, hosting, security, or SLA commitments.

4.4 Preference for Kerala-Based Firms

Preference shall be given to:

- Bidders with **registered operations in Kerala**
- Bidders demonstrating prior successful implementation for Kerala Government / KSRTC-SWIFT / Transport Department

However, this preference shall not override:

- Technical score
- Financial competitiveness
- Compliance & capability criteria

SECTION 5: DETAILED SCOPE OF WORK

5.1 Human Resource & Payroll Management System (HRMS)

The Human Resource & Payroll Management System (HRMS) forms the backbone of the KSRTC-SWIFT-SWIFT digital transformation initiative. As an organization employing a large and operationally diverse workforce—comprising drivers, conductors, mechanics, workshop staff, administrative personnel, contractual employees, and officers—the Corporation requires a unified digital system capable of handling the full spectrum of HR activities with accuracy, transparency, and auditability.

Currently, many HR processes operate through multiple disconnected systems, manual registers, depot-level files, and separate payroll processes, resulting in delays, inconsistencies, compliance risks, and significant administrative overhead. The Digital HRMS module aims to eliminate these inefficiencies and create a fully integrated, real-time HR ecosystem that supports operational decision-making, financial planning, workforce optimization, and statutory compliance.

The proposed HRMS will be developed and deployed by the selected System Integrator (SI) as a modular yet unified system integrating Employee Management, Attendance & Leave Administration, Payroll Engine, and Employee Self-Service (ESS). Each sub-module must function independently but remain interconnected through a robust workflow and rule-based engine. The entire system should be accessible via web browser and fully optimized for mobile access.

Below is the detailed specification of each component.

5.1.1 Employee Management

The Employee Management module shall serve as the authoritative and single source of truth for all employee-related data—covering personal details, service information, employment category, postings, leave history, training, disciplinary records, performance metrics, and retirement-related documentation.

This module forms the core foundation upon which all other HR functions operate. As KSRTC-SWIFT-SWIFT employs personnel across multiple depots, workshops, stations, and administrative units, a centralized digital system is essential to ensure that operational decisions (such as scheduling, route allocation, workshop assignments) are backed by accurate and real-time personnel data.

The SI shall design this module with comprehensive data structures, workflow logic, and validation mechanisms to ensure reliability, accuracy, and historical tracking.

A. Centralized Employee Master Database

The system must maintain a unified employee master containing:

- **Personal details:** Name, DOB, address, Aadhaar, PAN, blood group, contact numbers
- **Employment details:** Employee ID, designation, category (permanent/contract/temporary), cadre, pay scale
- **Service history:** Joining date, promotions, transfers, postings, increments
- **Skill/qualification details:** Driving license validity (for drivers), conductor license, workshop skill categories
- **Medical & insurance details**
- **Emergency contact information**

All master records shall be:

- Tamper-proof with audit logs
- Editable only through approval workflows
- Version-controlled to maintain historical changes

The SI shall provide bulk upload tools to migrate existing employee data from legacy systems, Excel sheets, depot-level files, or other sources.

B. Service Book Digitization

The HRMS must digitally recreate the service book for every employee, including:

- Appointment orders
- Training completions
- Leave approvals
- Disciplinary actions
- Promotions & increments

- Seniority lists
- Suspensions, reinstatements, and memos
- Retirement/settlement records

Digitized service book records must be:

- Indexed
- Searchable
- Time-stamped
- Linked to supporting documents (PDF, scanned copies)

The system must ensure legal acceptability for service verification and audit.

C. Posting & Deployment History

The system shall maintain a chronological record of all postings, including:

- Depot → Depot transfers
- Workshop assignments
- Route allocations (for drivers & conductors)
- Officiating assignments
- Deputations and temporary postings

This history must be used for:

- Payroll calculations
- Leave entitlement
- Overtime analysis
- Workforce optimization

Depot officers must be able to view real-time deployment details from a dashboard.

D. Contract and Tenure Management

For contractual or temporary staff:

- Contract start & end dates
- Renewal reminders
- Contract terms
- Wage category and revisions
- Termination details

The system must automatically generate alerts to HR for upcoming contract expiries and renewals.

5.1.2 Attendance & Leave Management

Overview

Attendance and leave constitute the most crucial operational inputs for payroll, duty allocation, performance evaluation, and regulatory compliance. KSRTC-SWIFT-SWIFT's workforce operates in shifts and duty-based schedules, often across geographically dispersed depots and operational units. Real-time, accurate attendance capture is vital to eliminate payroll discrepancies, unauthorized absenteeism, and operational delays.

The SI shall implement an attendance system integrated with Aadhaar/Biometric devices and capable of handling crew shifts, workshop duties, office staff timings, and special rosters.

A. Aadhaar/Biometric Attendance Integration

The system must support:

- Integration with multiple biometric devices across depots
- Aadhaar authentication (where permissible)
- Face recognition/time-stamp verification (if deployed)
- Auto-syncing of in/out timings
- Offline storage and sync during network downtime

Attendance data must flow in real-time to:

- Payroll module
- Leave module
- Duty scheduling tools (if applicable)

A unified dashboard shall display depot-wise attendance status.

B. Shift-wise / Crew-wise Attendance

KSRTC-SWIFT-SWIFT operates different categories of staff:

- Drivers (multiple shifts, night duties)
- Conductors
- Workshop technicians
- Depot clerks & supervisors
- Office staff

The system must support:

- Complex duty rosters
- Crew pairings
- Night halt duties
- On-duty/off-duty status
- Punch-based verification
- Manual override with approval workflow

A roster scheduling interface must allow depot staff to plan shifts and see attendance compliance.

C. Leave Application, Approval & Accrual Workflow

Employees must be able to apply for leave digitally via portal/mobile app.

Leave workflow must include:

- Leave application
- Supervisor review
- Depot manager approval
- HR validation
- Automatic updating of leave balance
- Alerts on insufficient leave
- Auto-approval in certain cases (configurable)

Leave categories managed:

- Casual Leave
- Earned Leave
- Sick Leave
- Special Leave (training, condolence, maternity, etc.)
- Leave Without Pay (LWP)

Additional capabilities:

- Attachment uploads
- SMS/email/app notifications
- Real-time view of pending leave requests
- Monthly leave analytics

D. Leave Balance & Accrual Management

The system must automatically calculate:

- Leave accruals based on category
- Leave encashment eligibility
- Deduction for LWP
- Rules for carry-forward or lapse

Configurations must be rule-based and fully customizable.

5.1.3 Payroll Engine

Overview

Payroll in KSRTC-SWIFT-SWIFT is highly complex due to:

- Multiple employee categories
- Shift-based allowances
- Kilometer-based incentives
- Overtime for drivers & conductors
- Night duties
- Absenteeism deductions
- Statutory contributions

The SI shall develop an intelligent payroll engine capable of processing large volumes of data with high accuracy and ensuring 100% compliance with Government rules, Finance Department guidelines, audit standards, and statutory norms.

A. Automated Payroll Calculations

The module must compute:

- Basic Pay
- Dearness Allowance (DA)
- House Rent Allowance (HRA)
- Special allowances
- Arrears (increment, retroactive pay)
- Shift allowances
- Crew duty-based incentives
- Overtime (hourly or per km)

The system must generate payroll at employee, depot, and organization levels.

B. Deductions

Deductions must include:

- PF
- ESI
- Income Tax (TDS)
- Union fees
- Pension contributions
- Loan recoveries
- Insurance premiums
- Leave Without Pay (auto deducted)

Each deduction must be rule-based and configurable.

C. Statutory Compliance

Payroll must automatically compute:

- PF contributions (employer/employee)
- ESI
- Professional Tax (if applicable)
- TDS slabs and deductions

The system must generate:

- Form 16
- PF/ESI reports
- Bank transfer statements
- e-Challan files

All reports must comply with government formats

D. Integration with Finance and Treasury Systems

The system shall integrate:

- Payroll summary with Accounting Module
- Salary disbursement files with Banks
- Integration with Tally/Treasury (if required)

Integration ensures that payroll costs flow directly into budgeting and accounting processes.

5.1.4 Employee Self-Service (ESS)

Overview

The ESS portal provides employees with direct access to their personal data, attendance records, payslips, and leave management tools. This reduces dependency on depot clerks or HR personnel and promotes transparency and accountability.

The ESS must be available through:

- Web login
- Android app
- iOS app

A. ESS Features

a. Payslips

Employees must be able to:

- View monthly payslips
- Download PDFs
- Access historic payslips
- Track changes in allowances/deductions

b. Leave Balance & History

The system shall show:

- Current leave balances
- Leave history
- Pending leave requests
- Approved/rejected leave status

c. Attendance History

Employees must view:

- Monthly attendance
- Punch-in/punch-out times
- Absenteeism details
- Overtime calculations (if applicable)

d. Personal Profile Updates

Employees can submit requests to update:

- Address
- Mobile number
- Bank details
- Nominee information

All changes must follow an approval workflow with audit logging.

B. Mobile App Features

The mobile app must include:

- Dashboard with quick links
- Push notifications for leave approvals, payroll updates, etc.
- Secure login with OTP/biometric
- Offline mode for certain inputs (if needed)
- Multi-language support (English & Malayalam)

5.2 FLEET MANAGEMENT SYSTEM

The Fleet Management System (FMS) is a central component of the KSRTC-SWIFT digital transformation initiative designed to modernize, standardize, and streamline all fleet-related operational activities. As one of India's largest public transport undertakings, KSRTC-SWIFT requires a robust digital system to manage thousands of buses moving across diverse routes, depots, schedules, and operational environments. The current processes rely heavily on manual registers, decentralized documentation, and fragmented systems. This results in inefficiencies, delays, data inconsistency, limited visibility, and challenges in real-time decision-making.

The proposed digital Fleet Management System (FMS) will serve as a unified digital platform for managing all fleet-related operational information, including fleet inventory, vehicle attributes, document compliance, route deployment, utilization reporting, vehicle performance analytics, fuel consumption analysis, GPS-based tracking data, and operational dashboards. The system aims to establish seamless data flow across departments, enhance transparency, and support evidence-based policy formulation.

The FMS shall not include any maintenance-related activities, repair workflows, job cards, breakdown management, component tracking, or workshop-level systems. This document exclusively defines fleet operational management as required by KSRTC-SWIFT.

5.2.1. Objectives of the Fleet Management System

The Fleet Management System must deliver the following key outcomes:

1. **Centralized digital registry of all vehicles** across KSRTC-SWIFT.
2. **Real-time visibility of fleet deployment**, allocation, and utilization.
3. **Accurate fuel consumption analysis** and mileage-based performance tracking.
4. **Streamlined document compliance** for statutory and regulatory requirements.
5. **Optimized vehicle allocation** across routes, depots, and service categories.
6. **Transparent operational reporting** at depot, zone, and corporate levels.
7. **Enhanced oversight** on fleet distribution, capacity usage, and performance.
8. **High-quality analytics** to support planning, budgeting, and route optimization.
9. **Integration with GPS/VTS, HRMS, ticketing platforms, and financial systems.**
10. **Mobile-enabled functionalities** for depot supervisors and operational staff.

The FMS will enable KSRTC-SWIFT to make faster, data-driven decisions and improve the efficiency of fleet operations

5.2.2. Fleet Master – Centralized Vehicle Information Repository

At the heart of the FMS is the **Fleet Master**, a comprehensive digital repository containing structured information for every bus under KSRTC-SWIFT's ownership or operational control.

A. Core Vehicle Details

The FMS must capture attributes including:

- Registration number
- Chassis and engine numbers
- Make, model, and variant
- Year of manufacture
- Seating and standing capacity
- Vehicle category (City, Fast, Super Fast, AC, Non-AC, Electric, etc.)
- Assigned depot, zone, or operating unit
- Vehicle ownership type (owned, leased, trial-operated, etc.)

The Fleet Master must support bulk uploads, automatic updates, and system-wide synchronization.

B. Statutory & Regulatory Documentation

Even without maintenance operations, statutory compliance is essential for fleet deployment.

The FMS must track:

- Vehicle insurance
- Road tax
- National and State permits
- Pollution Under Control (PUC)
- Fitness certificates
- Emission compliance dates
- Special clearances for electric or alternate fuel vehicles (if applicable)

The system must generate automated alerts well before expiry for proactive action.

C. Operational Attributes

The system must record operational characteristics such as:

- Service type (short distance, inter-district, long route)
- Route complexity (hilly/urban/rural)
- Fuel type (diesel, CNG, electric charge cycle index)
- Accessibility features (wheelchair access, low-floor capability)

These attributes enable effective scheduling and deployment.

5.2.3. Fleet Deployment, Allocation & Scheduling Visibility

Although scheduling itself may be handled in other modules, the FMS must **track and visualize deployment** in real-time.

A. Depot-Level Deployment Overview

The system must provide:

- Total buses assigned to depot
- Buses available for service
- Buses allocated to specific shifts
- Class-wise distribution (AC/Non-AC, Fast/Ordinary)
- Special duty allocation (VIP, emergency, festival duty, etc.)

B. Route Allocation Tracking

The system must allow supervisors to log:

- Routes assigned per vehicle
- Trip distance
- Departure and arrival points
- Trip operational category
- Frequency and schedule (if integrated with timetable module)

A unified display must show the daily, weekly, and monthly allocation of fleet assets.

C. Inter-depot Transfers

The FMS must record:

- Vehicle transfers between depots
- Reason for transfer
- Effective date
- Approval hierarchy
- Change reflected in Fleet Master immediately

This ensures real-time accuracy of fleet distribution.

5.2.4. Fuel Management & Mileage Analytics

Fuel expenditure is one of KSRTC-SWIFT's largest operational cost centers. The FMS must integrate fuel consumption data and provide advanced analytics.

A. Fuel Log Synchronization

Through integration with KSRTC-SWIFT's Fuel ERP, the system must reflect:

- Fuel draw data
- Fuel station/depot of issue
- Vehicle odometer at time of fill
- Driver, conductor, and duty assignment
- Fuel type and quantity

B. Mileage (KPL) Performance

The system must compute mileage using:

- Fuel data
- Daily kilometers logged via GPS
- Manual odometer entries (if applicable)

C. Fuel Performance Insights

The system must highlight:

- Depot-wise average mileage
- Vehicle model-wise performance
- Route-wise consumption efficiency
- Daily/weekly/monthly mileage trends
- Seasonal mileage variations

D. Fuel Anomaly Detection

The FMS shall automatically flag:

- Excessive fuel draw
- Mileage deviations
- Zero-distance fuel draws
- Fuel consumption inconsistent with route profile
- Irregular patterns among specific drivers or depots

These analytics support operational decision-making without linking to maintenance workflows.

5.2.5. GPS / Vehicle Tracking System (VTS) Data Integration

The FMS must integrate GPS/VTS data to enable real-time operational insight.

A. Real-time Dashboard

The dashboard must provide:

- Live location of vehicles
- Speed indicators
- Route deviation alerts
- Unauthorized stops
- Distance covered per shift

B. Historical Trip Analysis

The system must store:

- Trip routes
- Timetaken
- Running behavior
- Congestion patterns
- Excessive idling

These insights must support route planning and operational strategy.

5.2.6. Operational Compliance & Usage Monitoring

Compliance is a key part of fleet operations, even without maintenance modules.

A. Pre-Deployment Readiness Logging

The FMS shall allow supervisors to confirm:

- Vehicle assigned to duty
- Required documents valid
- Driver assigned
- Route assignment uploaded
- Fuel issuance completed

B. Regulatory Monitoring

Fleet compliance dashboards must show:

- Expiring certificates
- Permits due
- Insurance expiry tracking
- Regulatory deviations

C. Usage Monitoring

The system shall compute:

- Total kilometers operated
- Idle kilometers
- Route adherence
- Trips completed vs scheduled
- Vehicle availability ratio

5.2.7. Fleet Utilization, Distribution & Performance Analysis

The FMS must provide advanced analytics to support operational strategy.

A. Fleet Utilization Metrics

The system shall calculate:

- On-road vs off-road count (non-maintenance context)
- Trip count per vehicle
- Kilometers per day
- Scheduled vs actual trip performance
- Class-wise fleet effectiveness

B. Distribution Analysis

The system must reveal:

- Depot-level fleet concentration
- Zone-wise distribution
- Overloaded depots
- Underutilized fleets
- Asymmetric allocations requiring balancing

C. Performance Dashboards

Dashboards must show:

- Vehicle performance index (without maintenance parameters)
- Fuel efficiency scores
- Document compliance performance
- Route productivity indicators
- Service category utilization

5.2.8. Integration Requirements

The FMS must integrate with:

- GPS/VTS system
- Fuel ERP
- Ticketing system (Chalo or others)
- HRMS (for driver and conductor assignment)
- Financial Accounting System (for cost tracking)
- Scheduling systems (if any)

Integration must ensure seamless data flow.

5.2.9. Mobile Application for Depot & Field Officers

The mobile application must support:

- Route allocation recording
- Vehicle availability status update
- Fuel verification
- Document compliance alerts
- GPS route deviation reporting
- Trip start/end confirmation
- Uploading photos/videos of operational events

Offline support is mandatory.

5.2.10. Expected Outcomes

After deployment, KSRTC-SWIFT will benefit from:

1. Complete digitization of fleet information across all depots.
2. Accurate real-time view of fleet distribution and deployment.
3. Improved operational efficiency and reduced inconsistencies.
4. Higher fuel accountability and reduced irregularities.
5. Better decision-making supported by analytics dashboards.
6. Stronger compliance tracking, reducing legal and financial risks.
7. Transparent reporting for management and government stakeholders.
8. Streamlined operational coordination across depots and divisions.
9. Better route and fleet planning through data-backed insights.
10. Enhanced reliability of public transport operations, benefiting passengers.

5.3 LEASE BILLING & COST RECOVERY MODULE

The **Lease Billing & Cost Recovery Module** is a mission-critical component designed to manage the financial, contractual, and operational accounting associated with leased buses operating under KSRTC-SWIFT. As KSRTC-SWIFT increasingly adopts diversified operational models—including owned fleet, leased fleet, and public-private collaboration structures—the Corporation requires a robust, transparent, and automated digital system for lease billing, financial reconciliation, cost allocation, and audit tracking. This module shall ensure accuracy, compliance, and efficiency in lease-related transactions and provide a complete digital trail for management, finance divisions, and external auditors.

The module must support end-to-end digitalization of all billing scenarios pertaining to leased vehicles deployed for KSRTC-SWIFT operations, including fixed-rate lease models, variable-rate lease models, distance-based settlement, fuel cost recovery, crew cost allocation, penalties, deviations, service-level exceptions, and invoice generation. It must also allow KSRTC-SWIFT to exercise strong financial control and visibility over expenditure while ensuring timely payments, transparent calculations, and prevention of revenue or cost leakages.

5.3.1. Objectives of the Lease Billing & Cost Recovery Module

The System Integrator (SI) shall ensure that the module accomplishes the following:

1. **Automate the entire end-to-end lease billing workflow**, eliminating manual calculations.
2. **Provide accurate, rule-based computations** based on contract terms and operational inputs.
3. **Ensure full transparency of cost components** such as fuel, crew, kilometres operated, penalties, and adjustments.
4. **Enable one-click invoice generation** for finance and audit departments.
5. **Support multiple contract models** (fixed, variable, differential).
6. **Track operational performance** of leased buses, including utilization and compliance.
7. **Provide detailed reconciliation tools** for depots, zones, and KSRTC-SWIFT HQ.
8. **Support cost allocation and recovery logics** for complex operational models.
9. **Enable audit-friendly reporting**, with clear traceability, logs, and digital evidence.
10. **Integrate with KSRTC-SWIFT's financial, operational, and scheduling systems** for unified data flow.
11. **Provide dashboards and analytics** for management oversight and financial decision-making.

This module ensures financial discipline, transparency, and contract compliance across all leased fleet operations.

5.3.2. Lease Contract Digitization & Master Configuration

A. Contract Master

The module must support a digital **Contract Master** where all essential parameters of the lease agreement are stored. These include:

- Lessee/Lessor details
- Lease start and end dates
- Vehicle registration numbers
- Vehicle category (AC/Non-AC/Ordinary/EV/etc.)
- Contracted kilometre rates
- Daily/Monthly minimum assured kilometres (MAK)
- Fuel cost responsibilities (KSRTC-SWIFT/vendor/hybrid)
- Crew responsibility (Driver by vendor or KSRTC-SWIFT)
- Penalty clauses
- Incentive clauses (if any)
- Exclusions and special terms

B. Multiple Contract Models Supported

The module must support:

a.Fixed Cost Model

Where KSRTC-SWIFT pays a fixed monthly amount regardless of kilometres operated.

b.Variable Cost Model

Where billing is based on:

- Per-kilometre rate
- Per-day deployment
- Service category type

c.Hybrid Models

Where some costs are fixed and some are variable.

d.EV-Specific Contracts

Supporting:

- Fixed energy cost
- Charging unit consumption indexing
- Regenerative braking credits (if contracted)

The system must ensure that contracts can be configured, updated, and version-controlled with full audit logs.

5.3.3. Vehicle Deployment & Operational Data Capture

Although operational control may lie in other modules, the Lease Billing module must **consume operational data** to compute accurate bills.

Required data includes:

- Daily kilometres operated (GPS-synced or depot-recorded)
- Number of trips operated
- Route categories (ordinary, fast, AC, etc.)
- Operational hours (if time-based billing applies)
- Fuel drawn (if fuel cost is reimbursable)
- Crew cost logs (if reimbursed or chargeable)
- Non-operational days (approved vs unapproved)
- Special deployment (VIP, festival, emergency)

Data shall be fetched automatically from integrated systems.

5.3. 4. Automated Billing Engine

The heart of the module is the **Automated Billing Engine**, which must compute complex billing formulas with accuracy, consistency, and audit traceability.

A. Kilometre-Based Billing

The system must calculate billing based on:

- KM rate x actual KM operated
- Adjusted KM if contractual KM and actual KM differ
- Additional charges for overtime or extra trips

B. Minimum Assured Kilometres (MAK) Logic

If a vendor is guaranteed:

- 8,000 KM per month
- And actual KM < 8,000

The system must automatically compute:

Payable = MAK – Actual KM × KM Rate

If Actual KM exceeds MAK, they must be compensated accurately based on contract.

C. Fuel Cost Recovery (if applicable)

If the contract specifies fuel reimbursement, the system must compute:

- Fuel drawn × Fuel rate
- Or
- KM operated × Standard KMPL × Fuel rate

Fuel cost may vary:

- Depotwise
- Vehiclewise
- Contractwise

The module must allow multiple rule sets.

5.3.5 Crew Cost Allocation

If KSRTC-SWIFT provides crew, the module must compute:

- Driver wages
- Allowances
- Overtime
- Night allowances
- Holiday duties

If vendor provides crew, billings are adjusted accordingly.

5.3.6 Penalty Application

The module must automatically apply penalties for:

- Non-deployment
- Route violation
- Early withdrawal
- Unauthorized stoppages (VTS-based)
- Poor operational performance (if contract specifies)
- Failure to meet service category obligations

The penalty framework must be configurable.

5.3.7 Incentives

Some contracts include incentives for:

- High performance
- EV-specific performance (e.g., low energy consumption)
- Operational reliability

These must be dynamically calculated and applied.

5.3.8 Special Duty Billing

For emergency services (Sabarimala, festival, election duty), the system must support:

- Unique kilometre rates
- Additional allowances
- One-time charges

5.3.9. Invoice Generation & Workflow

The system must generate fully automated invoices.

A. Auto-Generated Invoice

Contains:

- Vendor details
- Contract reference
- Period of billing
- Vehicle list
- Billing components
- Penalties and incentives
- Net payable amount
- Tax calculations (GST/TDS)
- Standard invoice number
- Terms & conditions

B. Approval Workflow

The invoice must pass through:

1. Depot Officer
2. Mechanical/Operations section
3. Finance Section
4. Final approval by authorized officer

Each stage must have:

- Timestamp
- Digital signature
- Comments/remarks

C. Revision & Resubmission

If corrections are required:

- System must allow revisions with versioning
- Old invoices retained for audit
- Only approved invoices routed to Finance

5.3.9. Cost Recovery Mechanisms

In many cases, KSRTC-SWIFT must recover certain costs from vendors.

A. Types of Recoverable Costs

- Excess fuel consumption
- Crew negligence charges
- Damage charges (if contractual)
- Government fines charged to KSRTC-SWIFT
- VTS penalty recoveries

The system must compute recoveries automatically.

B. Ledger Creation

A digital ledger per vendor must display:

- Amount billed
- Amount paid
- Recoveries applied
- Pending dues
- Credit adjustments
- Historical statements

This ensures full transparency.

5.3.10. Vendor Performance Monitoring

The module shall compute and display performance indicators:

- Kilometres operated vs committed
- Consistency in deployment
- Service reliability score
- Fuel efficiency score
- Timely reporting compliance
- Penalties incurred

Performance should be visualized through dashboards.

5.3.11. Reconciliation Tools

The system must include a dedicated **Reconciliation Suite**.

A. Data Reconciliation

Allows cross-verification of:

- GPS data vs depot records
- Fuel ERP data vs operational logs
- KM statements vs timetable data
- Contract terms vs applied formulas

B. Dispute Resolution Support

For transparent dispute handling, system must allow:

- Vendor-side access (view-only)
- Comments from vendors
- Digital evidence attachment
- Clarification logs
- Decision tracking

C. Monthly & Yearly Reconciliation

The module must generate reconciled summaries for:

- Each depot
- Each contractor
- Each contract type
- Each vehicle category

5.3.12. Financial & Audit Reports

The module must support advanced analytics and reporting.

A. Mandatory Reports

- Monthly vendor-wise invoices
- Vehicle-wise billing sheets
- KM utilisation statements
- Penalty and incentive logs
- Ledger summary
- GST/TDS statements

B. Audit Trail

Every calculation must be:

- Logged
- Timestamped
- Traceable
- Immutable

This ensures compliance with government audit norms.

5.3.13. Integration Requirements

The module must integrate with:

- Financial Accounting System (Tally/Treasury)
- HRMS (for crew cost mapping)
- Fuel ERP
- GPS/VTs
- Ticketing system (for operational mileage)

Two-way integrations ensure cross-validation.

5.3.14. Dashboards & Analytics

Dashboards must provide insights on:

- Contract expenditure
- Vendor performance
- Cost-per-kilometre
- Zone-wise billing patterns
- Revenue vs cost comparisons
- Forecasting future lease expenditure

These analytics assist management and planning divisions.

5.3.15. Expected Benefits to KSRTC-SWIFT

Once implemented, the module will deliver:

1. **100% accurate lease billing** with zero manual computation.

2. **Full transparency in vendor payments and recoveries.**
3. **Reduction in billing disputes and errors.**
4. **Optimized cost-per-kilometre tracking.**
5. **Clear audit trail for every charge and deduction.**
6. **Faster and more structured vendor settlements.**
7. **Data-driven planning for leased fleet expansion.**
8. **Strengthened financial discipline across depots.**

5.4 FINANCIAL ACCOUNTING MODULE

The Financial Accounting Module is one of the foundational components of the KSRTC-SWIFT Digital Platform, designed to modernize the Corporation's financial operations, strengthen fiscal discipline, enhance transparency, and ensure compliance with statutory norms. KSRTC-SWIFT's financial ecosystem involves complex and high-volume transactions across depots, zones, headquarters, workshops, ticketing systems, travel card systems, fuel systems, and external partners. The current financial processes rely on partial automation, multiple standalone tools, and manual reconciliations, leading to inefficiencies, delays, inaccuracies, and significant audit gaps.

This module shall serve as KSRTC-SWIFT's central financial management system, capturing and processing all transactions related to revenue, expenditure, accounts payable, accounts receivable, asset accounting, budgeting, GST/TDS compliance, statutory reporting, and financial consolidation. The module shall integrate seamlessly with all relevant upstream and downstream systems, providing real-time validation and complete financial visibility across the entire organization.

The module shall adhere to Government of Kerala financial norms, accounting guidelines, audit requirements, and all applicable statutory frameworks including GST, TDS, Income Tax, Companies Act (where applicable), and generally accepted accounting principles (GAAP).

5.4.1. Objectives of the Financial Accounting Module

The System Integrator (SI) shall ensure that the module achieves the following:

1. **Full digitalization of KSRTC-SWIFT SWIFT's accounting processes**, eliminating manual ledger entries.
2. **Real-time visibility of financial transactions** across all depots, zones, and headquarters.
3. **Accurate and automated accounting** for ticket revenue, travel card revenue, lease payments, vendor payments, and service charges.

4. **Seamless integration with operational systems**, enabling automated trigger-based entries.
5. **Automated statutory compliance**, including GST, TDS, income tax, financial statements, and audit trails.
6. **Standardized chart of accounts** for uniform financial reporting across all KSRTC-SWIFT units.
7. **Strong financial control, reconciliation workflows, and audit-ready recordkeeping.**
8. **Advanced analytics and dashboards** to support financial planning and decision-making.

This module will support KSRTC-SWIFT's transformation into a financially transparent, accountable, and data-driven organization.

5.4.2. Accounting Core Structure

The Financial Accounting Module shall provide an end-to-end digital accounting framework.

A. Chart of Accounts (CoA)

A standardized, configurable Chart of Accounts must be created and maintained in consultation with KSRTC-SWIFT.

The CoA must support:

- Revenue heads (ticketing, non-ticketing, luggage, passes, travel cards, advertisements, cargo service, etc.)
- Expenditure heads (fuel, staff cost, administration cost, outsourcing cost, lease billing, electricity, station charges, etc.)
- Asset heads (land, buildings, buses, machinery, etc.)
- Liability heads (loans, advances, deposits, statutory liabilities)
- Transfer accounts
- Head-office control accounts
- Depot-wise and zone-wise codes

The CoA must support hierarchical grouping for financial consolidation.

B. Journal Management

The system must support:

- Automated journal entries
- Manual journal preparation (with validations)
- Recurring journal templates
- Multi-level approvals
- Digital audit trail

C. Ledger Management

The module must maintain:

- Real-time ledger updates
- Party ledger management (vendors, contractors, government, departments)
- Reconciliation indicators
- Ledger freeze options (month-end/period-end)

5.4.3. Revenue Accounting

KSRTC-SWIFT generates revenue from multiple streams. The module must consolidate, classify, and account for all revenue accurately.

A. Ticket Revenue

Integration with KSRTC-SWIFT ticketing systems (including Chalo or future platforms) is mandatory.

System must record:

- Daily ticket revenue
- Conductor settlement reports
- Depot-wise ticket collection
- Service category-wise revenue
- Digital ticketing revenue (QR, NCMC, app)
- Online booking and reservation revenue

B. Travel Card Revenue

The system must account for:

- Card recharges
- Bonus components
- Usage deductions
- Refunds/chargebacks
- Settlement with payment gateways

C. Non-Ticket Revenue

Must include:

- Parcel/cargo revenue
- Advertisement revenue
- Rental income (shops/stalls)

- Parking revenue
- Penalty receipts
- Special service revenue

D. Miscellaneous Receipts

System must allow depot-level entry of:

- Scrap sale receipts
- Tender document fees
- Miscellaneous beneficiary receipts
- Policy-based collections

All revenue entries must automatically affect KSRTC-SWIFT's financial ledgers.

5.4.4. Expenditure Accounting

The module must account for all operational expenses.

A. Recurring Expenditure

Includes:

- Fuel payments
- Electricity & water charges
- Station/stoppage payments
- Outsourced service payments
- Cleaning and housekeeping
- Communication charges
- Consumables
- AMC charges
- Software licenses
-

B. Staff Cost Accounting

Integration with HRMS is mandatory for:

- Payroll entries
- Allowances
- Leave salary
- Overtime
- Pension contributions
- Statutory contributions (PF, ESI)

System must auto-post entries to ledger groups.

C. Vendor Payments

For vendors such as:

- Lease bus contractors
- Ticketing service providers
- Consultants
- Infrastructure partners
- Fuel suppliers

The system must support invoice verification workflows.

5.5.5. Accounts Payable (AP) & Accounts Receivable (AR)

A. Accounts Payable (AP)

The AP module must provide:

- Invoice entry
- Purchase order linking (if applicable)
- Tax validations
- Payment approval workflow
- Partial payments
- Debit/credit notes
- Vendor ledger reconciliation

B Accounts Receivable (AR)

System must manage receivables such as:

- Rent from shops/stalls
- Advertising revenue
- Third-party service charges
- Inter-departmental claims
- Government grants

AR module must support:

- Dunning letters
- Standing instructions
- Reconciliation
- Ageing reports

5.4.6. Bank & Cash Management

KSRTC-SWIFT handles high-volume transactions across multiple bank accounts.

A. Bank Integration

The module must support:

- Bank statement import
- Auto-reconciliation
- NEFT/RTGS/IMPS payment files
- Bank balance dashboard

B. Cash Accounting

Depots often handle cash collections.

The system must store:

- Cash collected
- Cash remitted to HQ/Bank
- Cash in transit
- Physical vs system reconciliation

Warning alerts must be generated for discrepancies.

5.4.7 . Budgeting, Funds Management & Forecasting

A. Budget Preparation

The system must support:

- Annual budgeting
- Revised estimates (RE)
- Final estimates (FE)
- Contingency and supplementary budgets

B. Budget Control

Must include:

- Budget vs actual comparison
- Overspend alerts
- Commitment control
- Multi-level approvals

C. Forecasting

Using historical data, system must forecast:

- Revenue expectations
- Expenditure trends
- Cash flow patterns
- Debt servicing schedules

5.4.8. Asset Accounting (Non-Maintenance)

Though maintenance is excluded, **asset accounting** must be supported for financial reporting.

A. Asset Register

The system must maintain details for:

- Land
- Buildings
- Buses
- IT equipment
- Furniture
- Machinery

B. Depreciation

System must compute depreciation based on:

- Straight Line Method (SLM)
- Written Down Value (WDV)
- Government-specific depreciation tables
- Asset usage period

C. Asset Disposal

Supports:

- Sale
- Transfer
- Scrapping (financial entry only)
- Revaluation

5.4.9. GST, TDS & Statutory Compliance

A. GST Compliance

Module must support:

- HSN/SAC mapping
- GST input credit register
- GST output liability
- GST-ready invoice formats
- GSTR reconciliation assistance

B. TDS Compliance

Includes:

- TDS rate validation
- Automatic deduction
- Challan linking
- Form 16A generation
- TDS return support

C. Audit Reports

Supports:

- Internal audit
- External audit
- AG audit
- Statutory audit

Audit trail must be tamper-proof.

5.4.10. Financial Consolidation & Period Closing

A. Period Closing

The system must support:

- Monthly closing
- Quarterly closing

- Year-end closing
- Ledger freeze
- Accrual postings
- Reversal journals

B. Multi-Level Consolidation

The module must:

- Consolidate depot-level data
- Consolidate zone-level data
- Produce corporate-level final accounts

C. Financial Statements

The system must generate:

- Trial Balance
- Profit & Loss Account
- Balance Sheet
- Schedules and notes
- Cash flow statements

All statements must be exportable in Excel/PDF formats.

5.4.11. Integration Requirements

Mandatory integrations include:

- HRMS (payroll, allowances)
- Fuel ERP (fuel expenditure)
- Ticketing system (revenue)
- Travel Card System (digital revenue)
- Lease Billing Module
- VTS/GPS (if used for financial logic)
- Treasury or Tally (if migration/interface is required)

5.4.12. Dashboards & Analytics

Each financial officer must have role-based dashboards.

Dashboards include:

- Daily revenue summary

- Depot-wise performance
- Major expenditure heads
- Budget utilization
- Accounts receivable ageing
- Accounts payable pending
- GST/TDS status
- Monthly/Quarterly trends
- Comparative analysis with previous years

Advanced analytics must support:

- Trend forecasting
- Revenue leakage detection
- Scenario-based planning

5.4.13. **Expected Outcomes for KSRTC-SWIFT**

After implementation, KSRTC-SWIFT shall gain:

1. **Complete automation of financial operations** across the organization.
2. **Accurate, real-time financial visibility** enabling stronger governance.
3. **Timely statutory compliance** with GST, TDS, and audit requirements.
4. **Minimized manual dependency**, reducing delays and errors.
5. **High-quality financial reports**, supporting policy and decision-making.
6. **Enhanced accountability** at depot, zone, and head office levels.
7. **Improved revenue tracking**, reducing leakages and inaccuracies.
8. **Efficient vendor settlement cycles** and improved financial discipline.
9. **Data-backed budgeting and forecasting**, improving financial planning.
10. **Audit-ready transparency**, strengthening institutional credibility.

5.5 DASHBOARD & ENTERPRISE ANALYTICS MODULE

The **Dashboard and Enterprise Analytics Module** is a mission-critical component of the KSRTC-SWIFT Digital Platform, designed to provide real-time visibility, comprehensive analytics, management intelligence, and decision-support insights across the Corporation. KSRTC-SWIFT operates a complex and geographically widespread transport ecosystem involving thousands of buses, multiple revenue streams, diverse operational units, and significant financial obligations. To manage this environment effectively, KSRTC-SWIFT requires a powerful, integrated Analytics Layer that consolidates data from all operational systems and transforms it into actionable insights.

The module shall function as the **central enterprise intelligence hub**, enabling KSRTC-SWIFT to transition from reactive, manual monitoring to a proactive, data-driven governance model. It shall aggregate data from various modules—Fleet Management, HRMS, Lease

Billing, Ticketing, Financial Accounting, Fuel ERP, Travel Card System, GPS/VTS, and others—into a unified analytics platform, delivering executive dashboards, performance indicators, predictive insights, and policy-grade reports to decision-makers across all levels.

This module is essential for supporting KSRTC-SWIFT’s modernization objectives and ensuring that senior leadership—including CMD, EDs, Zonal Officers, Mechanical & Operations Divisions, and Finance Departments—have accurate, timely, and holistic visibility.

5.5.1. Objectives of the Dashboard & Enterprise Analytics Module

The System Integrator (SI) shall ensure that the module achieves the following:

1. **Provide real-time, multi-level dashboards** for leadership, operations, finance, HR, and planning units.
2. **Consolidate data** from all internal and external systems into a unified analytical repository.
3. **Deliver actionable KPIs** for fleet operations, revenue, finance, manpower, and service performance.
4. **Enable predictive analytics** using historical and real-time data.
5. **Support planning, budgeting, and optimization** through advanced analytical capabilities.
6. **Empower decision-makers** with a 360-degree view of KSRTC-SWIFT’s operational and financial health.
7. **Ensure transparency, accountability, and audit readiness** through data-driven reporting.
8. **Support mobile, web, and tablet-based dashboards** accessible to authorized users.
9. **Enable drill-down capabilities** from corporate-level view to depot-level and route-level details.

This module positions KSRTC-SWIFT to achieve digital maturity and enhance operational excellence.

5.5.2. Data Integration & Enterprise Data Model

At the core of this module is the **Enterprise Data Model (EDM)**, which consolidates datasets from all KSRTC-SWIFT systems.

A. Source Systems Integrated

The module shall integrate data from:

- Fleet Management
- HRMS
- Lease Billing & Contract Management
- Financial Accounting
- Ticketing Systems
- Travel Card/NCMC System
- GPS/VTS Vehicle Tracking
- Fuel Management ERP
- e-Office and workflow systems
- Depots and zones (daily entries)

B. Data Pipeline & ETL

The SI must implement:

- Automated data pipelines (hourly/daily/real-time)
- ETL (Extract, Transform, Load) frameworks
- Data cleansing and standardization
- Time-series data modeling
- Error detection and correction mechanisms

C. Data Warehouse

A central **Data Warehouse** shall be created to store structured and unstructured data.

The warehouse must support:

- Historical data retention
- Trend modelling
- Optimized querying
- High-volume analytics

5.5.3. Executive Dashboards (CMD, EDs, Senior Management)

The Executive Dashboard is the most visible component of the analytics suite, providing key performance indicators (KPIs) required for governance and policy decisions.

A. Key KPIs Displayed

Executives must access dashboards showing:

- Total operational fleet vs available fleet

- Daily revenue collection (ticketing + non-ticketing)
- Depot-wise performance
- Top-performing routes
- Cost-per-kilometre (fuel, lease, crew)
- Revenue-per-kilometre
- Fleet utilization
- Digital ticketing penetration
- Travel card usage insights
- Financial commitments and payables
- Employee strength and absenteeism
- Key compliance alerts
- Passenger ridership trends

Dashboards must be configurable and fully interactive.

B. Real-Time Notifications

Executives must receive alerts for:

- Sudden revenue dips
- GPS-detected route violations
- Document expiry risks
- Fuel efficiency anomalies
- Operational disruptions
- Leakages or abnormal activity

C. Decision-Support Indicators

The dashboard must highlight:

- Which depots need immediate intervention
- Which routes need optimization
- Which contract models underperform
- Which expenditure heads exceed budget

This ensures strategic alignment with organizational objectives.

5.5.4. Operational Dashboards (Depots, Zones, Operations Division)

Operational dashboards provide day-to-day visibility for depot-level and zonal-level officers.

A. Fleet Utilization Dashboard

Shows:

- Total buses assigned
- Available, deployed, reserved buses
- Route-wise fleet assignment
- Daily trip operations
- Cancellations and deviations

B. Revenue Dashboard

Includes:

- Daily ticket revenue
- Online/offline revenue split
- Conductor-wise collections
- Depot-level revenue comparison
- Revenue leakage indicators

C. GPS/VTS Operational Dashboard

Provides:

- Live vehicle map
- Route adherence
- Idling, stoppage, overspeeding
- Missed trips

D. Fuel Performance Dashboard

Shows:

- KPL values for each vehicle
- Depot comparison
- Month-wise fuel consumption
- Fuel anomalies

These dashboards ensure operational discipline and timely corrective action.

5.5.5. Financial Analytics Dashboards (Finance Department)

This set of dashboards is directly linked to KSRTC-SWIFT's financial health.

A. Revenue vs Expenditure Dashboard

Shows:

- Daily, weekly, monthly financial snapshot
- Category-wise revenue distribution
- Cost-of-operation indicators
- Depot-level cost-per-kilometre
- Profitability analysis

B. Accounts Payable & Receivable Dashboard

Shows:

- Pending invoices
- Vendor-wise outstanding
- Ageing analysis
- GST liability and input credit
- TDS deduction and remittance status

C. Budgeting & Forecasting Dashboard

Displays:

- Budget vs actual expenditure
- Variance indicators
- Predictive expenditure modelling
- Cash flow forecasting

Finance dashboards must support advanced drill-down features.

5.5.6. HR & Workforce Analytics Dashboards

The module shall visualize manpower data via interactive dashboards.

A. Attendance & Absenteeism

Includes:

- Daily headcount
- Depot-wise attendance
- Crew availability ratios
- Leave consumption trends

B. Payroll Cost Insights

Shows:

- Staff cost as percentage of revenue
- Category-wise expenditure

- Overtime spikes
- Unit-level staff burden analysis

C. Workforce Planning & Optimization

Dashboards must assist in:

- Predicting manpower shortage
- Identifying high-absence periods
- Optimizing shift allocation

5.5.7. Lease Billing & Contract Analytics Dashboards

These dashboards support monitoring of leased fleet performance.

A. Vendor Billing Analytics

Shows:

- Monthly billing amounts
- Penalties applied
- Incentive payouts
- KM operated vs commitment

B. Contract Compliance Score

Highlights:

- Underperforming vendors
- Route violations
- Non-deployment cases

C. EV Contract Insights (if applicable)

Displays:

- Energy consumption patterns
- Estimated cost savings
- EV performance KPIs

5.5.8. Passenger & Service Experience Analytics

The module shall monitor service quality and passenger experience.

A. Passenger Ridership Analytics

Shows:

- Daily ridership
- Route-wise load factor
- Peak/off-peak demand
- Passenger revenue per trip

B. Digital Adoption Dashboard

Includes:

- QR ticket usage
- Travel card penetration
- Mobile app ticketing share
- NCMC usage statistics

C. Service Reliability Indicators

Tracks:

- Trip completion ratio
- Frequency adherence
- Scheduled vs actual departures

5.5.9. Predictive & Advanced Analytics

The module must incorporate modern analytical models.

A. Revenue Forecasting

Using historical and seasonal trends.

B. Route Optimization Suggestions

Using:

- Passenger flow
- Operational costs
- Service demand

C. Fuel Efficiency Prediction

Predicts fuel anomalies before they occur.

D. Demand Modelling

Predicts:

- Peak travel days
- Festival traffic
- Long-route demand

E. Cost Forecasting

Projects expenditure across:

- Fuel
- Lease
- Staff
- Administration

5.5.10. Geo-Spatial Analytics (Maps & Route Intelligence)

The module must include GIS-based analytics.

A. Route Heatmaps

Shows:

- High-demand corridors
- Low-performing routes
- Delay clusters

B. Geographic Revenue Distribution

Visualizes revenue performance zonally.

C. Incident Mapping

Maps:

- Route deviations
- Unauthorized stoppages
- High-idle zones

5.5.11. Reporting Engine

The Reporting Engine shall support automated, scheduled, and ad-hoc reports.

A. Standard Reports

Includes:

- Daily/Monthly revenue
- Fleet utilization
- Fuel performance
- Ticketing performance
- Financial statements

B. Custom Report Builder

Enables creation of:

- Depot-specific reports
- Zone-level comparisons
- Government submissions

C. Scheduled Reports

Automatically sent to:

- CMD
- Finance department
- Operations committee

5.5.12. User Access, Roles & Audit Trails

All dashboards must be role-based.

A. Access Levels

- CMD-level executive dashboards
- Department-level analytics
- Depot-level operational dashboards
- View-only roles for auditors

B. Audit Trails

Every action must be logged:

- Dashboard views
- Data exports
- Filter selections
- Report downloads

5.5.13. Expected Outcomes

After implementation, KSRTC-SWIFT will achieve:

1. **Complete visibility into operations, financials, fleet, and manpower.**
2. **Ability to make informed, real-time decisions** rather than relying on manual reports.
3. **Drastic reduction in data inconsistencies** due to unified analytics.
4. **Higher operational efficiency** through actionable insights.
5. **Enhanced financial control**, reducing leakages and inefficiencies.
6. **Improved passenger service quality** driven by data-backed planning.
7. **Institutional transparency and audit readiness**, supporting governance objectives.
8. **Predictive intelligence** enabling proactive planning and intervention.

5.6 Mobile Applications Module

5.6.1. Overview and Objectives

The Mobile Applications Module shall provide secure, role-based mobile access to the KSRTC-SWIFT Digital Platform, enabling officers, staff, and authorized stakeholders to perform key functions from the field and on the move. The objective is to ensure that critical operational, HR, financial, and fleet-related information and workflows are not confined to desktop systems but are readily available through modern Android/iOS devices, thereby improving responsiveness, transparency, and efficiency.

The System Integrator (SI) shall design, develop, deploy, and maintain a suite of mobile applications (or a single, multi-role application) that integrates seamlessly with the backend systems including HRMS, Fleet Management, Lease Billing, Financial Accounting, Dashboard & Analytics, and any other modules forming part of this project.

Key objectives include:

1. Enabling **real-time data capture and access** from depots, field locations, and offices.
2. Providing **role-based mobile experiences** for employees, depot-level officers, and senior management.

3. Supporting **approvals, alerts, and workflow actions** via mobile devices.
4. Ensuring **data security, authentication, and auditability** on mobile platforms.
5. Providing **offline capability** for critical functions in low-connectivity environments.

5.6.2. Mobile Application Types & User Groups

The SI may design a single container application with role-based access or multiple dedicated apps. At minimum, the following user segments must be supported:

1. **Employee / HR Self-Service Users**
 - Drivers, conductors, office staff, technical staff, etc.
2. **Depot / Unit Supervisors & Officers**
 - Depot managers, section heads, scheduling staff, operations officers.
3. **Head Office / Zonal / Senior Management**
 - CMD, EDs, GMs, DyGMs, and other senior officers requiring dashboards and approvals.

Additional user groups (e.g., finance officers, inspection staff) may be included as required.

5.6.3. Core Features – Employee Mobile Application (HR & ESS)

The Employee-facing mobile component shall integrate with the HRMS and provide the following minimum functionalities:

A. Authentication & Security

- Secure login using unique credentials.
- Support for multi-factor authentication (MFA) where required.
- Enforced password policy and secure session management.

B. Employee Self-Service (ESS)

- View personal profile, designation, posting details, and contact information.
- View and download payslips for current and past months.
- View leave balance, leave history, and applied leave status.
- Submit leave applications with configurable workflows for approvals.
- View attendance summary (e.g., present/absent days, late reporting flags if applicable).
- View important circulars, HR notifications, and announcements.

C. Requests & Approvals

- Employees to raise requests (e.g., change of contact details, bank details, dependent information) through structured forms.
- Workflow-based routing of requests to competent authorities for approval/rejection.
- Push notifications to employees on approval/remarks/rejection.

D. Communication & Alerts

- In-app notification of policy updates, new schemes, or HR-related instructions.
- Broadcast messages to specific employee groups (e.g., drivers of a particular depot).
- Optional integration with SMS/Email for critical alerts.

5.6.4. Core Features – Depot / Operational Mobile Application

A separate role-based interface (within the same app or as a separate app) shall cater to the needs of depot officers and operational staff.

A. Fleet & Deployment View (Read-Only / Operational)

- View list of buses assigned to the depot, along with key attributes (category, capacity, service type).
- View daily fleet deployment summary (buses allocated to each route/service block).
- View high-level operational statistics such as number of scheduled trips versus completed trips (as integrated from Fleet/Operations module, if available).

(Note: As per your scope decisions, this remains non-maintenance and non-workshop in nature.)

B. Operational Reporting & Field Inputs

- Ability to capture simple operational events (e.g., trip cancellation reasons, traffic disruption notes, route deviation remarks) as part of daily reporting.
- Facility to attach photos/documents for specific incidents (e.g., road blockages, infrastructure issues) for internal reference.

C. Attendance & Staff Management (Linked to HRMS)

- View crew availability (driver/conductor) status for the day.
- Confirm or verify crew allocation for particular services (if integrated with scheduling module).
- Receive alerts on unusually high absenteeism or shortage of staff.

D. Approvals & Administrative Workflows

- Depot-level approvals for:
 - Leave applications of subordinates.
 - Basic HR requests (subject to HRMS workflows).
 - Operational requests escalated to depot (e.g., route adjustments submitted by field staff, if that is within this project scope).
- All approvals must be logged with date, time, user ID, and remarks.

5.6.5. Core Features – Management Mobile Application (Dashboards & Analytics)

A focused mobile interface must offer summarized dashboards and key indicators to the senior management.

A. Executive Dashboard (Mobile View)

- Snapshot of daily revenue (ticket + non-ticket).
- Snapshot of fleet deployment (buses in service vs total buses).
- Depot-wise performance ranking (revenue, utilization, etc.).
- High-level expense indicators (fuel, lease, major cost heads) – as integrated from Financial module.
- Short summary of HR indicators (staff strength, attendance, key exceptions).

B. Drill-Down & Filters

- Ability to filter dashboards by:
 - Date or period (day/week/month).
 - Zone / district / depot.
 - Category of service (AC/Non-AC, City/Long Route, etc.).
- Drill-down from Corporation-level view to zone-level and depot-level data.

C. Alerts & Exception Reporting

- Push alerts for:
 - Significant drop in revenue compared to normal baseline.
 - Exceptions flagged by analytics (e.g., unusual fuel consumption patterns, extreme KPL deviations, unusual route behaviour) – where analytics module is configured.
 - Upcoming critical compliance deadlines (e.g., large cluster of vehicles nearing insurance/permit expiry, if such data is exposed to mobile).

D. Decision Support

- Option to bookmark favorite dashboards or key metrics.
- Ability to export a summary (e.g., as PDF/image) for quick sharing in internal review meetings.

5.6.6. Common Technical Requirements for all Mobile Applications

A. Platforms

- The SI shall develop native or cross-platform applications compatible with:
 - **Android (mandatory)** – given the typical operating environment.
 - **iOS (desirable)** – especially for senior management devices.

If cross-platform technology is used (e.g., Flutter, React Native), it must be modern, well-supported, and capable of meeting performance and security requirements.

B Integration & APIs

- All mobile app functionalities must be built on top of secure APIs exposed by the central application platform.
- APIs must use standard protocols (REST/JSON over HTTPS).
- No business logic shall be hardcoded in the mobile app that is not validated and enforced in the backend.

C. Performance & Usability

- User interface shall be intuitive, with minimal steps required for common tasks.
- App should be optimized for low-bandwidth conditions common in rural/remote depots.
- Caching mechanisms shall be implemented for read-heavy screens (e.g., static master data, depots list, vehicle classes).

D. Offline Capability

- Critical workflows (e.g., field data capture, basic reporting, certain HR requests) must function in offline mode with local storage.
- Automatic sync with the server when connectivity is restored, with conflict resolution logic.

E. Security Requirements

- End-to-end communication via HTTPS with valid certificates.
- Secure storage of tokens and sensitive information, avoiding plain-text storage on device.
- Session timeout, inactivity logout, and device binding provisions for sensitive roles, if required.
- Mandatory login with proper credentials; no anonymous access for internal apps.
- Audit logging for critical actions performed via mobile (e.g., approvals, data submissions).

5.6.7. User Management, Roles & Access Control

- Mobile access must be tied to the same **role-based access control (RBAC)** model used in the web application.
- Users' rights in mobile must reflect their back-end roles; no additional or conflicting rights shall be granted solely due to mobile usage.
- Provision to remotely disable access for specific users (e.g., on transfer/retirement/suspension).

5.6.8. Notifications & Communication Framework

The SI shall implement a robust notification system integrated with the mobile apps:

- In-app notifications for approvals, rejections, and status changes.
- Configurable push notifications for critical alerts (e.g., urgent circulars, system messages).
- Optionally, integration with SMS/email for high priority notifications, in line with KSRTC-SWIFT policies.

All notifications must be logged and auditable.

5.6.9. Administration & Configuration

- Central administrative console (web-based) to:
 - Configure which features are enabled for which user roles.
 - Manage app versioning and rollout (especially for internal distribution if not using public app stores for employee apps).
 - Monitor login and usage patterns (for capacity planning and user support).
- Ability to force critical upgrades (e.g., block very old versions that are no longer compliant).

5.6.10. Quality Assurance, Testing & Deployment

A. Testing

The SI shall conduct:

- Functional testing on multiple device types and screen sizes.
- UI/UX consistency testing.
- Performance testing under realistic network conditions.
- Security testing (including basic mobile app security checks).

KSRTC-SWIFT shall be provided access to test builds (UAT versions) for validation before Go-Live.

B. Deployment

- For Android: apps should be deployable via Google Play Store or via an internal enterprise distribution mechanism as per KSRTC-SWIFT's decision.
- For iOS (if implemented): via App Store or enterprise distribution.

Appropriate documentation shall be provided for installation and update procedures.

5.6.11. Training & User Support

- The SI shall provide training material specific to mobile applications, including:

- Quick reference guides (PDF/online).
- Short tutorial videos (if feasible).
- FAQs and help text within the app for common tasks.
- Helpdesk support procedures shall include mobile app issues (login problems, basic troubleshooting, etc.).

5.6.12. Expected Outcomes

Upon successful deployment of the Mobile Application Module, KSRTC-SWIFT is expected to achieve:

1. **Improved responsiveness** in decision-making through mobile access to dashboards and approvals.
2. **Reduced dependency on desktops** for routine HR and operational tasks.
3. **Better communication with employees** and quicker dissemination of instructions.
4. **More accurate and timely data capture from the field** (depot/operational inputs).
5. **Greater transparency and traceability** of workflow actions taken by officers.
6. **Enhanced adoption of the digital platform**, as users can access systems from anywhere.

5.7. Insurance Claim Management Module

(Accident to Settlement Lifecycle + Recovery from Crew)

5.7.1 Objective

To implement a fully digital, workflow-driven Insurance Claim Management System that tracks every claim from accident occurrence to final settlement, including recovery from responsible crew, reconciliation, and audit reporting.

5.7.2 Functional Scope

A. Claim Registration (Initial Stage)

- Digital accident intimation entry (Depot / Control Room)
- Date, time, location (GPS-enabled)
- Vehicle details auto-fetch from Fleet Master
- Crew details auto-fetch from HRMS
- Third-party involvement capture
- FIR number, police station details
- Photo/video upload
- Preliminary loss estimate
- Insurance policy auto-linking

B. Survey & Documentation Tracking

- Surveyor appointment tracking

- Upload of:
 - Survey report
 - Estimate copy
 - Repair invoice
 - Fitness certificate (if applicable)
- Claim category tagging:
 - Own damage
 - Third-party claim
 - Injury/fatality
 - Property damage

C. Claim Processing & Settlement Tracking

- Claim submission to insurer (digital record)
- Claim amount claimed vs admitted
- Deduction details
- Settlement amount received
- Settlement date
- Mode of payment
- Ledger posting to Finance Module

D. Crew Liability & Recovery Tracking

Where accident is attributable to crew negligence:

- Enquiry report upload
- Liability percentage calculation
- Amount recoverable from crew
- Recovery schedule (EMI deduction through Payroll)
- Recovery balance tracking
- Auto-integration with HRMS payroll deductions
- Ledger entries in Financial Accounting

E. Summary & Reporting

The system shall generate:

- Total claims filed (period-wise)
- Total amount claimed vs received
- Pending claims (ageing analysis)
- Depot-wise claim statistics
- Insurance company-wise performance
- Crew-wise accident and recovery statement
- Monthly consolidated claim register
- Yearly loss ratio analytics

F. Dashboard Indicators

- Pending claim ageing > 30/60/90 days

- Claims under dispute
- Recovery pending from crew
- Settlement delay alerts

G. Integration Requirements

- Fleet Management (vehicle data)
 - HRMS (crew data & payroll recovery)
 - Financial Accounting (settlement & recovery entries)
 - Lease Billing (if leased vehicle involved)
-

5.8. Electric Bus AMC & Service Billing Monitoring Module

5.8.1 Objective

To digitally monitor AMC/service bills for electric buses, including invoice receipt, depot-level verification, approval workflow, payment tracking, and reconciliation.

5.8.2 Functional Scope

A. AMC Contract Master

- Service provider details
- Contract validity period
- Covered vehicles
- AMC scope (battery, motor, charger, etc.)
- Payment structure (fixed/monthly/usage-based)
- Penalty clauses
- SLA compliance parameters

B. Invoice Entry & Receipt Tracking

- Invoice number
- Invoice date
- Period covered
- Vehicle list
- Service description
- Amount claimed
- GST breakup
- Upload scanned invoice

C. Depot-Level Verification Workflow

Invoice must pass through:

1. Depot Mechanical Officer verification
2. Zonal approval
3. Finance validation
4. Final approval

Verification checks:

- Service completion confirmation
- Vehicle operational days validation
- Breakdown history
- SLA compliance
- Penalty adjustments

D. Payment & Pending Tracking

- Amount approved
- Amount paid
- Date of payment
- Balance outstanding
- Debit note (if penalties applied)
- AMC ledger per vendor

E. SLA & Penalty Monitoring

System must auto-check:

- Downtime percentage
- Response time compliance
- Battery performance metrics (if applicable)
- Non-availability penalties

F. Reports & Dashboards

- Vendor-wise AMC expenditure
- Depot-wise AMC cost
- Pending AMC bills ageing
- SLA compliance summary
- Cost per electric bus per month

G. Integration

- Fleet Management (vehicle data)
- Financial Accounting (payment posting)
- Lease Billing (if electric buses leased)

5.9. Accident Recording & Insurance Linking Module

This module integrates directly with the Insurance Module.

Scope:

- Real-time accident logging (GPS auto-tag)
- Accident classification:
 - Minor
 - Major
 - Fatal
- Link accident to:
 - Insurance claim ID
 - Crew record
 - Vehicle history
- Damage category tagging
- Third-party litigation tracking
- Legal case status (if any)
- Accident frequency analytics
- Vehicle accident history log
- Crew accident performance index

Dashboard:

- High-risk routes
- High-risk crew
- Accident frequency by vehicle model
- Depot-wise accident comparison

5.10. Lease Rent Claim & Other Dues Management Module

5.10.1. Objective

To track all receivables due to KSRTC-SWIFT from lease operations and other recoverable service charges.

5.10.2 Functional Scope

A. Lease Rent Claim Tracking

- Lease rent receivable per vehicle
- Periodic billing
- Invoice generation
- Amount received
- Balance outstanding
- Interest calculation (if delayed)

B. Other Recoverable Dues

System shall track:

- Spare part cost recovery
- Insurance reimbursement
- Fuel differential recovery
- Damage cost recovery
- Penalty recoveries
- Shared revenue adjustments

C. Vendor Ledger

Digital ledger per operator:

- Total billed
- Total received
- Pending dues
- Adjustments
- Credit/debit notes

D. Ageing Analysis

- 0–30 days
- 31–60 days
- 61–90 days
- 90 days

E. Integration

- Lease Billing Module
- Financial Accounting
- Insurance Module

5.11. Advance Payment Tracking Module (Depot-Level Advances)

5.11.1 Objective

To digitally track advances issued to depots for repair, emergency works, or services and ensure timely settlement.

5.11.2 Functional Scope

A. Advance Sanction Entry

- Advance ID
- Depot name
- Purpose
- Amount sanctioned

- Sanction order upload
- Budget head tagging

B. Advance Utilization Entry

- Expenditure statement upload
- Supporting documents
- Balance amount calculation

C. Settlement Monitoring

- Settlement due date
- Unsettled advance ageing
- Reminder alerts
- Adjustment entry in Finance Module

D. Reports

- Depot-wise advance summary
- Pending settlement report
- Advance utilization ratio
- Budget-wise advance usage

E. Integration

- Financial Accounting
- Budget Module

5.12. Loan & Liability Management Module

(KIIFB, Banks, Institutional Borrowings)

5.12.1 Objective

To track all loan liabilities, repayment schedules, interest accruals, and compliance obligations.

5.12.2 Functional Scope

A. Loan Master

- Lender name (KIIFB / Bank / Others)
- Sanction order
- Sanction amount
- Interest rate
- Moratorium period
- Repayment tenure
- EMI structure

- Security details

B. Repayment Schedule

- Installment due date
- Principal amount
- Interest component
- Outstanding principal
- Auto-reminder before due date

C. Payment Tracking

- Payment date
- Amount paid
- Mode of payment
- Delayed payment penalty
- Reconciliation with bank statement

D. Interest Accrual Automation

System must:

- Compute monthly interest
- Generate accrual entries
- Auto-post to Financial Accounting

E. Loan Analytics

- Outstanding loan position
- Debt servicing ratio
- Annual interest burden
- Cash flow projection
- Loan-wise repayment progress

F. Integration

- Financial Accounting
- Budget & Forecasting Module

SECTION 6: PROJECT IMPLEMENTATION TIMELINE & METHODOLOGY

The System Integrator (SI) shall execute the project using a structured, phased methodology consistent with Government of Kerala IT implementation norms, software engineering best practices, and KSRTC-SWIFT operational requirements.

The SI shall ensure that all activities are aligned with organizational objectives and carried out in a manner that ensures minimal disruption to existing KSRTC-SWIFT operations.

6.1 Project Phases

The project shall be implemented in the following phases:

Phase 1: Project Initiation & Requirement Study (4 Weeks)

The SI shall perform:

1. **Kick-off Meeting** with KSRTC-SWIFT stakeholders
2. **Stakeholder Mapping** across departments (HR, Finance, Workshops, Depots, Planning, Commercial)
3. **As-Is Process Study** covering:
 - Current HR processes
 - Maintenance workflows
 - Fuel, tyre, battery workflows
 - Financial workflows
 - Current accounting practices
 - Existing IT systems (Chalo, VTS, Fuel ERP, eOffice, Tally, etc.)
4. **Gap Analysis**
5. **Requirement Gathering Workshops**
6. **Drafting of Software Requirement Specification (SRS)**
7. **Approval of SRS by KSRTC-SWIFT**

Deliverables:

- SRS Document
- Integration Requirements Document
- Project Plan
- Change Request process definition

Phase 2: System Design (4 Weeks)

The SI shall prepare:

1. **High-Level Design (HLD):**
 - Overall system architecture
 - Module-level structure
 - Hosting architecture
 - Security architecture
 - Integration architecture
2. **Low-Level Design (LLD):**
 - Screen-wise workflow
 - Database schema
 - Validation rules
 - API design

3. **UI/UX Prototype:**
 - Dashboard view
 - Forms
 - Mobile app wireframes

Deliverables:

- HLD & LLD
- UI/UX prototype
- Final design approval

Phase 3: Development & Configuration (12–16 Weeks)

The SI shall undertake:

1. **Module development:**
 - HRMS
 - FMMS
 - Lease Billing
 - Financial Accounting
 - Dashboards
 - Mobile applications
2. **API development** for all integrations
3. **Configuration of hosting environment**
4. **Security implementation** (RBAC, MFA, SSL, APIs)
5. **Data migration tools** for employee/fleet/finance data

Deliverables:

- Module codebase
- API library
- Hosting environment setup
- Data migration toolkit

Phase 4: Testing & Quality Assurance (4 Weeks)

SI must conduct:

- Unit Testing
- System Testing
- Performance Testing
- Load Testing

- Integration Testing
- User Acceptance Testing (UAT)

KSRTC-SWIFT shall nominate a UAT team to validate results.

Deliverables:

- Test plan
- UAT deployment
- Security Testing Reports
- Performance Test Reports

Phase 5: Deployment & Go-Live (2 Weeks)

Activities include:

- Production server deployment
- DR site configuration
- Domain configuration
- Final data migration
- Go-Live readiness checklist
- User onboarding
- Helpdesk activation

Deliverables:

- Go-Live certification
- System handover notes
- DR activation documents

Phase 6: Stabilization & Warranty (4 Weeks)

During this period, SI shall:

- Fix all bugs
- Fine-tune performance
- Provide daily support
- Train KSRTC-SWIFT administrators
- Ensure seamless adoption

6.2 Overall Implementation Timeline

Phase	Timeline
-------	----------

Requirement Study	4 Weeks
System Design	4 Weeks
Development	12–16 Weeks
Testing	4 Weeks
Deployment	2 Weeks
Stabilization	4 Weeks
Total Duration	26–30 Weeks

SECTION 7: PROJECT GOVERNANCE & MANAGEMENT

To ensure timely execution and proper oversight, KSRTC-SWIFT and the SI shall establish a structured governance model.

7.1 Project Steering Committee (PSC)

A senior-level committee chaired by CMD/Executive Director (Technical/Operations) will provide policy direction.

Key Responsibilities:

- Approve major deliverables
- Review project progress
- Resolve escalated issues
- Ensure alignment with KSRTC-SWIFT’s strategic goals

Members include:

- CMD, KSRTC-SWIFT
- Executive Director (Operations)
- Executive Director (Finance)
- General Manager (IT)
- SI’s Project Director
-

7.2 Project Management Committee (PMC)

A cross-functional group coordinating execution.

Responsibilities:

- Day-to-day monitoring
- Review of design documents
- Data preparation & validation
- Approval for deployment
- Coordinating UAT activities

Members include:

- DyGM (IT) – Convenor
- Representatives from HR, Workshops, Finance, Depots
- SI Project Manager
- Domain leads

7.3 Project Management Office (PMO)

The SI must set up a PMO to manage:

- Project schedule
- Risk management
- Change requests
- Daily status updates
- Documentation control

7.4 Change Control Mechanism

Changes in scope must follow:

1. CR submission by KSRTC-SWIFT or SI
2. Impact analysis (cost/time/resources)
3. PSC approval
4. Implementation

No change shall be implemented without KSRTC-SWIFT approval.

SECTION 8: SERVICE LEVEL AGREEMENT (SLA)

The SLA binds the SI to measurable performance standards.

8.1 Application Uptime

The SI shall ensure:

- **99.9% uptime** for production systems
- Calculation excludes scheduled maintenance with prior approval

If uptime falls below threshold:

Uptime Range	Penalty
99.0%–99.9%	2% of monthly AMC
98.0%–99.0%	5% of monthly AMC
<98%	10% of monthly AMC

8.2 Response & Resolution Time for Issues

Critical Issues

- System down, payroll failure, fuel integration failure
- Response: 1 hour
- Resolution: 4 hours

Major Issues

- Module/functionality unusable
- Response: 2 hours
- Resolution: 12 hours

Minor Issues

- Non-blocking issue
- Response: 4 hours
- Resolution: 24–48 hours

Penalties apply for delays beyond resolution time.

8.3 Helpdesk Services

The SI shall provide:

- 24×7 helpdesk
- Ticket logging system
- Phone, email, and portal support
- Monthly helpdesk reports

8.4 Backup & DR Requirements

- Daily automated backups
- Weekly full backups
- DR site with RPO \leq 1 hour and RTO \leq 4 hours
- Quarterly DR drill compliance

Non-compliance penalty: ₹25,000 per missed drill.

SECTION 9: PENALTIES & DEDUCTIONS

To ensure disciplined project execution, the following penalties apply:

9.1 Delays in Project Milestones

Delay Period	Penalty
1–7 days	1% of milestone value
8–14 days	2% of milestone value
15–30 days	5% of milestone value
>30 days	Contract termination + forfeiture of EMD/PBG

9.2 Defect Leakage Penalty

If major bugs are found after Go-Live:

- ₹10,000 per defect for critical bugs
- ₹5,000 per defect for major bugs

9.3 Security Lapses

Any security breach attributable to SI negligence:

- Minimum fine: ₹1,00,000
- Liability for damages, data loss, and legal compliance

SECTION 10: PAYMENT TERMS

Payment shall be milestone-based.

10.1 Payment Schedule

Milestone	Payment
Approval of SRS	10%
Completion of Development	30%
Completion of UAT	20%
Go-Live	20%
End of Warranty Period	10%
AMC (Yearly)	10% annually

10.2 Retention Money

KSRTC-SWIFT may retain up to **5%** from milestone payments for quality assurance.

10.3 Conditions for Payment

Payments shall be released only after:

- Submission of invoice
- Submission of deliverables
- Sign-off by KSRTC-SWIFT
- No pending defects

SECTION 11: EVALUATION CRITERIA (QCBS)

The tender shall follow the **Quality & Cost Based Selection (QCBS)** method:

- **Technical Score:** 70%
- **Financial Score:** 30%

11.1 Technical Evaluation (70 Marks)

A. Experience (20 marks)

- ≥ 5 years & 3 major govt/PSU projects: 20 marks
- ≥ 3 years & 2 PSU projects: 15 marks
- Minimum eligibility: 10 marks

B. Proposed Solution & Methodology (20 marks)

- Architecture, scalability, security: 10 marks
- UI/UX, workflow, mobile apps: 5 marks
- Hosting strategy: 5 marks

C. Team Composition (15 marks)

- Project Manager
- Developers
- UI/UX designers
- Cloud engineers
- Cybersecurity experts

D. Demonstration / PPT / Prototype (10 marks)

Bidders must make a technical presentation.

E. Kerala Presence (5 marks)

Office/Operations within Kerala:

- Full office/team in Kerala: 5 marks
- Liaison office: 2 marks

11.2 Financial Evaluation (30 Marks)

L1 bidder receives full 30 marks.
Others receive:

$$\text{Financial Score} = (\text{L1 Price} / \text{Bidder Price}) \times 30$$

SECTION 12: GENERAL TERMS & CONDITIONS

These Terms and Conditions (T&C) shall be binding upon all bidders participating in this tender. Submission of a bid shall be deemed acceptance of all terms as outlined herein.

12.1 Governing Rules

1. This tender is governed by the provisions of the **Kerala Stores Purchase Rules (KSPR)** and subsequent amendments.
2. In the event of any contradiction between this tender and KSPR, the provisions of KSPR shall prevail.
3. All disputes are subject to jurisdiction of **Thiruvananthapuram courts only**.

12.2 Compliance with Laws

The bidder shall comply with all applicable laws, including:

- IT Act 2000 and amendments
- Indian Contract Act
- Income Tax Act
- GST regulations
- Labour laws
- Data protection regulations applicable in India
- Government of Kerala orders, circulars, notifications

12.3 Fraud & Corruption Clause

The bidder shall maintain integrity and transparency throughout the tendering process.

Any bidder found to be:

- Engaging in fraud
- Misrepresenting information
- Attempting to influence tender outcomes
- Breaching confidentiality
- Offering bribes or inducements

shall be **disqualified**, and the bid rejected immediately. KSRTC-SWIFT reserves the right to blacklist such bidder(s) for future tenders.

12.4 Confidentiality

1. All documents, data, diagrams, code, and information provided by KSRTC-SWIFT are confidential.
2. The bidder shall not disclose any information without explicit written consent.
3. Unauthorized disclosure may result in termination of contract and legal action.

12.5 Right to Reject Bids

KSRTC-SWIFT reserves the unconditional right to:

- Accept or reject any bid
- Cancel the tender at any stage
- Negotiate with one or more bidders
- Award to more than one bidder (if justified)
- Seek clarifications or additional documents

12.6 Clarifications During Evaluation

1. KSRTC-SWIFT may ask bidders for clarification on submitted documents.
2. Failure to provide clarifications within specified timelines may result in bid rejection.
3. No change in commercial terms shall be accepted during clarification.

12.7 Conflict of Interest

A bidder shall be disqualified if:

- Its business interests conflict with KSRTC-SWIFT's interests
- It is directly or indirectly engaged in competing operational activities
- It influences the bidding process unfairly

12.8 Subcontracting

1. Subcontracting is permitted only with prior approval from KSRTC-SWIFT.
2. Core development, security, hosting management, and integrations must be performed by the primary SI.
3. SI remains fully responsible for subcontracted work.

12.9 Force Majeure

Events such as:

- Natural calamities
- Floods
- Earthquakes

- Strikes
- Wars
- Government restrictions
- Pandemics

are considered force majeure conditions.

The SI shall notify KSRTC-SWIFT within **7 days** of such event.

12.10 Termination for Default

KSRTC-SWIFT may terminate the contract if the SI:

- Fails to meet project timelines
- Violates contract conditions
- Commits fraud or misrepresentation
- Repeatedly violates SLA
- Fails to rectify issues after written notice

Termination may involve:

- Forfeiture of Performance Guarantee
- Recovery of losses incurred
- Legal action

12.11 Termination for Convenience

KSRTC-SWIFT may terminate the contract at any time after providing **30 days' notice**. Payment will be made for accepted and delivered milestones only.

12.12 Performance Guarantee

The selected bidder shall furnish a **Performance Bank Guarantee (PBG)** equivalent to **5% of contract value**, valid for contract duration + 6 months.

PBG shall be forfeited if:

- SI fails to meet obligations
- SI terminates contract prematurely
- SI violates security standards

12.13 Delivery, Inspection & Acceptance

Delivery is deemed complete only when:

- Modules are developed as per SRS
- Testing is completed
- UAT sign-off is provided

- Deployment is completed in Production
- Documentation is submitted
- Training is conducted

KSRTC-SWIFT reserves the right to inspect facilities, development centers, and data centers.

12.14 Warranty Obligations

During Warranty:

- All defects must be rectified free of cost
- No downtime should exceed SLA thresholds
- New features arising from errors or design gaps must be implemented at no cost
- SI must provide on-site support if required

12.15 Intellectual Property Rights (IPR)

1. All **source code**, documentation, APIs, scripts, and system components developed under this project shall become the exclusive property of KSRTC-SWIFT.
2. SI shall not reuse, resell, or repurpose any component without written authorization.
3. KSRTC-SWIFT shall have unlimited rights to use, modify, or extend the system.

12.16 Data Ownership

All data generated, stored, or processed belongs exclusively to KSRTC-SWIFT.

SI shall ensure:

- Data confidentiality
- Protection during transit & storage
- Data not used for any other purpose

12.17 Information Security Requirements

The SI shall comply with:

- ISO 27001
- OWASP Top 10
- CERT-In guidelines
- GIGW 3.0

Mandatory security measures:

- Multi-factor authentication

- Device-level encryption
- Secure API gateway
- WAF & Firewalls
- Annual VA/PT audits

Failure to maintain security posture will result in financial penalties.

12.18 Hosting Compliance

All servers shall be hosted in **MeitY-approved, ISO 27001-certified Indian cloud datacenters.**

Hosting requirements:

- High availability
- DR site
- Auto-scaling capabilities
- 99.9% uptime
- Daily backups

SECTION 13: CONTRACT CONDITIONS

These conditions govern the execution and post-award obligations of the contract.

13.1 Contract Period

The contract period includes:

- Implementation duration (26–30 weeks)
- One-year warranty
- Optional AMC extension (if approved separately)

13.2 Penalty for Non-Performance

1. Failure to meet performance obligations may lead to suspension.
2. KSRTC-SWIFT reserves the right to blacklist the SI for future contracts.
3. Penalty amounts will be deducted from payments or PBG.

13.3 Contract Signing

Upon selection:

- SI must sign the contract within **15 days** of award

- Submit PBG
- Commence work as per work order

Failure to sign contract = automatic cancellation + forfeiture of EMD.

13.4 Confidentiality Agreement

The SI, subcontractors, and personnel must sign NDAs.

13.5 Resource Deployment

SI shall deploy:

- Project Manager (full-time)
- Technical team
- Database/security engineers
- Support engineers

KSRTC-SWIFT may request replacement if the performance is unsatisfactory.

13.6 Escalation Mechanism

Three-level escalation:

1. SI Project Manager
2. SI Project Director
3. Steering Committee (KSRTC-SWIFT)

13.7 Audits

The system shall undergo:

- Technical audit
- Security audit
- Financial audit (if applicable)
- Data integrity audit

KSRTC-SWIFT may engage third-party auditors.

SECTION 14: FORMATS & ANNEXURES

Attached formats constitute an inseparable part of this tender.

ANNEXURE I: TECHNICAL BID COVER LETTER

(To be printed on bidder's letterhead)

To
The Chairman & Managing Director
Kerala State Road Transport Corporation
Transport Bhavan, Fort,
Thiruvananthapuram – 695023

Sub: Submission of Technical Bid for Tender No. TETS

Sir,
We hereby submit our Technical Proposal in response to the above tender.
We have examined the tender document and agree to all terms and conditions.
We certify that all information provided is true and correct.

Authorized Signatory
(Seal)

ANNEXURE II: BIDDER DETAILS FORM

- Name of Company
- Registered Address
- Contact details
- GST/PAN
- Date of Incorporation
- Turnover details
- Net worth
- Project experience
- Key staff proposed

ANNEXURE III: ELIGIBILITY DOCUMENTS CHECKLIST

- Certificate of incorporation
- GST certificate
- Audited financial statements
- Work orders
- Completion certificates
- HR strength certificate
- ISO certifications
- Declaration of no blacklisting
- Declaration of compliance with KSPR

ANNEXURE IV: DECLARATION OF NO BLACKLISTING

We hereby declare that our firm has not been blacklisted by any

State/Central Government, PSU, or statutory body.

Authorized Signatory

ANNEXURE V: FINANCIAL BID FORMAT

(Uploaded in BOQ format on eTender portal)

Components:

- HRMS
- FMMS
- Lease Billing
- Financial Accounting
- Mobile Apps
- Hosting
- Security
- Integrations
- AMC charges

ANNEXURE VI: PERFORMANCE BANK GUARANTEE FORMAT

Standard PBG format as per Government of Kerala norms.

ANNEXURE VII: NDA TEMPLATE

Covering intellectual property, confidentiality, and security obligations.

ANNEXURE VIII: SELF-DECLARATION FOR KERALA OFFICE

Proof of Kerala-registered office or operational presence.

SECTION 15: EXECUTIVE SUMMARY

Kerala State Road Transport Corporation (KSRTC-SWIFT) is one of the oldest and largest public transport undertakings in India, serving millions of passengers across the State. With operations spanning depots, workshops, terminals, administrative offices, and cross-functional departments, KSRTC-SWIFT's efficiency, transparency, and service quality can be significantly enhanced through modern digital systems. The organization's current workflows rely on a mix of manual, semi-digital, and fragmented systems. This leads to

operational bottlenecks, revenue leakages, delayed decision-making, and reduced visibility over key performance metrics.

The aim of this tender is to select a competent **System Integrator (SI)** capable of delivering a fully integrated, enterprise-grade **Digital Platform for KSRTC-SWIFT**. This platform shall unify HR processes, fleet and maintenance operations, lease billing, financial accounting, dashboards, analytics, integrations, and accessibility through web and mobile channels.

The project aligns with Government of Kerala's broader digital governance vision and supports the modernization of public service delivery, more efficient use of public assets, measurable improvement in decision-making, and better accountability in transport operations.

The digital solution shall ensure KSRTC-SWIFT is equipped to operate with:

- Real-time fleet insights
- Automated HR and payroll processes
- Strong financial controls
- Predictive maintenance capabilities
- Transparent cost recovery
- Robust security compliance
- Seamless integration with external partners and legacy systems

The System Integrator selected through this tender will play a critical role in shaping KSRTC-SWIFT's future operational capability and service reliability.

SECTION 16: RISK MANAGEMENT FRAMEWORK

The System Integrator shall adopt a comprehensive risk management framework throughout the project lifecycle.

16.1 Risk Categories

1. **Technical Risks**
 - Software integration challenges
 - Performance bottlenecks
 - Hosting failure
 - Data migration inaccuracies
2. **Operational Risks**
 - Resistance to change
 - Process deviations
 - Improper data entry by users
 - Training gaps
3. **Financial Risks**

- Cost escalations
- Vendor non-performance
- Delay penalties
- 4. **Security Risks**
 - Unauthorized access
 - Data loss
 - Malware and cyberattacks
- 5. **Compliance Risks**
 - Non-adherence to KSPR
 - Lack of audit trails
 - Inaccurate statutory reporting

16.2 Risk Mitigation Strategy

The SI must implement:

- Weekly review with Project Management Committee
- Change management workshops
- Extensive testing & UAT
- Strict security controls (MFA, RBAC, VA/PT)
- Backup and DR strategy
- Helpdesk with escalation matrix
- Audit compliance documentation

SECTION 17: CHANGE MANAGEMENT & USER ADOPTION

A digital transformation of this scale requires proactive change management.

The SI shall facilitate user adoption through:

17.1 Change Management Activities

- Awareness workshops
- Department-wise induction
- User manuals/SOPs
- Short video explainers
- FAQs and platform guides

17.2 Internal Communication

SI shall coordinate with KSRTC-SWIFT to:

- Disseminate system updates
- Highlight benefits to employees
- Enable depot-level champions
- Track user adoption metrics

17.3 Post-Go-Live Support

During stabilization period, SI must:

- Offer daily support
- Rectify issues quickly
- Monitor system analytics
- Offer refresher training

Successful digital transformation depends not only on technology but also on change readiness.

SECTION 18: AUDIT & COMPLIANCE

The integrated system shall be fully auditable and compliant with all applicable norms.

18.1 Technical Audits

SI must ensure technical audits covering:

- Performance
- Reliability
- Scalability
- Integration stability

18.2 Security Audits

Mandatory security audits include:

- Vulnerability Assessment (VA)
- Penetration Testing (PT)
- Secure code review
- SSL certificate management
- API gateway audits

18.3 Financial Audits

The financial accounting module must support:

- GST compliance
- TDS reporting
- Monthly/annual closing
- Ledger verification

18.4 Operational Audits

System logs must support:

- Depot-level attendance checks
- Fuel consumption audits
- Maintenance expenditure tracking
- Bus performance tracking

SECTION 19: DATA MIGRATION & VALIDATION

The SI must undertake structured data migration from multiple sources.

19.1 Data Sources

- Excel sheets
- Depot records
- Existing HR/payroll systems
- Legacy accounting systems
- Fleet/workshop registers

19.2 Data Migration Steps

1. Data inventory creation
2. Cleansing & standardization
3. Data import to staging
4. Validation by KSRTC-SWIFT
5. Final upload into production

19.3 Data Quality Assurance

SI must ensure:

- No data loss
- No duplicate records
- Consistency across modules

SI is fully responsible for ensuring accuracy and integrity of migrated data.

SECTION 20: ACCEPTANCE TESTING

Testing is mandatory before Go-Live.

20.1 Types of Testing Required

- Unit Testing
- Functional Testing

Integration Testing

- Load Testing
- Security Testing
- User Acceptance Testing (UAT)

20.2 UAT Sign-Off

UAT sign-off by authorized KSRTC-SWIFT officers is essential for:

- Release of milestone payments
- Production deployment

KSRTC-SWIFT may hire third-party auditors for independent verification.

SECTION 21: ESCALATION MATRIX

The SI must maintain a 3-layer escalation system.

Level 1 (L1):

- SI Project Manager
- Response time: Immediate
- Handles operational and minor issues

Level 2 (L2):

- SI Project Director
- Handles unresolved L1 issues

Level 3 (L3):

- KSRTC-SWIFT Steering Committee
- Handles critical escalations

SECTION 22: SERVICE CONTINUITY PLAN

The SI must ensure uninterrupted service delivery.

22.1 Minimum Requirements

- Automated switching between servers
- Redundant network paths
- Failover mechanism
- Real-time health monitoring
- DR readiness

22.2 Business Continuity Testing

Quarterly BCP & DR drills must be conducted.

Non-compliance penalty: ₹25,000 per missed cycle.

SECTION 23: ENVIRONMENTAL & ENERGY COMPLIANCE

The hosting environment must ensure:

- Energy-efficient data centers
- Reduced carbon footprint
- Compliance with Government of India's "Green Data Center Policy"
- Optimal resource utilization through auto-scaling
-

SECTION 24: FINAL DECLARATION OF COMPLIANCE

All bidders must submit a signed declaration confirming:

24.1 Acceptance of Terms

Bidder agrees to:

- All technical requirements
- All administrative and contractual conditions
- All SLA and penalty clauses

24.2 Authenticity of Information

Bidder confirms:

- All submitted documents are genuine
- No data has been modified or misrepresented

24.3 Compliance with KSPR

Bidder accepts full compliance with Kerala Stores Purchase Rules.

24.4 No Blacklisting

Bidder confirms it has not been blacklisted by Government entities.

SECTION 25: CONCLUSION

This tender represents a significant milestone in KSRTC-SWIFT's journey toward complete digital modernization. The selected System Integrator shall enable KSRTC-SWIFT to:

- Improve public service delivery
- Enhance internal operational efficiency
- Reduce administrative burden
- Ensure complete transparency
- Leverage analytics for operational decision-making
- Strengthen financial controls
- Improve fleet reliability and passenger experience

The integrated digital platform will serve as a scalable foundation for future expansions, including:

- Predictive analytics
- AI/ML-based maintenance
- Passenger apps
- Integrated ticketing
- Intelligent route optimization

KSRTC-SWIFT expects full cooperation, technical excellence, and adherence to standards from the selected System Integrator to ensure the success of this mission-critical project.



ANNEXURE "A"

(Proforma of Certificate be furnished along with Technical Bid)

KERALA STATE ROAD TRANSPORT CORPORATION **GENERAL INFORMATION ABOUT THE TENDERER**

1	Name of the Tenderer					
	Registered address of the firm with GSTIN					
	State		District			
	Telephone No.		Fax			
	Email		Website			
Contact Person Details						
2	Name		Designation			
	Telephone No.		Mobile No.			
Communication Address						
3	Address					
	State		District			
	Telephone No.		Fax			
	Email		Website			
Type of the Firm (Please ✓ relevant box)						
4	Private Ltd.		Public Ltd.		Proprietorship	
	Partnership		Society		Others,	
	Registration No. & Date of					
Nature of Business (Please ✓ relevant box)						
5	Original Equipment		Authorized Dealer			
	Manufacturer		/Representative			

	Direct Importer		Others, specify.	
Key personnel Details (Chairman, CEO, Directors, Managing Partners etc.)				
	in case of Directors, DIN Nos. are required			
6	Name		Designation	
	Name		Designation	

Bank Details				
7	Bank Account No.		IFSC Code	
	Bank Name & Address		Branch Name	
	Tel No		Email ID	
8	Whether any criminal case was registered against the company or any of its promoters in the past?		Yes / No	
9	GST No.			
10	GST in (%)			
13	Other relevant Information provided *			
Date:		Office Seal		Signature of the tenderer / Authorised signatory



Annexure- C

(Proforma of Certificate be furnished along with Technical Bid)

ANNUAL TURN OVER STATEMENT

The Annual Turnover of M/s _____
for the past three years are given below and certified that the statement
is true and correct.

Sl. No.	Year	Turnover in Lakhs (Rs)
1	2022 - 2023	
2	2023 - 2024	
3	2024 - 2025	
Total		
Average Turnover per year		

Date:

Signature of Auditor/ Chartered Accountant

(Name in Capital)

Address :

Registration No:

Seal:



Annexure - D

(Proforma of Certificate be furnished along with Technical Bid)

AFFIDAVIT

**Format for Affidavit certifying that Entity / Promoter(s)
/Director(s)/Partners of Entity are not blacklisted**

I, M/s. (Name of the firm), having registered office at hereby certify and confirm that we or any of our promoter(s) /director(s) are not barred by Department of Transport, Govt. of Kerala/ or any other entity of Government of Kerala or blacklisted by any state government or central government / department / organization in India from participating in Tender/s, either individually or as member of a Consortium as on the (Last date of submission of tender).

We further confirm that we are aware that, our bid for the captioned tender would be liable for rejection in case any material misrepresentation is made or discovered at any stage of the Bidding Process or thereafter during the contract period.

Dated thisDay of, 20.....

Name of the Applicant

.....

Signature of the Authorized Person

.....

Name of the Authorized Person