

Courier Management System - KSRTC

A. Core Functional Modules:

1. Order Management
 - o Create, update, track, and manage delivery orders.
 - o Bulk order upload support and third-party integrations.
 - o Automated label generation (QR codes/PDF).
 - o Parcel weight and dimension-based pricing.
 - o Walk-in customer queue management with SMS notifications.
2. Real-Time Tracking
 - o GPS-based live tracking of vehicles and parcels.
 - o Google Maps API integration for route visibility.
 - o Smart tracking via IoT device integration.
3. Automated Dispatch & Route Optimization
 - o AI-based route planning and auto-dispatching.
 - o Manual override for dispatch control.
 - o Integration with depot schedules and real-time vehicle availability.
4. User Interfaces
 - o Customer Portal: For order placement, payments, and tracking.
 - o Admin & Operations Portal: For system-wide monitoring and control.
 - o Delivery Agent App: For route navigation, updates, and digital proof of delivery.
 - o Depot App: For staff updates and parcel management.
5. Customer Communication
 - o SMS, Email, and WhatsApp notifications for real-time status updates.
 - o SLA-based issue escalation and chatbot/ticketing support.

B. System Features & Architecture:

1. Role-Based Access Control (RBAC)
 - o Defined roles: Admin, Branch Manager, Dispatcher, Delivery Agent, Customer.
 - o Activity audit logs and access controls per role.
2. Branch Management
 - o Multi-branch configuration with local staff and delivery zones.

- o Branch-wise performance reporting and queue control.
- 3. Fleet & Vehicle Management
 - o Dashboard for fleet and driver assignment.
 - o Telematics system integration for vehicle insights.
- 4. Proof of Delivery (POD)
 - o Digital signature and photograph capture.
 - o Separate real-time tracking views for staff and customers.
- 5. First Mile Pickup
 - o Online pickup request by customers with address and location tagging.
 - o On-the-spot digital payments (UPI/PG integration).
- 6. Last-Mile Delivery
 - o Integration with internal and third-party last-mile couriers.
 - o Coordination between depots and delivery staff.
- 7. Payment & Invoicing
 - o Support for Cash on Delivery (COD) and online payments.
 - o Auto-invoice generation with tax calculations and multi-currency support.
- 8. Analytics & Reporting
 - o KPI dashboards for delivery time, success rate, and revenue.
 - o Branch-wise, vehicle-wise, and custom reporting.
 - o Predictive analytics for demand forecasting.
- 9. Integration Capabilities
 - o Open APIs for external logistics/ERP/CRM platforms
 - o Webhooks and IoT integration support.

C. Business Impact Expectations:

- Optimized Resource Utilization through the existing KSRTC network.
- Operational Efficiency by reducing manual intervention.
- Cost Reduction via route optimization and digital workflows.
- Customer Satisfaction with transparent, real-time communication.
- Scalability to support future business growth.

D. Project Timeline & References:

- The entire solution must be deployed and made live within 30 days of contract execution.
- The bidder must demonstrate at least two successful national-level CMS implementations with references.