SCOPE OF WORK (SOW)

FOR IMPLEMENTATION OF KSRTC ACCIDENT MONITORING & REPORTING SYSTEM

1. Introduction

Kerala State Road Transport Corporation (KSRTC) intends to procure and deploy a comprehensive digital Accident Monitoring & Reporting System to replace the existing manual, paper-based accident documentation process.

The proposed system shall provide a unified, real-time, modular platform for recording, verifying, analysing, and reporting all accident-related incidents across KSRTC operations.

This Scope of Work (SOW) specifies the functional, technical, deployment, training, security, and support requirements to be met by the selected vendor.

2. Objectives

The primary objectives are:

1. Enable real-time Accident Spot Reporting (Zeroth Report) from the driver/conductor.
2. Digitally manage Inspector Reports, Primary Reports, and Workshop Reports.
3. Ensure end-to-end traceability from accident occurrence to vehicle restoration.
4. Achieve data accuracy, auditability, and centralized decision-making.
5. Improve KSRTC's accident analytics, safety compliance, and operational oversight.

3. Solution Architecture Requirements

The selected vendor shall deliver a **modular, web-based platform**, along with a **mobile application** (if bidding for combined option), containing the following integrated modules:

4. Detailed Scope of Work

4.1 Accident Spot Report Module (Zeroth Report)

Users: Drivers / Conductors
Purpose: Immediate reporting from accident location.

Mandatory Features:

- Auto-capture of bus number, route, date/time, and GPS location.
- Upload of images and video evidence.
- User authentication (driver/conductor login).
- Reference number generation.
- Offline data entry + background sync (mobile app).
- One-tap SOS alert to control room.
- Over-speed alerts to backend.

Deployment Options (Vendor must bid for one or both):

Web + Mobile App with offline sync and SOS

4.2 Inspector Report Module

Users: Inspector or designated field officer

Scope:

- Pull data using accident reference number.
- Input of verified observations, photos, documents.
- Digital signature of inspector.
- Route, vehicle, depot, district verification.
- Validation of Zeroth report content.

4.3 Primary Report Module

Users: Depot Administration / Supervisors

Scope:

- Auto-population of data from Zeroth + Inspector reports.
- Upload of additional evidence (witness notes, damage summary).
- Capture involvement of third parties.
- Status assignment (Pending / Review / Closed).
- Internal remark logs.

4.4 Workshop Report Module

Users: Workshop In-Charge / Depot Mechanical Staff

Scope:

- Map to accident using reference number.
- Capture repair activity, labour, spares used, and cost.
- Track status (Under Repair / Completed / Restored).
- Download/print workshop repair certificate.

- Integrate with vehicle lifecycle records.

5. System Requirements

5.1 Technical Requirements

Vendors must ensure:

- Fully responsive web interface.
- Mobile app (Android) if applicable.
- Secure API-driven architecture.
- Cloud-hosted deployment (AWS or equivalent Government-approved cloud).
- Database with backup and recovery.
- Real-time logs, audit trails, and role-based access control.

5.2 Security & Compliance Requirements

Mandatory security specifications:

- End-to-End Encryption using TLS 1.3
- AES-256 encryption for sensitive data
- Role-based access control
- Full audit logging of all report changes
- Compliance with CERT-In security guidelines

6. Deliverables

6.1 Mandatory Deliverables

1. Fully functional Web Platform (all modules).
2. Android Mobile App (if bidding for Option B).
3. Admin dashboard for KSRTC HQ.
4. Depot-level dashboards.
5. Vehicle & schedule mapping database.
6. Integration-ready APIs for future KSRTC systems.
7. Automated report export (PDF, XLS).
8. Notification engine for SOS, alerts, broadcasts.

7. Training & Onboarding

The selected vendor must provide:

- Training for KSRTC HQ staff
- Training for depot-level staff
- Training for inspectors
- Training for drivers/conductors (mobile app)
- User manuals, SOPs, and video tutorials

8. Documentation Requirements

Vendor must hand over:

- Source Code (complete)
- Administrator manuals
- User manuals
- API documentation
- System architecture document
- Deployment and backup procedures

9. Post-Deployment Support

Vendor must provide **minimum 1 year support** including:

- Bug fixes
- Performance optimization
- Minor enhancements
- Remote assistance

KSRTC may optionally extend AMC after this period.

10. Project Timeline

Phase	Duration	Deliverables
Web Modules	1 month	Full deployment-ready system
Mobile App	2 months	Zeroth reporting Android App with SOS, speed alerts
Testing & QA	1 week	UAT + integration tests
Support	2 months	Bug fixes + training

11. Cloud Hosting Requirements

Per-month estimated costs (payable by KSRTC):

12. Intellectual Property Rights

- Full source code and IP shall be transferred to KSRTC after final payment.

13. Payment Terms

To be structured as:

- Milestone-based payments aligned with deliverables.
- Final payment only after code handover and successful UAT.

14. Vendor Eligibility Criteria

The vendor must meet:

1. KSUM registered startup.
2. Ability to provide 24×7 support (email/phone).

15. Service Level Requirements (SLAs)

1. **System Uptime:** ≥ 99%
2. **Bug Resolution:**
    - Critical: < 24 hours
    - Major: < 3 days
    - Minor: < 7 days
3. **Helpdesk Response:** < 4 hours
4. **Data Backup:** Daily automated backup

16. KSRTC Responsibilities

- Provide access to depots, inspectors, workshop teams.
- Provide driver/vehicle database for integration.
- Nominate nodal officer for coordination.

Conclusion

This Scope of Work provides a complete functional & technical framework for KSRTC's tender for the Accident Monitoring & Reporting System, ensuring modernization, transparency, accountability, and operational efficiency.