

 Project Title: *Smart Mobility Ecosystem – Intelligent Transportation & Safety Management System*

 Industry: Smart Transportation & Mobility

 Project Type: Salesforce CRM + IoT + AI Integration

 Target Users: Commuters, Transport Authorities, Emergency Services, Mobility Service Providers

Problem Statement

Urban mobility faces major challenges: traffic congestion, road accidents, lack of real-time transport information, and inefficient emergency response. Current systems are fragmented, reactive, and unable to meet the growing demand for safe, sustainable, and intelligent mobility solutions.

To address these challenges, the organization aims to implement a Smart Mobility Ecosystem powered by Salesforce CRM, IoT sensors, and AI-driven analytics to:

- Enhance road safety with automated accident detection & emergency alerts
 - Optimize traffic flow and reduce congestion with real-time insights
 - Improve commuter experience through predictive route suggestions
 - Enable authorities to manage resources and incidents efficiently
 - Provide dashboards for monitoring mobility KPIs in real time
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Use Cases

1. Smart Traffic Management

- IoT-based traffic sensors to monitor congestion
- AI-driven traffic rerouting recommendations
- Automated notifications to commuters

2. Road Safety & Emergency Response

- Accident detection via IoT devices/connected cars
- Auto alerts to nearby hospitals & police stations
- Real-time incident dashboards for authorities

3. Public Transport Optimization

- Track buses, metros, and cabs in real time
- Predictive schedules and delays for commuters
- Digital ticketing and feedback collection

4. Commuter Engagement

- Personalized travel updates via SMS/Email/Apps
- Loyalty rewards for sustainable travel (EV, carpool)
- Integrated customer support on Salesforce CRM

5. Reporting & Analytics

- Dashboards for traffic density, accident hotspots
- Monthly reports on emergency response times
- KPI tracking for urban mobility efficiency

✓ Phase 1: Problem Understanding & Industry Analysis

- Requirement Gathering → Collect mobility challenges (traffic, accidents, delays, emergency response).
 - Stakeholder Analysis → Transport authorities, commuters, hospitals, police, service providers.
 - Business Process Mapping → Map traffic monitoring, emergency alerts, commuter journey flows.
 - Industry-specific Use Case Analysis → Smart traffic, road safety, public transport optimization.
 - AppExchange Exploration → Mobility apps, IoT connectors, emergency notification systems.
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✓ Phase 2: Org Setup & Configuration

- Salesforce Editions → Select Enterprise Edition for integration scalability.
 - Company Profile Setup → Transport department/company details.
 - Business Hours & Holidays → Setup traffic monitoring hours and service schedules.
 - Fiscal Year Settings → Define reporting periods for mobility KPIs.
 - User Setup & Licenses → Create roles for agents, emergency responders, admins.
 - Profiles, Roles & Permission Sets → Differentiate access for authorities, hospitals, police.
 - OWD & Sharing Rules → Secure commuter data while allowing emergency sharing.
 - Login Access Policies → Restricted access for field agents.
 - Dev Org & Sandbox → Configure IoT test environments.
 - Deployment Basics → Prepare migration from sandbox to production.
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✓ Phase 3: Data Modeling & Relationships

- Standard & Custom Objects → Vehicles, Routes, Accidents, Alerts, Commuters.

- Fields → Accident location, traffic density, response time.
- Record Types → Accident reports, traffic congestion cases, commuter requests.
- Page Layouts → Emergency dashboard for hospitals, traffic overview for authorities.
- Compact Layouts → Quick view of incident details.
- Schema Builder → Visualize relationships.
- Lookup vs Master-Detail → Accident linked to Commuter & Vehicle.
- Junction Objects → Vehicle-Route mapping.
- External Objects → IoT sensor data import.

✓ Phase 4: Process Automation (Admin)

- Validation Rules → Ensure mandatory fields like location/time in accident reports.
- Workflow Rules → Notify authorities when accident severity = “High”.
- Process Builder → Auto-assign cases to nearby hospitals.
- Approval Process → Escalation for unresponsive emergency teams.
- Flow Builder → Trigger SMS/email to commuters on route delays.
- Email Alerts → Send updates on public transport delays.
- Field Updates → Update case status when resolved.
- Tasks → Assign follow-up actions to agents.
- Custom Notifications → Mobile push alerts to responders.

✓ Phase 5: Apex Programming (Developer)

- Classes & Objects → Define mobility logic (accident detection, traffic rerouting).
- Apex Triggers → Auto-create emergency case on IoT accident input.

- SOQL & SOSL → Query incidents by location.
 - Batch Apex → Process large traffic datasets.
 - Queueable & Scheduled Apex → Run congestion analysis hourly.
 - Future Methods → Call external APIs for live traffic feeds.
 - Exception Handling → Handle missing IoT data.
 - Test Classes → Validate safety alert automation.
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✅ Phase 6: User Interface Development

- Lightning App Builder → Build “Smart Mobility Dashboard”.
 - Record Pages → Commuter incident report page.
 - Tabs → Traffic, Accidents, Transport.
 - Utility Bar → Quick emergency contact option.
 - LWC (Lightning Web Components) → Live traffic heatmap.
 - Apex with LWC → Display IoT accident alerts.
 - Events in LWC → Update dashboard when new incident occurs.
 - Navigation Service → Quick navigation to nearby hospital records.
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✅ Phase 7: Integration & External Access

- Named Credentials → Connect to Google Maps & IoT APIs.
- External Services → Fetch live traffic/transport data.
- Web Services (REST/SOAP) → Accident alert integration with hospitals.

- Callouts → Emergency SMS APIs.
 - Platform Events → Accident alert broadcast to responders.
 - Change Data Capture → Update commuter apps with live changes.
 - Salesforce Connect → Link with external transport databases.
 - OAuth & Authentication → Secure IoT integration.
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✅ **Phase 8: Data Management & Deployment**

- Data Import Wizard & Data Loader → Upload commuter and vehicle data.
 - Duplicate Rules → Avoid multiple reports of same accident.
 - Data Export & Backup → Backup historical accident/traffic data.
 - Change Sets & Managed Packages → Deploy flows and automation.
 - VS Code & SFDX → Develop mobility integrations.
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✅ **Phase 9: Reporting, Dashboards & Security Review**

- Reports → Daily traffic congestion, emergency response times.
 - Dashboards → Real-time “Mobility Health” dashboard.
 - Dynamic Dashboards → Role-based views for authorities vs commuters.
 - Sharing Settings & Field Level Security → Protect commuter PII.
 - Audit Trail → Track emergency case updates.
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✅ **Phase 10: Final Presentation & Demo Day**

- Pitch Presentation → Showcase “Shaping the Future of Mobility”.

- Demo Walkthrough → Accident detection → auto alert → hospital response.
- Feedback Collection → Gather insights from authorities & commuters.
- Handoff Documentation → Provide technical + user manuals.
- LinkedIn/Portfolio Project Showcase → Position as innovation in smart mobility.