🚐 Salesforce Project Implementation Phases (Admin + Developer)

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

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✅ **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.

✅ **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.

✅ **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.

✅ **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.

✅ **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.

✅ **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.

✅ **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.

✅ **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.