SDA

Deliverable#02

Company: TranspoLogic

Product: FleetConnect – Road Cargo Fleet Management MIS

1. Project Overview

FleetConnect is a Cargo Fleet Management Information System (MIS) that is created to streamline the operations of trucking and road cargo transport businesses. FleetConnect offers a unified platform to manage fleets, drivers, cargo shipment, routes, schedules, and maintenance. The system consolidates all records into one MIS to allow for transparency, minimize inefficiencies, and assist in decision-making.

2. Motivation

Road cargo and transport companies are plagued by inefficient route planning, a lack of shipment visibility, missed deliveries, poor maintenance monitoring, and the use of manual paperwork. These problems lead to increased costs, late shipments, and unsatisfied customers. Our motivation is to create an MIS with a focus on road cargo that gives improved control of operations, reduces human error, and delivers on time and reliably.

3. Objectives

• To create and develop a centralized MIS for the operations of road cargo fleets.

• To keep precise records for vehicles, drivers, shipments, and routes.

• To allocate cargoes with real-time status.

• To monitor and schedule vehicle servicing.

• To produce analytical and financial reports to aid in decision-making.

• To give an easy-to-use GUI to logistics staff and administrators.

4. Expected Outcomes

• A working MIS for trucking and cargo fleet management.

• Centralized vehicle, driver, and shipment database.

• Improved fleets utilization through best route scheduling.

• Scheduled maintenance tracking to prevent breakdowns and delay.

• Accurate shipment assignment and delivery status reporting.

• MIS reports on revenue, expenditure, fleet usage, and performance.

• Scalable system architecture for expansion in the future.

5. Project Scope

FleetConnect will feature the following modules:

• Fleet Management: Vehicle registration, service history, availability tracking of trucks and road cargo vehicles.

• Driver Management: Profiles, license details, assignments, and working hours.

• Cargo & Shipment Management: Creating shipments, cargo information, vehicle allocation, and status updates of delivery.

• Route & Schedule Management: Vehicle to route allocation, trip planning, and schedule monitoring.

• Maintenance Tracking: Service alerts, repair history, and downtime tracking.

• Reporting & Analytics: Revenue reports, shipment history, fleet utilization, and driver performance reports.

6. Tools and Technologies

• Backend: SQL for database management.

• Design & Documentation: UML diagrams, MS Office.

• Frontend: Java with Java Swing/JavaFX for GUI.

• Version Control: GitHub for source code management.