**Software Requirements Specification (SRS)**

**For HAREYA Transportation Operations Management System**

**Version 1.0**  
**Prepared by: [Your Name/Team]**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to define the functional and non-functional requirements for developing a **C#-based application** that automates and supports **logistics, dispatch, payroll, traffic department operations, and factoring processes** for HAREYA Transportation LLC.  
This system will streamline communication, improve efficiency, ensure compliance with operational procedures, and provide real-time visibility into all aspects of the company’s transportation operations.

**1.2 Scope**

The system will:

* Automate **load booking, calendar scheduling, and dispatching**.
* Provide **real-time tracking of loads and drivers**.
* Manage **payroll settlements and financial reports**.
* Support **broker communications, documentation (BOL/POD), and delivery confirmations**.
* Integrate with **Fleet One/WEX Capital** for factoring, billing, and payment processing.
* Enable role-based access for **Admin, Dispatcher, Driver, Finance, and Management**.

The system will be implemented as an **ASP.NET Core web application** with a **SQL Server database**, deployed on cloud infrastructure (Azure/AWS).

**1.3 Definitions, Acronyms, and Abbreviations**

* **BOL** – Bill of Lading
* **POD** – Proof of Delivery
* **TMS** – Transportation Management System
* **Rate Con** – Rate Confirmation document from a broker
* **Factoring** – Selling invoices to a factoring company for immediate payment

**2. Overall Description**

**2.1 Product Perspective**

The system will serve as an **all-in-one Transportation Management Platform (TMS)**, integrating logistics planning, financial management, and factoring workflows into one centralized application. It will replace manual spreadsheets, WhatsApp messages, and fragmented tools currently used.

**2.2 Product Functions**

Key functions include:

* Load Booking and Calendar Scheduling
* Driver Dispatch and Communication
* Real-Time Tracking & Status Updates
* Payroll and Settlement Calculations
* Broker Communication and Document Sharing
* Factoring and Invoice Submission (Fleet One Integration)
* Financial Reports and Analytics

**2.3 User Classes and Characteristics**

* **Admin** – Full access, system configuration, user management.
* **Dispatcher** – Manages loads, assigns drivers, updates status.
* **Driver** – Receives dispatch details, uploads BOL/POD, provides status updates.
* **Finance** – Manages payroll, factoring submissions, invoice reconciliation.
* **Management** – Monitors dashboards, approves payments, views performance reports.

**2.4 Operating Environment**

* **Frontend:** Web-based UI (responsive, mobile-friendly).
* **Backend:** ASP.NET Core (C#).
* **Database:** SQL Server.
* **Hosting:** Azure or AWS Cloud.
* **Integrations:** WhatsApp API, SMS Gateway, Email (SMTP), Fleet One/WEX API.

**3. System Features (Functional Requirements)**

**3.1 Load Management**

* Book loads from brokers and store rate confirmations.
* Maintain a **calendar view** with color-coded brokers and load statuses.
* Auto-update calendar with dispatch, confirmation, and cancellation statuses.

**3.2 Dispatching**

* Assign drivers based on **availability, location, and vehicle type**.
* Send dispatch info via **SMS/Email/WhatsApp**.
* Require driver confirmation.
* Log all communication and confirmations.

**3.3 Load Tracking**

* GPS tracking integration or manual updates.
* Driver status updates at key milestones (*At Shipper, Departed, At Receiver*).
* Escalation alerts for unresponsive drivers.

**3.4 Document Management**

* Upload and store BOL and POD documents.
* Validate clarity and completeness (e.g., no blur, signature visible).
* Attach documents automatically in broker updates.

**3.5 Traffic Department Operations**

* Send driver info to brokers.
* Provide dispatch confirmations and ETAs.
* Report breakdowns, traffic delays, and corrective actions.
* Final delivery confirmation with POD.

**3.6 Payroll & Settlement**

* Weekly settlement calculations.
* Track expenses (fuel, insurance, tolls, maintenance).
* Calculate **gross vs net pay** for each driver.
* Generate **driver vs company earnings reports**.

**3.7 Factoring & Billing**

* Broker credit check integration with Fleet One.
* Generate billing files with **Rate Con, POD, Invoice**.
* Submit files to Fleet One portal.
* Track invoice status (*Pending, Approved, Rejected*).
* Handle rejections and allow resubmission.

**3.8 Invoice Management**

* Generate invoices using a **standard template**.
* Submit weekly invoices to brokers/factoring company.
* Manage adjustments, chargebacks, and reconciliation.

**4. Non-Functional Requirements**

**4.1 Security**

* Role-based access control (RBAC).
* Two-factor authentication (2FA) for financial users.
* Secure document storage with encryption.

**4.2 Performance**

* Support 100+ concurrent users.
* Handle 10,000+ loads annually without performance degradation.

**4.3 Reliability**

* System uptime ≥ 99.5%.
* Automated backups of database and documents.

**4.4 Usability**

* Intuitive dashboards (Calendar, Dispatch Board, Finance).
* Mobile-friendly UI for drivers.

**4.5 Compliance**

* Adhere to U.S. transportation compliance for record-keeping.
* Maintain audit logs for all dispatch, financial, and broker communications.

**5. Use Cases**

**UC1: Book Load**

**Actors:** Dispatcher, Broker  
**Precondition:** Rate confirmation received.  
**Steps:**

1. Dispatcher enters load details from Rate Con.
2. System creates calendar entry.
3. Load available for driver assignment.

**UC2: Dispatch Driver**

**Actors:** Dispatcher, Driver  
**Steps:**

1. Dispatcher assigns driver.
2. System sends dispatch details.
3. Driver confirms via mobile.
4. Calendar & TMS updated.

**UC3: Payroll Settlement**

**Actors:** Finance Team  
**Steps:**

1. System compiles weekly loads per driver.
2. Deductions applied (fuel, tolls, insurance).
3. Net pay and company share calculated.
4. Report generated for approval.

**UC4: Factoring Submission**

**Actors:** Finance Team, Fleet One  
**Steps:**

1. Finance builds billing file.
2. Uploads documents to Fleet One portal.
3. Tracks status (Pending → Approved/Rejected).
4. If rejected, corrects and resubmits.

**6. Appendices**

* **Glossary:** BOL, POD, Rate Con, Factoring, Net 30.
* **Sample Documents:** Invoice Template, POD, Rate Confirmation.
* **Future Enhancements:** AI-driven load optimization, mobile driver app, predictive ETA tracking.