

Ship Anywhere. Anytime.

Version 1.0.0

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Functional Requirements Document Authorization Memorandum

I have carefully assessed the Functional Requirements Document for the **SHIP FLEX SYSTEM**.

MANAGEMENT CERTIFICATION - Please check the appropriate statement.

_____ The document is accepted.

_____ The document is accepted pending the changes noted.

_____ The document is not accepted.

We fully accept the changes as needed improvements and authorize initiation of work to proceed.
Based on our authority and judgment, the continued operation of this system is authorized.

NAME
Project Manager

DATE

NAME
Director

DATE

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1.0 INTRODUCTION

1.1 Purpose

The **Ship-Flex** project aims to streamline and enhance the shipping process for businesses and individual customers through a comprehensive digital platform. The system will address key needs in shipping management, including efficient order processing, cost-effective shipping solutions, and robust customer support. By integrating various functionalities, Ship-Flex will provide a user-friendly interface for managing shipping operations, optimizing shipping costs, and ensuring accurate invoicing and billing.

1.2 Project Goal

To develop a digital platform that simplifies and optimizes the shipping process for businesses and individuals by automating tasks, reducing costs, and improving customer experience.

1.3 Document Purpose

To define the specific functionalities, features, and behaviors required for the Ship-Flex digital platform to streamline shipping processes, reduce costs, and improve customer satisfaction.

1.4 Document Scope

This FRD will detail the functional requirements for the Ship-Flex digital platform, focusing on core shipping management functionalities. It will encompass marketing website, order processing, shipping rate calculation, carrier integration, customer portal features, and invoicing/billing capabilities. The document will not delve into specific design details, user interface elements, or hardware/software specifications.

1.5 Target Audience

- **Project Management:** Project managers responsible for overseeing the Ship-Flex development.
- **Development Team:** Software engineers and developers tasked with building the platform.
- **Business Analysts:** Analysts responsible for understanding business requirements and translating them into functional requirements.
- **Quality Assurance:** Testing and quality assurance teams ensuring system quality.
- **Stakeholders:** Business owners, executives, and end-users who need to understand the system's capabilities.

1.6 Definitions, Acronyms, and Abbreviations

- **API:** Application Programming Interface (Used for HS Code validation and potentially other integrations)
- **B2B:** Business-to-Business (For business accounts with volume discounts)
- **B2C:** Business-to-Consumer (For retail customers)
- **HS Code:** Harmonized System Code (For classifying internationally traded goods)
- **SMS:** Short Message Service (For sending notifications to customers)
- **UI:** User Interface (The design and layout of the application)
- **VAT:** Value Added Tax (For handling taxes for European business clients)

2.0 BUSINESS REQUIREMENTS OVERVIEW

2.1 Critical Business Requirements

1. **Efficient Shipping Management:**
 - **Shipping Label Generation:** Allows users to generate shipping labels quickly by comparing rates from multiple providers, ensuring the best price and service.
 - **Order Management:** Facilitates easy import and management of orders from ecommerce platforms like WooCommerce and Shopify, as well as manual upload via Excel sheets.
2. **Cost Control and Financial Management:**
 - **Recharge and Add Credit:** Provides users with the ability to preload accounts using credit cards or PayPal, which is essential for prepaid label generation.
 - **Invoice & Billing:** Supports detailed and customizable invoice generation, including proforma and commercial invoices, with options for PDF downloads and non-delivery item invoices.
3. **Enhanced User Experience:**
 - **User Registration and Authentication:** Secure registration and login processes, including two-factor authentication to ensure account security.
 - **Customer Portal:** Allows users to manage their profiles, view shipping history, and access support resources, improving overall user satisfaction.
4. **Administrative Control and Oversight:**
 - **Admin Console:** Empowers administrators with tools to manage user accounts, oversee orders, control payment gateways, and handle communication with customers.
 - **Shipping Provider Integration:** Enables easy management of shipping providers and pricing structures, ensuring the platform remains adaptable to changing business needs.
5. **Support and Help:**
 - **Support & Help:** Provides mechanisms for users to report issues, track support requests, and receive timely assistance, ensuring operational efficiency and customer satisfaction.
6. **Marketing Website:**
 - **Digital Touch-point:** will serve as the primary digital touch-point for customers, offering a user-friendly interface with sections dedicated to company overview, product details, customer support, courier partnerships, and contact information.
 - **Shipping Calculator:** A shipping calculator tool will be integrated for customer convenience.
 - **Blogs and News:** To drive organic traffic and enhance user experience, the website will include blogs and news articles, as well as seamless on-boarding and login functionalities for customer portal access.

2.2 Assumptions and Constraints

2.2.1 Assumptions

1. **User Accessibility:** It is assumed that all users have access to modern web browsers and internet connectivity sufficient to use the Ship-Flex platform effectively.
2. **Payment Integration:** It is assumed that payment gateway services (PayPal, Other Credit Card System Platforms) are operational and compatible with the Ship-Flex system.
3. **Shipping Providers:** The integration with major shipping providers (FedEx, UPS, DHL) will be supported and functional as per the providers' APIs and services.

4. **Data Accuracy:** It is assumed that the data provided by users (e.g., shipping details, HS Codes) is accurate and complete to avoid issues with label generation and shipping.
5. **Compliance:** The system will adhere to relevant data protection regulations and industry standards for secure handling of user information.

2.2.2 Constraints

1. **System Compatibility:** The platform's functionality is dependent on compatibility with the latest versions of web browsers and may encounter limitations with older versions.
2. **Payment Processing:** Transactional delays or issues with payment gateways could affect the recharge and billing functionalities.
3. **Integration Limitations:** Integration with shipping providers and ecommerce platforms is subject to their API limitations and availability.
4. **Data Security:** While security measures will be in place, the system's ability to protect against data breaches is constrained by external threats and evolving cyber security risks.
5. **Regulatory Compliance:** Adherence to international shipping regulations and VAT requirements may necessitate additional adjustments and updates to the system.

3.0 NON FUNCTIONAL REQUIREMENTS

3.1 Usability Requirements

3.1.1 User Interface (UI)

- **Intuitive Design:** The interface must be user-friendly, with clear navigation menus and well-organized content to ensure that users can easily find and use features without extensive training.
- **Responsive Design:** The platform should be accessible and functional on various devices, including desktops, tablets, and smart phones, adjusting layout and content as needed for different screen sizes.

3.1.2 User Experience (UX)

- **Clear Instructions:** Provide straightforward, step-by-step instructions for complex tasks such as user registration, label generation, and payment processing to guide users through the process efficiently.
- **Feedback Mechanisms:** Implement real-time feedback for user actions, such as confirmation messages for successful operations (e.g., label generation, payment) and error notifications for invalid inputs or failed transactions.
- **Help and Support:** Include easily accessible help resources, such as a support center, and contact forms, to assist users with any issues or questions they may encounter.

3.2 Performance Requirements

- **Fast Load Times:** Ensure that pages and processes, including label generation and order management, load quickly to enhance the user experience and reduce wait times.
- **Scalability:** The system should handle increasing numbers of users and transactions efficiently, maintaining performance as the platform grows.

3.3 Supportability Requirements

3.3.1 Training

- **User Training:**
 - **On boarding Sessions:** Provide initial training sessions for new users, including interactive tutorials or webinars, to help them familiarize themselves with key features and functionalities.
 - **User Guides:** Develop comprehensive user guides and video tutorials that cover common tasks, troubleshooting, and advanced features.
- **Admin Training:**
 - **Administrative Training:** Offer specialized training for administrators on managing user accounts, overseeing orders, configuring payment systems, and integrating with shipping providers.
 - **Technical Documentation:** Create detailed technical documentation outlining system management, error resolution, and advanced administrative functions.

3.3.2 Documentation

- **User Documentation:**
 - **Help Center:** Maintain an online help center with searchable FAQs, step-by-step guides, and troubleshooting tips.
 - **System Manual:** Provide a complete system manual detailing user processes, system features, and configuration options.
- **Technical Documentation:**
 - **System Architecture:** Document the system architecture, including diagrams of components and data flow.
 - **API Documentation:** Offer comprehensive API documentation for integration with third-party systems and services.
 - **Maintenance Procedures:** Include procedures for regular maintenance, backup, and recovery.

3.3.3 Staff

- **Technical Support Team:**
 - **Help Desk:** Establish a help desk for resolving user issues, handling support requests, and providing technical assistance.
 - **Support Staff:** Employ skilled support staff with expertise in system operations, customer service, and troubleshooting.
- **Administrative Staff:**
 - **System Administrators:** Assign dedicated administrators to oversee the day-to-day operations of the system, manage user accounts, and handle administrative tasks.

3.3.4 Equipment

- **Hardware Requirements:**
 - **Server Infrastructure:** Ensure robust server infrastructure to handle system operations, including data storage, processing power, and network connectivity.
 - **Backup Systems:** Implement backup systems to secure data and ensure availability in case of hardware failure.
- **User Equipment:**
 - **Compatible Devices:** Ensure that the system is compatible with various devices, including desktops, tablets, and smartphones, and that it performs well across different operating systems and browsers.

3.3.5 Facilities

- **Data Center:**
 - **Hosting Environment:** Utilize a reliable and secure data center for hosting the application, with appropriate measures for physical security, environmental controls, and disaster recovery.
- **Office Space:**
 - **Support Centers:** Maintain office space for support teams and administrative staff, equipped with necessary tools and resources for efficient operation.

Maintenance and Updates

- **Regular Updates:** Schedule regular updates to the system for security patches, feature enhancements, and performance improvements.
- **Monitoring and Support:** Implement continuous monitoring of system performance and user activity to quickly address issues and optimize functionality.

Customer Support

- **Support Channels:** Offer multiple support channels, including email, phone, and live chat, to accommodate various user preferences.
- **Response Times:** Establish and communicate response time targets for support requests to ensure timely assistance and user satisfaction.

3.4 Security Requirements

3.4.1 User ID and Authentication

- **Unique User IDs:** Each user must have a unique ID to access the system.
- **Two-Factor Authentication (2FA):** Implement 2FA to enhance account security during login.

Privacy

- **Data Encryption:** Encrypt sensitive data both in transit and at rest to protect user information.
- **Access Controls:** Restrict access to user data based on roles and permissions.

Security Audits

- **Regular Audits:** Conduct regular security audits to identify and address vulnerabilities.

- **Compliance:** Ensure compliance with relevant security standards and regulations.

Incident Management

- **Incident Response Plan:** Develop and maintain an incident response plan to manage and mitigate security breaches.

3.5 Interface Requirements

Navigation

- **Consistent Layout:** Ensure a consistent navigation structure across all pages for ease of use.
- **Menus and Links:** Provide clear, intuitive menus and links to essential features (e.g., Home, About Us, Customer Portal, etc).

Functionality

- **Interactive Elements:** Include interactive elements such as buttons and forms for user actions (e.g., sign-up, login, and contact forms).
- **Responsive Design:** Ensure interfaces are responsive and functional across various devices and screen sizes.

Location of Interface Elements

- **Primary Actions:** Place primary actions (e.g., sign-up, login) prominently on the landing page and other relevant sections.
- **Information Display:** Display key information (e.g., shipment tracking, account balance) clearly within dedicated sections or dashboards.

Display

- **Visual Consistency:** Maintain visual consistency with a cohesive color scheme, typography, and iconography.
- **User-Friendly Design:** Ensure that interface elements are user-friendly and accessible, providing clear feedback and instructions.

4.0 FUNCTIONAL REQUIREMENTS

Table 4.1: SHIPPER: MARKETING WEBSITE AND CONSOLE

Section	Feature	Details
4.1. Ship-flex.com Website		
4.1.1 Marketing Website - Navigation	Landing/ Home page	Information about Ship-Flex, services, contact & login, blogs.
	About Us	Company history, mission, team, and values.
	Our Product	Detailed information about products and services.
	Customer Services	Support options, FAQs, and contact information.
	Partners Courier	List of integrated courier partners.
	Contact Us	Contact form and details.
	Shipping Calculator	Tool to estimate shipping costs based on user inputs.
	Customer On boarding & Sign Up	Registration process for new customers.
	Login to Customer Portal	Access for existing users to manage their accounts.
	Blog/ News	Articles and updates for SEO and user engagement.
4.1.2 User Registration and Authentication	Secure sign-up with two-factor authentication.	Collection of essential business details during registration.
	Two-Factor Authentication	Additional security layer during login via OTP message on email and registered mobile number.

4.2 Shippers Panel - customer.ship-flex.com		
4.2.1 Shipper Profile Management	Upload Documents	Functionality for shippers to upload necessary documents.
	Manage User	Add and manage users based on roles and permissions.
4.2.2 Manage Item Tab	List Items and HS Code for Approval	Option to list items with HS codes for approval.
	Display Approved Items	Show approved items eligible for shipping.
4.2.3 Shipping Label Generation	Compare Shipping Rates	Tool to compare rates from different providers.
	Prepaid Label Generation	Users must preload accounts via credit card or PayPal.
	Cancel Shipping	Option to cancel shipping if not yet picked up.
	International Shipment and Custom Invoice	Create invoices for international shipments.
4.2.4 Order Management	Add and Import Orders	Integration with WooCommerce, Shopify.
	Upload Orders via Excel Sheet	Upload orders via Excel sheet.
4.2.5 Business Dashboard	Real-Time Insights	Real-time shipment tracking, account balance, credit info, and updates.
4.2.6 Origin and Destination Address Book	Manage Address	Maintain and use address book for shipping labels.
4.2.7 Automatic Provider Selection	Suggest Preferred Provider	System suggests shipping provider based on historical data.
4.2.8 Recharge / Add Credit	Payment Options	Recharge account using PayPal or credit card.
4.2.9 Cancellation of Shipping Label	Cancel Labels	Option to cancel shipping labels if not picked up.

4.2.10 Invoice & Billing	Download Invoices	Download itemized, Performa, commercial invoices, and PDFs.
4.2.11 Support & Help	Contact Form	Report issues to admin.
	Support History	View History of previous support requests.

ADMIN CONSOLE console.ship-flex.com

Section	Feature	Details
4.3.1 User Management	Manage Customer Accounts	View registration details and reset passwords.
4.3.2 Order Management	Oversight of Orders	Monitor shipping label orders, status, and history.
4.3.3 Payment Management	Manage Payments	Access customer payment details and transaction history.
4.3.4 Shipping Provider Integration	Manage Providers	Add or remove shipping providers.
4.3.5 Communication Management	Send Notifications	Send email and SMS updates to customers.
4.3.6 Pricing Structure Management	Upload Pricing	Upload pricing structures between A to B for different shipping companies.
4.3.7 Customer Onboarding and Pricing	Approve Onboarding	Approve new customers and set pricing based on business volume.
4.3.8 Shipping Platform Integration	Major Platforms	Integrate with FedEx, UPS, and DHL.
4.3.9 Payment Gateway Integration	Popular Gateways	Integrate with PayPal etc.
4.3.10 Communication Channels	Email and SMS	Use email and SMS for updates and notifications.

4.3.11 HS Code API Integration	Validate HS Codes	Integration for valid item HS codes
4.3.12 Admin Updates on Customer Dashboard	Display Updates	Display admin updates and announcements on the customer dashboard.
4.3.13 B2B and B2C Accounts	B2B Discounts	Separate page for business accounts with discounts and different pricing for retail customers.
	B2C Pricing	Different pricing for retail customers.
4.3.14 VAT Numbers for Business Clients	Manage VAT Numbers	Manage VAT numbers for European regions.
4.3.15 Helpdesk Management	Support Tickets	Manage user queries and create support tickets.

APPENDIX A: REFERENCES

Listed below are all documents referenced in this Functional Requirements document.

REFERENCES		
DOCUMENT NAME	DESCRIPTION	LOCATION
Project Scope Document shared by Raj Sir	Project Key features including website, shipper portal and admin console	Pune -Jodhpur

APPENDIX B: KEY TERMS

Listed below are definitions for terms relevant to this Functional Requirements document.

KEY TERMS	
TERM	DEFINITION
Two Factor Authentication	A security measure that requires two forms of identification before allowing access to an account, enhancing the security of user data.
Shipping Label Generation	The process of creating shipping labels that include all necessary details for shipping, such as origin, destination, and shipment information.
HS Code (Harmonized System Code)	A standardized numerical method of classifying traded products, used for customs declarations and ensuring compliance with regulations.
Order Management	The system feature that allows shippers to add, import, and manage orders, including integration with e-commerce platforms like WooCommerce and Shopify.
Automatic Provider Selection	A feature that suggests the preferred shipping provider for a customer based on historical usage data.
Admin Console	The backend interface used by administrators to manage customer accounts, orders, payments, shipping providers, and other key system functions.
Shipping Provider Integration	Integration with major shipping platforms (e.g., FedEx, UPS, DHL) to facilitate shipping label creation and order management.
Payment Gateway Integration	Integration with popular payment processors like PayPal and Stripe to handle transactions securely.
B2B Accounts	Business-to-Business accounts that may receive discounts based on the volume of shipments or specific agreements with the platform.
WooCommerce	An open-source eCommerce plugin for WordPress that allows businesses to create and manage online stores, offering extensive customization options and integration with various payment gateways.
Shopify	A cloud-based eCommerce platform that enables businesses to create and manage online stores with built-in tools for payments, shipping, and product management, requiring no coding skills.