



Scope Document for Marketplace

Mobile App – Android Version

(Multi-Vendor B2B/B2C eCommerce System)

Industrial Development Board

Background

Industrial Development Board of Ceylon (IDB) has been established by the government Act No. 36, 1969. It functions under the Ministry of Industry. In terms of this Act the IDB is the Prime State Organization entrusted with the responsibility of development to the Industrial Sector. Throughout last 53 years IDB has catered mainly to the Enterprises, individuals and institutions of the industrial sector of Sri Lanka. The IDB consists of 600 employees with more than fifty operational units around the country including a dedicated staff and a network of regional and district offices covering each district. In fact, it is the only such organization within the private and government sectors of the country.

Our services include Identification of business opportunities, Quality & productivity improvement, Project feasibility studies & reports, Management, Development and Consultancy, Business Information and linkages, Product Development, Innovation & new technologies, Market development and promotion, Business counseling & Extension, Technology development & assistance, Engineering workshop and foundry facilities, Infrastructure facilities, Engineering services, Entrepreneurship development training and Provision of product specific raw materials.

IDB consists of eleven divisions through which all its activities are streamlined. They are:

Functional Divisions

- Entrepreneurship Development Division
- Engineering Services Division
- Industrial Estate Division
- Marketing Division
- Regional Development Division

- Technical Services Division
- Rubber Products Development Centre
- Leather Products Development Center

Operational Divisions

- Administration Division
- Finance Division
- Planning Division

Project Overview

The Industrial Development Board of Ceylon is embarking on a project to develop a Multi-Vendor eCommerce System that supports both B2B (Business-to-Business) and B2C (Business-to-Consumer) selling. This system will be implemented both as web and mobile application.

Project Objectives

1. Create a Comprehensive Multi-Vendor eCommerce Platform

- Develop a feature-rich Multi-Vendor eCommerce system that enables multiple sellers to register, list, and manage their products within a unified platform.
- Implement robust seller management capabilities, including product catalog management, order processing, and reporting tools.
- Ensure seamless integration of seller storefronts within the broader eCommerce ecosystem.

2. Facilitate B2B and B2C Transactions

- Enable a versatile Business-to-Business-Consumer (B2B2C) model, allowing businesses to engage with both other businesses and individual customers.
- Provide a flexible system that can seamlessly transition between B2B and B2C modes to adapt to market dynamics and business needs.

3. Deliver a User-Friendly and Responsive Experience

- Develop a user interface (UI) and user experience (UX) design that is intuitive and easy to navigate, ensuring a positive shopping experience for customers and efficient operations for sellers.
- Prioritize mobile responsiveness to cater to a wide range of devices, including desktops, laptops, smartphones, and tablets.

4. Foster Economic Growth and Innovation

- Create a dynamic Multi-Vendor eCommerce platform that supports local businesses, entrepreneurs, and artisans, empowering them to expand their reach and contribute to the economic development of Sri Lanka.
- Encourage innovation within the local business community by providing a digital platform for showcasing and selling their products to a broader audience.

5. Strengthen Industrial Development Initiatives

- Align the project with the strategic goals of the Industrial Development Board, emphasizing the growth and sustainability of industries within Sri Lanka.
- Leverage the eCommerce platform to support existing industries and encourage the emergence of new ones, ultimately contributing to job creation and industrial development.

Project Requirement / Features

1. Customer / User / Guest (Mobile App) – Android Version

- Registration Form
- Email Verification
- Social Media Signup
- User Dashboard
 - Personal Information: Customers can update their name, contact information, and profile picture.
 - Address Book: Customers can manage their billing and shipping addresses, including adding, editing, or deleting addresses.
 - Order History: Customers can view a list of their past orders with details such as order status, order date, and order total.
 - Wishlist: Customers can add and remove products from their wishlist for future reference.
 - Change Password: Customers should have the option to change their account password securely.
- Email Notifications
- Profile Deactivation
- Category Navigation
- Featured Products
- Search Bar
- Product Listings
- Sorting and Filtering
- Product Details Page
- Stock Availability
- Quantity Selection
- Add to Cart
- Product Variants
- Availability Status
- Review Submission
- Review Display

- Sorting and Filtering Reviews
- Review Verification
- Reporting Abusive Content
- Average Rating Display
- Review Comments
- Cart Preview
- Cart Page
- Cart Management
- Add to Wishlist
- Wishlist
- Wishlist Move to Cart
- Share Wishlist
- Wishlist Notifications
- Shopping Cart Review
- Shipping Address
- Billing Information
- Order Summary
- Coupon/Promo Code
- Order Placement
- Order History Overview
- Detailed Order View
- Order Status Tracking
- Shipment Tracking
- Order Status Notifications
- Reorder Option
- Returns and Refunds
- Invoices
- Auction Management
 - View and Participate in Auctions:
 - Bidding Management:
 - Real-time Updates:

- Watchlist:
- Bid Notifications

1. Customer Summary App – Android Version

- I. User Registration and Profile Management
 - Allow users to register, log in, and manage their profiles.
 - Include profile settings for personal information, shipping addresses, and payment methods.
 - Enable profile picture upload and social media integration for quick registration.
- II. Product Browsing
 - Provide a user-friendly interface for browsing products.
 - Implement product categories, filters, sorting options, and search functionality.
 - Display product details, images, descriptions, prices, ratings, and reviews.
- III. Cart and Wishlist
 - Allow users to add and remove items from their shopping cart.
 - Implement a wishlist feature for saving favorite products.
 - Display the total cart value and enable easy checkout.
- IV. Checkout and Payment
 - Provide a secure and seamless checkout process.
 - Support multiple payment options, including credit/debit cards, digital wallets, and cash on delivery.
 - Include order summary, delivery address selection, and order confirmation.
- V. Order History and Tracking
 - Enable users to view their order history with order details and status.
 - Implement real-time order tracking with notifications for order updates.
- VI. Notifications and Alerts
 - Send push notifications for order confirmations, promotions, and personalized recommendations.
 - Allow users to manage notification preferences.

- VII. Reviews and Ratings
 - Enable users to leave reviews and ratings for purchased products.
 - Display average product ratings and sort products by ratings.
- VIII. Customer Support
 - Offer in-app customer support with chat, email, or call options.
 - Provide a knowledge base or FAQs section for common queries.
- IX. Social Sharing
 - Allow users to share product links and their shopping experiences on social media.
- X. Localization and Currency
 - Support multiple languages and currencies for a global audience.
 - Automatically detect and adapt to the user's language and currency preferences.

NOTE: All the features included in the Web Based should be visible for the customer

2. Seller / Vendor (Mobile App) – Android Version

- Business Profile Creation
 - Sellers initiate the registration process by accessing the Bizconnect Portal.
 - After completing the business profile, sellers submit their registration for verification by the Industrial Development Board (IDB).
 - Along with their profile, they may need to upload scanned copies of relevant business documents for verification purposes.
 - The IDB reviews the submitted seller profiles and documents to ensure compliance with legal and regulatory requirements.
 - The verification process may include checks for business legitimacy, tax compliance, and adherence to industry standards.
- API Registration
 - Once the seller's profile is verified and approved by the IDB, an API integration is initiated to create the seller's account within the Multi-Vendor system.
 - The API should securely transmit verified seller information to the Multi-Vendor platform for registration.
- Seller Activities
 - Login and Authentication
 - Role-Based Access
 - Personalized Dashboard
 - Order Management
 - Order Details
 - Order Processing
 - Order Status Updates
 - Handling Order Cancellations
 - Handling Refunds
 - Return Management
 - Order History and Tracking
 - Notifications and Alerts
- Product Management

- Product Listing Creation
- Product Editing and Updates
- Bulk Product Management
- Product Images and Media
- Stock Level Tracking
- Product Variants and Options
- Product SEO Optimization
- Product Visibility and Status
- Product Reviews and Ratings
- Product Import and Export
- Product Analytics
- Integration Capabilities (API)
- Store Analytics
- Customer Communication
- Coupon and Promotion Management
 - Coupon Creation
 - Coupon Code Generation
 - Discount Parameters
 - Real-Time Validation
 - Coupon Reporting
 - Promotion Scheduling
 - Coupon Expiry Alerts
- B2B Seller Dashboard
 - Corporate Account Management
 - Custom Pricing and Quoting
 - Product Catalog Customization
 - Wholesale Pricing Levels
- Commission and Fees Tracking
- Shipping Management
 - Shipping Zones
 - Worldwide Shipping Options
 - Shipping Methods

- Store Settings
- Auction Management
 - Auction Listings:
 - Setting Reserve Prices
 - Auction Duration:
 - Listing Fees
 - Monitoring and Management:

Seller App (Summary)

- I. Seller Registration and Onboarding
 - Enable sellers to register and create business profiles.
 - Implement a verification process managed by the Industrial Development Board.
 - Include features for uploading business documents and verifying identity.
- II. Dashboard and Analytics
 - Provide a full-featured dashboard for sellers to manage their products, orders, and store performance.
 - Display real-time sales data, order status, and earnings.
 - Offer analytics and insights to help sellers make data-driven decisions.
- III. Product Management
 - Allow sellers to add, edit, and delete product listings.
 - Include fields for product details, descriptions, prices, variants, and images.
 - Implement bulk import capabilities for inventory management.
- IV. Inventory Management
 - Provide tools for sellers to manage product inventory and stock levels.
 - Support stock alerts and low-stock notifications.
- V. Order Management
 - Allow sellers to view and manage incoming orders.

- Features include order processing, updating order statuses, handling cancellations, and issuing refunds.
- VI. Customer Communication
- Implement live chat with customers to address inquiries and provide support.
 - Enable sellers to respond to customer reviews and messages.
- VII. Store and Product Reviews
- Allow sellers to view and respond to store and product reviews.
 - Encourage sellers to maintain high-quality products and customer service.
- VIII. Shipping and Logistics
- Enable sellers to set shipping rates and options.
 - Integrate with multiple courier services for local and international shipping.
 - Implement shipping zone management.
- IX. Reporting and Analytics
- Provide sellers with insights into store performance, customer behavior, and product popularity.
 - Generate reports on sales, earnings, and inventory.
- X. Payment and Payout Management
- Allow sellers to configure and manage payment methods.
 - Process payouts, manage withdrawal requests, and set payment schedules.
- XI. Return and Refund Management
- Provide tools for sellers to manage return requests and issue refunds.

NOTE: All the features included in the Web Based should be visible for the seller

Development Environment

Mobile App Development Environment:

- I. Programming Languages and Frameworks:
 - Android (Java/Kotlin): For developing apps on the Android platform.
 - React Native or Flutter.
- II. Integrated Development Environments (IDEs)
 - Android Studio (for Android): The official IDE for Android app development.
 - Visual Studio Code: A popular and versatile code editor for cross-platform mobile development with React Native or Flutter.
- III. Emulators/Simulators
 - Android Emulator: Allows you to test Android apps on your development machine.
- IV. Mobile App Testing:
 - Appium: An open-source tool for mobile app automation testing.
 - Firebase Test Lab: A cloud-based app testing platform for Android
- V. Mobile App UI Design
 - Adobe XD, Sketch, or Figma: Tools for designing app user interfaces.
- VI. Version Control
 - Git: For version control and collaboration among developers.
- VII. Backend and API Development:
 - Since the Website backend technologies mentioned earlier, you can reuse the backend for your mobile app.
 - Ensure that the RESTful APIs are compatible with mobile app requirements.

- VIII. Mobile App Authentication and Authorization
 - Implement OAuth 2.0 and JWT as you mentioned in your web development environment.

- IX. Push Notifications:
 - Firebase Cloud Messaging (FCM): For Android.

- X. App Store Deployment
 - Google Play Console: For Android app submissions.
 - App Gallery

- XI. Analytics and Monitoring
 - Google Analytics for Mobile and Firebase Analytics: Monitor user interactions and app performance.

- XII. Continuous Integration and Deployment (CI/CD):
 - Tools like Jenkins, Travis CI, or GitHub Actions to automate app builds and deployments.

- XIII. Mobile App Security
 - Implement app security best practices, including code obfuscation, secure data storage, and encryption.

Maintenance (Mobile App) – Android

1. Software Updates and Patch Management

- Regularly update the system's software components, including the operating system, web server, database management system, and any third-party libraries or frameworks used.
 - Apply security patches and bug fixes to address vulnerabilities and enhance system stability.
2. Monitoring and Performance Optimization
 - Implement monitoring tools to continuously track system performance, resource utilization, and response times.
 - Identify and address performance bottlenecks, such as slow database queries or inefficient code.
 - Optimize database performance through indexing, query optimization, and caching mechanisms.
 3. Security Audits and Compliance
 - Conduct regular security audits to identify and mitigate security risks.
 - Ensure compliance with data protection regulations and industry-specific security standards.
 - Implement security best practices, including encryption, access controls, and intrusion detection systems.
 4. Data Backup and Recovery
 - Set up automated data backup procedures to protect against data loss due to hardware failures, human errors, or security incidents.
 - Test data restoration procedures to ensure data integrity and availability in case of a disaster.
 5. User Support and Issue Resolution
 - Provide a user support mechanism, such as a helpdesk or ticketing system, for users to report issues and seek assistance.
 - Resolve user-reported issues promptly within agreed-upon Service Level Agreements (SLAs).
 6. Content Management and Updates
 - Regularly review and update product listings, descriptions, prices, and images to ensure accuracy and relevance.
 - Enable vendors to manage their product listings and information easily.

7. Server and Infrastructure Scaling

- Monitor server resources and scale infrastructure resources as needed to accommodate increased user activity.
- Implement load balancing to distribute traffic efficiently across multiple servers.

8. Scheduled Maintenance

- Plan and schedule routine maintenance windows during off-peak hours to minimize user disruption.
- Notify users and vendors in advance of scheduled maintenance activities.

9. Quality Assurance and Testing

- Conduct regular testing, including functional testing, regression testing, and security testing.
- Test new features and updates in a staging environment before deploying them to the production system.

10. Backup and Disaster Recovery Drills

- Periodically simulate disaster recovery scenarios to validate the effectiveness of backup and recovery procedures.

11. Performance Testing

- Perform load and stress testing to assess the system's performance under heavy traffic conditions.

Ownership

- i. The Consultant should provide soft copies of source codes, content management tool, graphics, databases and any other software used for development and hard copies of all design documentations and other related documents used in the development to IDB.

- ii. The intellectual property rights relating to the process of a particular system, graphics, photos (captured by the photographers), text, artwork, design, sound recordings, software, database, and any other components developed for this project by the Consultant shall be the property of the IDB.
- iii. Any proprietary software components belonging to the Consultant shall be licensed to IDB for perpetual use. The Consultant shall be required to provide appropriate arrangements to make available the source code or assign suitable party to carry forward the contractual terms of the said proprietary software to the client in the event of either bankruptcy, winding or merger of the Consultant company.
- iv. Passwords related to all systems should be handed over to IDB after signing off from the project. The passwords can be obtained from IDB during maintenance period.
- v. Vendor should impose the copyright and disclaimer notice as specified by the IDB.
- vi. All confidential information exchanged during the assignment should be treated as non-disclosable contents.

Outputs and Deliverables

Total duration of this project is three (3) months. The Consultant should undertake to complete all tasks in parallel.

Training

- i. The relevant System Development Company should provide necessary training on each and every segment/ feature/ Add-on of the system to the IDB and the relevant stakeholders as required both physically and Online.

- ii. Provide user manuals on each and every function of the system including back end features.

Customer App

Customer App Feature	Can Perform Task?
User Registration and Profile Management	
Product Browsing	
Cart and Wishlist	
Checkout and Payment	
Order History and Tracking	
Notifications and Alerts	
Reviews and Ratings	
Customer Support	
Social Sharing	

Localization and Currency	
Playstore and App Gallery Publish	

Seller App

Seller App Feature	Can Perform Task?
Seller Registration and Onboarding	
Dashboard and Analytics	
Product Management	
Inventory Management	
Order Management	
Customer Communication	

Store and Product Reviews	
Shipping and Logistics	
Reporting and Analytics	
Payment and Payout Management	
Return and Refund Management	
Playstore and AppStore and App Gallery Publish	

Maintenance

Maintenance Task	Can Perform Task?
Software Updates and Patch Management	

Monitoring and Performance Optimization	
Security Audits and Compliance	
Data Backup and Recovery	
User Support and Issue Resolution	
Content Management and Updates	
Server and Infrastructure Scaling	
Scheduled Maintenance	
Quality Assurance and Testing	
Backup and Disaster Recovery Drills	
Performance Testing	