Business Requirements Specification (BRS)

HanFoods E-commerce Platform

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1. Executive Summary

1.1 Project Overview

HanFoods E-commerce Platform is a specialized online marketplace dedicated to coconut-based products, with a primary focus on fresh and dried coconut hearts (củ hủ dừa). The platform connects coconut farmers and processors with health-conscious consumers seeking premium natural coconut products.

1.2 Business Opportunity

- Market Gap: Limited specialized platforms for authentic Vietnamese coconut products with direct farmer-to-consumer connection
- Target Market: Health-conscious consumers aged 25-55, natural food enthusiasts, Vietnamese diaspora worldwide, wellness product retailers
- Business Value: Projected 40% increase in coconut farmer revenue through direct online sales channel, eliminating middlemen

1.3 Success Metrics

- 2,000+ registered customers within 6 months
- 30+ coconut farmers/processors as suppliers by year-end
- Average order value of 350,000 VND
- 90% customer satisfaction rating for product freshness and quality
- 500kg+ monthly fresh coconut heart sales volume

2. Project Objectives

2.1 Strategic Objectives

- SO-001: Establish HanFoods as the leading Vietnamese coconut products e-commerce platform
- SO-002: Create sustainable revenue streams for coconut farmers and processors
- SO-003: Provide fresh, authentic coconut products with reliable coldchain delivery
- SO-004: Build brand loyalty through premium quality and product authenticity

2.2 Business Objectives

- BO-001: Generate 800M VND revenue in first year through coconut product sales
- BO-002: Achieve 25% market share in online coconut products segment in Vietnam
- BO-003: Establish direct partnerships with 50+ coconut farmers across Mekong Delta
- BO-004: Expand to international markets (US, Australia, Japan) for Vietnamese diaspora

2.3 Technical Objectives

- TO-001: Deploy scalable cloud-based architecture supporting 10,000 concurrent users
- TO-002: Achieve 99.5% system uptime
- TO-003: Implement secure payment processing with multiple options
- TO-004: Provide real-time order tracking and inventory management

3. Scope

3.1 In-Scope

• Customer-facing Features:

- User registration and authentication
- Coconut product browsing with detailed origin information
- Fresh product availability and harvest date tracking
- Shopping cart with cold-chain delivery options
- Order placement with freshness guarantee
- Product quality reviews and farmer ratings

• Farmer/Supplier Management:

- Farmer registration and farm verification
- Coconut product catalog management (fresh/dried variants)

- Harvest scheduling and inventory updates
- Order fulfillment with quality tracking
- Revenue reporting and payment management

• Administrative Functions:

- User and supplier management
- Product category management (fresh coconut hearts, dried variants, coconut-based products)
- Cold-chain logistics coordination
- Quality control and farmer certification
- Financial reporting and farm analytics

• Payment Integration:

- Credit/debit card processing
- Bank transfer support
- Cash on delivery (COD) for local deliveries
- Digital wallet integration
- International payment support for export orders

3.2 Out-of-Scope

- Mobile application development (Phase 2)
- Advanced AI quality assessment engine (Phase 2)
- Third-party international logistics integration (Phase 2)
- Multi-language support beyond Vietnamese/English
- Cryptocurrency payment options
- Farm IoT monitoring and automation systems
- Processing facility management software

3.3 Future Considerations

- Integration with farm management systems
- Blockchain traceability for product authenticity
- Subscription-based fresh coconut delivery service
- B2B bulk ordering for restaurants and retailers
- Coconut byproduct marketplace (coconut oil, fiber, shells)
- International cold-chain logistics expansion

4. Business Requirements

4.1 Customer Management (Priority: High)

- BR-001: System shall allow customers to create and manage user accounts
 - Acceptance Criteria: Registration with email/phone, profile management, password reset
 - Business Value: Customer retention and personalized experience

- BR-002: System shall provide secure authentication and authorization
 - Acceptance Criteria: Multi-factor authentication option, rolebased access control
 - Business Value: Data security and compliance

4.2 Product Management (Priority: High)

- BR-003: System shall support comprehensive coconut product catalog management
 - Acceptance Criteria: Product categories (fresh/dried coconut hearts, coconut water, coconut oil), origin tracking, harvest dates, quality grades
 - Business Value: Product authenticity and traceability for premium positioning
- BR-004: System shall provide specialized search and filtering for coconut products
 - Acceptance Criteria: Search by product type, origin location, harvest date, quality grade, freshness level, processing method
 - Business Value: Enhanced product discovery and quality-focused shopping experience

4.3 Order Processing (Priority: Critical)

- BR-005: System shall support end-to-end order management workflow
 - Acceptance Criteria: Cart management, checkout process, payment processing, order confirmation
 - Business Value: Core revenue generation functionality
- BR-006: System shall provide real-time freshness tracking and delivery updates
 - Acceptance Criteria: Cold-chain status monitoring, estimated freshness window, delivery temperature tracking
 - Business Value: Quality assurance and customer confidence in fresh product delivery

4.4 Payment Processing (Priority: Critical)

- BR-007: System shall integrate multiple payment methods including international options
 - Acceptance Criteria: Credit cards, bank transfers, COD, digital wallets, international payment gateways
 - Business Value: Payment flexibility for domestic and international customers

4.5 Farmer/Supplier Operations (Priority: High)

 BR-008: System shall provide farmer self-service portal with agricultural focus

- Acceptance Criteria: Harvest planning, product quality tracking, farm certification management, payment tracking
- Business Value: Farmer empowerment and supply chain transparency

4.6 Quality Control and Traceability (Priority: High)

- BR-009: System shall implement comprehensive product traceability from farm to customer
 - Acceptance Criteria: Farm origin tracking, harvest date recording, processing timeline, quality certification
 - Business Value: Premium positioning and customer trust through transparency

4.7 Analytics and Reporting (Priority: Medium)

- BR-010: System shall generate specialized agricultural and sales intelligence reports
 - Acceptance Criteria: Farm productivity analytics, seasonal demand patterns, quality metrics, customer preferences
 - Business Value: Data-driven farming and business optimization

5. Stakeholders

5.1 Primary Stakeholders

Stakeholder	Role	Responsibilities	Success Criteria
Customers	End Users	Purchase coconut products, provide quality feedback	Fresh product delivery, authentic origin information
Coconut	Primary	Harvest coconuts,	Fair pricing, timely
Farmers	Suppli- ers	maintain quality standards, manage inventory	payments, market access
Platform	Business	Strategic decisions,	Revenue targets,
Owner	Owner	farmer relationships, quality assurance	farmer satisfaction, market expansion

5.2 Secondary Stakeholders

Stakeholder	Role	Responsibilities	Success Criteria
Cold-Chain Logistics	Delivery Ser- vices	Temperature- controlled delivery, freshness maintenance	On-time fresh delivery, product quality preservation
Payment Providers	Financial Ser- vices	Transaction processing, international payments	Secure, reliable payments with international support
Agricultural Authorities Export Agencies	•	de organic certification, food safety standards of the port documentation, customs clearance	Quality compliance, certification validation Smooth international shipments, regulatory compliance

5.3 Internal Stakeholders

Stakeholder	Role	Responsibilities	Success Criteria
Development Team	Technical Imple- menta- tion	System development, maintenance	Quality deliverables, on-time delivery
QA Team	Quality Assur-	Testing, validation	Bug-free releases, performance standards
Support Team	ance Customer Service	User support, issue resolution	Customer satisfaction, quick response times

6. Constraints & Assumptions

6.1 Technical Constraints

- TC-001: System must be developed using modern web technologies (Node.js, React, MongoDB)
- TC-002: Must comply with Vietnamese data protection regulations
- ${\bf TC\text{-}003}:$ Payment processing must meet PCI DSS compliance standards
- TC-004: System must support minimum 1,000 concurrent users at launch

6.2 Business Constraints

- BC-001: Project budget limited to \$50,000 USD equivalent
- BC-002: Go-live date fixed at December 31, 2025
- BC-003: Initial launch limited to Ho Chi Minh City market
- BC-004: Vendor commission rate not to exceed 15%

6.3 Legal and Regulatory Constraints

- LC-001: Must comply with Vietnam Food Safety Law and agricultural export regulations
- LC-002: Coconut farmers must have valid agricultural licenses and organic certifications
- LC-003: Platform must implement agricultural product traceability requirements
- LC-004: Export shipments must comply with destination country food import regulations

6.4 Key Assumptions

- AS-001: Target market values authentic, traceable agricultural products
- AS-002: Coconut farmers are willing to adopt technology for direct sales
- AS-003: Customers accept premium pricing for guaranteed freshness and quality
- AS-004: Cold-chain logistics infrastructure available for fresh product delivery
- AS-005: International demand exists for authentic Vietnamese coconut products

7. Acceptance Criteria

7.1 Business Acceptance Criteria

- BAC-001: System successfully delivers 50 fresh coconut heart orders per week within first month
- BAC-002: Customer registration and fresh product ordering complete in under 7 minutes
- BAC-003: Farmer onboarding and product listing completed in under 48 hours
- \bullet BAC-004: Payment processing success rate exceeds 98% including international transactions
- BAC-005: Cold-chain delivery maintains product freshness with 95% customer satisfaction

7.2 User Experience Criteria

- UXC-001: Customer satisfaction score above 4.0/5.0
- UXC-002: Average page load time under 3 seconds
- $\bullet~$ UXC-003: Mobile responsiveness across all major devices
- UXC-004: Accessibility compliance (WCAG 2.1 AA)

7.3 Security Criteria

- $\bullet\,$ SEC-001: All user data encrypted in transit and at rest
- SEC-002: Payment information stored according to PCI DSS standards
- SEC-003: User authentication includes password strength requirements
- SEC-004: System logs all administrative actions for audit trails

7.4 Performance Criteria

- PFC-001: System handles 1,000+ concurrent users without degradation
- PFC-002: Database queries respond within 100ms for 95th percentile
- PFC-003: File uploads complete within 30 seconds for 10MB files
- PFC-004: Search results return within 2 seconds

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