Procurement System - Development Modules Roadmap

Module-Based Development Strategy

Module 1: Foundation & Multi-Tenant Core



Duration: 3-4 weeks

Priority: Critical (Start Here)

What You'll Build:

• Multi-tenant database architecture (8 hotel units)

- User authentication and role management
- Basic product catalog with unit allocation
- Admin dashboard foundation

Database Setup:
User Management:
Basic Product Management:
Admin Interface: User management dashboard Unit configuration System settings Basic navigation structure Responsive layout foundation

- Multi-tenant database schema
- User authentication system

- Basic admin dashboard
- Product management interface
- Unit selection and switching

Business Value:

- Foundation for all future modules
- User access control established
- Basic product management per unit
- Client can see the multi-tenant structure

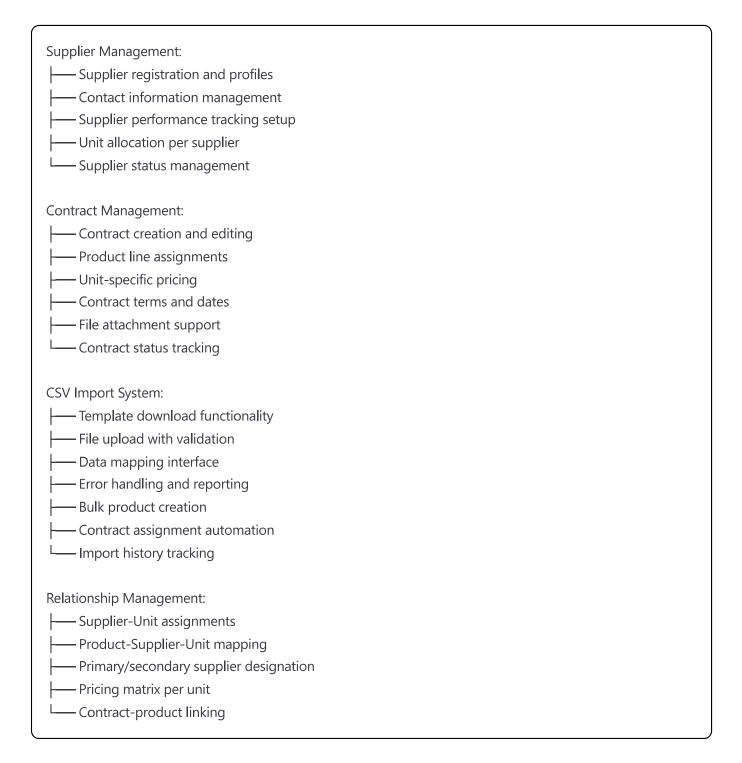
Module 2: Contract & Supplier Management

Duration: 3-4 weeks

Priority: High

What You'll Build:

- Comprehensive supplier database
- Contract management system
- CSV import functionality for bulk data
- Supplier-unit-product relationships



- Supplier database and management interface
- Contract management system
- CSV import tool with validation
- ✓ Bulk data upload capability
- Relationship mapping interface

Business Value:

- Bulk contract data entry capability
- Centralized supplier information
- Foundation for automated ordering
- Clear supplier-unit relationships

Module 3: Core Operations & Stock Management

Duration: 4-5 weeks

Priority: High

What You'll Build:

- Stock receiving and issuing system
- Automated reorder functionality
- Batch/lot tracking
- Unit-level stock management

Stock Receiving:	
— Delivery confirmation interface	
Batch/lot number recording	
Expiry date tracking	
— Quality check recording	
— Variance reporting	
—— Automatic stock level updates	
Receiving documentation	
Stock Issuing:	
— Department-wise stock requests	
FIFO batch allocation	
—— Issue authorization	
—— Stock level updates	
— Usage tracking	
L—— Issue documentation	
Automated Reordering:	
—— Reorder level monitoring	
— Automatic PR generation	
— Unit-specific supplier selection	
—— Quantity calculation logic	
—— Approval workflow routing	
L—— PO generation	
Batch Tracking:	
— Batch/lot registration	
Expiry management	
—— Batch movement tracking	
FIFO rotation alerts	
Recall capability	
—— Traceability reports	

Deliverables:

- Stock receiving workflow
- Z Automated reorder system
- Batch tracking functionality
- Stock issuing process
- Real-time inventory updates

Business Value:

- Core operational functionality
- Automated procurement workflows
- Full traceability system
- Reduced manual processes

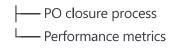
Module 4: Requisitions & Approval Workflows

Duration: 3-4 weeks Priority: Medium-High

What You'll Build:

- Manual requisition system
- Emergency requisition handling
- Multi-level approval workflows
- Purchase order management

Manual Requisitions:	
Emergency Requisitions:	
Approval Workflows:	
Purchase Order Management:	



- Manual requisition system
- Z Emergency requisition capability
- Approval workflow engine
- **V** Purchase order management
- Z Email notification system

Business Value:

- Complete procurement workflow
- Emergency handling capability
- Proper authorization controls
- Streamlined PO process

Module 5: Supplier Portal

Duration: 3-4 weeks Priority: Medium

What You'll Build:

- External supplier access portal
- Real-time stock monitoring for suppliers
- Supplier communication system
- Proactive restock notifications

Supplier Authentication:
Stock Monitoring Dashboard:
Supplier Communication:
Proactive Features:

- Supplier portal login system
- Stock monitoring dashboard
- Communication system
- Alert and notification system
- Mobile-responsive supplier interface

Business Value:

- Proactive supplier management
- Reduced stockout incidents
- Improved supplier relationships
- Better demand planning

Module 6: Analytics & Business Intelligence

Duration: 4-5 weeks

Priority: Medium

What You'll Build:

- Multi-level dashboards (Group, Unit, Department)
- Advanced reporting system
- Performance analytics
- PowerBI integration or custom visualization

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Deliverables:

- Multi-level dashboard system
- Advanced analytics engine
- Automated reporting system
- V PowerBl integration OR custom visualization
- Performance monitoring tools

Business Value:

- Data-driven decision making
- Performance optimization insights
- Cost saving identification
- Strategic planning support

Development Strategy & Timeline

Recommended Development Order:



Technology Stack Per Module:

Backend (FastAPI):

Module 1: Basic FastAPI + Supabase + Authentication

Module 2: File upload + CSV processing + Data validation

Module 3: Background tasks + Complex business logic + Batch processing

Module 4: Workflow engine + Email integration + Approval logic

Module 5: External API + Separate authentication + Real-time updates

Module 6: Data aggregation + PowerBl connectors + Advanced queries

Frontend (Recommendation: Vue.js):

Module 1: Basic Vue app + Routing + Authentication

Module 2: File upload components + Data tables + Form validation

Module 3: Real-time updates + Complex forms + Status tracking

Module 4: Workflow interfaces + Approval components + Notifications

Module 5: External portal + Responsive design + Real-time charts

Module 6: Advanced dashboards + Chart libraries + Data visualization

Getting Started Recommendation

Start with Module 1 because:

- **Section** Establishes foundation for everything else
- Client sees immediate progress
- Z Tests multi-tenant architecture early
- Validates user role concepts
- Provides working system for early feedback

Success Criteria for Module 1:

- Multiple users can log in with different roles
- Users can switch between hotel units
- Basic product management works per unit
- Admin can manage users and units
- System is responsive and secure

Ready to start with Module 1? I can help you set up:

- 1. Multi-tenant database schema
- 2. FastAPI authentication system
- 3. Vue.js frontend structure
- 4. Basic admin dashboard
- 5. User role management

Let me know when you want to dive into Module 1 implementation!