Revolutionizing Agriculture with AgriEdge Or-Mange Ltd: A Salesforce-Driven Order Management Solution

Salesforce Project (Admin + Developer Phases)

Prepared By:IJJAPUREDDY PARVATHI DEVI

Phase 1: Problem Understanding & Industry Analysis

Requirement Gathering

- Identify challenges: manual order entry, stock visibility issues, delayed updates to farmers/distributors.

- Understand seasonal agricultural demand and bulk-order patterns.

- Define compliance needs (GST billing, data privacy).

Stakeholder Analysis

- **CEO/Management** – wants real-time sales & supply-chain insights.

- **Sales/Field Team** – needs mobile order capture and quick approvals.

- **Warehouse Staff** – requires live inventory data.

- **Farmers/Distributors** – expect instant confirmation and delivery tracking.

- **IT/Admin** – ensures system stability and integrations.

Business Process Mapping (Before Salesforce)

- Phone/email order → Spreadsheet entry → Manual stock check → Warehouse dispatch → Multiple updates across channels.

Industry-Specific Use Case

- Seasonal demand forecasting (crop cycles).

- Bulk fertilizer/seed orders.

- Perishable-goods tracking.

AppExchange Exploration

- Inventory management apps.

- SMS/WhatsApp notification add-ons.

- Agri-supply chain accelerators.

Phase 2: Org Setup & Configuration (Admin)

- Salesforce Edition: Developer/Enterprise.

- Company Profile: AgriEdge details, fiscal year aligned to crop season.

- Business Hours & Holidays: set by regional agriculture calendar.

Users & Security

- Profiles for Sales Agent, Warehouse Manager, Distributor.

- Roles & Permission Sets for data access.

- OWD: Products—Public Read Only; Orders—Private.
- Sharing rules and login access policies.

Sandbox & Deployment

- Create Dev Sandbox for testing.
- Plan deployment using Change Sets.

Phase 3: Data Modeling & Relationships

Objects

- Product – Name, Category, Price, Stock Quantity, Expiry Date.
- Customer – Name, Contact, Farm Location, Type (Farmer/Distributor).
- Order – Order No, Customer, Order Date, Status, Payment Mode.
- Order Item – Junction object for Order ↔ Product (Qty, Price).
- Delivery – Delivery Date, Vehicle, Status.

Relationships

- Customer ↔ Order (Lookup).
- Order ↔ Order Item (Master-Detail).
- Order Item ↔ Product (Lookup).

Record Types & Layouts

- Retail Farmer Orders vs. Bulk Distributor Orders.

Phase 4: Process Automation (Admin)

- **Validation Rules**: Quantity ≤ Available Stock; Delivery Date ≥ Today.
- **Flows / Process Builder**:
  - Auto-update inventory when order confirmed.
  - Send SMS/email confirmation to customer.
- **Approval Process**: High-value bulk orders route to Manager.
- **Scheduled Flows**: Daily low-stock alerts.

Phase 5: Apex Programming (Developer)

- **Apex Classes**
  - InventoryService – adjust stock on order changes.
  - DemandForecastService – seasonal demand calculations.

- **Triggers**
  - Before Insert on Order Item → check stock.
  - After Update on Delivery → notify customer when status = "Delivered".
- **Asynchronous Processing**
  - Batch Apex for nightly stock reconciliation.
  - Queueable Apex for large-order processing.
- **Testing**
  - Custom Exceptions and Test Classes with >75 % coverage.

Phase 6: User Interface Development

- **Lightning App Builder**: "AgriEdge Order Management" app.
- **Record Pages & Utility Bar**: Quick Create Order, related Products & Deliveries.
- **LWC Components**:
  - Farmer Self-Service Order Form.
  - Inventory Dashboard with low-stock indicators.

Phase 7: Integration & External Access

- Payment gateway integration (UPI/Credit).
- Third-party logistics tracking via REST APIs.
- SMS/WhatsApp notifications.
- Platform Events for real-time updates.
- OAuth for secure distributor portal login.

Phase 8: Data Management & Deployment

- Data Loader: import existing customers and product catalog.
- Duplicate Rules: prevent duplicate farmer/distributor records.
- Weekly Data Export & Backup.
- Deploy customizations from sandbox to production using SFDX/Change Sets.

Phase 9: Reporting, Dashboards & Security Review

- **Reports**: Orders by Region, Stock Movement, Seasonal Demand Trends.
- **Dashboards**:
  - Sales Performance (daily/monthly).

- Inventory Health (low stock, overstock).
- **Security**: Field-level security for pricing; IP restrictions for internal staff.

Phase 10: Final Presentation & Demo Day

- **Demo Walkthrough**: Customer places order → inventory auto-update → warehouse notification → delivery tracking → analytics view.

- **Documentation & Handoff**: ERD, Flows, Apex classes, deployment guide.

- **Feedback & Portfolio**: Gather stakeholder feedback; publish case study on LinkedIn/GitHub.