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

Project Overview

The agricultural sector, while essential, often lags in digital transformation. AgriEdge Or-Mange Ltd has embarked on a mission to digitize and streamline its internal operations using Salesforce CRM. The goal is to design and implement a robust, scalable, and user-friendly Order Management System (OMS) on Salesforce to manage agricultural product orders, track shipments, manage customer data, and improve task automation. This solution enables the company to manage its customer relationships and product lifecycle efficiently, ensuring timely delivery and transparency throughout the sales process.

Objectives

The primary objectives of this Salesforce CRM project include:

- Automating the order placement and tracking process.
- Reducing manual efforts in managing customer data and order statuses.
- Implementing a centralized view of customer interactions and history.
- Enabling better data management and reporting for business decisions.
- Improving efficiency of field agents, sales reps, and logistics handlers.
- Providing task notifications and approval workflows for internal operations.

Phase 1: Requirement Analysis & Planning

Understanding Business Requirements

The business needed a system where orders for agricultural equipment and products could be tracked from initiation to delivery. Pain points included lost records, slow response times, and

no visibility into customer order status. The new system was expected to allow real-time tracking, automated communications, and better decision-making tools.

Defining Project Scope and Objectives

- Manage customer profiles with purchase history.
- Track real-time order status.
- Automate approvals and shipment triggers.
- Integrate delivery schedules and feedback mechanisms.
- Implement roles and permissions for different users (Admin, Agent, Manager).

Designing Data Model and Security Model

- **Custom Objects**: Order__c, Product__c, Customer__c, Shipment__c.
- **Relationships**: Master-detail between Orders and Products; Lookup between Customer and Orders.
- **Security**: Role hierarchy for Agent > Manager > Admin. Field-level access based on profiles.

Phase 2: Salesforce Development - Backend & Configurations

Setup Environment & DevOps Workflow

- Created a Salesforce Developer Org.
- Used Change Sets for deployment.
- Enabled Dev Hub and Scratch Orgs for SFDX-based development (optional).

Customization of Objects and Fields

- Created custom objects and fields.
- Added validation rules (e.g., delivery date must be after order date).
- Implemented picklists for status fields like "Pending", "In Process", "Delivered".

Automation Tools

- **Flows**: Auto-create a task when an order is placed.
- **Process Builder**: Send email when order is marked as "Shipped".
- **Approval Process**: Multi-level approval for orders over a threshold value.
- **Workflow Rules**: Alert on overdue deliveries.

Apex Development

- Apex Trigger for auto-creating related records.
- Apex Class to calculate total order cost with discounts.
- Batch Apex to update status for bulk records nightly.

Phase 3: UI/UX Development & Customization

Lightning App Setup

- Created a custom App: “AgriEdge OMS”.
- Customized tab layout to include all key objects.

Page Layouts and Dynamic Forms

- Configured dynamic forms to show/hide sections based on user role or stage.
- Created different layouts for Manager, Agent, and Admin profiles.

User Management

- Created and assigned roles: Admin, Agent, Delivery Executive.
- Profile-level permissions for CRUD on custom objects.

Reports and Dashboards

- Order Summary Report grouped by Status.
- Dashboard showing daily orders, total revenue, and agent performance.

Lightning Components (LWC)

- Developed LWC for Quick Order Entry.
- Used LWC to show live shipment tracking using external API (bonus feature).

Phase 4: Data Migration, Testing & Security

Data Loading

- Used Data Loader to import historical data from Excel files.
- Applied Data Import Wizard for bulk customer creation.

Field History Tracking & Duplicate Rules

- Enabled Field History on key fields: Order Status, Delivery Date.
- Configured Duplicate Rules and Matching Rules to avoid record repetition.

Profiles and Permission Sets

- Created permission sets for temporary access to objects.
- Implemented sharing rules for data visibility by region.

Test Classes

- Created unit tests for all Apex classes and triggers with >90% code coverage.

Test Case Documentation

Test Case	Description	Expected Output	Actual Output
TC01	Create Order	Order Created Successfully	✅
TC02	Submit for Approval	Approval Email Sent	✅
TC03	Overdue Order Alert	Notification Sent to Manager	✅

Phase 5: Deployment, Documentation & Maintenance

Deployment Strategy

- Used Change Sets for moving metadata from Dev Org to UAT Org.
- Manual verification of each component before deployment.

Maintenance Plan

- Weekly system health check.
- Monthly review of automation logic.
- Backup plan for data using scheduled exports.

Troubleshooting & Monitoring

- Created a troubleshooting document for common errors (e.g., permission denied, missing fields).
- Scheduled reports to catch automation failures.

Conclusion

The Salesforce-powered Order Management System for AgriEdge Or-Mange Ltd successfully addresses the core needs of modern agriculture logistics. With streamlined order tracking, automated approvals, and role-based access, the platform has significantly improved efficiency, customer satisfaction, and operational visibility. It serves as a scalable model that can accommodate future enhancements, ensuring long-term digital growth in the agriculture domain.

Future Enhancements

- Integrate AI-based demand forecasting.
- Use chatbots for real-time customer support.
- Enable mobile app support for field agents.
- Implement WhatsApp integration for order notifications.

- Add multilingual support for rural agents.