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

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Project Overview

AgriEdge Or-Mange Ltd is an established player in the agriculture and agri-supply industry, specializing in distributing farming products, fertilizers, and agricultural machinery. As the company expanded, its traditional manual system for order tracking and customer management began to show inefficiencies — delayed processing, data duplication, and lack of visibility into real-time order and shipment statuses.

To address these issues, AgriEdge Or-Mange Ltd implemented a **Salesforce-based Order Management System (OMS)** designed to automate workflows, track sales, manage inventory, and enhance customer experience.

This system consolidates **orders, shipments, and customer records** into a single, intelligent platform, providing automation and transparency across departments. Through Salesforce CRM, the company can now track every order from initiation to delivery while providing analytics dashboards for business insights.

Objectives

The main goal of this project is to **digitize and automate the order lifecycle** using Salesforce CRM. The system improves operational efficiency, reduces manual effort, and provides real-time visibility into the sales process.

- Automate the **order creation, tracking, and delivery** process.

- Build **custom Salesforce objects** for managing orders, products, and shipments.

- Implement **Apex automation** for dynamic order calculations and updates.

- Enable **real-time notifications** for order approvals and overdue deliveries.

- Ensure **data security and access control** through roles and permission sets.

- Generate **dashboards and reports** for management decision-making.

Technology Description

The AgriEdge Order Management System was developed on the **Salesforce Lightning Platform**, combining **declarative** and **programmatic** tools for automation, scalability, and efficient order tracking.

Technologies and Tools Used:

- **Salesforce Lightning Platform** – Core CRM and OMS framework for automation and data management.

- **Custom Objects** – *AgriEdge_Order__c*, *AgriEdge_OrderItem__c*, *AgriEdge_Shipment__c*, *AgriEdge_Customer__c* for structured record storage.

- **Apex Classes & Triggers** – *OrderTotalUpdater*, *OrderTaskCreator*, *ShipmentStatusUpdater* for business logic automation.

- **Declarative Tools** – Flows, Process Builder, Validation Rules for workflow automation and data accuracy.

- **Security Configuration** – Profiles, Roles, and Permission Sets to manage access and ensure data protection.

- **Data Management Tools** – Data Loader and Data Import Wizard for seamless data migration.

- **Reporting & Analytics** – Reports and Dashboards for insights on sales, revenue, and shipment performance.

- **Deployment** – Change Sets used for migrating metadata between environments.

- **Testing** – Apex Test Classes (*AgriEdgeOrderTests*) ensuring >90% code coverage and system reliability.

Phase 1: Requirement Analysis & Planning

AgriEdge needed a centralized system to manage customer profiles, orders, payments, and shipment statuses. The old manual process caused delays and data inconsistencies.
Key Deliverables:

- Defined project scope — automate order lifecycle, establish approvals, and manage roles (Admin, Manager, Agent).

- **Data Model:**

  - *Objects:* AgriEdge_Order__c, AgriEdge_OrderItem__c, AgriEdge_Shipment__c, AgriEdge_Customer__c

  - *Relationships:* Master-Detail (Order → OrderItem), Lookup (Order → Customer)

- **Security Model:** Role hierarchy, FLS for sensitive data, and sharing rules for region-based access.
  Technologies Used: Salesforce Object Manager, Validation Rules, Schema Builder

Phase 2: Salesforce Development – Backend & Configurations

This phase focused on automation and backend logic to ensure efficiency and data consistency.
Key Developments:

- **Apex Triggers & Classes:**

  - *OrderTotalUpdater* – auto-calculates total and discounts.

  - *OrderTaskCreator* – creates follow-up tasks on new orders.

- **Flows & Process Builder:** Automate notifications and task creation.

- **Approval Process:** For high-value orders (>₱50,000).

- **Workflow Rules:** Alerts for overdue deliveries and pending approvals.
  Technologies Used: Apex, Process Builder, Flows, Approval Process, Developer Console

Phase 3: UI/UX Development & Customization

The Lightning interface was designed for intuitive navigation and real-time data visibility.
Key Activities:

- Built **AgriEdge OMS Lightning App** with tabs for Orders, Order Items, Shipments, and Reports.

- Customized page layouts per user role using **Dynamic Forms**.

- Created **Dashboards** for sales, shipment tracking, and performance monitoring.

- Developed **LWC components** for quick order creation and live shipment updates.
  Technologies Used: Lightning App Builder, Dynamic Forms, LWC, Reports & Dashboards

Phase 4: Data Migration, Testing & Security

Data from legacy systems was migrated and validated while ensuring strong security.
Key Activities:

- Imported historical and customer data via **Data Loader** and **Data Import Wizard**.

- Developed **Apex Test Classes (AgriEdgeOrderTests)** with >90% coverage.

- Conducted **UAT** to verify automation accuracy and reporting.

- Strengthened security with **Roles, Profiles, Permission Sets**, and **Audit Trail**.
  Technologies Used: Data Loader, Data Import Wizard, Apex Test Framework, Salesforce Security Model

Phase 5: Deployment, Documentation & Maintenance

The system was deployed to production and optimized for reliability and scalability.
Key Activities:

- Deployed using **Change Sets** (Dev → UAT → Prod).

- Conducted manual verification and regular org audits.

- Implemented **weekly health checks** and **data backups**.

- Monitored system health using **Reports, Debug Logs**, and **Audit Trail**.
  Technologies Used: Change Sets, Data Export Scheduler, Debug Logs, Audit Trail

Conclusion

The Salesforce-powered AgriEdge OMS revolutionized agricultural operations by automating the full order lifecycle—from creation to delivery. It improved accuracy, transparency, and decision-making through real-time dashboards and analytics.

Skills and Knowledge Gained

- Salesforce Data Modeling & Security Design
- Apex Programming (Triggers, Classes, Batch Jobs)
- Process Automation (Flows, Process Builder, Approvals)
- Lightning App & LWC Development
- Testing & Deployment Best Practices

Future Scope

- **Mobile App Integration:** For field agents to manage orders on the go.
- **Customer Portal:** Real-time order and shipment tracking.
- **AI Forecasting (Einstein):** Predict demand and optimize stock.
- **IoT Integration:** Monitor inventory via connected sensors.
- **WhatsApp/SMS Alerts:** Notify customers of order updates.
- **Multilingual Support:** Expand usability across regions.