

WhatsNext Vision Motors: Shaping the Future of Mobility with Innovation and Excellence

ABSTRACT

This project showcases the implementation of a Salesforce CRM solution for **WhatsNext Vision Motors**, a trailblazing automotive company revolutionizing mobility through technology and customer-centric solutions. The project's primary goal was to enhance the vehicle ordering experience, streamline dealer assignment, and maintain robust stock validation mechanisms.

Key innovations include automated dealer assignment based on customer location, proactive stock validation to prevent out-of-stock orders, and scheduled batch processes for status updates of bulk orders. The solution employs Apex, Trigger Handlers, Record-Triggered Flows, and Batch Apex to ensure automation, efficiency, and scalability.

This CRM implementation is designed to boost customer satisfaction, enhance internal productivity, and ensure accurate real-time stock and order data for strategic decision-making.

OBJECTIVE

The objective of this project is to build a robust Salesforce CRM system for **WhatsNext Vision Motors** that modernizes the vehicle ordering process, improves stock management, and streamlines dealer-customer interactions.

Goals include:

- Preventing customer orders for out-of-stock vehicles.
- Automatically suggesting the nearest dealer based on the customer's address.
- Keeping order statuses synchronized with inventory data.
- Automating order confirmation workflows and stock alerts.
- Reducing administrative overhead through process automation.

TECHNOLOGY DESCRIPTION

Salesforce

Salesforce is a cloud-based CRM platform offering powerful tools for automation, data management, and process optimization. It enables companies to deliver streamlined services and data-driven decisions with built-in security, scalability, and modular development.

Custom Objects

Custom objects were created to capture automotive business data.

Examples:

- Customer__c – Stores customer contact and address info.
- Vehicle__c – Contains details of vehicle models, features, and stock.
- Dealer__c – Stores dealer location and details.
- Order__c – Vehicle orders with status, quantity, customer, and dealer.
- TestDrive__c – Records scheduled test drive details.

Tabs

Tabs were created for each major object for visibility and quick access.

Custom App

A Lightning App named "**Vision Motors CRM**" was created containing all relevant tabs: Customer, Vehicle, Dealer, Orders, Test Drives, and Reports.

Profiles

Custom profiles were created for Dealer Managers, Order Executives, and Inventory Managers. These profiles control access levels to various objects.

Roles

Roles were defined to reflect the hierarchy within the organization, enabling role-based record visibility and sharing.

Permission Sets

Permission sets were created to give additional access to specific users like stock adjustment and test drive scheduling.

Email Templates

Predefined templates were created for:

- **Order Confirmation**
- **Stock Unavailability Notification**
- **Test Drive Reminder**

Email Alerts

These templates were linked to automation flows and Apex to trigger automatic emails to customers and staff.

Flows

Flows were used to automate logic without needing Apex code.

Examples:

- Auto-dealer assignment using customer's address.
- Send test drive reminders automatically.
- Auto-update order status based on vehicle availability.

Apex

Apex was used to implement complex business logic.

- Triggers to enforce stock validation and auto-dealer assignment.
- Trigger Handlers used to keep code modular.
- Batch Apex and Scheduled Apex to automate stock updates and email alerts.

DETAILED EXECUTION OF PROJECT PHASES

1. Developer Org Setup

- Created Salesforce Developer Org from developer.salesforce.com/signup
- Configured user permissions, object-level access, and enabled necessary features for development

2. Custom Object Creation

The following custom objects were created to represent business-critical data in the automotive domain:

- **Vehicle__c** – Stores vehicle details (Model, Type, Stock, Price, Status)
- **Vehicle_Dealer__c** – Stores authorized dealer details (Dealer Name, Location, Phone)
- **Vehicle_Customer__c** – Stores customer information (Name, Contact, Preferred Vehicle Type)
- **Vehicle_Order__c** – Tracks customer vehicle orders (Order Date, Vehicle, Status)
- **Vehicle_Test_Drive__c** – Manages test drive bookings (Test Drive Date, Vehicle, Status)
- **Vehicle_Service_Request__c** – Manages customer service/repair requests (Service Date, Issue, Status)

3. Creating the Lightning App

- App Name: **WhatsNext Vision Motors CRM**
- Tabs Included: Vehicle, Dealer, Customer, Orders, Test Drives, Service Requests, Reports
- App assigned to custom profiles for visibility and navigation across all modules

4. Validation Rules

Validation rules were created to enforce data integrity and prevent invalid entries:

- **Vehicle_Order_c**: Prevents placing orders if stock is 0
Error: “Vehicle currently out of stock”
- **Vehicle_Customer_c**: Validates email field to ensure correct format
Error: “Please enter a valid email address”

5. User Role & Profile Setup

Defined specific roles for business users to align with real-world responsibilities:

- Regional Dealer Manager
- Inventory Supervisor
- Sales Executive
- Service Technician

A custom profile was created and cloned from Standard User, with permissions granted to custom objects and flows.

6. User Creation

Sample users were created and assigned appropriate roles and profiles:

- **Anshul Mehta** – Role: Dealer Manager
- **Pooja Rathi** – Role: Sales Executive
- **Vikram Sinha** – Role: Inventory Supervisor

7. Email Templates & Alerts

Email templates were designed and connected to automation logic to improve communication and reduce manual work:

- **Order Confirmation Email** – Triggered when order status is “Confirmed”
- **Low Stock Notification** – Sent when stock quantity falls below threshold
- **Test Drive Reminder** – Sent automatically 24 hours before a scheduled test drive

8. Flow Implementations

a. Auto Assign Dealer Flow

- Automatically assigns the nearest authorized dealer to a customer order
- Based on address/location logic using lookup relationship to Vehicle_Dealer__c

b. Test Drive Reminder Flow

- Scheduled flow that sends a reminder email one day before the test drive date
- Triggered from Vehicle_Test_Drive__c object

c. Order Status Update Flow

- Automatically sets order status as:
 - **Pending** if stock = 0
 - **Confirmed** if stock > 0
- Ensures customers are informed with real-time order updates

9. Apex Triggers & Classes

a. VehicleOrderTrigger

- Trigger that enforces stock validation logic and integrates with handler class

b. VehicleOrderTriggerHandler

- Modular handler class that processes business logic:
 - Checks vehicle availability
 - Updates stock quantity
 - Auto-assigns dealer

c. Trigger Logic Used

- Applied using best practices: one trigger per object, bulk-safe logic, modular handler architecture

10. Batch Apex & Scheduling

a. VehicleOrderBatch

- Batch Apex class that periodically processes and updates order statuses in bulk

- Ensures accuracy between vehicle stock and active orders

b. VehicleOrderBatchScheduler

- Scheduled Apex class that runs the VehicleOrderBatch every day at a specified time
- Sends alerts for stock replenishment or pending orders due to out-of-stock vehicles

11. Modules Implemented

Your project followed a structured development approach using these modules:

- **Use Case Understanding**
- **Salesforce Credential Creation**
- **Data Management – Objects & Fields**
- **Tabs Creation for Object Navigation**
- **App Manager Configuration**
- **Process Automation with Flows**
- **Apex Trigger and Batch Development**
- **Testing, Validation, and Scheduling**

PROJECT WITH REAL WORLD EXAMPLE

Business Scenario: SUV Order by a Customer

Customer Profile:

- Name: **John**
- Email: ragaviravi2597@gmail.com
- Address: **Chennai**

Order Process Flow:

1. **Vehicle Selection:**

- Model: Honda SUV
- Price: \$80,000
- Available Stock: 100 units

2. **Order Creation:**

- Customer places order for 1 SUV
- System checks stock and assigns nearest Chennai dealer
- Order status = “Pending”

3. **Order Confirmation:**

- Stock confirmed
- Order status auto-updated to “Confirmed”
- Confirmation email sent

4. **Inventory Adjustment:**

- Stock decreased from 100 → 99

5. **Test Drive Scheduled:**

- Test drive on 07 December 2025
- Reminder sent on 06 December 2025

Business Benefits Realized

- **Customer Experience** – Fast, error-free confirmation and timely reminders
- **Inventory Management** – Prevents overbooking or false confirmations
- **Operational Efficiency** – Reduced manual work for dealer assignment
- **Automation** – Batch jobs handle bulk updates with no human intervention
- **Scalability** – Handles thousands of records without performance issues

SCREENSHOTS

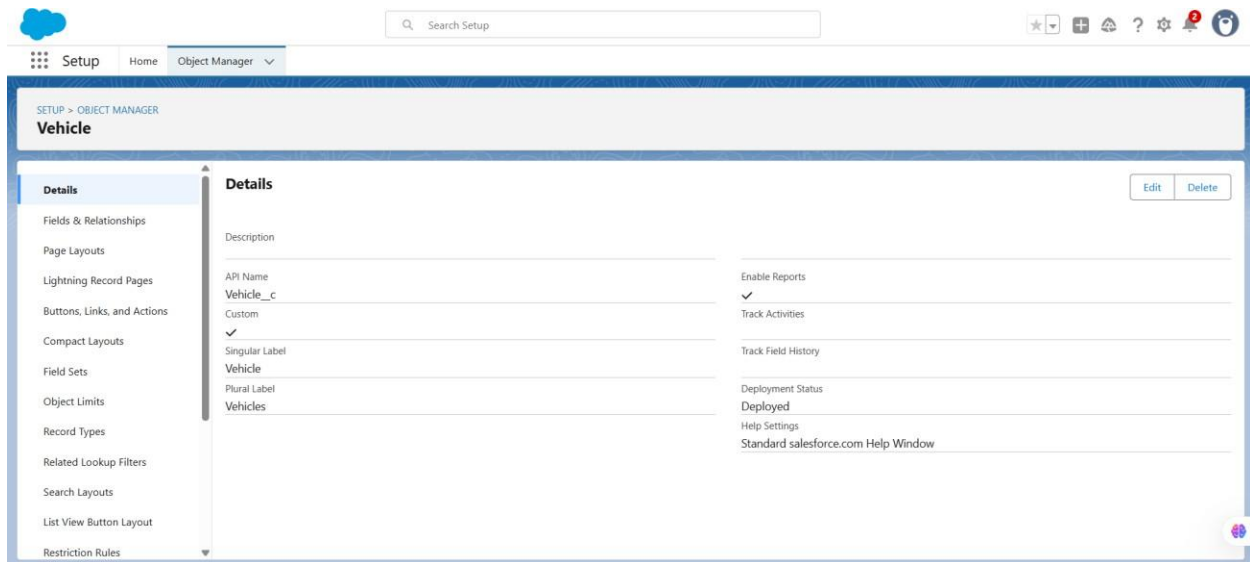


Fig1. Vehicle Object

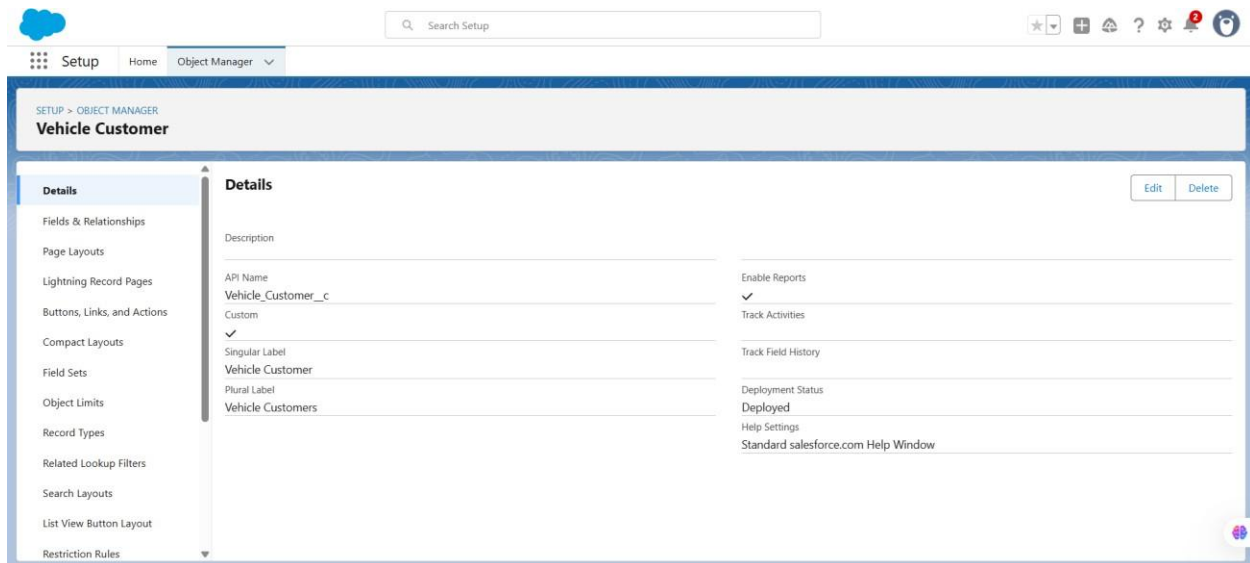


Fig2. Vehicle Customer

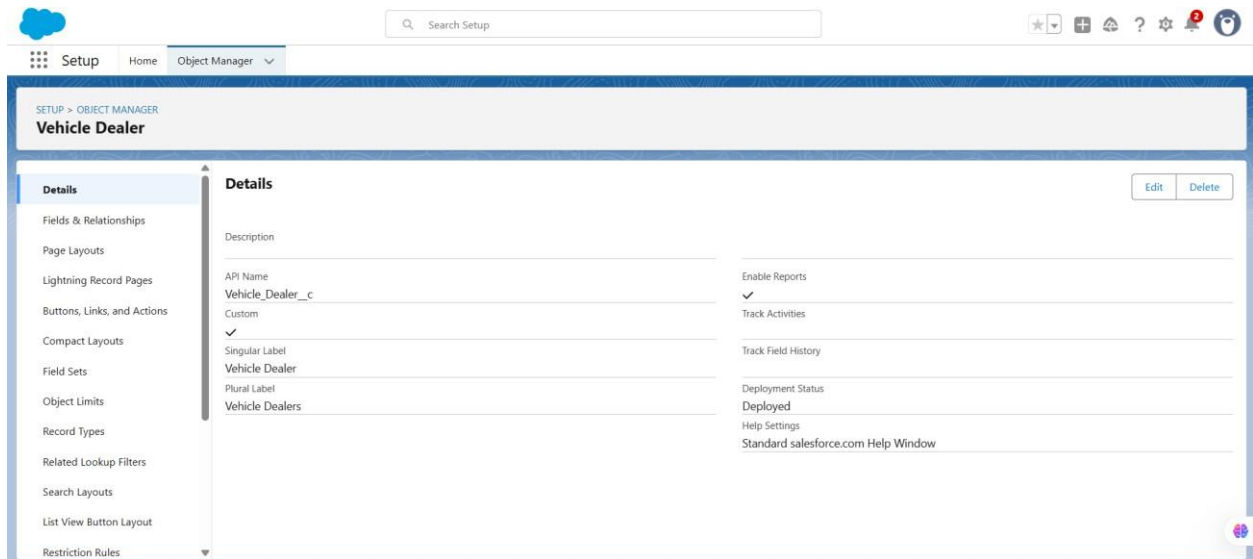


Fig3. Vehicle Dealer

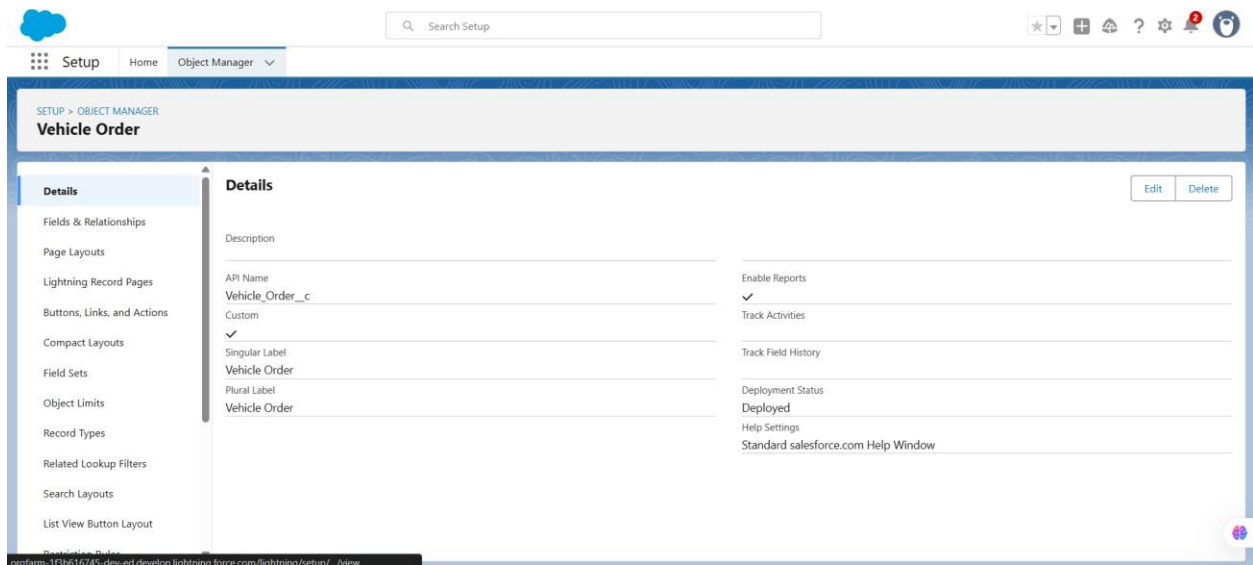
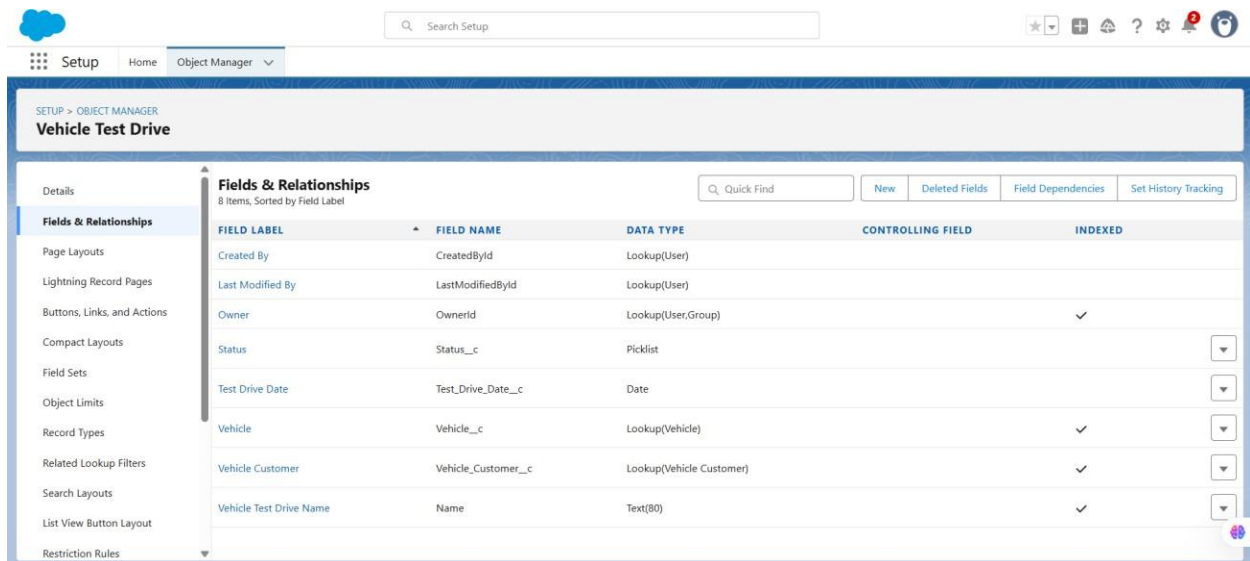


Fig4. Vehicle Order



Setup > OBJECT MANAGER

Vehicle Test Drive

Details

Fields & Relationships
8 Items, Sorted by Field Label

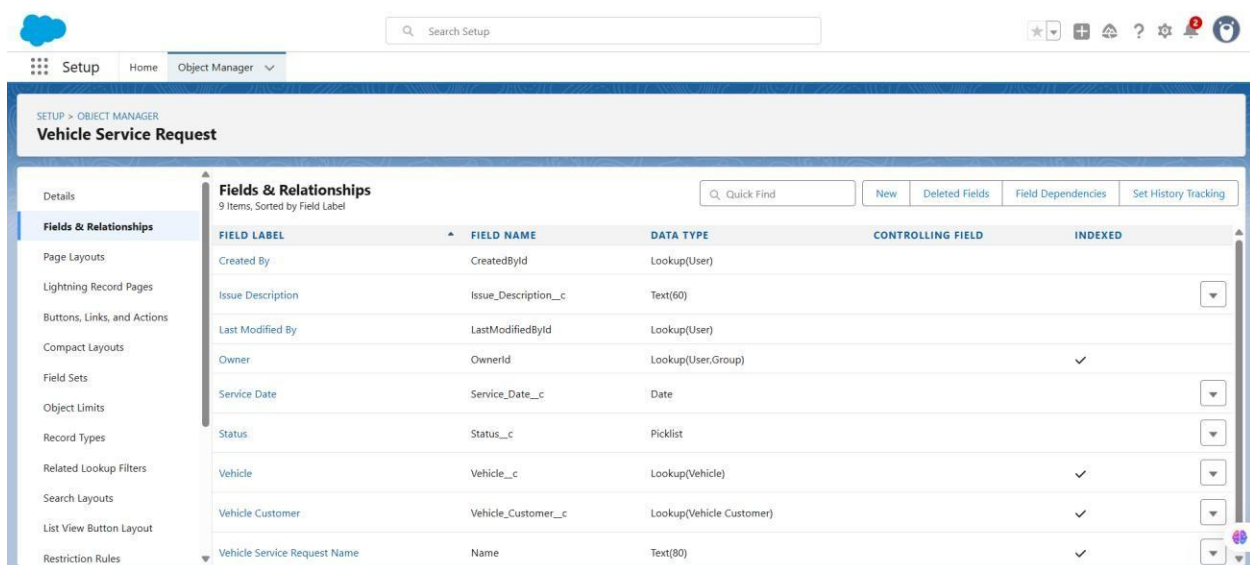
Quick Find:

New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Status	Status__c	Picklist		
Test Drive Date	Test_Drive_Date__c	Date		
Vehicle	Vehicle__c	Lookup(Vehicle)		✓
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)		✓
Vehicle Test Drive Name	Name	Text(80)		✓

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules.

Fig5. Vehicle Test Drive



Setup > OBJECT MANAGER

Vehicle Service Request

Details

Fields & Relationships
9 Items, Sorted by Field Label

Quick Find:

New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Issue Description	Issue_Description__c	Text(60)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Service Date	Service_Date__c	Date		
Status	Status__c	Picklist		
Vehicle	Vehicle__c	Lookup(Vehicle)		✓
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)		✓
Vehicle Service Request Name	Name	Text(80)		✓

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules.

Fig6. Vehicle Service Request

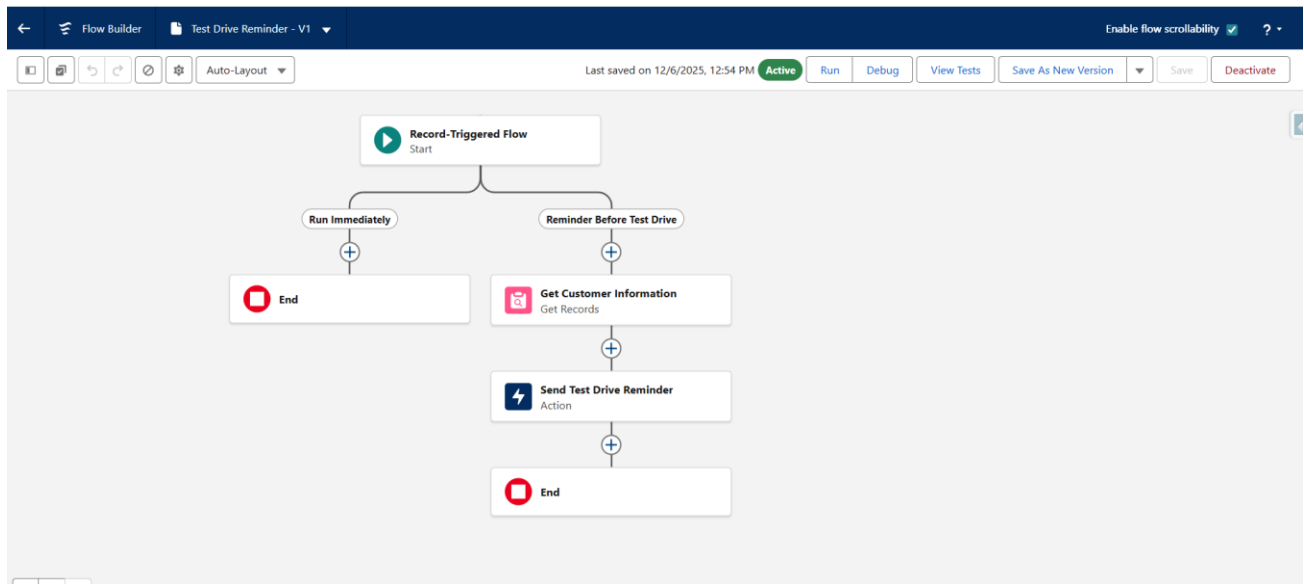


Fig7. Test Drive Reminder Flow

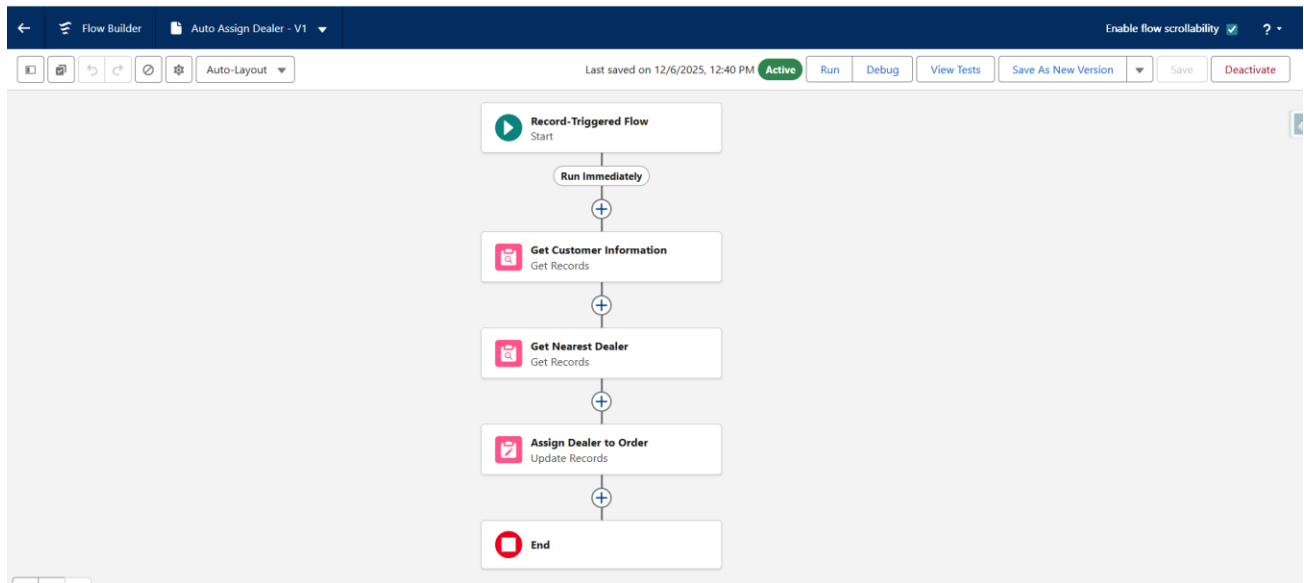


Fig8. Auto Assign Dealer Flow

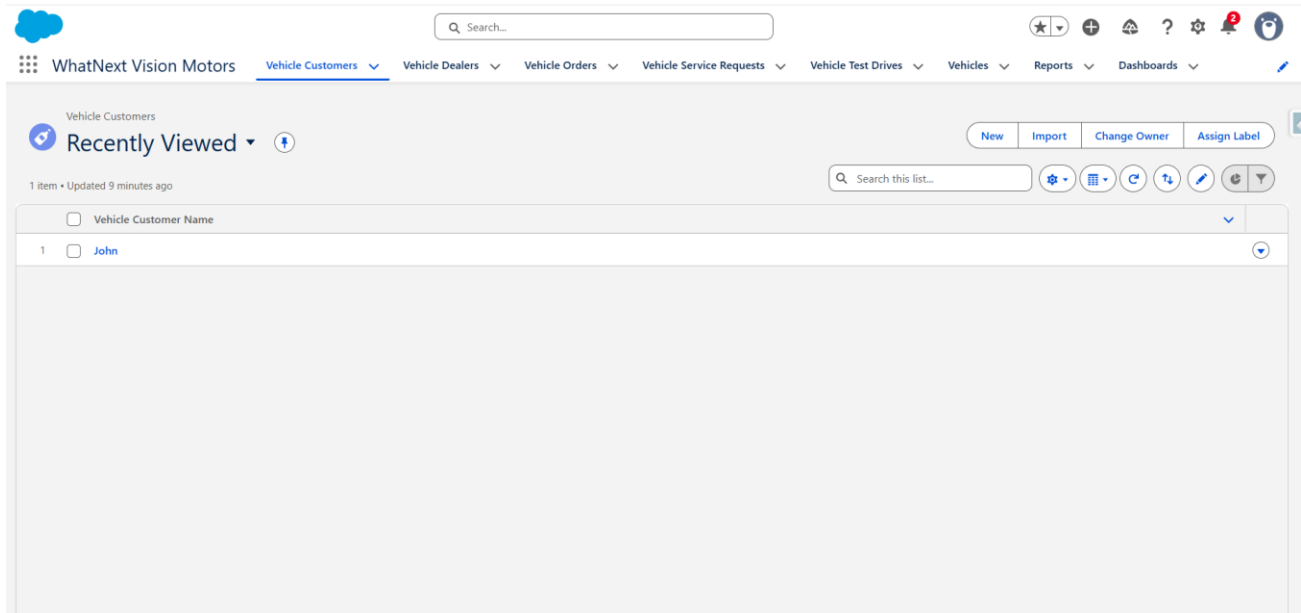


Fig9. Whatnext Vision Motors WebApp

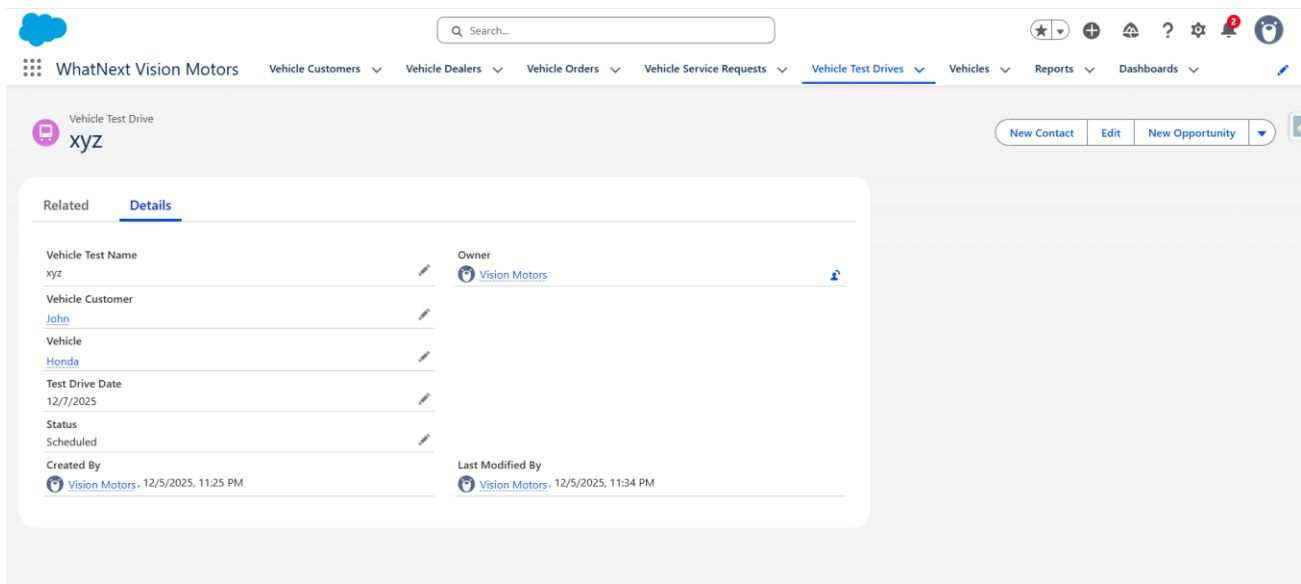


Fig10. Test Drive Application

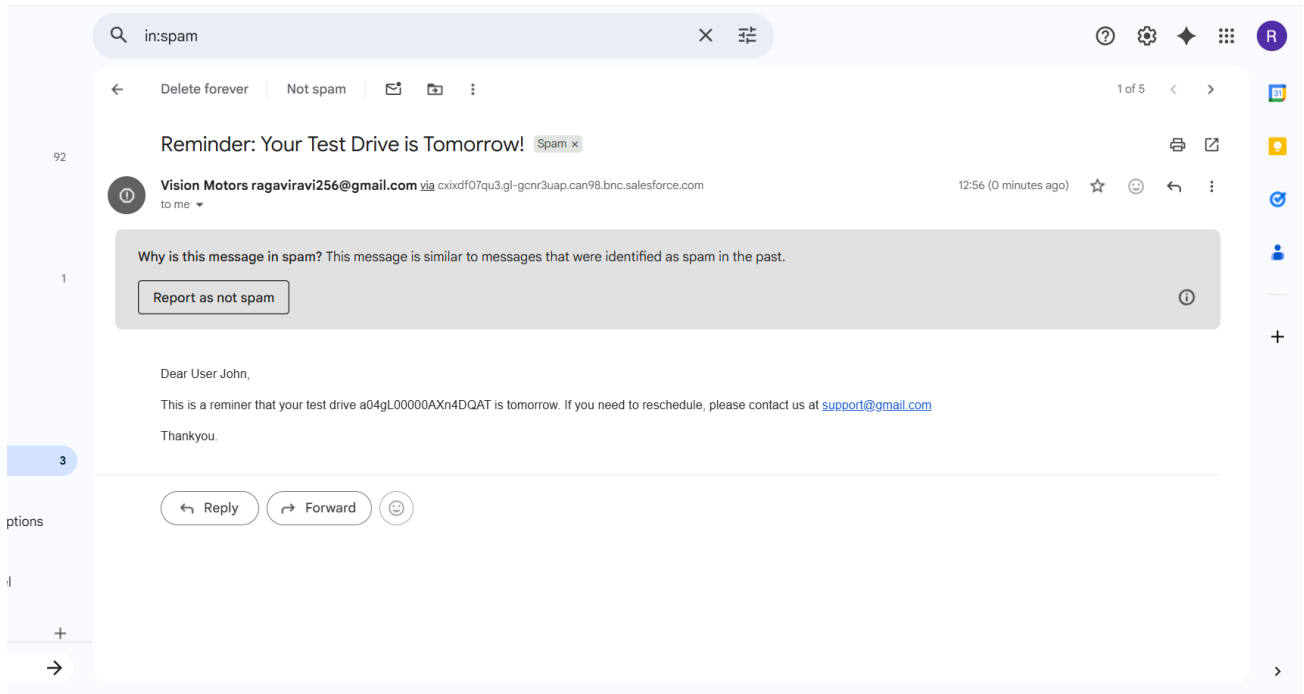


Fig11. Test Drive Email

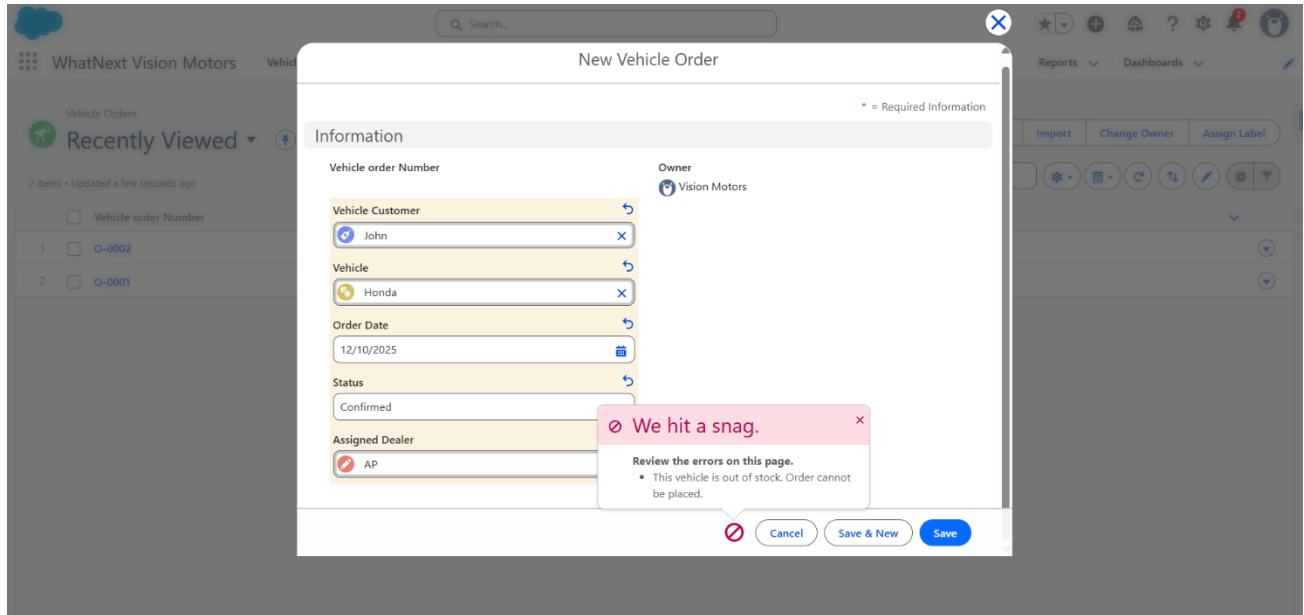


Fig12. Vehicle Order Stock Check

CONCLUSION

The Salesforce CRM implementation for **WhatsNext Vision Motors** has successfully modernized the company's vehicle ordering and inventory management processes. By automating dealer assignment, validating stock availability before order placement, and streamlining communication through scheduled flows and email alerts, the project has significantly enhanced both operational efficiency and customer satisfaction.

The use of trigger handlers, batch Apex, and modular automation flows ensures the system is scalable, secure, and maintainable. Real-time updates, automated status tracking, and proactive stock alerts reduce manual workload and errors, allowing staff to focus on strategic tasks.

This solution not only strengthens internal workflows but also improves the overall customer experience by offering faster service, greater transparency, and timely engagement. With this robust foundation in place, WhatsNext Vision Motors is well-prepared to scale its digital ecosystem and lead the way in innovative, customer-focused mobility solutions.