

# **WhatNext Vision Motors: Shaping the Future of Mobility with Innovation and Excellence**

## **Project Overview**

The WhatNext Vision Motors CRM is a Salesforce-based customer relationship management system developed to streamline the vehicle ordering process and enhance overall customer experience in the automotive industry. The project focuses on automating dealer assignment, validating stock availability, and improving operational workflows to reduce manual work and service delays. Key features of the CRM include real-time tracking of vehicle inventory, prevention of orders for out-of-stock units, automatic dealer suggestions based on customer location, and scheduled updates that modify order statuses to either Pending or Confirmed depending on stock levels. By integrating automated processes, Apex development, and batch jobs, the system delivers a more efficient and transparent ordering flow—ensuring fast service, minimized errors, and higher customer satisfaction.

## **Objectives**

The main objective of this project is to design and implement a customized Salesforce CRM solution for WhatNext Vision Motors that enhances the overall ordering workflow, centralizes vehicle and dealer information, and improves the customer experience.

By creating a well-structured data model that organizes vehicle inventory, dealer location, and customer orders in a consistent and accessible format, the CRM aims to:

1. Improve data accuracy and reliability by implementing proper validation rules, enforcing stock availability checks, and maintaining consistent records across the platform.
2. Automate critical business processes such as dealer assignment based on customer location, status updates through scheduled jobs, and restrictions on orders for out-of-stock vehicles—reducing manual work and minimizing operational errors.
3. Enhance customer experience and engagement by ensuring faster order processing, real-time visibility of availability, and transparent communication on order status, promoting trust and satisfaction.
4. Increase operational efficiency by streamlining order management, reducing administrative workload, and allowing staff to focus on decision-making and strategic tasks rather than repetitive processes.

## **Phase 1: Requirement Analysis & Planning**

Phase 1 involves gathering business requirements and establishing the overall direction for the development of the WhatNext Vision Motors CRM. This stage focuses on identifying key operational issues in the current ordering process, such as lack of

automated dealer assignment, difficulty in monitoring stock availability, and potential errors caused by manual order handling. From these insights, the project scope, data structure, and system workflow were carefully planned to ensure that the solution addresses real business needs.

Key Deliverables in Phase 1 include:

- Understanding Business Requirements

The team analyzed how the organization handles vehicle inquiries, ordering, and inventory monitoring. The goal was to solve challenges like out-of-stock ordering conflicts, inefficient dealer assignment, and delayed updates on order status.

- Defining Project Scope and Objectives

The project was defined to focus on improving customer ordering experience, automating dealer allocation, maintaining accurate vehicle stock records, and implementing scheduled processing for order status updates. System limitations, timelines, and expected outputs were also documented.

- Design of Data Model and Security Model

The data model was structured to store and relate customer profiles, vehicle availability, dealer information, and order records. Security roles and access permissions were planned to ensure controlled visibility and data privacy within the organization.

- Stakeholders Mapping

Stakeholders such as system administrators, sales agents, dealers, and customers were identified along with their roles, responsibilities, and access needs within the CRM.

- Execution Roadmap

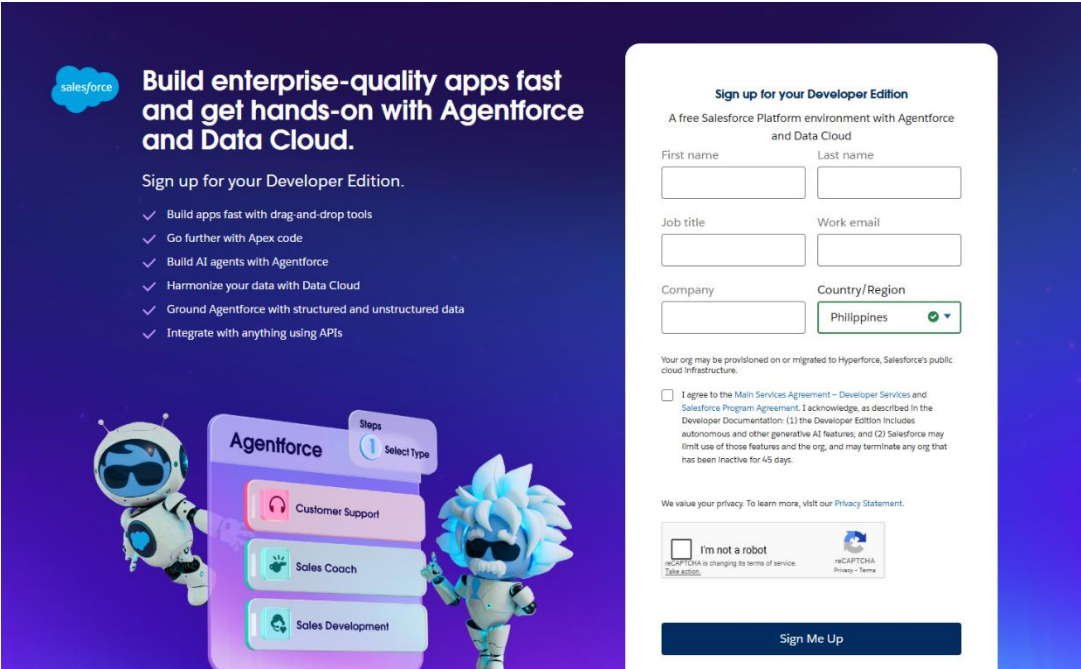
A development timeline was drafted, outlining milestones such as configuration setup, automation buildout, Apex trigger development, batch job implementation, testing phases, and deployment. This roadmap guided the step-by-step execution of the CRM.

## **Phase 2: Salesforce Development - Backend & Configurations**

### **Environment Setup & DevOps Workflow**

- Developer Org account was created using <https://developer.salesforce.com/signup>.  
The

account was created and verified. Password set and access was granted to the Salesforce Setup page.



Customization of Objects, Fields, Validation Rules, Automation

The following custom objects were created:

- 1. **Vehicle** - Stores vehicle details name, vehicle model, stock quantity, price, vehicle dealer and status.
- 2. **Vehicle Dealer** - Stores dealer info such as name, location, phone and email address.
- 3. **Vehicle Customer** - Stores customer details such as name, email address, phone, address, preferred vehicle type.
- 4. **Vehicle Order** - Stores vehicle purchases details such as customer, vehicle, order date, status and assigned dealer.
- 5. **Vehicle Test Drive** – Tracks and stores test drive bookings.
- 6. **Vehicle Service Request** – Tracks and stores vehicle servicing requests.

Table 1: Custom Object and their Key fields

Object Name	Key Fields
Vehicle	Name, Vehicle Model, Stock Quantity, Price, Vehicle Dealer Status.
Vehicle Dealer	Name, Location, Phone, Email Address
Vehicle Customer	Name, Email Address, Phone,

	Address, Preferred Vehicle Type
Vehicle Order	Customer Name, Vehicle, Order Date, Status, Assigned Dealer
Vehicle Test Drive	Test Drive Name, Customer Name, Vehicle, Test Drive Date, Status
Vehicle Service Request	Service Request Name, Customer. Service Date, Issue Description, Status

Validation Rules

- Out-of-Stock Order Validation – it blocks order creation if the chosen vehicle has zero stock.

Automation (Flows)

1. Auto Assign Dealer Flow - Automatically assign the nearest dealer to a customer's vehicle order based on the customer’s address without manual input.

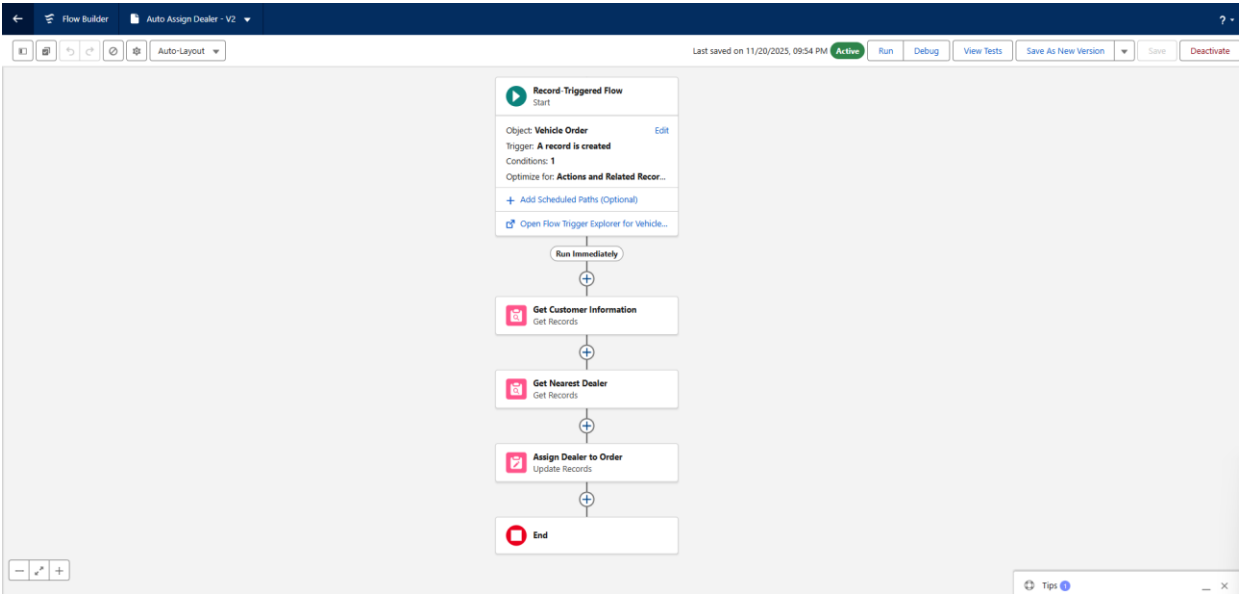


Fig.2. Auto Assign Dealer Flow

2. Test Drive Reminder Flow – it sends a reminder email to the customer about their scheduled test drive.

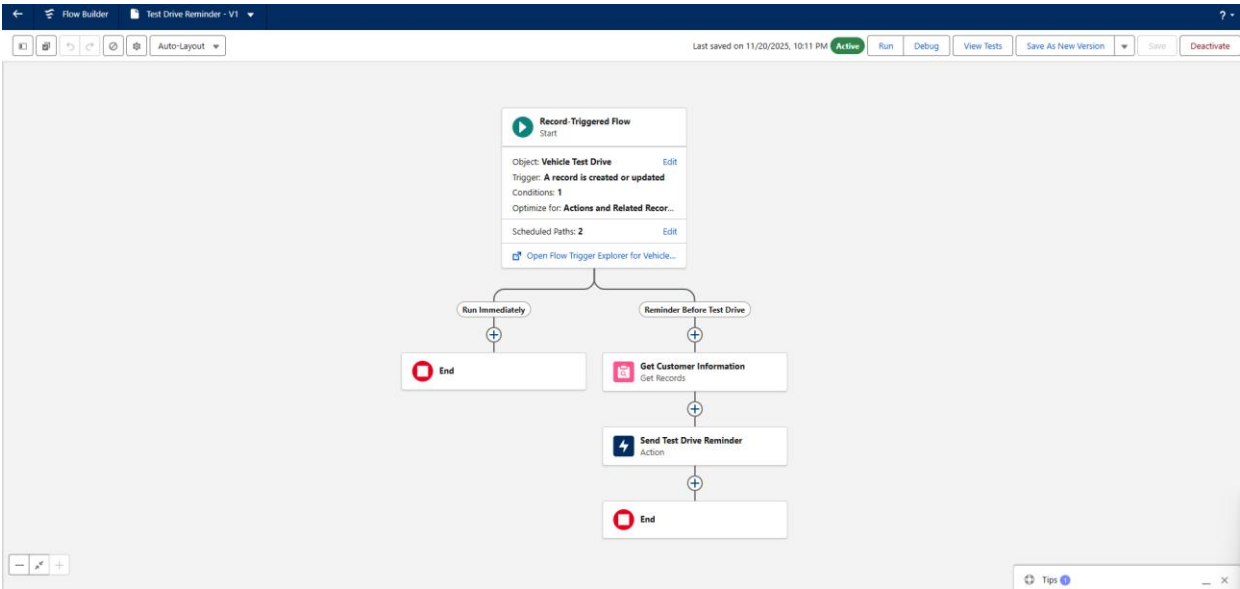


Fig.3.Test Drive Reminder Flow

Apex Classes and Triggers

Apex Classes:

- VehicleOrderBatch – this code checks if the stock is available for each pending order. If the stock is available, it will reduce the inventory count of the vehicle and updates both the order and vehicle records.
- VehicleOrderBatchScheduler - this code schedules the batch job to run daily at 12pm.
- VehicleOrderTriggerHandler - this code stops the order from continuing if the vehicle is out of stock and deducts inventory when the order is confirmed.

Apex Classes

Apex Code is an object oriented programming language that allows developers to develop on-demand business applications on the Lightning Platform.

Percent of Apex Used: 0.09%

You are currently using 5,270 characters of Apex Code (excluding comments and @isTest annotated classes) in your organization, out of an allowed limit of 6,000,000 characters. Note that the amount in use includes both Apex Classes and Triggers defined in your organization.

Estimate your organization's code coverage

Compile all classes

View: All Create New View

Action	Name	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	VehicleOrderBatch		65.0	Active	2,010	Scharitze Barqueros	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	VehicleOrderBatchScheduler		65.0	Active	230	Scharitze Barqueros	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   <a href="#">Security</a>	VehicleOrderTriggerHandler		65.0	Active	2,775	Scharitze Barqueros	<input type="checkbox"/>

Fig.4.Apex Classes

Apex Triggers:

- VehicleOrderTrigger - When a Vehicle Order record is inserted or updated, this trigger is triggered. It transfers all trigger context variables to the VehicleOrderTriggerHandler, which handles inventory updates and stock checking,

SETUP Apex Triggers

Apex Triggers

This page allows you to view and modify all the triggers in your organization. To create a new trigger, navigate to the appropriate sObject triggers page.

Percent of Apex Used: 0.09%

You are currently using 5,270 characters of Apex Code (excluding comments and @isTest annotated classes) in your organization, out of an allowed limit of 6,000,000 characters. Note that the amount in use includes both Apex Classes and Triggers defined in your organization.

Compile all triggers

View: All Create New View

Action	Name	Namespace Prefix	sObject Type	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
<a href="#">Edit</a>   <a href="#">Del</a>	VehicleOrderTrigger		Vehicle_Order	65.0	Active	255	Scharitze Barqueros	<input type="checkbox"/>

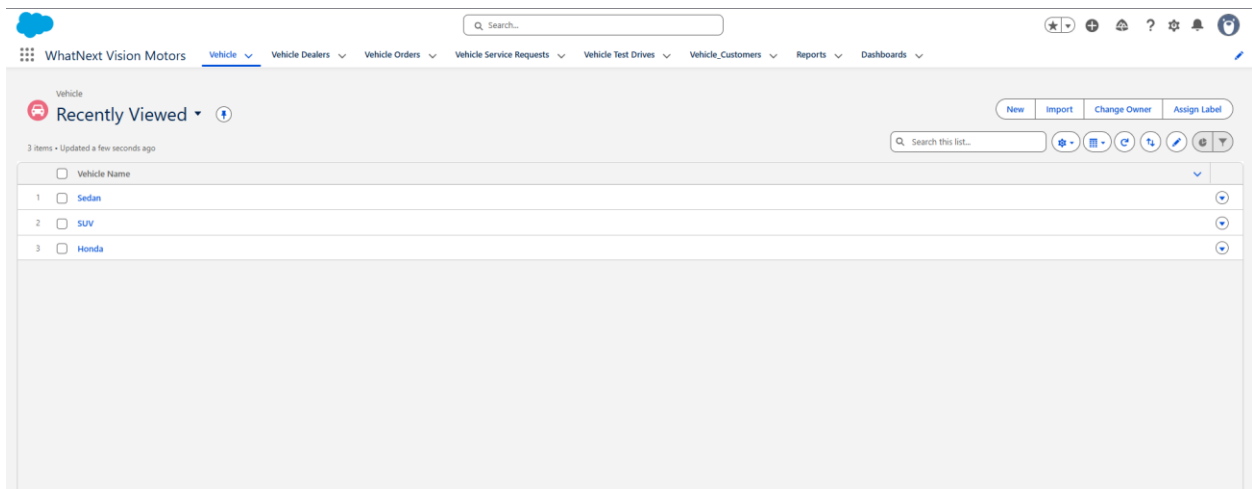
rather than having logic of its own.

*Fig.5.Apex Triggers*

### Phase 3: UI/UX Development & Customization

## Lightning App

The WhatsNext Vision Motors App is created on the App Manager to provide a simplified and easy to use interface, enhancing the customer ordering experience and allowing users to efficiently manage vehicle orders, customer information, and dealer assignments.



*Fig.6. WhatsNext Vision Motors App*

## Page Layouts, Dynamic Forms

To improve usability and streamline data entry, the page layouts for Vehicle Orders, Customers, and Vehicles were customized. Dynamic Forms were implemented to display only relevant fields based on the context of each record, ensuring that users see the right information at the right time. The screenshots below illustrate the layout structure and how the dynamic fields appear during record creation and updates.

- **Vehicle**

Vehicle Detail

Standard Buttons

EditDeleteCloneChange OwnerChange Record TypePrintable ViewSharingShare

Custom Buttons

Information (Header visible on edit only)

\* ● Vehicle NameSample TextOwnerSample Text

Vehicle ModelSample Text

Stock Quantity75,240

Price\$123.45

Vehicle DealerSample Text

StatusSample Text

Fig.7. Vehicle Detail Page Layout

New Vehicle

\* = Required Information

Information

\* Vehicle Name

Vehicle Model

--None--

Stock Quantity

Price

Vehicle Dealer

Search Vehicle Dealers...

Status

--None--

Owner

Scharizze Barqueros

Cancel

Save & New

Save

Fig.8. Form to add another vehicle

• Vehicle Dealers

Vehicle Dealer Detail

Standard Buttons

Edit

Delete

Clone

Change Owner

Change Record Type

Printable View

Sharing

Sharing Hierarchy

Information (Header visible on edit only)

\* Vehicle Dealer Name

Sample Text

Dealer Location\_

Sample Text

Dealer Code

GEN-2004-001234

Phone

1-415-555-1212

Email

sarah.sample@company.com

Owner

Sample Text

Fig.9. Vehicle Dealers Detail Page Layout

New Vehicle Dealer

\* = Required Information

Information

\* Vehicle Dealer Name

Owner

Scharizze Barqueros

Dealer Location\_

Dealer Code

Phone

Email

Cancel

Save & New

Save

Fig.10. Form to add new dealers

• Vehicle Orders

Vehicle Order Detail

Standard Buttons

Edit

Delete

Clone

Change Owner

Change Record Type

Printable View

Sharing

Sharing Hierarchy

Information (Header visible on edit only)

Vehicle Order Number

GEN-2004-001234

Vehicle\_Customer

Sample Text

Vehicle

Sample Text

Order Date

11/28/2025

Status

Sample Text

Assigned Dealer

Sample Text

Owner

Sample Text

Fig.11. Vehicle Orders Detail Page Layout

New Vehicle Order

\* = Required Information

Information

Vehicle Order Number

Owner

Scharizze Barqueros

Vehicle\_Customer

Search Vehicle\_Customers...

Vehicle

Search Vehicle...

Order Date

Status

--None--

Assigned Dealer

Search Vehicle Dealers...

Cancel

Save & New

Save



Fig.12. Form to add new vehicle order

- Vehicle Service Requests

Vehicle Service Request Detail

Standard Buttons

Edit

Delete

Clone

Change Owner

Change Record Type

Printable View

Sharing

Sharing Hierarchy

Information (Header visible on edit only)

★

●

Vehicle Service Request Name

Sample Text

Vehicle\_Customer

Sample Text

Vehicle

Sample Text

Service Date

11/28/2025

Issue Description

Sample Text

Status

Sample Text

Owner

Sample Text

Fig.13. Vehicle Service Requests Detail Page Layout

New Vehicle Service Request

\* = Required Information

Information

\* Vehicle Service Request Name

Vehicle\_Customer

Search Vehicle\_Customers...

Vehicle

Search Vehicle...

Service Date

Issue Description

Status

--None--

Owner

Scharizze Barqueros

Cancel

Save & New

Save

Fig.14. Form to add new vehicle service request

- Vehicle Test Drivers

Vehicle Test Drive Detail

Standard Buttons

Edit

Delete

Clone

Change Owner

Change Record Type

Printable View

Sharing

Sharing Hierarchy

Information (Header visible on edit only)

★

●

Vehicle Test\_Drive Name

Sample Text

Vehicle\_Customer

Sample Text

Vehicle

Sample Text

Test Drive Date

11/28/2025

Status

Sample Text

Owner

Sample Text

Fig.15. Vehicle Test Drivers Detail Page Layout

New Vehicle Test Drive

\* = Required Information

Information

\* Vehicle Test\_Drive Name

Owner

Scharizze Barqueros

Vehicle\_Customer

Search Vehicle\_Customers...

Vehicle

Search Vehicle...

Test Drive Date

Status

--None--

Cancel

Save & New

Save

Fig.16. Form to add new vehicle test drive

• Vehicle Customers

Vehicle Customer Detail

Standard Buttons

EditDeleteCloneChange OwnerChange Record TypePrintable ViewSharingSharing Hierarchy

Information (Header visible on edit only)

\* Vehicle\_Customer Name

Sample Text

Owner

Sample Text

Email

sarah.sample@company.com

Phone

1-415-555-1212

Address

Sample Text

Preferred Vehicle Type

Sample Text

Fig.17. Vehicle Customers Detail Page Layout

New Vehicle\_Customer

\* = Required Information

Information

\* Vehicle\_Customer Name

Owner

Scharizze Barqueros

Email

Phone

Address

Preferred Vehicle Type

--None--

Cancel

Save & New

Save

Fig.18. Form to add new customer

Reports & Dashboard

Reports and dashboards were created to provide real-time insights into vehicle availability, order status, and dealer performance. These visual tools help users monitor key metrics, track operational efficiency, and make informed decisions. The screenshots below show the generated reports and dashboard components used to support data-driven management within the system.

• Reports

WhatNext Vision Motors

Q Search...

Vehicle

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Vehicle\_Customers

Reports

Dashboards

Report: Vehicle Orders with Vehicle

New Vehicle Orders with Vehicle Report

Field Editing Enabled

Add Chart

Edit

Total Records: 13

	Vehicle Order: Vehicle Order Number	Vehicle: Vehicle Name
1	O-0001	Honda
2	O-0002	Honda
3	O-0008	Sedan
4	O-0007	Sedan
5	O-0009	Sedan
6	O-0006	Sedan
7	O-0005	Sedan
8	O-0004	Sedan
9	O-0013	SUV
10	O-0011	SUV
11	O-0010	SUV
12	O-0012	SUV
13	O-0003	SUV

Fig.19. Vehicle Orders with Vehicle Report

• Dashboards

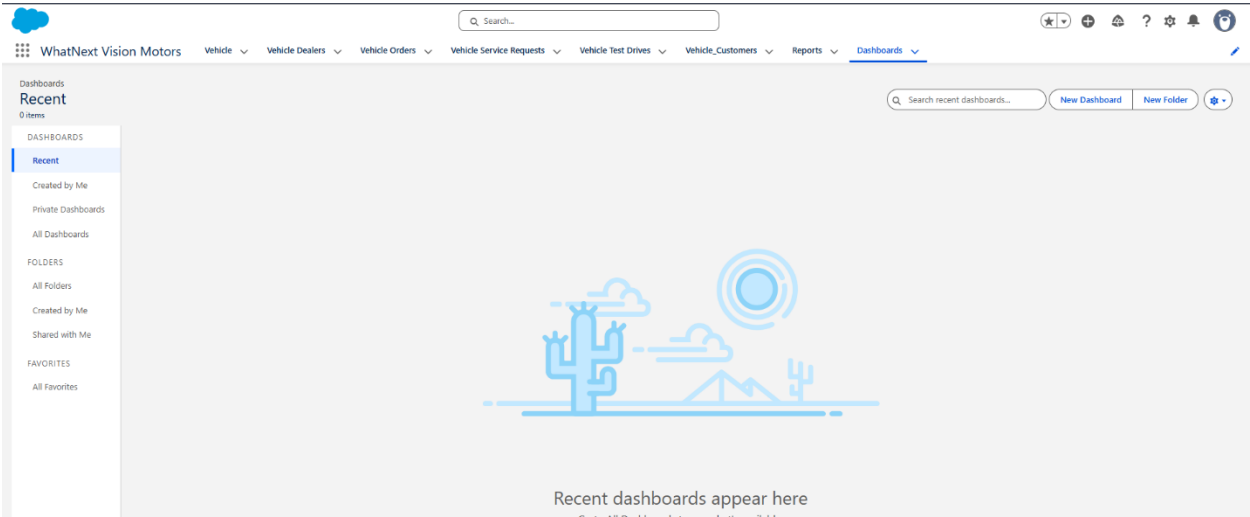


Fig.20. Dashboards

Lightning Pages

- Vehicle

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

★

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⚙️

🔔

👤

Vehicle

Recently Viewed

NewImportChange OwnerAssign Label

3 items • Updated a few seconds ago

Q Search this list...

☐

Vehicle Name

1

☐

Sedan

2

☐

SUV

3

☐

Honda

- Vehicle Customer

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

★

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⚙️

🔔

👤

Vehicle\_Customers

Recently Viewed

NewImportChange OwnerAssign Label

14 items • Updated a few seconds ago

Q Search this list...

☐

Vehicle\_Customer Name

1

☐

cha

2

☐

Amore

3

☐

Axl

4

☐

Mark

5

☐

Riz

6

☐

Valerie

7

☐

Fab

8

☐

Rue

9

☐

Scha

10

☐

Val

11

☐

May

12

☐

Charles

13

☐

Miles

14

☐

John

- Vehicle Dealers

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

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⚙️

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👤

Vehicle Dealers

Recently Viewed

NewImportChange OwnerAssign Label

3 items • Updated a few seconds ago

Q Search this list...

☐

Vehicle Dealer Name

1

☐

Ann

2

☐

TM

3

☐

Em

- Vehicle Orders

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

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Vehicle Orders

Recently Viewed

New

Import

Change Owner

Assign Label

Q Search this list...

🔍

📄

🔄

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✎

🗑️

📏

13 items • Updated a few seconds ago

	Vehicle Order Number	
1	<input type="checkbox"/> O-0013	📄
2	<input type="checkbox"/> O-0012	📄
3	<input type="checkbox"/> O-0011	📄
4	<input type="checkbox"/> O-0010	📄
5	<input type="checkbox"/> O-0009	📄
6	<input type="checkbox"/> O-0008	📄
7	<input type="checkbox"/> O-0007	📄
8	<input type="checkbox"/> O-0006	📄
9	<input type="checkbox"/> O-0005	📄
10	<input type="checkbox"/> O-0003	📄
11	<input type="checkbox"/> O-0002	📄
12	<input type="checkbox"/> O-0001	📄
13	<input type="checkbox"/> O-0004	📄

- Vehicle Service Request

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

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🔔

👤

Vehicle Service Requests

Recently Viewed

New

Import

Change Owner

Assign Label

Q Search this list...

🔍

📄

🔄

🔗

✎

🗑️

📏

1 item • Updated a few seconds ago

	Vehicle Service Request Name	
1	<input type="checkbox"/> Grand Hotels & Resorts Ltd	📄

- Vehicle Test Drive

Lightning Usage App

Lightning Usage

Vehicle

Vehicle\_Customers

Vehicle Dealers

Vehicle Orders

Vehicle Service Requests

Vehicle Test Drives

Q Search...

★

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📁

?

⚙️

🔔

👤

Vehicle Test Drives

Recently Viewed

New

Import

Change Owner

Assign Label

Q Search this list...

🔍

📄

🔄

🔗

✎

🗑️

📏

3 items • Updated a few seconds ago

	Vehicle Test_Drive Name	
1	<input type="checkbox"/> abc	📄
2	<input type="checkbox"/> 123	📄
3	<input type="checkbox"/> xyz	📄

Phase 4: Data Migration, Testing & Security

Field History Tracking

Field History Tracking was configured to monitor important changes across key objects of the WhatNext Vision Motors system. This ensures transparency, auditability, and accountability for all business-critical updates.

Purpose:

To maintain a historical record of changes made to essential fields such as vehicle availability, order status, and customer details.

Objects with Tracking Enabled:

Vehicle\_\_c – Stock Quantity, Vehicle Price

Customer\_\_c – Email, Mobile Number

Order\_\_c – Order Status, Assigned Vehicle, Dealer

## Duplicate Rules & Matching Rules

To ensure clean, consistent, and reliable customer and dealer records, Salesforce duplicate detection was implemented through Matching and Duplicate Rules.

- **Matching Rules**

Matching Rules identify similarities between new and existing records. A custom Matching Rule was created for:

**Customer\_\_c**

Based on Email and Mobile Number

**Dealer\_\_c**

Based on Dealer Name and Contact Email

- **Duplicate Rule**

Prevents duplicate customers from being created in the system

## Profiles and Roles

Standard profiles such as *Standard User* and *System Administrator* were utilized to manage access levels within the system.

Role Hierarchy established:

- CEO
  - └── Sales Manager
    - └── Sales Rep

## Permission Sets:

Created an Order Management Access permission set and assigned it to users who require access to create and manage Orders and Vehicles.

## Sharing Rules

**Public Read/Write** for most custom objects

**Manual Sharing** allowed for sensitive customer records

## Apex Test Classes

Apex Test Classes were created to validate system logic, ensure reliability, and meet Salesforce's minimum 75% code coverage requirement.

## Objectives of Test Classes

- Validate triggers (VehicleOrderTrigger)
- Validate batch jobs (VehicleOrderBatch)
- Ensure no DML or logic errors occur
- Confirm automation works under real-world scenarios

## Feature Testing & Test Cases

Comprehensive testing was done for every Salesforce automation implemented within the WhatNext Vision Motors ecosystem.

### Features Tested

- Vehicle Booking Creation
- Approval Process for High-Value Orders
- Automatic Task Creation (e.g., customer follow-up tasks)
- Record-Triggered Flows
- Apex Triggers (Order validation, stock deduction)
- Batch Apex (processing pending orders)
- 

## Phase 5: Deployment, Documentation & Maintenance

The final phase of the WhatsNext Vision Motors CRM Implementation focused on deploying the developed Salesforce components into the production instance, finalizing documentation, and establishing long-term maintenance procedures to ensure system reliability and scalability.

- **Deployment Strategy**

Deployment was carried out using Salesforce Change Sets as the primary migration method. All required configurations—including custom objects, fields, flows, validation rules, Apex classes, triggers, profiles, and permission sets—were packaged in organized batches and deployed from Sandbox to Production.

Before deployment, User Acceptance Testing (UAT) was performed to ensure that automations executed correctly and business requirements were met. This strategy helped reduce deployment risks and ensured smooth transition with minimal production interruptions.

- **Maintenance & Monitoring Approach**

After the system went live, a structured maintenance plan was implemented to ensure continuous performance and operational stability. Routine monitoring activities include:

- Reviewing flow and automation logs for errors
- Maintaining objects, layouts, and fields based on evolving requirements
- Managing user access through profiles & permission sets
- Providing user support through reported tickets and guided troubleshooting

Enhancements and fixes will first be tested in Sandbox before deployment to Production to prevent data loss or system downtime.

• **Troubleshooting Documentation**

A troubleshooting reference was created to enable rapid response to system issues and reduce operational delays. It includes:

- A list of common user issues and recommended solutions
- Guidelines for modifying layouts, permissions, and validation rules
- Steps to debug Flow, Batch Jobs, and Apex Trigger errors using Debug Logs
- Verification procedures for new Change Sets prior to deployment

This ensures the system remains stable and allows administrators to resolve issues efficiently.

• **Documentation Overview**

All key system components were documented for easy reference and future development. The documentation includes:

- Custom objects and fields with their functional purposes
- Record-triggered flows and automation processes
- Validation rules implemented to maintain data integrity
- Profile and permission-set configuration for controlled system access

• **Testing Approach**

Multiple testing methods were performed prior to deployment:

Testing Type	Purpose
Apex Test Classes	Validate trigger logic & automation behavior
Flow Testing	Confirm correct dealer assignment & order validation
UAT (User Acceptance Testing)	Real-scenario order creation and approval testing
Reports & Dashboards Validation	Ensure accuracy of inventory and order visibility

Thorough testing ensured smooth functionality of automation, accurate order processing, and reliability of the stock monitoring system.

This ensured that all automation behaved as expected before production deployment.

**Future Enhancements**

To expand CRM capability and customer experience, the following improvements are proposed:

- AI-Based Vehicle Recommendation Engine for smarter customer matching
- Chatbot Support Integration for order tracking and inquiries
- Advanced BI Dashboards for real-time metrics and business analysis
- SMS/Email Alerts for order updates, stock changes, and schedule reminders



These enhancements would increase automation, user engagement, and operational intelligence.

## **Conclusion**

The WhatsNext Vision Motors Salesforce CRM successfully delivered an integrated solution for managing customers, vehicle inventory, orders, and dealer assignments. Automation reduced manual workload, ensured stock accuracy, and enhanced overall customer experience.

This system lays a strong foundation for future expansion—scalable, efficient, and aligned with the company’s vision of digital transformation. With planned enhancements and continuous monitoring, WhatsNext Vision Motors is now equipped for long-term growth and customer-centric innovation.