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

Enhancing Customer Experience and Operational Efficiency in Automotive Retail

This project demonstrates a Salesforce-powered digital transformation for WhatNext Vision Motors, a leader in automotive innovation. The solution simplifies business processes, automates tasks, and provides a smooth, connected experience for customers—from their first inquiry to final vehicle delivery.

## Project Overview

WhatNext Vision Motors leverages Salesforce to:

- Centralize and manage vehicle, dealer, and customer data
- Automate workflows for order processing, dealer assignment, and stock validation
- Enable real-time insights for sales, service, and inventory teams
- Enhance customer experience with proactive communication and transparency

The goal: A frictionless, efficient, and customer-centric automotive retail experience.

## Objectives

The main objective of building this CRM is to provide WhatNext Vision Motors with a unified platform for managing all aspects of automotive retail—from customer inquiries to vehicle delivery and after-sales service. By automating key business processes and centralizing data, the CRM aims to improve customer satisfaction, reduce manual errors, and enable data-driven decision-making. This leads to better customer management, streamlined bookings, and increased operational efficiency, directly contributing to business growth and customer loyalty.

## Phase 1: Requirement Analysis & Planning

➢ Understanding Business Requirements: The CRM addresses the need for efficient management of vehicle inventory, dealer assignments, customer data, and service requests. It solves problems such as manual order processing, lack of real-time stock visibility, and fragmented customer communication.

➢ Defining Project Scope and Objectives: Centralize all vehicle, dealer, and customer information; Automate dealer assignment and order processing; Implement real-time stock validation; Enable proactive customer notifications; Provide robust reporting and analytics
➢ Design Data Model and Security Model: Custom objects for vehicles, dealers, customers, orders, test drives, and service requests; Field-level security, profiles, roles, and sharing rules to ensure data privacy and compliance.

# Phase 2: Salesforce Development – Backend & Configurations

➢ Setup environment & DevOps workflow: Salesforce sandboxes, version control, and deployment pipelines established for safe development and release.
➢ Customization of Objects, Fields, Validation Rules, Automation: Custom objects and fields as per the data model; Validation rules to ensure data integrity; Automation using Workflow Rules, Process Builder, Flows, and Approval Processes
➢ Apex Classes, Triggers, Asynchronous Apex: Apex triggers for stock validation and dealer assignment; Batch Apex for nightly bulk updates; Asynchronous Apex for handling large data volumes efficiently

# Phase 3: UI/UX Development & Customization

➢ Lightning App setup through App Manager: Custom Lightning App for easy navigation and user experience
➢ Page Layouts, Dynamic Forms: Tailored layouts for each object to display relevant information
➢ User Management: Profiles, roles, and permission sets for different user types
➢ Reports and Dashboards: Real-time insights into sales, inventory, and service metrics
➢ LWC Development (if any): Custom Lightning Web Components for enhanced interactivity (bonus)
➢ Lightning Pages: Modular pages for streamlined workflows.

# Phase 4: Data Migration, Testing & Security

➢ Data Loading Process: Data Import Wizard and Data Loader used for migrating legacy data
➢ Field History Tracking, Duplicate Rules, Matching Rules: Enabled for key objects to ensure data quality and auditability
➢ Profiles, Roles, Role Hierarchy, Permission Sets, Sharing Rules: Implemented to control access and maintain security

➢ Creation of Test Classes: Apex test classes for all triggers and classes to ensure code quality
➢ Testing Approach: Test cases prepared for all features (booking creation, approval process, task automation, flows, triggers, etc.); Input and output screenshots documented for each scenario.

## Phase 5: Deployment, Documentation & Maintenance

➢ Deployment Strategy: Change Sets used for moving components from sandbox to production; version control for tracking changes
➢ Maintenance & Monitoring: Regular monitoring of system health, scheduled data backups, and user feedback collection
➢ Troubleshooting Approach: Documented common issues and resolution steps for quick support.

## Data Model Highlights

Custom Objects:

| OBJECT NAME | PURPOSE | RELATIONSHIPS |
|---|---|---|
| VEHICLE__C | Stores vehicle details | Related to Dealer & Orders |
| VEHICLE_DEALER__C | Stores dealer info | Related to Orders |
| VEHICLE_CUSTOMER__C | Stores customer details | Related to Orders & Test Drives |
| VEHICLE_ORDER__C | Tracks vehicle purchases | Related to Customer & Vehicle |
| VEHICLE_TEST_DRIVE__C | Tracks test drive bookings | Related to Customer & Vehicle |
| VEHICLE_SERVICE_REQUEST__C | Tracks service requests | Related to Customer & Vehicle |

## Fields & Relationships

1. Vehicle__c (Custom Object)

Vehicle_Name__c (Text)

Vehicle_Model__c (Picklist: Sedan, SUV, EV, etc.)

Stock_Quantity__c (Number)

Price__c (Currency)

Dealer__c (Lookup to Dealer__c)

Status__c (Picklist: Available, Out of Stock, Discontinued)

2. Vehicle_ Dealer__c (Custom Object)

Dealer_Name__c (Text)

Dealer_Location__c (Text)

Dealer_Code__c (Auto Number)

Phone__c (Phone)

Email__c (Email)

3. Vehicle_Order__c (Custom Object)

Customer__c (Lookup to Customer__c)

Vehicle__c (Lookup to Vehicle__c)

Order_Date__c (Date)

Status__c (Picklist: Pending, Confirmed, Delivered, Canceled)

4. Vehicle_Customer__c (Custom Object)

Customer_Name__c (Text)

Email__c (Email)

Phone__c (Phone)

Address__c (Text)

Preferred_Vehicle_Type__c (Picklist: Sedan, SUV, EV, etc.)

5. Vehicle_Test_Drive__c (Custom Object)

Customer__c (Lookup to Customer__c)

Vehicle__c (Lookup to Vehicle__c)

Test_Drive_Date__c (Date)

Status__c (Picklist: Scheduled, Completed, Canceled)

6. Vehicle_Service_Request__c (Custom Object)

Customer__c (Lookup to Customer__c)

Vehicle__c (Lookup to Vehicle__c)

Service_Date__c (Date)

Issue_Description__c (Text)

Status__c (Picklist: Requested, In Progress, Completed)

## Technologies & Tools Used

| TOOL / FEATURE | PURPOSE |
|---|---|
| SALESFORCE LIGHTNING APP | Custom UI and layout creation |
| RECORD-TRIGGERED FLOWS | Real-time automation (dealer assignment, emails) |
| APEX TRIGGERS | Custom logic (stock validation, assignment) |
| BATCH APEX | Nightly bulk order/status updates |
| VALIDATION RULES | Data integrity at the UI level |
| SCHEDULED APEX | Automate nightly updates for inventory/orders |

## Testing Approach

➢ Test cases were created for all major features, including booking creation, approval processes, automatic task creation, flows, and triggers.
➢ Apex test classes ensure code coverage and reliability.
➢ Manual and automated testing performed for flows, reports, and dashboards.

# Screenshots

- Folder Structure for Screenshots:

WhatNext Vision Motors/

├── Data Management-Objects/

├── Data Management-Tabs/

├── Data Management-App Manager/

├── Data Management-Fields/

├── Automation-Flows/

└── Apex and Batch Class/

  ➢ For each Salesforce feature (objects, flows, validation rules, etc.), relevant screenshots are provided in the respective folders.
  ➢ Each automation (validation rule, approval process, flow) is briefly described in the documentation.

# Security

  ➢ Profiles, roles, role hierarchy, permission sets, and sharing rules are implemented to ensure data security and proper access control.
  ➢ Field history tracking, duplicate rules, and matching rules are enabled for data quality.

# Future Enhancements

  ➢ Integration of AI-powered chatbots for customer support
  ➢ Predictive analytics for sales and inventory management
  ➢ Enhanced mobile experience for field agents.

# What I Learned

  ➢ Designing scalable, normalized data models in Salesforce
  ➢ Automating business logic with Flows and Apex
  ➢ Ensuring data consistency with validation rules and error handling
  ➢ Building modular Lightning apps for streamlined user experience

# Project Links

- **<u>Demo Video</u>**: Uploaded the link at the skill wallet Salesforce.

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# Conclusion

The WhatNext Vision Motors CRM project successfully demonstrates how Salesforce can be leveraged to transform automotive retail operations. By automating workflows, centralizing data, and enhancing user experience, the solution delivers significant business value and sets the foundation for future innovation.