

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

Enhancing Customer Engagement & Operational Efficiency in Modern Auto Retail

This initiative highlights the transformation journey of WhatsNext Vision Motors through the integration of Salesforce. As a trailblazer in automotive innovation, the company utilizes this CRM-driven solution to simplify internal operations, automate essential tasks, and ensure a smooth end-to-end customer experience—from initial inquiry to final vehicle delivery.

Project Overview

With Salesforce at its core, WhatsNext Vision Motors is able to:

- Consolidate critical data across vehicles, dealerships, and customers in one centralized system
- Streamline key workflows including order handling, dealer allocation, and inventory checks
- Offer real-time visibility for sales, service, and inventory departments
- Foster a transparent and engaging experience for customers through timely updates and clear communication

Ultimate Aim: To create a seamless, agile, and customer-first automotive retail ecosystem.

Objectives

The primary goal behind developing this CRM system is to equip WhatsNext Vision Motors with an integrated solution to oversee the complete automotive retail cycle—from handling customer queries to vehicle delivery and post-sale services. By digitizing major business processes and consolidating information, the CRM is designed to:

- Boost customer satisfaction
- Minimize manual intervention and related errors
- Promote decisions backed by real-time data

This directly translates into more efficient customer engagement, simplified booking processes, and enhanced business growth and retention.

Phase 1: Requirement Gathering & Strategic Planning

- **Understanding Business Needs:**

The CRM initiative was aimed at addressing inefficiencies in handling vehicle stock, customer records, dealer coordination, and service interactions. It resolves issues like manual order handling, absence of real-time inventory data, and inconsistent communication across departments.

- **Outlining Scope and Goals:**

The project aimed to unify all relevant data—vehicles, dealers, and clients—into a single platform. It included automating tasks like assigning dealers and processing orders, validating stock in real time, sending automated updates to customers, and generating detailed reports and analytics.

- **Designing the Data and Security Architecture:**

The solution included tailored Salesforce objects for managing cars, dealers, customers, bookings, test drives, and service requests. Field-level access, user profiles, roles, and sharing configurations were implemented to protect data and ensure compliance.

Phase 2: Backend Development & Platform Setup

- **Establishing Development Framework:**

Salesforce sandbox environments were configured with integrated version control systems and deployment pipelines to enable secure development and release cycles.

- **Custom Configuration & Business Logic Automation:**

The platform was enhanced with custom objects and fields based on the defined data model. Validation rules maintained data accuracy, while workflows, process builders, flows, and approval processes automated various operations.

- **Coding with Apex & Asynchronous Processing:**

Apex code, including triggers for assigning dealers and validating stock, was created. Batch Apex handled large-scale nightly updates, and asynchronous methods ensured smooth processing of high data volumes.

Phase 3: Frontend Customization & User Experience Design

- **Lightning Application Configuration:**
A tailored Lightning App was created via App Manager to offer a smooth, user-friendly interface.
- **Dynamic Interface Layouts:**
Each object was assigned specific page layouts and dynamic forms to highlight relevant fields and streamline data input.
- **Role-Based User Access:**
Profiles, roles, and permission sets were defined to reflect different user responsibilities and ensure proper access control.
- **Reporting & Insights:**
Custom dashboards and real-time reports offered valuable insights into key operations like sales, inventory levels, and service requests.
- **(Optional) Lightning Web Components:**
Interactive Lightning Web Components (LWCs) were developed to enhance user engagement and functionality.
- **Lightning Page Configuration:**
Modular Lightning Pages were created to support intuitive, task-oriented workflows.

Phase 4: Data Migration, Quality Assurance & Security Controls

- **Legacy Data Import:**
Tools like Data Loader and Data Import Wizard were used to transition historical data into the new system.
- **Data Integrity Measures:**
Field history tracking, duplicate detection, and matching rules ensured the accuracy and traceability of critical records.
- **Security Framework:**
A comprehensive access model, including roles, role hierarchies, profiles,

permission sets, and sharing rules, safeguarded data integrity.

- **Apex Testing Infrastructure:**

Custom test classes were developed to validate the logic behind triggers and classes, promoting robust code quality.

- **System Testing Approach:**

Thorough test cases were created to evaluate each module (booking, approvals, automation, flows, etc.). Screenshots of expected versus actual results were documented for every scenario.

Phase 5: Release, Documentation & Post-Launch Support

- **Deployment Mechanism:**

Components were migrated from development to production using Change Sets, with version control tracking all modifications.

- **Ongoing Support & Feedback Loops:**

System health was continuously monitored, periodic backups were scheduled, and user feedback was actively gathered for enhancements.

- **Issue Resolution Protocol:**

A support document was prepared to outline common system issues and their resolutions, enabling quick troubleshooting by the support team.

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

- 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

- Dealer_Name_c (Text)

- Dealer_Location__c (Text)
- Dealer_Code__c (Auto Number)
- Phone__c (Phone)
- Email__c (Email)

3.Vehicle_Order__c

- 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

- 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

- 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

- 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:

WhatsNext 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 Measures

To ensure robust data protection and proper access control across the CRM:

- A structured access system was enforced using profiles, roles, role hierarchies, permission sets, and sharing rules.
- Data quality and reliability were maintained through field history tracking, duplicate detection mechanisms, and matching rules.

Planned Future Enhancements

The CRM system lays the foundation for further advancements, with potential additions including:

- Smart AI-based chatbots to assist customers in real-time
- Predictive insights for optimizing sales strategies and inventory planning
- A refined mobile interface to support field agents with on-the-go capabilities

Key Learnings

Throughout the development of this project, the following skills and insights were gained:

- Crafting scalable and normalized data architectures within the Salesforce ecosystem
 - Automating processes using declarative tools (Flows) and programmatic logic (Apex)
 - Applying validation rules and error handling to ensure data integrity
 - Designing modular and intuitive Lightning applications for improved user experience
 - Leveraging batch processing and asynchronous Apex to handle large datasets efficiently
-

Author

Rudra Bhardwaj

Graphic Era Deemed To Be University

B.Tech in Computer Science with Specialization in Artificial Intelligence Email:

rudrabhardwaj1976@gmail.com

Project Links

- GitHub Repository: <https://github.com/sidhantkaistha2004/Salesforce---WhatNext-Vision-Motors-Shaping-the-Future-of-Mobility-with-Innovation-and-Excellence>

- Demo Video: Uploaded the link at the skillwallet Salesforce.

License

This project is developed for educational and portfolio purposes. Feel free to fork, adapt, or reference it for learning.

Conclusion

The WhatsNext 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.

