# Phase 3: Data Modeling & Object Design

## 1. Introduction

Phase 3 of the WhatNext Vision Motors Salesforce CRM implementation focused on building the data model, which is the backbone of the CRM system. This phase involved configuring standard and custom objects, creating fields, record types, page layouts, compact layouts, and designing relationships between objects using Schema Builder. Advanced concepts such as junction objects, external objects, and relationship types were also applied to ensure scalability and accurate business mapping.  
  
By carefully designing the schema, the system ensures data integrity, traceability, and alignment with real-world automotive dealership processes.

## 2. Standard & Custom Objects

### Standard Objects Used

- Account – Represents corporate customers and individual buyers.  
- Contact – Stores details of customers linked to accounts.  
- Opportunity – Tracks sales deals and negotiations.  
- Case – Used for customer service and issue tracking.  
- User – Represents internal Salesforce users (Sales, Dealer, Service).

### Custom Objects Created

- Vehicle\_\_c – Stores vehicle details (type, price, availability).  
- Dealer\_\_c – Represents authorized dealers with stock information.  
- Vehicle\_Order\_\_c – Manages vehicle purchase orders.  
- Vehicle\_Test\_Drive\_\_c – Tracks test drive requests, scheduling, and completion.  
- Vehicle\_Service\_Request\_\_c – Captures service requests (maintenance, repairs).

## 3. Fields

Each object was enhanced with custom fields to capture required data.  
  
Examples:  
- Vehicle\_\_c:  
 • Vehicle Type (Picklist: Car, SUV, Bike, Truck)  
 • Price (Currency)  
 • Availability (Checkbox)  
 • Dealer (Lookup to Dealer\_\_c)  
  
- Vehicle\_Order\_\_c:  
 • Order Date (Date)  
 • Order Status (Picklist: New, In Progress, Delivered, Cancelled)  
 • Customer (Lookup to Contact)  
 • Vehicle (Lookup to Vehicle\_\_c)  
  
- Vehicle\_Service\_Request\_\_c:  
 • Request Type (Picklist: Maintenance, Repair, Inquiry)  
 • Status (Picklist: Open, In Progress, Closed)  
 • Assigned Agent (Lookup to User)

## 4. Record Types

Record types were created for different business scenarios:  
- Vehicle Orders → Retail Order and Dealer Bulk Order.  
- Service Requests → Warranty Service and Paid Service.  
- Test Drives → In-Showroom and On-Road.  
  
This allowed tailored picklists, page layouts, and automation per record type.

## 5. Page Layouts

Page layouts were customized to provide user-friendly interfaces:  
- Sales reps see customer, vehicle, and order fields on one page.  
- Service agents view service request details with quick access to status updates.  
- Dealers access stock and assigned orders directly.  
  
Custom buttons (e.g., “Schedule Test Drive”) were added for quick actions.

## 6. Compact Layouts

Compact layouts were designed for Salesforce mobile app and record previews:  
- Vehicle\_\_c: Vehicle Name, Vehicle Type, Price, Availability.  
- Service Requests: Request Type, Status, Customer.  
  
This improved productivity by showing key fields at a glance.

## 7. Schema Builder

Salesforce Schema Builder was used to visualize relationships between objects:  
- Vehicle\_\_c linked to Dealer\_\_c (Lookup).  
- Vehicle\_Order\_\_c linked to Customer and Vehicle (Lookup).  
- Vehicle\_Test\_Drive\_\_c linked to Vehicle and Customer (Lookup).  
- Vehicle\_Service\_Request\_\_c linked to Vehicle and Customer (Lookup).  
  
Schema Builder ensured the model was clear, easy to maintain, and well-documented.

## 8. Lookup vs Master-Detail vs Hierarchical Relationships

- Lookup Relationship: Vehicle\_\_c → Dealer\_\_c. Flexible; does not enforce parent ownership.  
- Master-Detail Relationship: Vehicle\_Order\_\_c → Vehicle\_\_c. Order is dependent on vehicle; allows roll-up summaries.  
- Hierarchical Relationship: Used in User object to model reporting structures, e.g., Sales Rep → Regional Manager.  
  
Using the right relationship type ensured data integrity and correct business rules.

## 9. Junction Objects

Vehicle\_Dealer\_Assignment\_\_c was created as a junction object to handle many-to-many relationships:  
- One dealer may sell multiple vehicles.  
- One vehicle may be available at multiple dealers.  
  
This allowed efficient tracking of stock distribution and dealer-vehicle assignments.

## 10. External Objects

External objects were considered for future integrations with external inventory systems. They allow real-time data access without storing it in Salesforce. Example: External\_Inventory\_\_x linked with Vehicle\_\_c for stock validation.  
  
While not implemented in Phase 3, they were scoped as a scalable option for future expansion.

## 11. Conclusion of Phase 3

Phase 3 established the data model for the WhatNext Vision Motors CRM system. Through a combination of standard and custom objects, record types, layouts, and relationships, the system now reflects the real-world operations of an automotive dealership.  
  
This robust schema will serve as the foundation for upcoming automation, flows, and analytics in subsequent phases.