# **Phase 8: Data Management & Deployment 📦**

**Project:** Supply Chain Traceability & Inventory Management System

**Goal:** Load the initial data required for testing and demonstration, and package all custom components into a Change Set for reliable deployment to a target organization.

### **1. Initial Data Import via Data Loader**

The Data Loader was used to perform bulk data insertion, ensuring the system has realistic records for demonstration (e.g., barcode search).



| **Object** | **Tool** | **Import Action** | **Records** | **Rationale** |
| --- | --- | --- | --- | --- |
| **Product** | Data Loader | Insert | 5+ | Establishes base product definitions. |
| **Retail Location** | Data Loader | Insert | 4+ | Populates destination targets for shipments. |
| **Lot** | Data Loader | Insert | 5+ | **CRITICAL:** Creates Lot\_\_c records with unique Barcode\_\_c and initial Current\_Inventory\_\_c. |

### **2. Change Set Packaging for Deployment**

All custom metadata and code components developed across Phases 3 through 7 were packaged into a single Outbound Change Set for migration.

| **Component Type** | **Included Items (Examples)** | **Rationale** |
| --- | --- | --- |
| **Custom Objects** | Lot\_\_c, Shipment\_\_c, Retail\_Location\_\_c | Core data model. |
| **Apex Classes** | LotBarcodeController, ShipmentService, InventoryReorderScheduler | All backend business logic. |
| **Apex Triggers** | ShipmentInventoryTrigger | Inventory enforcement mechanism. |
| **Flows** | Update\_Retail\_Location\_Inventory | Declarative automation logic. |
| **Lightning Web Components** | traceabilityScanner, inventoryDashboard | Full custom UI components. |

### **Change Set Component Listing**

### **Deployment Process Confirmation**

VS Code and SFDX were used for the iterative development and deployment of Apex and LWC code, while Change Sets were used for packaging the complete set of customizations.