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Project Title: ShipmentTrack – Real-Time Shipment Tracking & Inventory Visibility Hub

Project Overview

Industry: Logistics

Project Type: B2C Salesforce CRM Implementation

Target Users: Warehouse Managers, Logistics Coordinators, Customers

Problem Statement:

Logistics firms often struggle with real-time tracking of shipments and managing warehouse inventory across multiple locations. Without centralized data, customers and managers lack visibility into delivery timelines and stock levels. This leads to delays, poor communication, lost shipments, and inefficient inventory management. The company aims to implement a Salesforce CRM solution that integrates shipment tracking, automates inventory updates, and sends notifications regarding delays, stock-outs, or overstocking to enhance operational efficiency and customer satisfaction. The existing systems lack integration and rely heavily on manual processes, resulting in higher operational costs and customer dissatisfaction.

Use Cases:

- Shipment Tracking: Integrate tracking information to update shipment status in real time, allowingboth customers and internal teams to stay informed.
- Inventory Management: Maintain accurate inventory records across warehouses, with automatedupdates as shipments move, ensuring transparency and reducing discrepancies.
- Notifications & Alerts: Send SMS/email alerts to customers and internal teams for shipment delays,stock discrepancies, and expected replenishments, thereby improving responsiveness.
- Reporting & Analytics: Provide dashboards that show delivery timelines, stock levels, and trends inshipment delays, enabling proactive management and strategic planning.
- Customer Interaction: Allow customers to access real-time tracking and inventory availability throughself-service portals integrated with Salesforce.

Phase 1: Problem Understanding & Industry Analysis

- Requirement Gathering: Conduct detailed interviews with warehouse staff, logistics coordinators, andcustomer service teams to understand current operational challenges. Collect data regarding shipment delays, stock discrepancies, and communication gaps. Stakeholder Analysis:
- Warehouse Managers – need automated inventory updates and alerts for stock discrepancies tomanage replenishment effectively. o Logistics Coordinators – need real-time tracking of shipments and ETA updates to plan routes and avoid delays
- Business Process Mapping: Map current manual tracking and inventory processes, identifying painpoints and inefficiencies. Design an optimized Salesforce-driven workflow that incorporates automation, tracking, and alerts.

Phase 2: Org Setup & Configuration

- Salesforce Edition: Configure the environment using Service Cloud or Enterprise Edition tailored forlogistics operations with multi-user access and scalable architecture.
- Company Profile: Set up organization details including time zone, delivery zones, currency, andoperational regions to support global logistics workflows.
- User Setup & Security:o Profiles: Create profiles for Warehouse Manager, Logistics Coordinator, Inventory Clerk, and Customer Support.
- Permission Sets: Grant selective access to features such as inventory adjustments, shipment editing,and data export.

Phase 3: Data Modeling & Relationships

- Custom Objects:

Shipment__c: Stores shipment details such as tracking number, current location, estimated delivery, and status updates. o Inventory__c: Maintains warehouse inventory records, including stock levels, reorder points, and item descriptions.

- Relationships:
- Master-Detail: Inventory__c linked to Warehouse__c to ensure seamless inventory management. Lookup: Shipment__c linked to Customer__c to facilitate direct communication

- Record Types & Layouts: Create distinct layouts for shipments that are in-transit, delivered, or pending dispatch, and design inventory layouts for fast-moving and slowmoving items.

Phase 4: Process Automation (Admin)

- Validation Rules: Implement rules to prevent negative inventory levels and ensure shipment details arecomplete before dispatch.
- Screen Flow: Enable logistics coordinators to input shipment details easily and attach proof ofdispatch or delivery.
- Record-Triggered Flow: Automatically send alerts when stock drops below threshold levels or whenshipments are delayed beyond acceptable time windows.
- Scheduled Flow: Generate periodic reports summarizing inventory health and pending shipments to assist managerial reviews.

Phase 5: Apex Programming (Developer)

- Apex Trigger: On update of Shipment__c, automatically adjust Inventory__c levels and create shipmentlogs for auditing purposes.
- Batch Apex: Implement periodic batch jobs to reconcile inventory records with third-party systems andupdate delivery status across warehouses.
- Exception Handling: Develop error-handling mechanisms to capture failed updates, networkdisruptions, or API inconsistencies, providing fallback options for users.
- Test Classes: Ensure code reliability by writing comprehensive test cases covering positive, negative,and boundary scenarios.

Phase 6: User Interface Development

•Lightning App Builder:

- Create a "Shipment Dashboard" with widgets for tracking in-transit shipments, estimated delivery timelines, and urgent alerts. o Include related lists for inventory status, customer feedback, and shipment logs to enhance user navigation.
- LWC: Design a custom grid view allowing logistics teams to filter and update multiple shipments atonce, with intuitive sorting, tagging, and progress tracking features.

- Mobile Access: Optimize interfaces for mobile devices to support field coordinators updating shipmentdetails on the go.

Phase 7: Integration & External Access

- Named Credentials & Callouts: Integrate with third-party shipment tracking APIs such as FedEx, DHL,or UPS for automated status updates.
- External Services: Connect with ERP systems and supply chain platforms to maintain consistencyacross internal and external workflows.
- Web Services (REST/SOAP): Build APIs that expose shipment and inventory data for customer portals,providing transparency and service-level agreement tracking.
- Authentication & Security: Implement OAuth protocols and API key management to secure dataexchanges and prevent unauthorized access.

Phase 8: Data Management & Deployment

- Data Loader: Import existing records such as shipment logs, inventory data, and customer contact listsfrom CSV or Excel files, ensuring a smooth transition from legacy systems.
- Duplicate Rules: Avoid redundant records by checking for duplicates based on unique fields liketracking numbers, warehouse IDs, and product codes.
- Deployment Pipeline: Utilize VS Code & SFDX to manage metadata migration from developmentsandbox to UAT and production environments with rollback mechanisms in place.
- Backup Strategy: Implement automated data backup schedules to prevent loss during unforeseenoutages or system failures.

Phase 9: Reporting, Dashboards & Security Review

- Inventory levels by warehouse, highlighting discrepancies and reorder needs. o Shipment delay reports analyzing bottlenecks and transit inefficiencies.
- Dashboards: Real-time analytics on inventory health, shipment timelines, customer complaints, anddelivery efficiency metrics.
- Security Review: Field-Level Security: Restrict access to sensitive information such as supplier accounts and pricing details.

Phase 10: Final Presentation & Demo Day

- Demo Walkthrough: Showcase the end-to-end process starting from shipment creation, inventoryadjustments, real-time tracking, automated alerts, and final reporting dashboards.
- Handoff Documentation: Create user-friendly guides, training videos, and FAQs to support warehousestaff, logistics coordinators, and customer service teams in using the Salesforce platform effectively.
- Portfolio Showcase: Document project outcomes with screenshots, detailed use cases, processdiagrams, and demo recordings. Share this on GitHub, LinkedIn, and other professional platforms to highlight your Salesforce expertise in logistics solutions.