PHASE II: PROJECT PLANNING

Field	Details
Date	05 November 2025
Team ID	NM2025TMID07730
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

Title: Project Planning for **"Medical Inventory Management System"**

1. Objective

The Project Planning Phase defines the structural, security, and workflow foundation for the Medical Inventory Management System.

Its purpose is to analyze business requirements, identify inventory-related entities, plan data and access structures, and establish automation and dashboards for procurement, stock, and consumption tracking within Salesforce.

This phase also outlines logical data relationships, user roles, and security policies to ensure efficient and compliant healthcare inventory operations.
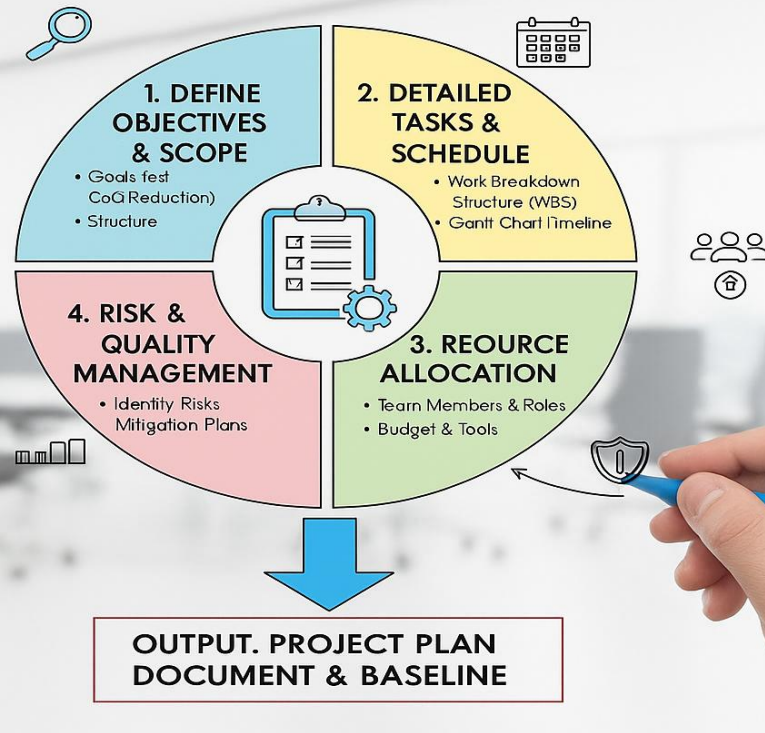
2. Overview of the Planning Process

The planning process consists of four major components:

Step	Focus Area
1	Defining Core Inventory Entities
2	Designing Data & Relationship Model
3	User & Access Role Setup
4	Timeline, Tools & Resource Planning

This ensures a smooth workflow from **item creation → purchase order → goods receipt → stock management → issuance/return.**

PROJECT PLANNING PHASE
MEDICAL INVENTORY MANAGEMENT SYSTEMENATIO

1. DEFINE OBJECTIVES & SCOPE
• Goals fest CoG Reduction)
• Structure

2. DETAILED TASKS & SCHEDULE
• Work Breakdown Structure (WBS)
• Gantt Chart Timeline

4. RISK & QUALITY MANAGEMENT
• Identity Risks Mitigation Plans

3. REOURCE ALLOCATION
• Team Members & Roles
• Budget & Tools

OUTPUT. PROJECT PLAN DOCUMENT & BASELINE

3. Core Entity Identification

The Medical Inventory Management application is organized around key **Salesforce Custom Objects**:

Object Name	Description	Relationships
Item (Product Master)	Represents medical items, equipment, or consumables	Linked to Purchase Order & Stock Ledger
Supplier	Stores vendor details, contact info, and payment terms	Linked to Purchase Order
Purchase Order (PO)	Tracks item orders, quantities, and approvals	Parent of PO Line Item
Goods Receipt (GRN)	Captures received items, quantities, batches, and expiry	Child of Purchase Order
Stock Ledger	Maintains movement history (inward/outward)	Linked to Item & Location
Issue / Consumption	Tracks issued items to wards, doctors, or patients	Linked to Item & Stock Ledger
Return / Adjustment	Handles returned, damaged, or adjusted quantities	Linked to Item & Stock Ledger

This object model enables end-to-end traceability of each item from purchase → receipt → usage → audit.

4. Relationship Strategy

Relationship Type	Object Pair	Purpose
Master–Detail	Purchase Order → PO Line Item	Ensures dependent line items auto-delete with parent
Master–Detail	Goods Receipt → GRN Line	Summarizes received quantities and expiry dates
Lookup	Item → Supplier	Tracks preferred vendors
Lookup	Issue → Item	Enables issuing items from available stock
Formula	Stock Ledger → Item	Auto-pulls item name and UOM for reports
Lookup	Return → Issue	Links returned items back to original issue transaction

This data architecture supports automation, dashboards, and record-level security across all modules.

5. Security and Profile Planning

5.1 Custom Profiles Created

Profile Name	Description	Access Level
Inventory Clerk Profile	Manages day-to-day stock entries and receipts	Create/Edit GRN, Issue, Return
Inventory Manager Profile	Oversees procurement and stock movement	Full CRUD on inventory objects
Finance Officer Profile	Reviews purchases and generates cost reports	Read-only on inventory, Full on Purchase Orders
System Admin	Default administrator role	Full access to all data

5.2 Public Groups

Public Group	Members	Purpose
Store Staff	Clerks, Pharmacists	Record stock movement and consumption
Purchase Team	Managers, Finance	Manage purchase orders and approvals
Admins	Admin and IT users	System configuration and oversight

6. Data Access and Sharing Rules

Rule Condition	Shared With	Purpose
Stock Status = "Low"	Inventory Manager Group	Enables reorder action
Expiry Date ≤ 30 days	Store Staff & Manager	Prevents issuing near-expiry items
PO Status = "Pending Approval"	Purchase Team	Facilitates approval process

Adjustment Type = "Damage"	Admin Group	Allows oversight and audit tracking

Data visibility:

- Store staff can access assigned stock location only.
- Managers have cross-department view for stock analysis.

7. User Creation and Role Assignment

7.1 Procedure

1. Setup → Users → New User

2. Assign Salesforce Platform License for store staff

3. Assign Salesforce License for managers/admins

4. Configure profiles and public group membership

5. Relate users to Inventory Locations via lookup field

7.2 User Hierarchy

Role	Assigned Profile	Group	Access Level
Inventory Manager	Inventory Manager Profile	Purchase Team	Full Access
Store Clerk	Inventory Clerk Profile	Store Staff	Limited Access
Finance Officer	Finance Officer Profile	Purchase Team	Read + Report Access
System Admin	Admin Profile	Admins	Full Control

8. Environment Setup and Configuration

Steps completed:

- Salesforce Developer Edition created for prototype
- Lightning Experience enabled
- Created app alias: Medical Inventory Management
- Added custom tabs for Item, Supplier, PO, GRN, Stock Ledger, Issue
- Activated Flow Builder, Reports, and Dashboard tools
- Configured branding and healthcare-themed UI for clarity

9. Project Timeline and Resource Plan

Phase	Duration	Key Deliverables
Ideation	2 Days	Problem study, Use cases

Planning	3 Days	ERD, Profiles, Access Rules
Requirement Analysis	4 Days	Object setup & data model
Design & Implementation	5 Days	Flows, Automation, UI setup
Testing & Deployment	2 Days	Validation & user acceptance

10. Tools and Resources Used

Tool	Purpose
Lightning App Builder	UI layout and navigation
Flow Builder	Automate PO approvals & alerts
Apex Triggers	Auto-calculate stock balances & expiry validation
Dashboard Builder	Stock value, expiry summary, and usage trend reports
Schema Builder	Object relationship mapping
SmartInternz Platform	Project submission & mentoring support

11. Expected Outcomes of the Planning Phase

- Finalized data model for items, suppliers, orders, and stock tracking
- Configured user roles and access permissions
- Established a secure Salesforce environment
- Defined automation logic for purchase and inventory flows
- Prepared a clear roadmap for implementation and testing phases

12. Summary

The Project Planning Phase forms the blueprint for the Medical Inventory Management System.

It establishes a structured, secure, and scalable framework for managing the complete medical supply lifecycle procurement, storage, and consumption—using Salesforce.

With clear data relationships, defined user roles, and automation strategies, the project is now ready to move confidently into the Requirement Analysis and Implementation Phases.