Project Design Phase

Problem – Solution Fit Template
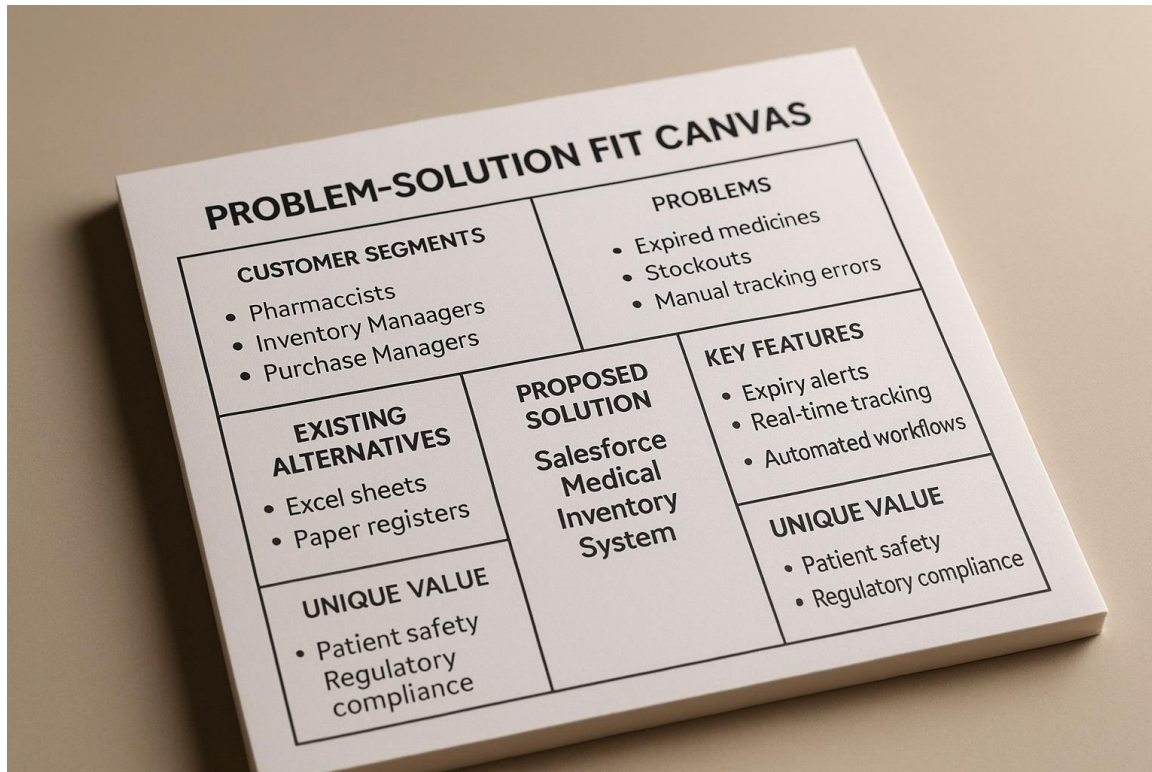
Field	Details
Date	04 November 2025
Team ID	NM2025TMID03885
Project Name	Medical Inventory Management System
Maximum Marks	2 Marks

Problem Solution Fit:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why.

Purpose:

- **Solve complex problems** in a way that fits the state of your customers.

- **Succeed faster** and increase your solution adoption by tapping into existing mediums and channels of behavior.

- **Sharpen your communication and marketing strategy** with the right triggers and messaging.

- **Increase touch-points** with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.

- **Understand the existing situation** in order to improve it for your target group.

Conclusion:

The project "Medical Inventory Management System" addresses a crucial gap in healthcare operations and patient safety management within medical facilities. By ensuring that no expired medicines are dispensed to patients and critical medical supplies are always available when needed, we significantly improve patient safety, regulatory compliance, and operational efficiency.

This solution not only safeguards healthcare delivery workflows but also supports better resource management, cost optimization, and audit compliance. With the successful implementation of automated expiry monitoring, real-time stock tracking, intelligent purchase order workflows, and comprehensive supplier performance dashboards in Salesforce, this project sets a foundation for building smarter and safer inventory management systems in healthcare environments.

Problem-Solution Fit Analysis:

1. CUSTOMER SEGMENTS

Primary Users:

- Hospital Pharmacists - Manage medicine inventory, ensure patient safety

- Inventory Managers - Track stock levels, prevent shortages

- Purchase Managers - Handle supplier relationships, procurement

- Healthcare Administrators - Monitor costs, ensure compliance

- Warehouse Staff - Manage inventory transactions

2. CUSTOMER PROBLEMS

Problem Category	Problem Description	Pain Intensity	Frequency
Expired Product Risk	Medicines expire without alerts causing waste (₹50,000-₹2,00,000/month) and potential patient safety incidents	Critical	Daily
Stock Shortages	Critical medicines run out unexpectedly during emergencies affecting patient care and treatment delivery	Critical	Weekly
Manual Data Errors	Manual tracking causes 10-15% inventory discrepancies leading to audit failures and compliance issues	High	Daily
Supplier Delays	No visibility into supplier performance causes unpredictable delivery times and emergency purchases at 30-40% premium	High	Monthly
Regulatory Non-Compliance	Missing audit trails and documentation lead to regulatory penalties and license risks	Critical	Quarterly
Excessive Time Waste	Staff spend 60% time on manual paperwork instead of patient care	Medium	Daily

3. EXISTING ALTERNATIVES

Current Solutions Used:

Alternative	Limitations
Excel Spreadsheets	No real-time updates, prone to errors, no automation, difficult multi-user access
Paper Registers	Time-consuming, no search capability, data gets lost, no audit trail

Manual Phone Calls	Inefficient supplier communication, no documentation, delays
Physical Stock Checks	Labor-intensive, only point-in-time accuracy, cannot predict shortages
Email-based PO Tracking	Scattered information, difficult to track status, no centralized visibility

Why They Fail:

- No automated expiry monitoring

- Reactive instead of proactive

- Cannot handle volume/complexity

- Poor data integrity

- No integration between processed

4. PROPOSED SOLUTION

Salesforce-Based Medical Inventory Management System

Core Solution Components:

Component	Solution Feature	Solves Problem
Automated Expiry Monitoring	Flows send alerts at 30, 15, 7 days before expiry; Dashboard highlights expiring products	Prevents expired medicine dispensing; Reduces waste by 90%
Real-Time Stock Tracking	Current stock levels updated automatically; Minimum threshold alerts trigger reorder workflows	Eliminates stockouts; Ensures critical supplies always available
Automated Data Entry	Validation rules prevent errors; Triggers auto-calculate totals; Mobile barcode scanning	Achieves 100% data accuracy; Saves 50% time
Supplier Performance Dashboard	Track on-time delivery %, lead times, quality scores; Comparative analytics	Improves supplier accountability; Enables data-driven negotiations
Complete Audit Trail	Every transaction logged with user, timestamp, before/after values	Ensures regulatory compliance; Passes audits
Purchase Order	Workflows manage approval,	Reduces PO processing time

| Automation | notifications, delivery tracking | by 60%; Prevents delays |

5. UNIQUE VALUE PROPOSITION

What Makes This Solution Different:

✅ Healthcare-Specific: Built specifically for medical inventory with expiry monitoring and patient safety focus

✅ Native Salesforce: No external plugins required; Cloud-based, mobile-accessible, scalable

✅ Complete Ecosystem: Integrates inventory, purchasing, suppliers, transactions, and reporting in one platform

✅ Automated Intelligence: Proactive alerts prevent problems before they occur

✅ Role-Based Security: HIPAA-ready with profiles, roles, permission sets for compliance

✅ Real-Time Visibility: Dashboards provide instant insights for faster decision-making

PROBLEM-SOLUTION FIT CANVAS:

CUSTOMER SEGMENTS

Pharmacists | Inventory Managers | Purchase Managers | Admins

TOP 3 PROBLEMS

1. Expired medicines → Patient safety risk

2. Critical stockouts → Treatment delays

3. Manual errors → Audit failures

EXISTING ALTERNATIVES

Excel, Paper Registers, Manual Calls → All fail at scale

PROPOSED SOLUTION

Salesforce Medical Inventory System with Automation

KEY FEATURES

• Automated Expiry Alerts   • Real-time Stock Tracking

• PO Automation   • Supplier Dashboards

• Audit Trails

UNIQUE VALUE

Healthcare-focused | Native Salesforce | 90% waste reduction

Patient Safety | Regulatory Compliance | Cost Savings