Project Design Phase

Date

Project Name
Automated Network Request Management in ServiceNow

College Name
Ideal Institute Of Technology

Step-1: Problem-Solution Fit

Problem Statement:
Manual handling of network service requests (new connections, relocations, device configurations, etc.) causes delays, inconsistent processes, lack of transparency, and heavy workload for IT teams. Employees often face uncertainty about their request status, while IT staff spend significant time on repetitive tasks.

✅ Solution Hypothesis

Create a ServiceNow-based automated request management system that:

- Provides a **self-service portal** for users to raise requests.
- Uses **dynamic forms** to capture request details accurately.
- Automates **approval workflows** based on type/sensitivity.
- Notifies users and IT staff with **real-time updates**.
- Optionally integrates with network automation tools for **direct fulfillment**.
- Offers **dashboards and reports** for SLA tracking and decision-making.

🛠️ Key Features of the Solution

Feature	How it Solves the Problem
Service Catalog with Dynamic Forms	Simplifies request submission and captures accurate details.
Auto-Populated User Details	Reduces errors and speeds up form filling.
Automated Approval Workflows	Removes delays by routing to correct approvers instantly.
Flow Designer Automations	Automates task creation, notifications, and updates.
Real-Time Notifications	Keeps users informed of progress at every stage.
SLA Tracking & Dashboards	Provides visibility into performance and compliance.
Integration with Network Tools (optional)	Automates fulfillment of standard requests without manual intervention.
Reporting & Analytics	Helps management identify trends, bottlenecks, and improvement areas.

Step-2: Proposed Solution

Phase Objective:
Design a scalable, automated, and transparent system within ServiceNow to manage network service requests efficiently and reduce manual workload.

Solution Overview:
The system leverages **ServiceNow Service Catalog, Flow Designer, Approvals, and Notifications** to provide an end-to-end automated workflow for request submission, processing, and fulfillment.

🏗️ Solution Components

Component	Description
Self-Service Portal (Service Catalog)	Allows employees to raise network-related requests.
Dynamic Request Form	Captures request details (device type, location, reason, etc.).

Approval Workflow	Routes requests to managers/IT heads based on rules.
Flow Designer Automation	Automates creation of tasks, sending of notifications, and approvals.
Custom Tables	Stores network request data, approvals, and fulfillment logs.
Notifications System	Sends emails/alerts to users and technicians in real-time.
SLA & Analytics Dashboard	Tracks resolution times, SLA breaches, and request trends.
Integration Module (Optional)	Connects to orchestration tools for automatic execution of standard tasks.

Step-3: Solution Architecture

System Overview:
The solution is built natively on the **ServiceNow platform**, ensuring scalability, performance, data security, and real-time automation. It integrates Service Catalog, Flow Designer, and approval workflows into a centralized request management system.

🔁 High-Level Architecture Diagram (Conceptual)

1. **User (Employee)** → submits request via ServiceNow Service Catalog.
2. **Service Catalog** → captures input using dynamic forms.
3. **Approval Workflow** → routed automatically to manager/IT head.
4. **Flow Designer** → creates tasks, sends notifications, and updates status.
5. **Network Team** → works on fulfillment tasks.
6. **Notifications** → keep users informed (email, portal).
7. **Analytics Dashboard** → provides SLA and performance insights.
8. **Integration (optional)** → external automation/orchestration tools.

🧱 Key Components

Component	Description
Frontend (Portal/UI)	ServiceNow Service Portal for request submission and tracking.
Workflow Engine	Flow Designer for automating approvals, tasks, and notifications.
Authentication	ServiceNow authentication with SSO/MFA.
Approval Engine	Role-based approval workflows configured in ServiceNow.
Notifications	In-app, email, and system-generated alerts.
SLA Dashboard	ServiceNow Performance Analytics for monitoring SLA and KPIs.
Database	ServiceNow custom tables and CMDB for request and asset records.
Integration Layer	ServiceNow Orchestration/REST APIs for external tool integration.

🔄 Integration Points

External System	Purpose
Email Gateway	Send real-time notifications.
Collaboration Tools (e.g., MS Teams/Slack)	Notify employees/IT teams of request updates.
Orchestration/Automation Tools (e.g., Ansible, Cisco APIs)	Automate fulfillment of network changes.
CMDB	Reference network devices and dependencies.

✅ **Final Note:**
The **Automated Network Request Management System in ServiceNow** is designed to **eliminate manual inefficiencies**, provide **transparency to end-users**, and **empower IT teams** with automation and analytics to improve overall service delivery.