**Phase 4: Requirement Analysis Phase**

**Project Title: Laptop Request Catalogue Item**

**Platform: ServiceNow – SmartInternz Project**

### 1. **to Requirement Analysis Introduction**

The Requirement Analysis Phase is one of the most crucial stages in project development. It bridges the gap between design and implementation by identifying exactly what the system must do — both from a functional and non-functional perspective. In this phase, all user needs, business rules, and technical specifications are gathered, analyzed, and documented clearly to ensure the system performs as intended once developed. For this project — Laptop Request Catalogue Item — the goal is to define the system requirements that will enable users to submit laptop requests, managers to approve them, and the IT team to fulfill them efficiently through ServiceNow's automation workflow.

### Objectives of Requirement Analysis

The objectives of this phase includeTo gather and document all necessary system requirements. To analyze functional and non-functional expectations from users and stakeholders. To ensure the project design aligns with real-world business needs.To avoid scope creep (unplanned changes) during development.To establish a solid foundation for implementation and testing. Requirement analysis ensures everyone involved — users, managers, and developers — has a shared understanding of how the system should behave.

### Stakeholder Identification

Each stakeholder interacts with the system differently. Understanding their expectations helps define accurate requirements. Stakeholder Role / Responsibility Requirements / Expectations Requester (Employee / Student) Initiates the laptop request Needs a simple form to submit requests easily.Manager / Approver Reviews and approves or rejects requests Needs automatic notifications and easy approval options. IT Support Team Fulfills approved requests Requires clear task details and delivery tracking.

System Administrator Configures and manages the platform Needs control over form design, workflow, and access permissions.

Project Mentor / Faculty Oversees project progress Requires documentation and reports for evaluation. Each requirement from these stakeholders forms the base of the project configuration.

### Functional Requirement

These define what the system must do — the actions and processes that fulfill the business objectives.

**Catalog Form Requirements**

The system must allow users to submit laptop requests via the Service Catalog. The form must include fields for laptop type, justification, delivery location, and manager selection. Fields like requester name and department must be auto-populated using the logged-in user's profile. All mandatory fields must be validated before submission.

**Workflow Requirements**

The workflow should trigger automatically when a request is submitted.Requests must be routed to the manager for approval. If approved, a task should be generated for the IT Support Group. If rejected, the requester should receive an immediate notification. Once IT fulfills the request, the status should update to Closed. The system must record timestamps for each step (submitted, approved, fulfilled, closed).

**Notification Requirements**

The requester must receive an email confirmation upon submission. The manager must receive a notification for pending approvals.The requester must receive updates when the request is approved, rejected, or fulfilled. IT team members must be notified when new fulfillment tasks are assigned.

**Access Control Requirements**

Only logged-in users can submit requests. Managers can only view and act on requests assigned to them. IT Support can access fulfillment tasks only. Admins have full access to all configuration and data.

**Reporting Requirements**

The system must allow administrators to view all request records. Reports should show total requests, approvals, rejections, and fulfillment timelines.Data should be exportable for performance analysis.

**Non-Functional Requirements**

Non-functional requirements focus on how the system performs rather than what it does.

Performance The system should process requests within seconds; form load time < 3 seconds.

**Scalability        The design should support additional catalog items in the future.**

**Reliability        Workflow must trigger accurately every time without manual intervention.**

**Security          Only authorized users can access or modify records.**

**Usability        The form interface should be intuitive and user-friendly.**

**Availability        The ServiceNow instance should be accessible 24/7.**

Maintainability Configuration changes should be easy without disrupting existing requests.These ensure the final system is not only functional but also stable and efficient.

### System Requirements Specification (SRS)

the SRS document consolidates all requirements into a technical format that guides developers during implementation

### Hardware Requirements

**System Access**: Laptop or desktop with stable internet.

**Browser:** Latest version of Chrome, Edge, or Firefox.

**Minimum RAM**: 4 GB or higher (recommended 8 GB).

**Software Requirements**

**Platform**: ServiceNow Developer Instance.

**Modules Used:** Service Catalog, Flow Designer, Notification, Approvals.

**User Roles**: admin, approver, itil, requester.

**Version Compatibility:** Compatible with ServiceNow Tokyo or later.


### . Data Flow and Interaction Requirements

understanding data flow is vital to ensure all components work together seamlessly.

**Data Flow Sequence:**
 User fills out and submits the Laptop Request form. System stores request data in the sc_req_item table.Approval record generated in sys_approval_approver table. If approved, task record created in sc_task table.Workflow continues until the request is closed.

**Interactions:**

**Users →** Form: Provide input data.

**System →** Workflow: Automate approval and task creation.

**Database →** Users: Display status and history of requests.


This structure ensures the system follows a clear logical data path, improving traceability and auditing.

**Requirement Validation**

Before moving into development, all requirements must be verified for clarity, completeness, and feasibility.

**Validation Checklist:**

All user needs are captured and documented Requirements are technically feasible within ServiceNow. Functional and non-functional requirements are clearly separated. Stakeholders have reviewed and approved the final requirements list. Requirements align with SmartInternz project goals. Only after successful validation can the development and configuration begin confidently.

**Expected Outcome of Requirement Analysis**

**At the end of this phase:**

The system's functional behavior is clearly defined Roles and access levels are identified. Performance and security expectations are set.Dependencies between modules are understood.The project is ready for development and testing phasesThis ensures the upcoming testing phase can focus purely on validating performance rather than clarifying scope.

**Conclusion of Requirement Analysis Phase**

The Requirement Analysis Phase acts as the blueprint for system development. For the Laptop Request Catalogue Item Project, it identifies all technical, functional, and operational needs, ensuring that every stakeholder's requirement is accounted for. This phase provides complete clarity on how the ServiceNow instance should behave once implemented — from form submission to final approval. The clearly documented requirements minimize misunderstandings and form the basis for testing, ensuring a high-quality, efficient ServiceNow solution. With the analysis complete, the project can now proceed to the Performance Testing Phase, where the configured system will be evaluated for reliability, speed, and efficiency.

# Requirement Phase: Laptop Requsst Catalgue Item

Defining an Automated & Efficient Provisioning Process

## Goals & Objectives

✓ **Standanization**
(Pre-approved configurations)

✓ **Clarity & Simplcity**
(Intutlive form)

✓ **Automation**
(Workflows, approvals)

✓ **Accurate Fuffillment**
Hardware/Software

## Functional Requirements

R1. User Authentication ⚙

R2. Request Type Selection

R3. Configuration Selection

R4. Software Selection

R5. Software Selection ⚙

R6. Manager Approval ⚙

Rī. Financial Data ⚙

R7. Status Tracking

R8. CMDB Update ⚙

## Non-Functional Requirements

NF1. Usability (< 5 min) 🛡

(< 5 min)

NF2. Performance 🛡

(< 5 sec)

NF4. Security (Auth. IT only)

NF4. Mainteainability 🛡

(Easy updates) 🛡

NF5. Reliability (Escalation)

## Stakekedors

End Users

End Users

Feedback

IT Service Desk
(Data fields)

✓ Procurement

✓ (Configurations, approvals)

Finn: Cost Center

ITAM (CMDB integration)