**Systems Analysis: Requirements**

**Automation of Initech ITAM Process**

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# Background

(Divya Parameswaran)

## Problem Statement

IniTech Solutions is experiencing a problem as a result of poor resource management and tracking, which has resulted in issues such as data duplication and mismanagement, preventing them from achieving organization-wide visibility, real-time tracking and reporting, and integration with external sources.

## Technology Solution

**Old Statement**

To resolve IniTech Solutions' crisis, it would be best to create a system where a database of asset information is stored and updated in real-time and can be viewed in an asset portal, on whose dashboard users can submit requests for assets that have already been allocated or request for a new asset, as recommended by IT auditors.

**New Statement**

Our technology solution to address a bunch of issues identified in the recent audit report is to create an in-house IT asset management system.

# Fact Finding Techniques

(Divya Parameswaran)

The fact-finding techniques that we have used here is interviewing and observation. Interviewing lets the system analyst gather information about the behavior, answering pattern and response of the interviewee in a better way than the email mode of interview. Observation aids the system analyst in incorporating the before mentioned goals to find the required information about the project's topic, such as removing multiple values for the same user, effective dashboard visualization and data extraction quickly.

**1. Interviewing**

An interview is a scheduled meeting in which one person gathers information from another. It is necessary to understand the abilities required to properly prepare, conduct, document, and assess interviews. The main goal of the interview is to know the existing ideas that will be implemented and the requirements that are unique to the users and project stakeholders. This also helps in developing an entirely different view other than the ones we observe.

**Determine the people to interview**

To learn about user expectations, the system analyst must choose the right people and interview them with the right questions. We would select the project lead, technical manager, and department heads from the organization for the interview process as they will be the ones who utilize the product and manage it successfully.

**Establish Objective for the interview**

After selecting the people to interview, objectives for the session must be determined. The objective depends on the role of the person being interviewed. Interviewing the technical manager and project lead will provide a better insight that can aid in understanding the system as a whole. Specific details about operations and business processes are best learned from people like department heads who work with the system daily.

**Interview Question to be asked**

1.What are the additional features you would like to have in the new system?

2. What are your views on the new system?

3. On a scale of 1 to 10, rate your experience working with a centralized database repository?

4. How would you rate the severity of the data duplication: low, medium, or high?

5. How effectively were you able to review the reports, was it better than before?

6. How would you rate the overall system performance: poor, average, or good?

**Interview Examination**

1. Any new ideas?

2. Any interdependencies when one feature affects the other

3. Any unique functionality that is currently in place and should not be compromised with

4. Provide feedback

5. Any new suggestions to modify existing ideas?

**2. Observation**

This type of fact-finding technique helps the system analyst in understanding the problem statement better by observing things personally. Personal observation aids the analyst in determining whether or not the facts stated by the interviewee are correct. Personal observation can also be beneficial as the process progresses. When recommendations are based on personal observation of actual operations, for example, they are more likely to be adopted. Observation can also assist create relationships with the users who will be working with the new system by providing the knowledge needed to test or install future changes.

**The main goal is to**

1. Determine the existing operation and processes.
2. Pay attention to all the phases in a transaction.
3. Examine all the relevant documents and reports involved.
4. Follow-up questionnaires for the users who are already involved in the process.
5. Asking all the questions to reduce misleading information.
6. Taking the survey of some of the disclosed information.
7. Testing the old systems.

# Business Function 1

(Sushmitha Alagesan)

## Purpose

**Serialized asset tracking**

A computerized asset management system can help with asset management, maintenance operations simplification, and project administration and planning. A centralized software solution that connects with existing systems to aggregate data collection from physical asset regardless of make, model, or manufacturer into one place. It also helps the businesses expedite asset management and decrease human error. Additionally, businesses will gain complete asset visibility including location, status, and usage history, using a single web-based dashboard that enables for quick search and tag filtering.

The company will also be able to do the following

1. Look at what you have including the glimpse of the equipment's position (asset stages).
2. Keep an eye on who is in charge of your most valuable assets and its whereabouts.
3. On top of it, important information such as maintenance dates and asset condition can also be managed.

**Asset States**

The asset status provides clarity on assets to improve the accuracy and efficiency of routine equipment maintenance by delivering information on health and asset status in real-time based on usage metrics. Verified, paperless inspections aid in the preservation of assets, which can improve on-the-job safety, equipment productivity, and overall job productivity. This in turn can help avoid downtime due to breakdowns in the long run. Given that assets can have a lifecycle of five to fifteen years, it also helps managers to stay on top of maintenance for the entire asset lifecycle and stick to regular maintenance schedules.

**Unique Identifiers**

Generally, assets can be identified using the asset tags. Asset tags, otherwise known as asset labels, are used to identify a variety of physical assets, such as equipment, tools, racks, and machinery. Asset tags on the other hand have unique identifiers called serial numbers. To identify the assets, we can also use barcode label as asset tags. Barcodes are assigned with unique identification number which can be scanned during the asset tracking process. This process contains all of the asset data, allowing users to quickly and easily discover a given item.

**Selecting model from stockroom**

We can provide options to select model from stockroom if it is present or if it is assigned to any other official, the data will be visible to the user. The required data present in the database

can be fetched without manual intervention.

## 

## Process Map

Graphical user interface

Description automatically generated with medium confidence

**Business Requirements**

* Asset identification involves asset manager to be able to classify the assets based on the laptop features.
* A unique barcode that is generated holds the asset information to be sent to the database.
* The barcode that contains asset information has default values including unique data to avoid duplication.
* The centralized data is updated at every stage of the asset lifecycle.
* The asset manager can access the stock room using the separate user interface maintained.
* The asset manager can choose from the nearest stock room based on asset availability.

**Business Function 2**

(Swetha Anantha Murthy)

## Purpose

**Stockroom Management**

## A serialized asset can be stored in a unique storage location defined by a building and room. An effective inventory management approach results in a well-organized stockroom management center. A well-organized warehouse improves the efficiency of present and future fulfillment strategies. This includes cost savings and improved product quality for companies that employ warehouses to manage inventories.

**Stockroom Identifier**

The stockroom user interface allows users to specify a unique identifier for the stockroom, which is similar to the asset tag in serialized asset tracking. To map them with the unique identifier, the address can be used as an additional identifier. As a result, the data in the stock room can be better understood by the asset manager or the director of facilities management, allowing them to

manage and operate the stock room more precisely.

**Security**

The safety of warehouse employees should be a top priority for facility managers. The security options for the stock room suggested by stakeholders are physical lock and key card. The physical lock can be opened with the key manually by the asset manager and user who has the access. The other option may be a key card, where we can swipe or insert credentials, which are then verified against the existing centralized database. The user can only enter the stock room after the access control has been verified. By following such safety standards will keep the company out of unnecessary legal difficulties and avoids fines and penalties from regulatory agencies.

## Process Map

Diagram

Description automatically generated

## Business Requirements

* Assign a unique identifier, series of 5 characters alphanumeric to each stockroom.
* Define buildings with unique combination key to select any building to assign.
* Enter the room number along with address.
* Stockroom requires preparation of standardized list of security control options.
* Assign a stockroom manager contact information to each stockroom.

**Business Function 3**

**(**Likhith Sri Vatsa Uppada**)**

## Purpose

**ITAM Process**

The request and fulfillment process is a management procedure that touches every other function since it requires data updates in the central repository once the request is reviewed by another team. Stakeholders have five primary functions.

**Asset Entry**

The asset entry process involves updating the database with information about the laptop's current state and health. The default values established during the serialized asset state for each laptop are a unique code, asset tag, and model, but the location, state, condition, and assignment can be altered at any time during the product lifecycle. The asset's state could be in use, available, lost or stolen, on order, or retired, for example. The asset entry complies with UI access for technicians.

**Request Process**

The asset request from the employee and the asset search from the database are both part of the request procedure. The request has been submitted for processing.

**Fulfillment Process**

The IT service management officials analyze the employee request, and the request is processed. The asset is assigned when it has been processed.

## Process Map

Diagram, schematic

Description automatically generated

## Business Requirements

* The asset entry system must allow technicians to enter and update database information. Barcode information should be included in the default data.
* The technician UI can set the computer's current status and condition, which is then stored in the database.
* Employees must be able to submit asset requests to IT service management through the employee UI.
* IT service management must follow security measures and give employees access to service requests in order to execute requests.
* The asset state and condition updates at the beginning and end of the request should be followed by the request fulfillment procedure.
* The employee must be able to submit a request for the service he need through the support process.

# Business Function 4 (Divya Parameswaran)

## Purpose

## Security Process

## The goal of security management is to maintain high-level security to every function and separate the access of function to various roles based on the stakeholder level of authority. This is done to ensure that the underlying sensitive data is kept as secure as possible.

## Security Access

## Each user is divided into groups such as employee, technician, owner where each of the user type has a specific access system to use the software. Every user needs to provide their credentials along with the 2FA code issued by the device, and the device will redirect them to the appropriate portal based on their job. This is one of the most popular and crucial underlying functions, which is used as a protocol layer to safeguard sensitive data from malicious software or hackers.

## Process Map

Diagram

Description automatically generated

## Business Requirements

* A single sign-on with two factor authentication solution is required for the system being created.
* Employee should possess mobile device to authenticate two factor authentication.
* Grouping for role-based access, controls, with the focus on the principle of least privilege.
* Auto-recommendation system for the level of access required by each role in the system.

# References

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