Report On

IT Asset and Logistics Management of TEAM Group

By

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An internship report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of
Masters of Business Administration (MBA)

BRAC Business School
BRAC University
March 2024

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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Letter of Transmittal

Mohammad Abdul Hoque
Professor,
BRAC Business School
BRAC University
Kha 224 Bir Uttam Rafiqul Islam Avenue, Merul Badda, Dhaka

Subject: Submission of Internship Report.

Dear Sir,

Here in my MBA Internship Report titled "IT Asset and Logistics Management of TEAM Group", I have shared the overview of IT Logistics System and my tasks through this report.

The entire duration of preparing this report has been helpful a lot to me. Observing and analyzing the whole system by performing the assigned jobs, following the valuable advices of my current line manager and internship supervisor have helped me a lot to complete this report efficiently. This report has helped me to understand the relevance between the academic work and its application in practice. At the end of this report the findings of this internship work and its limitations are discussed, and recommendations are made for improvement in the concerned work.

Hoping that you find this Internship Report satisfactory.

Sincerely yours,

_____

Arif Razzaque Dhrubo
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Date: March 25, 2024

Non-Disclosure Agreement

This page is for Non-Disclosure Agreement between TEAM Group and Arif Razzaque Dhrubo.

This agreement is made and entered into by and between TEAM Group and the undersigned student at BRAC University…….

Acknowledgement

First of all, I thank to the Almighty Allah for providing me strength for preparing this Internship Report within the timeline. I would like to thank Professor Dr. Mohammad Abdul Hoque Sir for allowing me to work on “IT Asset & Logistics Management of TEAM Group”. As soon as I started my internship period, I have gone through researching IT Operations Management. I would like to thank my organizational supervisor Mr. K. A. M Lutfullah Sir for guiding me into my tasks. His valuable advices and suggestions have assisted me in preparing this report.

This internship helped me to learn about some obstacles faced during carrying out this internship work and the different methods used to overcome those obstacles. I also learned cross functional department working skills throughout this Internship period. And I feel really fortunate to grasp those skills in developing myself.

However, there may still be some unintentional errors. I humbly ask my supervisor and co-supervisor to approve my report with these unintentional errors.

Executive Summary

In order to complete my Masters in Business Administration (MBA) under BRAC Business School BRAC University, I have the opportunity of a wonderful working experience as an intern in TEAM Group, where I worked in Service Delivery & Infrastructure Department focusing in IT-Logistics functions.

The first part of this report is a short introduction of the TEAM Group showing company's vision, mission, core values, products and a brief of IT Department has been shared.

Main part of this report is the Project Part in Chapter 2 and Data Interpretation Part in chapter 3. IT Operations Management is one of the most discussed and important parts for any organization nowadays. Previously, companies managed to run their businesses and operations without IT. That time, there were lesser productivity, lesser efficiency and huge loss of time. People did hard work but they did not get the deserved sufficient compensation. Most of the time decisions had been taken based on perception or manual analysis.

But when IT entered into businesses, a huge amount of time saved through automation. Data Analysis are now done within few seconds efficiently due to the advent of the advanced software. IT Team can now focus not only on support but also in Network and Security System, Logistics and Inventory Management, Helpdesk, Remote Support, Users' activity with IT device and internet, Proactive approaches towards IT Incidents like Cyber Attack and Securiry Breach and many more. Continuously observing, monitoring and developing these activities any sorts of business can be integrated with the help IT. This increases efficiency and helping organizations to achieve their goal more efficiently. Nowadays, organization can rectify business issues with the help of IT Operations Management. It has been helping in gaining more Return on Investment (ROI) reducing lead time and making nearly zero dependency on downtime.

As my internship report focuses on IT Logistics Management of TEAM Group, some discussions of ManageEngine Tool, Logic ERP Software have been provided. I made all the analysis using ManageEngine tool which assisted me in keeping track of my activities, and asset status. Also, I physically worked on Inventory counting and information matching for some IT Assets of TEAM Group, via of which I ensured information accuracy.

I used Logic ERP to keep track of purchases and service requisitions. Once requisition is submitted to procurement department, I follow up with them to know the latest update of requisition. After that I pass that update to the concerned stakeholders. The purpose of following up with procurement department is to get required IT products and services within lead time, 7 days. During my internship period, I managed to receive and deliver few products within 7 days. Working with these types of several requisitions helped me making some strong recommendations to reduce lead time of purchasing. However, this did not help much to reduce the lead time to the expected level. Reasons behind are: fund crisis, vendor support, budget approval.

Keywords: Service Delivery & Infrastructure; IT-Logistics; ManageEngine, Logic ERP; Downtime; Return on Investment (ROI); Leadtime.

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List of Acronyms

IT	Information Technology
SD & Infra	Service Delivery & Infrastructure
CS	Comparison Statement
PO	Purchase Order
SCM	Supply Chain Management
RMG	Ready Made Garments
ERP	Enterprise Resource Planning
Mgt.	Management
JD	Job Description
CSV	Comma Separated Value
SSD	Solid State Drive
HDD	Hard Disk
RAM	Random Access Memory
CPU	Central Processing Unit
UPS	Uninterrupted Power Supply
AD	Active Directory
SLA	Service Legal Agreement
FR	Fast React

Glossary

Capex	Equipment that is considered fixed for a company is known as Capex.
Opex	Equipment that is consumable for a company's day-to-day operation is known as Opex.
Threshold	Delivery Lead Time is the summation of "Pending Time of processing an order & its Delivery Time" used here as a standard of procurement time in Days to observe the procurement system of the organization.

Chapter 1

Organization Overview

1.1 About "TEAM Group"

TEAM Group is one of the leading conglomerates in Bangladesh. It started its journey with Manufacturing and Apparel industry in 2009. The core business of this company is Ready Made Garments (RMG). Besides RMG, this organization has diversified its business in Pharmaceuticals, Retails, IT & Real Estate. Since 2009 TEAM Group has 14 sister concerns such as: 4A Yarn Dyeing Ltd, Gramtech Knit Dyeing & Fashion Ltd, C.B.M International Ltd, Brothers Fashion Ltd, Mars Stich Ltd, South End Sweater Ltd, Team Sourcing Company Ltd, Intellier Ltd, Twelve Clothing Ltd, Team Developers Ltd, Team Pharmaceuticals Ltd, Team Accessories Ltd, Team Pharma IMEX and Team Group Corporate Office. This company has been moving forward, maintaining high ethical and environmental standards, to reach to the targeted vision by keeping a proper mission along with core values in mind such as Innovation, Corporate Social Responsibility, Diversity and Sustainability.

Textile business is TEAM Group's core business. Company always focuses on making new patterns, designs, styles. For branding and marketing concern persons always try to bring something new in the market so that a company can enjoy a business profit.

TEAM Group always perform corporate social responsibilities. Sometimes the company arranges some recreational, funny activities to refresh employees' mind and body. Some of famous such programs of this company are: Mezbani program, Corporate Iftar party, Annual Picnic – which are arranged every year. Besides, the company sometimes performs some charitable activities for workers which strengthens the relationship between management authority and worker.

Company always focuses on diversity. Diversification of business has increases company's share in market. Although the main business is the Ready-Made Garments, but the company diversifies its businesses in Pharmaceutical Sectors, IT Sector, Real State Sector. In future, if there arises a scope of business in a new sector, it will also open new a business there.

Sustainability is another main issue among all core values. The term sustainability engages with all core values of business such as purpose, operations, adaptation and expansion of a business. Basically, it is directly related with production. Company's goal is to produce best quality product with minimum cost. So, it focuses on quality raw material sourcing as well as on the mandatory steps for carrying out production. Here "Lean" and "Sustainability" departments are responsible for making economic production more efficiently. These two departments ensure operation efficiency to sustain the business. Need to adopt rapid changes in achieving business goal in no time. This is how sustainability works as core value.

1.2 Vision

To become a reliable global organization that provides excellence through innovation of different products, implying internal drives to be the best, and ensuring top-notch quality by enabling best customer service and support to the existing market.

1.3 Mission

Setting up an ethical business standard by providing a safe and rewarding work environment. Implementing eco-friendly technologies through trained and knowledgeable workforce to maintain the highest level of customer satisfaction. Ensuring sustainable growth through innovation by utilizing talents and upholding operational efficiencies.

1.4 Core Values

Core values of this organization are:

a. **Ownership:** We believe in ownership. We all are owners of the business. Taking ownership of any task is one of our core values which not only makes strong bond between management and employees inside office but also outside. We are always building up based on two-way thinking approaches in every dealing.

b. **Excellence:** We go all-out to excel in every aspect of our business and approach to every challenge with a determination to succeed.

c. **Social Responsibility:** We care for the future generation of our beloved country. Environmental safety is always ensured by continuous green technology management.

d. **Recognition and Reward:** Working smartly definitely brings the expected outcome and we all believe in it. Dedication towards our work brings excellence. Employees are being rewarded continuously for such contributions in this organization.

1.5 Products

Some of our renowned products are as follows:

1. Demin Buttons
2. Denim Causal & Non-Casual Shirts
3. Denim Jacket
4. Padded Jacket
5. Quilted Jacket
6. Leather Jacket
7. Hoodie
8. POLO
9. Cardigan
10. Rain Water
11. Wind Breaker
12. Knitted Sleepwear
13. Knitted Pants and Shorts

1.6 Introducing Service Delivery & Infrastructure Department

Alike other organizations “TEAM Group” has an “IT” department. There are two sections of the IT Department. One is the “Service Delivery & Infrastructure” and another is the “Application.” Figure 1 makes it clear.

Service Delivery & Infrastructure works on “System & Support”, “Helpdesk Team”, “IT-Logistics”. Here, System & Support team works on Active Directory System, Server System, Networking System, IT Support System, Data Center System.

Helpdesk team works on ManageEngine System. They keep track on all raised services and support requests and align available resources for users’ support. Besides they also educate IT Engineers about updates of ManageEngine and trains end user on how to use ManageEngine.

IT-Logistics team works on IT Assets of the organization. Keeping records and tracks of IT Asset purchases, usage, custody are in IT-Logistics scope. Also, it works closely with Supply Chain Department for IT Purchases.

Application team works on “Logic ERP”. They provide supports to those users who works on Logic ERP for business purpose in other departments. Also, they provide support on “Fast React (FR)” software to the users of production department. FR is the software through which production department observes live production data in production.

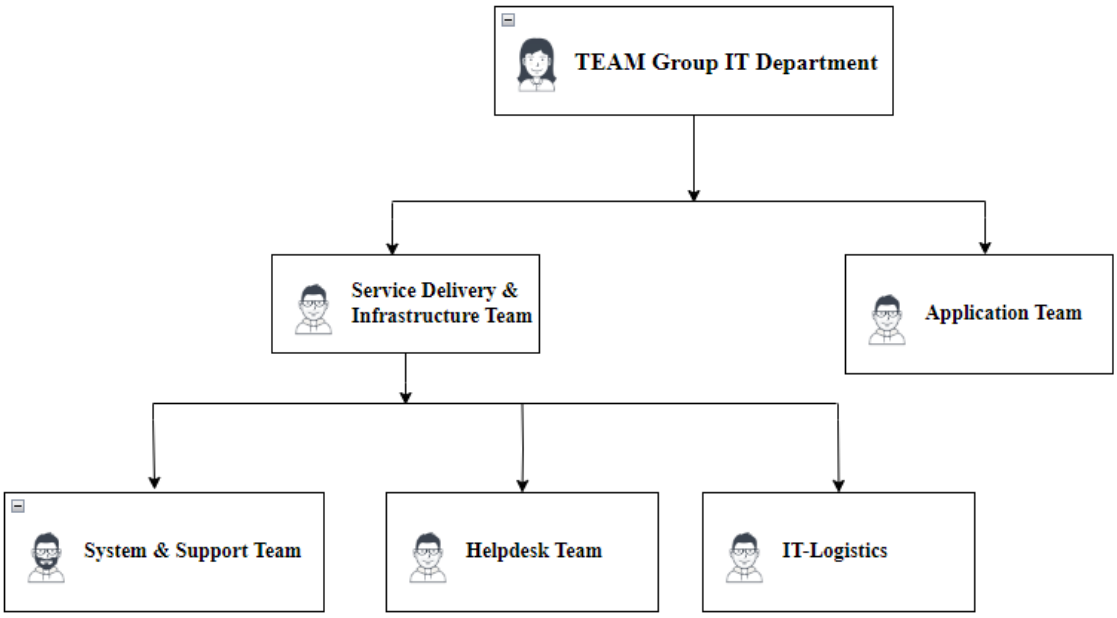

Figure 1: IT Department Structure of "TEAM Group"

Chapter 2

Project Part

2.1 Project Overview

As I've been appointed in the Service Delivery & Infrastructure Team of IT Department for focusing on IT-Logistics' functions. My chosen project is 'IT Asset and Logistics Management of TEAM Group'. Here my task for this Internship work is to observe and analyze the entire IT Asset Management System & Process of TEAM Group.

The following methodologies are followed to complete this project.

1. The IT asset management process starts with purchasing IT related requirement analysis. After conformation, requisition has to be made. Next stage is approving IT requisition. After that it goes to the procurement department. Thus this process starts with Purchasing IT Assets. Here my task is to work and observe the IT Asset procurement process of the

TEAM Group. Next working is on IT Asset receiving, delivering and observing IT Asset Status continuously. The next task is to work on Warranty or Support related activity on IT Assets if required. My last task is to work on "Disposal" process, if IT Asset is fully in "Expired State".

2. I have focused in the technology applications, software deployment and data migration in automated tool.

3. In the operations management part, I have kept record of necessary data such as acquisition date, expiration date, owner company, vendor, asset status, servicing delivery time, purchase time observations and its related scenarios and observations and many more. 2.2 Tool: ManageEngine

ManageEngine is an automation tool which helps to monitor and control IT operations. IT System Support, Helpdesk, Logistics Management operations are done via this tool. Key features of ManageEngine for IT Operations are:

1. ***Identity and Access Management:*** In Identity and Access Management there are some features present, such as Here Active Directory Management, Identity Governance and Administration, Privileged Access Management.

   In Active Directory Management, user account creation rules are described as per Microsoft 365 rule. User account usage status report can be generated from here. User logon monitoring, group management, audit trail for demonstration can be done through it.

   In Identity Governance and Administration several features are enabled. One is Multi-factor Authentication (MFA), where user have to use 2 steps to log on into work account. Another is user account life cycle management observation. System admin and helpdesk team can observe user life cycle management.

Privileged access management works like a credential vault. Secured login, session recording, analyzing login failure, cyber-attack on workstation can be analyzed through this feature.

2. ***Enterprise Service Management:*** Key features of Enterprise Service Management are: Service Desk Plus and IT Asset Management.

   Service Desk Plus works on automation system. In this system, technicians are no need of memorizing codes and commands which save an ample amount of time in IT Service. This helps in integrating business with IT. Using Service Desk Plus multi-channel support for each business division the required feature can be enabled. Also, Service Legal Agreement (SLA) management can be applied here to keep track on every support history. Different sorts of data analysis, report generation can be done via Service Desk Plus.

   In Enterprise Service Management, IT asset inventory can be managed efficiently. Different states of IT Assets like “In Use”, “In Support”, “In Store”, “In Repair”, “Expired” and “Disposed” states can be monitored.

3. ***Unified Endpoint Management and Security:*** Endpoint Management, Endpoint Security are focused part here.

   In Endpoint Management, different sorts of IT support are managed. Such some managed supports are: Patch Management, Operating System (OS) imaging, Remote Control Support.

   Patch Management is such a management where customized third-party applications are managed. IT is updated continuously to support this management. Sometimes, some patch updates are missed due to the network issue or a device issue. As automation

process is enabled continuously, Patch Manager Plus helps to retrieve those updates and keeps cyber environment safe.

ManageEngine continuously scans Operating System (OS) in devices. It identifies to detect slightest change in OS whether done by default or manually. This also has an impact in remote support. Through endpoint central, IT technicians can provide user support via secured remote log in.

4. ***IT Operations Management:*** IT Operations Management focuses on Network and Server Performed Monitor, IT Incident Management.

   In Network and Server performance the following key points are measured:

   - Real time bandwidth measurement. It helps system to analyze internet traffic, internet usage in every device. It also helps to monitor users' performance on using bandwidth.
   - After analyzing internet bandwidth usage of users', it helps in planning future internet capacity, network, and security designing. Based on that it plays a vital role in planning future internet capacity, network and security designing.

   Some key selling points of IT Incident Management is:

   - It works as an alarm system. Scheduled activities like license renewal, security breach, system failure, cyber-attack – such notifications come to system and assigned engineers take immediate preventive measures on it.

5. ***Security Information and Event Management:*** In this part the focused points include Log and Compliance Management, Security Auditing.

   "Event Log Analyzer" is a part of Security Information and Event Management (SIEM). Here comprehensive data collection of real time event response time, web

server security, processing of these data, analysis are done. In a nut shell it is an integrated data compliance management.

Another point is “Security Auditing” where utilization of actions is measured for IT incidents. It also conducts share point auditing. Files and data kept on share folders and its related activities are observed here.

Nowadays large organizations depend on IT Infrastructure Management largely. These infrastructures must be agile and robust to run a business. Device health performance, Network Structure and Designing, Changing Faulty Configuration, Cyberattack and threats, measuring several application performances all have become daily issues here. Continuously working and updating above issues will make organization’s IT performance much smoother. Besides, IT can be integrated with organization’s core business. It also helps in calculating Return on Investment (ROI).

Organizations will be benefited in the following ways if IT Operations Management can be implemented and applied. Such as:

- It boosts productivity. Through a structured management, it solves queries and issues faster. At the end, it saves time which can be invested in increasing productivity.

e. It reduces downtime. Sometimes due to lack of proper maintenance downtime is evident. For a running business it hampers productivity. It passively increases operation cost and increases time for ROI. If existing system features can be monitored, updated and integrated properly with a business, there will be a possibility of zero downtime.

- It creates scope for innovation. Building an efficient IT System helps IT team to invest time on innovation. Here automation process can be developed while innovation. This will make our work more efficient. Automation in IT and business helps to utilize smart technologies which teach us to become economic in business operation.

End user experience plays a vital role in operations management. Here we know users' behavior and pattern of using applications. Besides, we can find our scopes for continuous improvement. If users are unable to adopt with changes of IT Operations Management, business will suffer from timeliness. Productivity will reduce in a huge margin. So, if end users can be educated with updated IT Operations related to core business, all problems will be solved. Management will feel more the importance of IT Operations Management in business. It will help in getting funds for bigger IT Operations and Projects.

Figure 2 represents the login page of ManageEngine. Need a valid Username and Password to login ManageEngine Service Desk Plus.

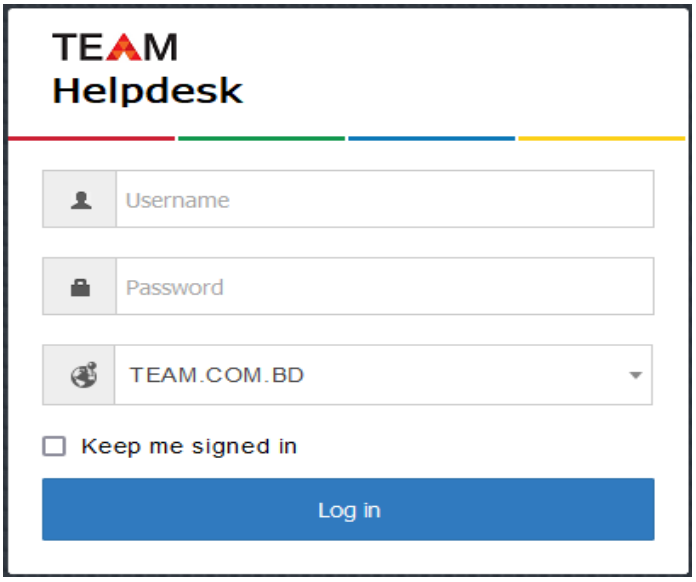

Figure 2: Login Page of ManageEngine.

Figure 3 appears after login with proper Username and password under official network. All options showed in Menu Bar represent asset, system, and support information of IT for the organization which saves time and cost. In the 1st page, pending tasks related to IT Asset, System & Support, and Announcement from IT Department, Reminders are shown in this page.

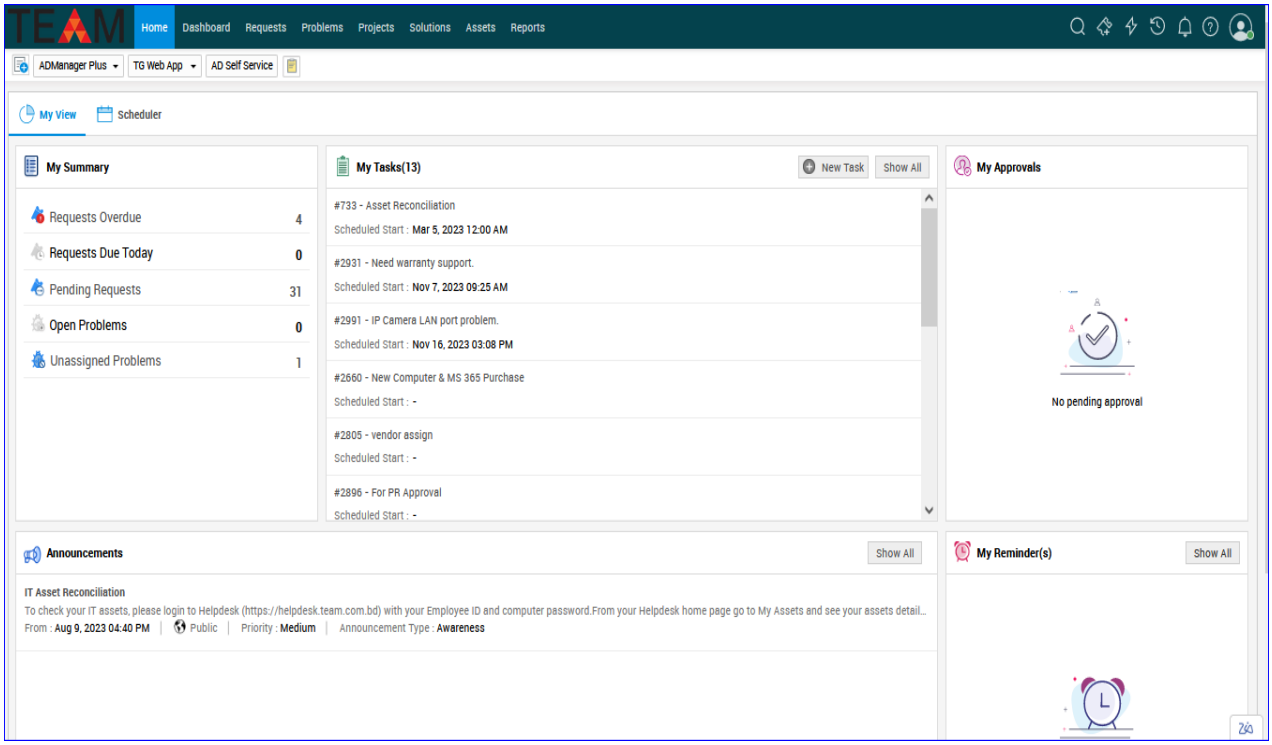

Figure 3: First page of ManageEngine after Login.

Different types of reports such as: Task summary, request summary, different modes are shown in Figure 4.

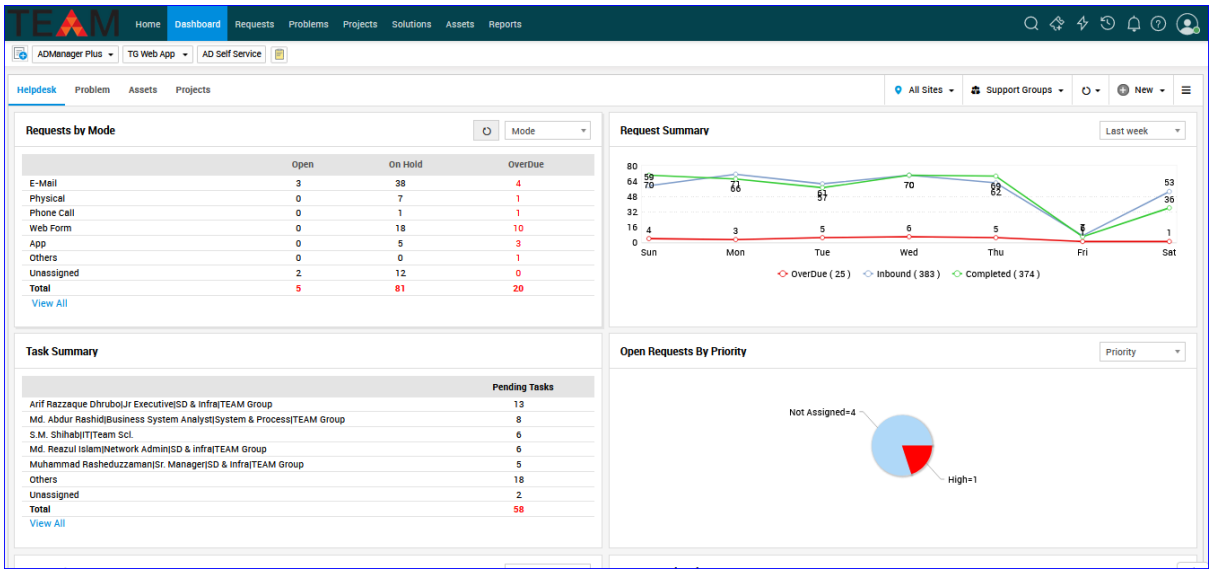

Figure 4: Dashboard Bar.

The page in Figure 5 is focused on requests generated by users using our helpdesk system. Every Engineers have access to investigate these and the concerned sister concerns i.e: concerned Business Units Engineers pick their relevant request to provide support to users.

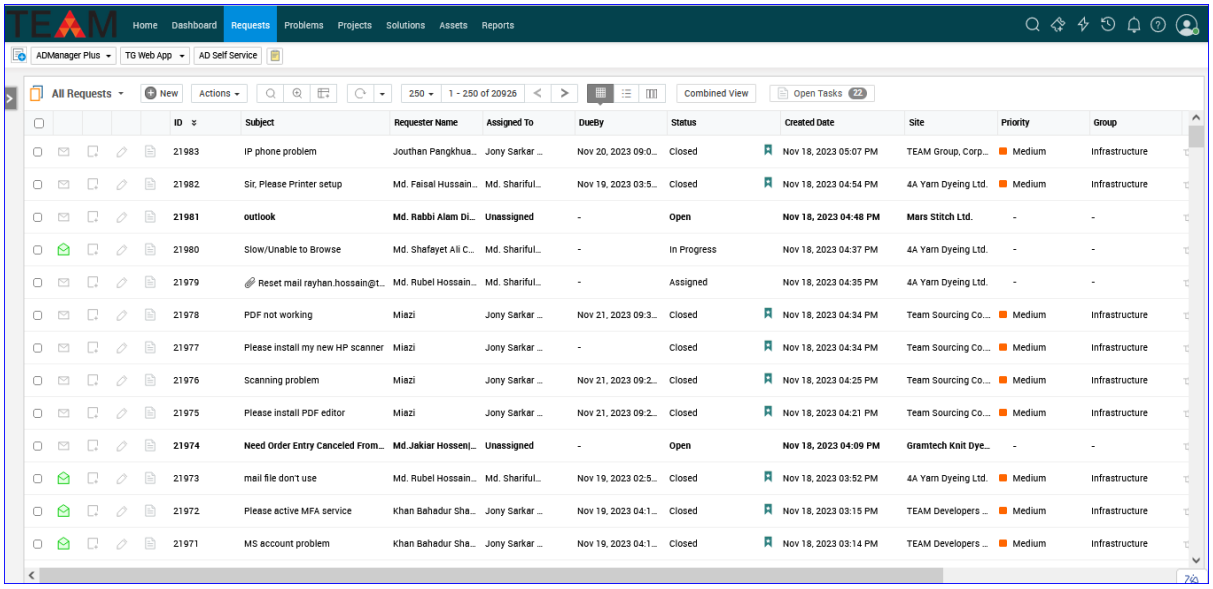

Figure 5: IT Support Requests.

The page in Figure 6 shows problem page. Problems raise when users repeatedly raise same request even though service engineers solve the problem which means when user do not get permanent solution of any particular problem. Generally, requests that are raised frequently from user side is considered as problem. IT System & Support and Application team focus into this to eradicate problems for smooth support.

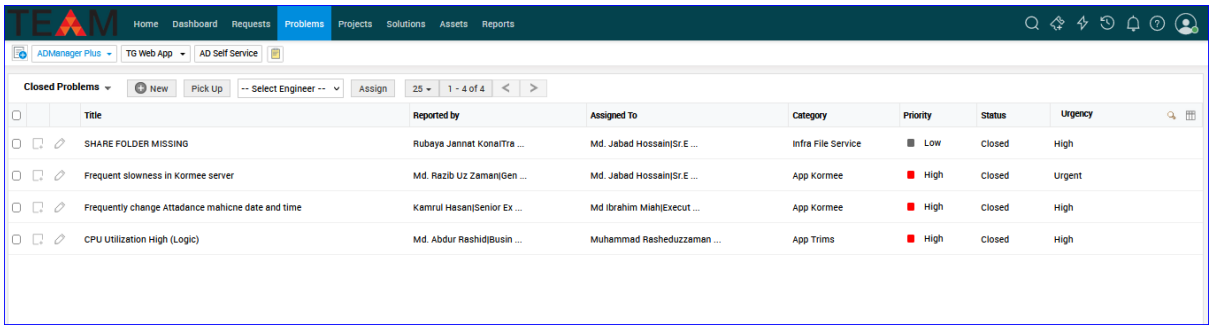

Figure 6: Problem Page.

This page in Figure 7 shows all sorts of projects done by assigned engineers. It varies from Engineer to Engineer.

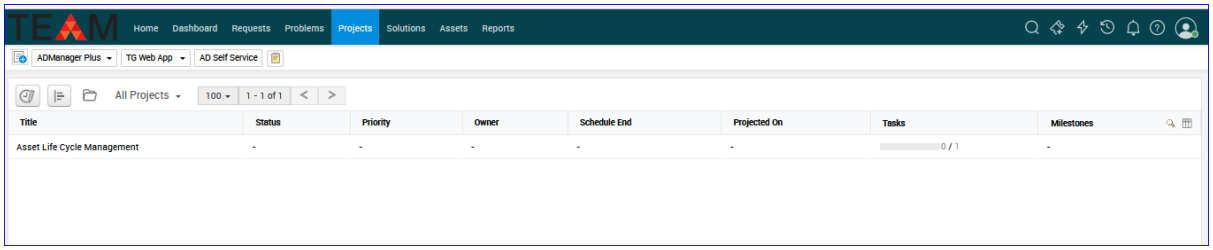

Figure 7: Project Part.

Page in Figure 8 shows the solution page where solution of frequently occurred problems are provided. Solutions frequently facing problems are provided here.

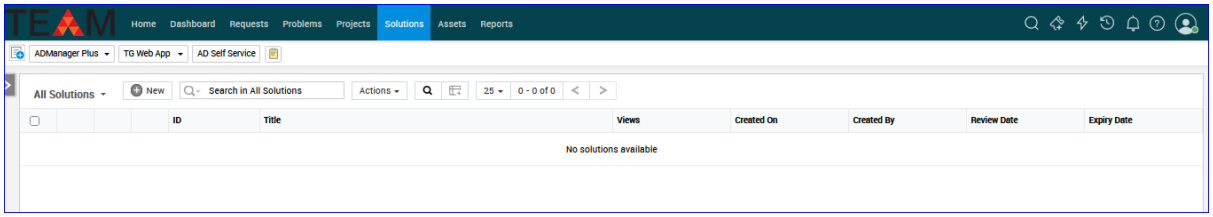

Figure 8: Solution Page.

Summary information of TEAM Group IT Asset is present in Figure 9. There are enormous numbers of fields here to collect information. My internship project will mainly focus on this page.

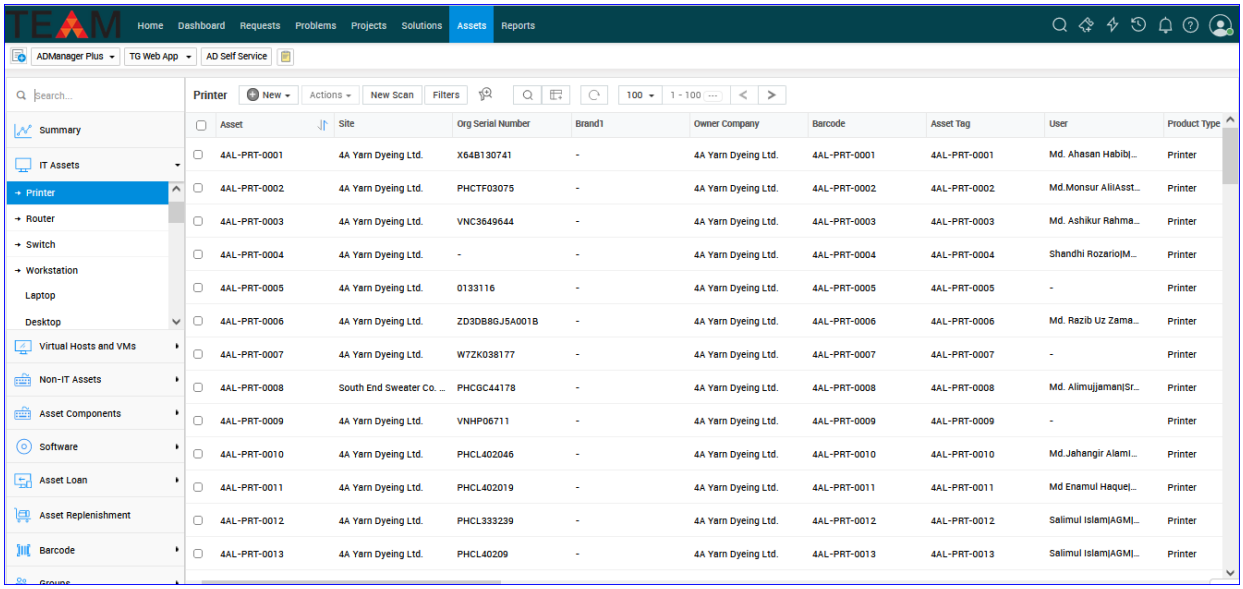

Figure 9: Asset Page.

Here in Figure 10, different sorts of reports regarding IT asset and service-related information, business unit specific report can be generated from this page.

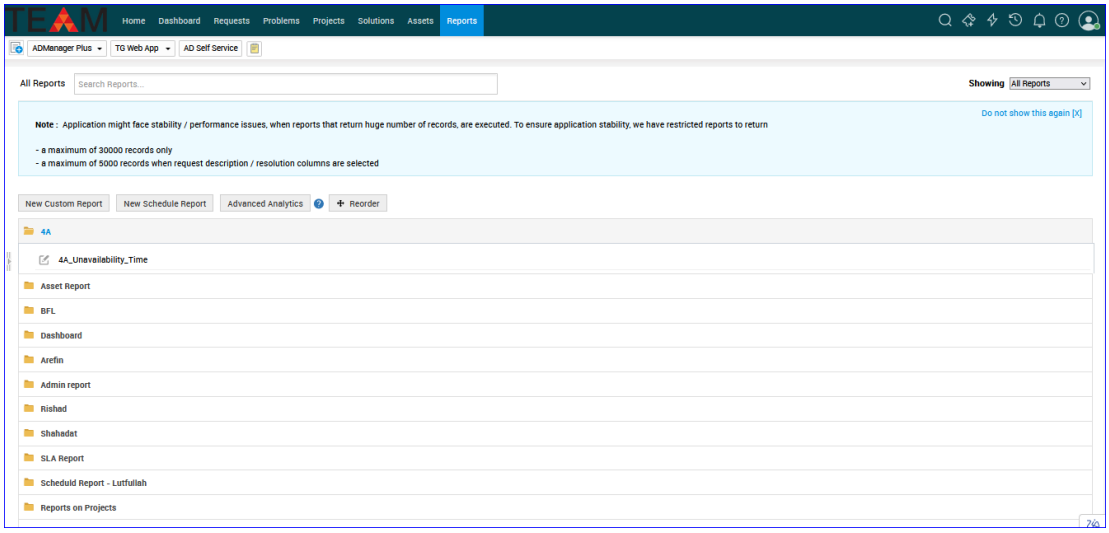

Figure 10: Report Page.

2.3 Responsibilities and Contribution

During this internship project I've been assigned to perform the following responsibilities:

- Collecting and Analyzing IT requisition requirement from concerned sister concerns i.e: concerned Business Units.
- Submit requisition to the procurement team after approval.
- Follow up with procurement team and vendor for IT requisitions and services.
- Receiving products from vendors as per Purchase Order (PO).
- Entering Asset information into ManageEngine before sending to concerned units.
- Submitting bill documents to procurement team after receiving IT products from vendor.
- Follow up with Site Engineers for Asset Lifecycle which helps me in analyzing different states of IT Asset such as "In Use", "In Store", "In Support", "Expired", "Disposed".
- Ensuring information accuracy of IT Assets in ManageEngine.

2.3.1 Observing Procurement Process and My Tasks

After collecting all requisition requirements, I submit requisition to our procurement team for getting the work done by them. IT as per requisition. Because IT does not purchase anything. The following flowchart in Figure 11 explains TEAM Group's procurement system very well.

Task 1: Procurement Process starts from collecting and analyzing requisition requirements. After finishing this process, either I or a concerned stakeholder fills in the requisition form. These are pre-defined processes. Here, two types of IT Asset are present. Capex and Opex. Capex are those items which are added as Capital Assets for TEAM Group. Some examples

are Desktop, Laptop, IP Phone, Printer, Router, Switch and so on. On the other hand, regular consumable items are considered as Opex items. Some examples are Mouse, Keyboard, Printer Ink, UPS Batteries. Also, replacement for Capex items is considered as Opex items. In that case, Desktop, Laptop and such IT assets are considered as Opex items. For Capex items budget approval is required. After getting the budget approval, I submit requisition and budget to Supply Chain Management Department. On the other hand, if requisition is rejected at the initial stage, procurement process stops here.

Task 2: After submitting requisition to the procurement department, the concerned persons from the procurement department start contacting vendors and suppliers for quotation. After receiving several quotations, I get involved with the procurement department in detail discussion about quotations provided by vendors or suppliers to clarify requirements. Then the procurement department begins to make a Comparison Statement (CS). After that they proceed for its approval. After CS approval, Purchase Order (PO) is issued. Then vendors deliver us the product after receiving the PO. My task here is to follow up CS approval status from SCM department, and then with the concerned vendor till the product is delivered.

Task 3: During delivering products I check all products information physically as per PO and requisition. Products are received only and only if they match with the requirement. Otherwise, products are returned to the concerned vendor for replacement.

Task 4: After receiving products, I collect necessary information about products by keeping one set of invoices copy and submitting another set to SCM department for bill processing. Next, I enter product details in ManageEngine. Then, I contact eligible concerns about delivering products. Due to some dependencies such as transportation, manpower shortage it takes on average 3 to 4 days in delivering products. This is how, a procurement process ends.

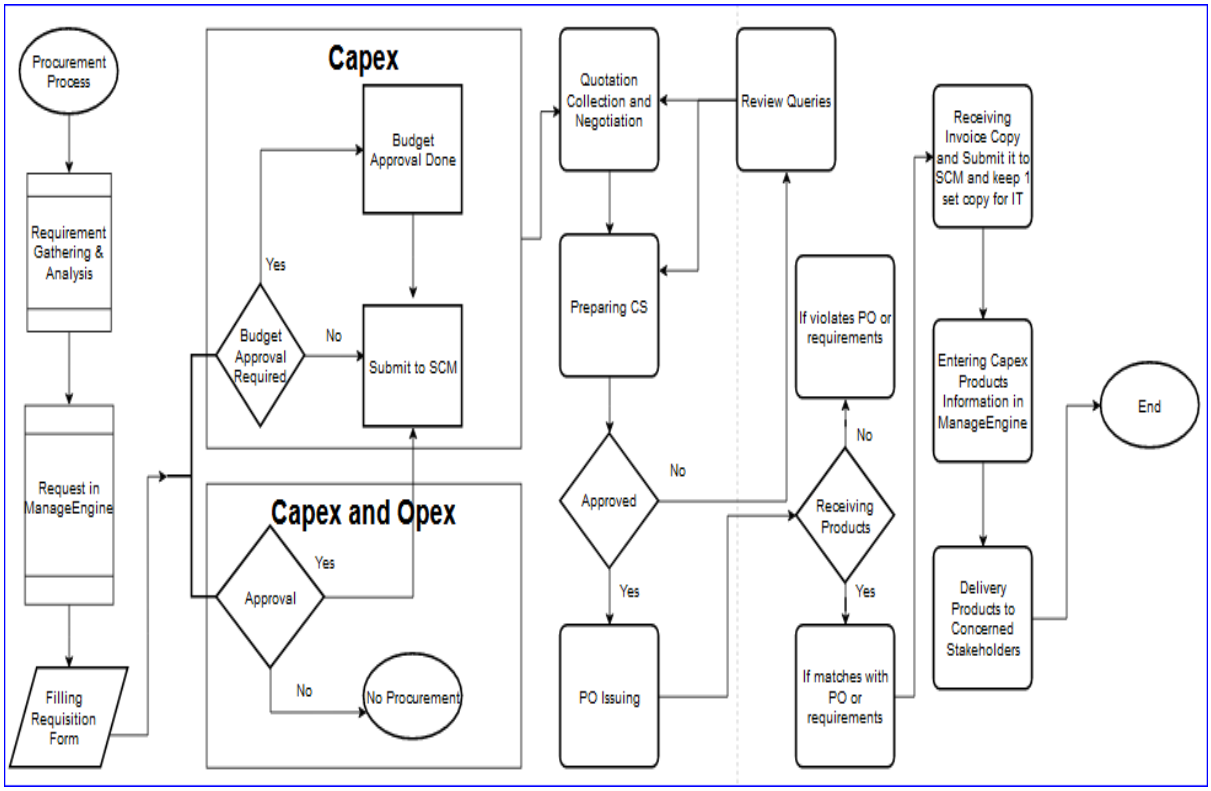

Figure 11: The Procurement Process of TEAM Group.

2.3.2 Software: Logic ERP

ERP stands for Enterprise Resource Planning which is a software that is used to run a company's core business. As a TEAM Group in an RMG, this uses Logic ERP to run the business. Logic ERP is mainly used by the" supply chain users", "commercials", "merchandisers" "finance & accounts", and "IT department". Requisition raising (purchase & servicing), follow up, status reports all can be tracked by using ERP.

In Figure 12, login page of Logic ERP is shown. A valid user id and password is required to login to ERP within the office network range. Outside the office network no one can access ERP.

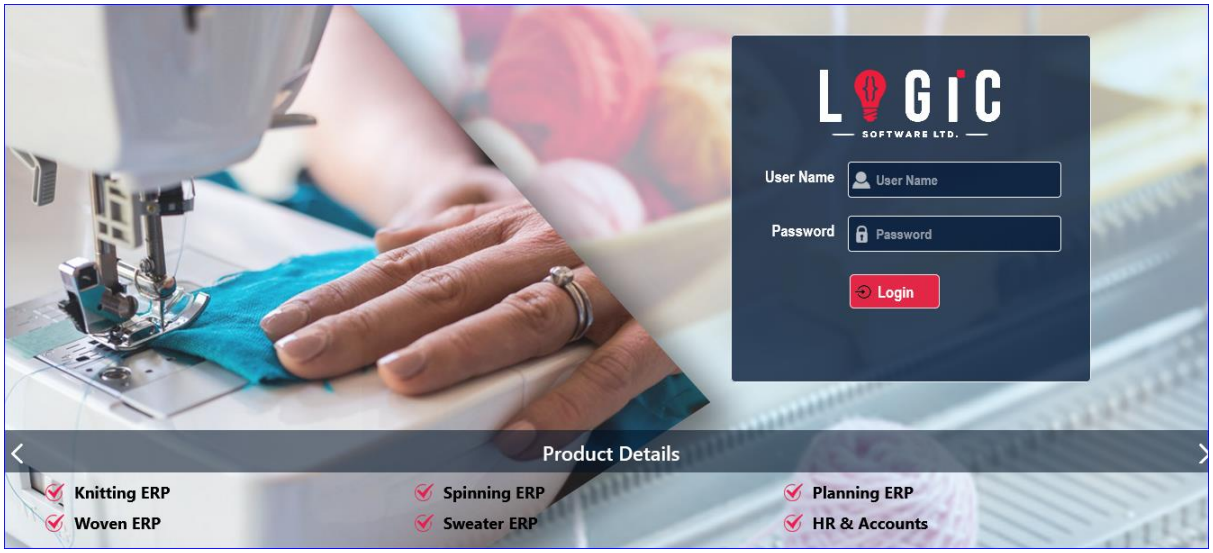

Figure 12: Login Page of Logic ERP.

A huge number of options are present in Logic ERP in the 1st page after login. Options can be customized as per users' requirement. In Figure 13, a total of 5 options is appeared in the Menu Bar. From there, only 3 options i.e., Inventory, SCM and Mgt. Report is required as per my Job Description (JD).

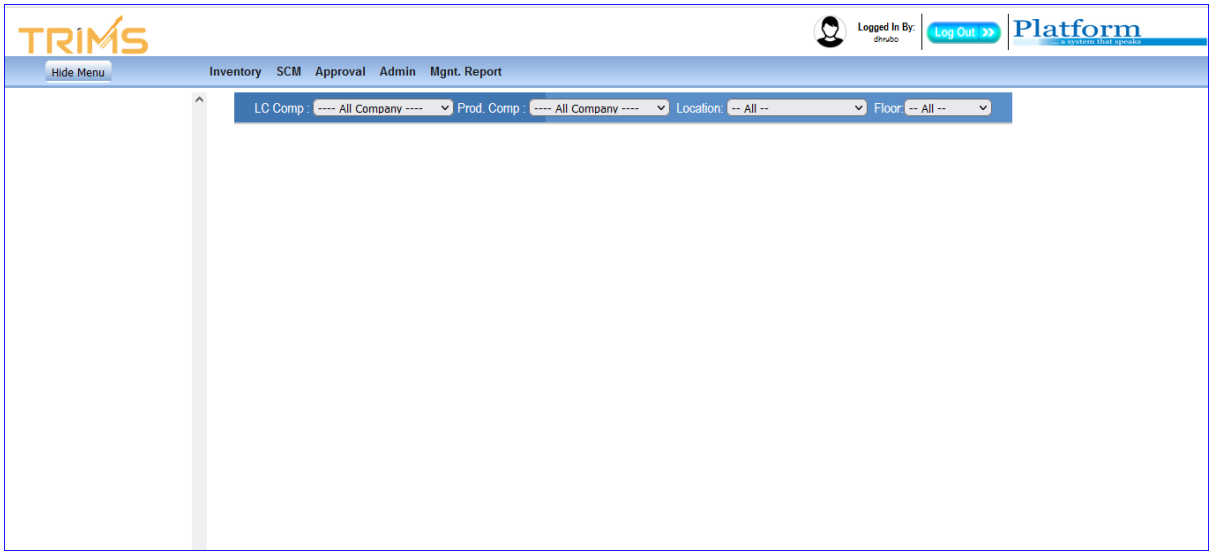

Figure 13: First Page of Logic ERP after Login.

In Figure 14, Purchase Requisition page is shown. Here, any concerned from Business Units raises requisition and some necessary information appear such as Requisition No, Requisition Date, Pay Mode, Ready to Approve, Remarks. My task is to check and verify requirements from here and communicate with stakeholders continuously until the purpose of the raised requisition is achieved.

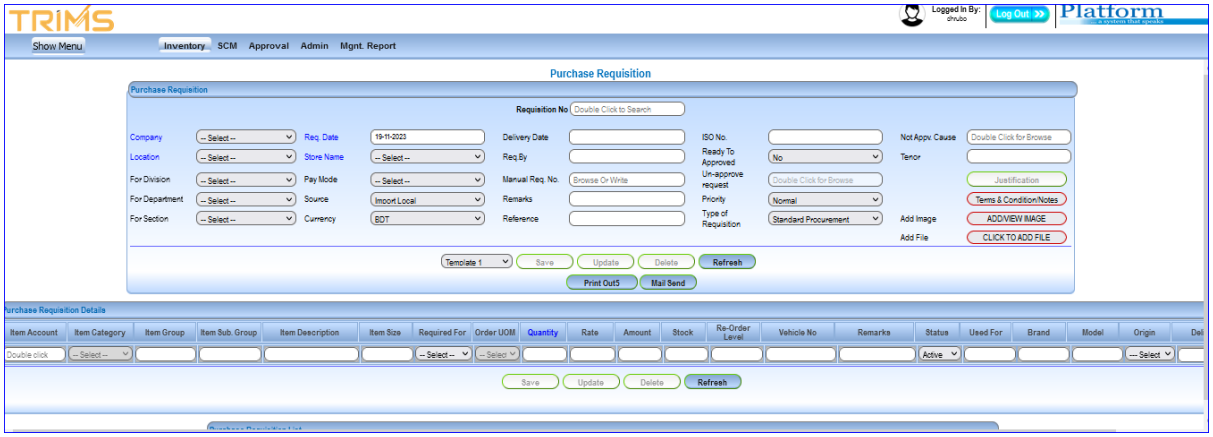

Figure 14: Purchase Requisition Page.

Figure 15 shows Service Requisition Page. Service requisitions for IT issues are being raised by the same method that we do for purchase requisition. Here my task is to analyze the requisition information and proceed for the manual approval. After approval I submit it to SCM department for further processing. Then I follow up with the procurement team and the concerned vendor for further processing until products or services are received.

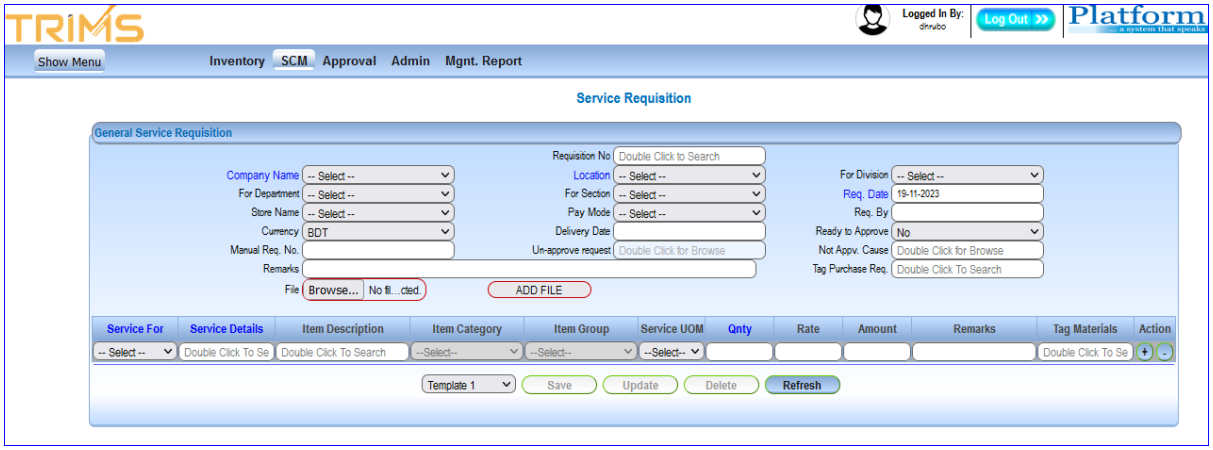

Figure 15: Service Requisition Page.

Figure 16 shows "Mgnt. Report" page through which requisition status can be tracked. My task here is to follow up pending requisition status via some information such as: PO issued or not, Vendor name, Cost, Product Receiving Status. After receiving all these information from ERP, I take priority-based actions. In some cases, I escalate issues to my Line Manager, if problematic issues arise.

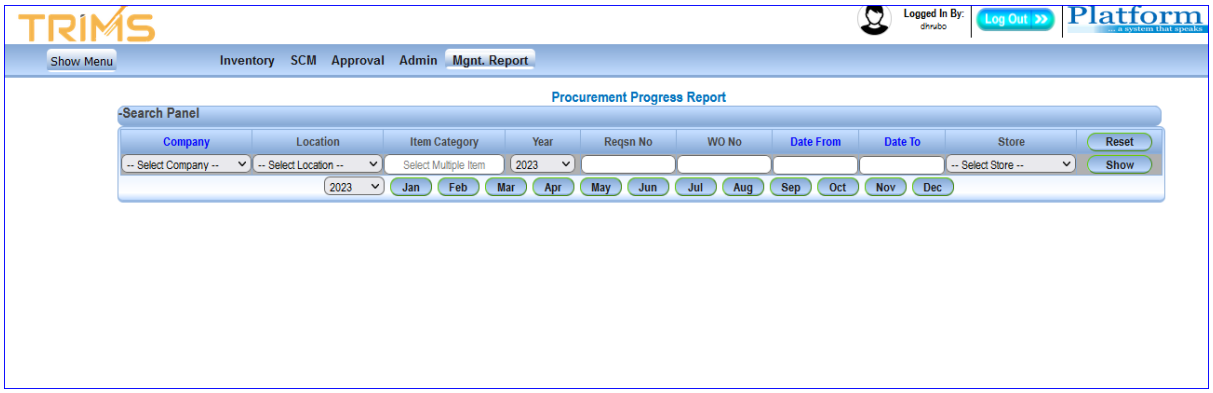

Figure 16: Requisition Follow Up Page.

2.3.3 Software Deployment and Data Migration

First, all information is kept at MS Excel file. But due to big data and continuous changes in Asset Information, it has become difficult to maintain data in this file. One of the burning issues for Excel file is, it needs manual updating. As a result, there occur information missing, spelling mistakes. Additionally, all sorts of reports need to be generated manually. To remove these hassles TEAM Group started launching Helpdesk which is known as ManageEngine and entered all IT Assert Information there as shown in Figure 9.

Figure 17 shows the excel file image where all necessary data are provided regarding IT Assets. Before implementing ManageEngine, all information such as: “asset name, asset tag, barcode, product type, asset state, acquisition date, expiry date, org serial number, location, owner company, purchase cost, site, total cost and user” are kept in excel file.

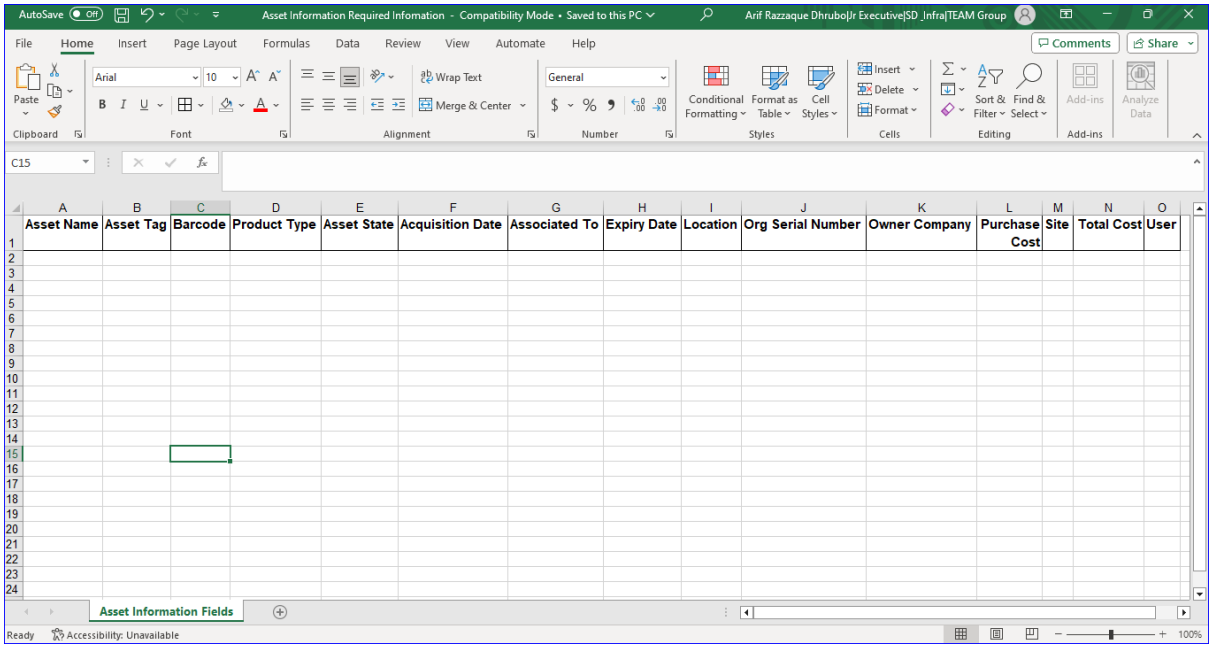

Figure 17: Excel Database Snapshot.

After completing data entry in the excel file (Figure 17), I make it .CSV file and enter .CSV file in ManageEngine for uploading information as shown in Figure 18.

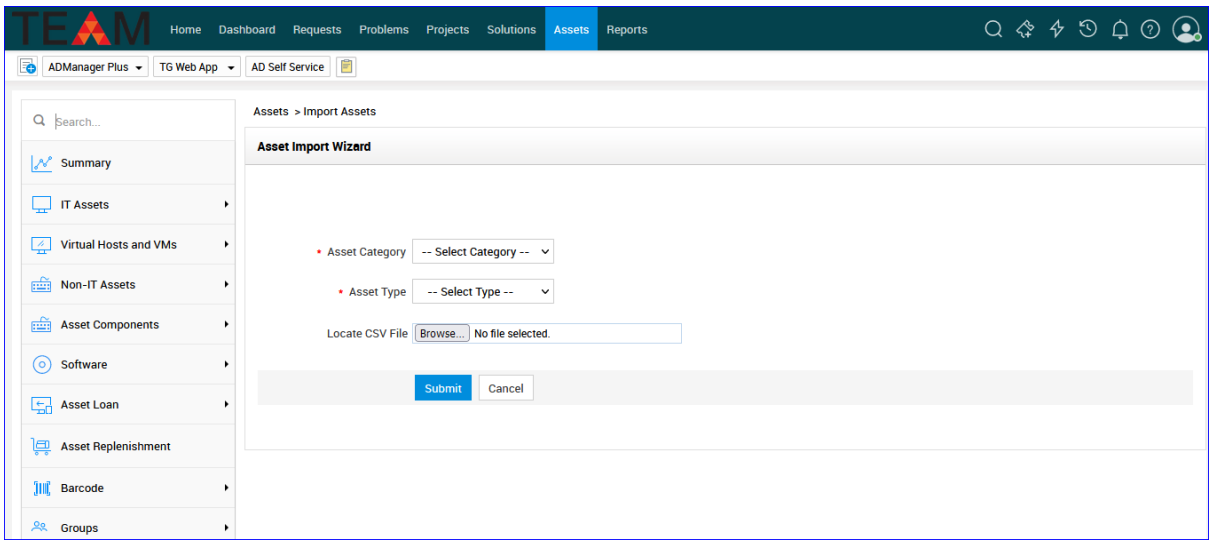

Figure 18: Entering .CSV Data File in ManageEngine.

Chapter 3

Data Interpretation and Analysis

3.1 Purchase Requisition Data Analysis

While working with purchase requisition, several parameters such as products, category, type, item, quantity, delivery duration, and pending duration are there to analyze. This part will cover only Purchase Requisition of November 2023 only as my Internship Period's task and analysis covers this duration.

Though garments manufacturing is the core business of TEAM Group, IT-Logistics plays a vital role in running and managing its daily operation. For day-to-day operations all sorts of IT equipment are required. The graph in Figure 19 shows the time span for receiving and delivering products to the concerned stakeholders. In November 2023, the IT department delivered Opex items to the concerned stakeholders like "AA & AAA" battery, CAT6 Cable,

Desktop Cooling Fan, Headphone, Keyboard & Mouse, Replacement monitors and Software Renewal License such as Adobe Illustrator, Photoshop and PDF Editor License, SSD, Telephone Set, UPS and Wireless Mouse. Generally, for IT purchases delivery lead time has been set for 7 Days (marked by the red color line in Figure 19) known as Threshold. Though delivery lead time is supposed to be the sum of "Pending Time & Delivery Time", but here 7 Days has been set based on operations observation. From the graph, product delivery within 1 to 7 days makes sense as some products like Headphone, SSD, Keyboard, Mouse are found instantly and here procurement team follows their protocol for purchasing. But when the number of requirements for these items increases the procurement team waits and issues work order altogether to a vendor to deliver all the items. The same is the situation in case of software renewal issues.

Indeed, threshold for receiving products is set to 7 days but for first eight products it crossed exceeds 7 days. Reasons behind this are discussed below.

- For SSD, Keyboard Mouse, Desktop Cooling Fan, Monitor 1 & Monitor 2 it took time in sourcing the required model and brand that was mentioned in the requisition. After 3 working days of placing the order the procurement department informed us that there was a shortage of that particular brand in the current market, and that was why the vendors took extra time to source the particular brand. We conveyed the same message to the concerned end user immediately verbally. In this situation we managed the end user in such way that he/she became patient for IT support. However, procurement department continued their follow up with the vendor, and finally we were able to deliver the desired product to end user.
- For Adobe Photoshop, Adobe Illustrator and PDF Editor, procurement department managed to collect quotation early and they prepared CS also. But there was a vendor's condition that 50% advance payment should be made before purchasing, 30% during

delivery and 20% after delivery. Our procurement department approached the finance department for 50% advance payment and there it took an extra time. Because of the large amount, around 20 lack (approx.), finally, after 15 days we were able to deliver these products to 63 end users.

It is observed that the threshold is set for any IT products 7 days. Basically, this is the considered maximum time for receiving any IT products. But due to following reasons the threshold 7 days cannot be maintained.

- High cost of IT products in the current market. Recently cost increased due to high inflation US Dollar.
- Unavailability of a particular brand, model and the required IT products' specification. This is the crossing threshold time taking more than 7 days. If that IT product is extremely urgent for a business purpose, the IT department set an alternative brand, model and specifications for that user. Sometimes the IT department research on different brand and models of IT items to check whether it'll meet requirement as per requisition or not. Also, if we find a product from a local vendor, we request them to provide us for testing purposes. If they provide us with a product, we test them for a few days and return them.
- Another reason for crossing 7 days threshold time is that we don't get fund from the finance department. Also, the finance department cannot arrange fund for IT products as per mentioned in Purchase Order (PO). As a result, vendors delivered products late.

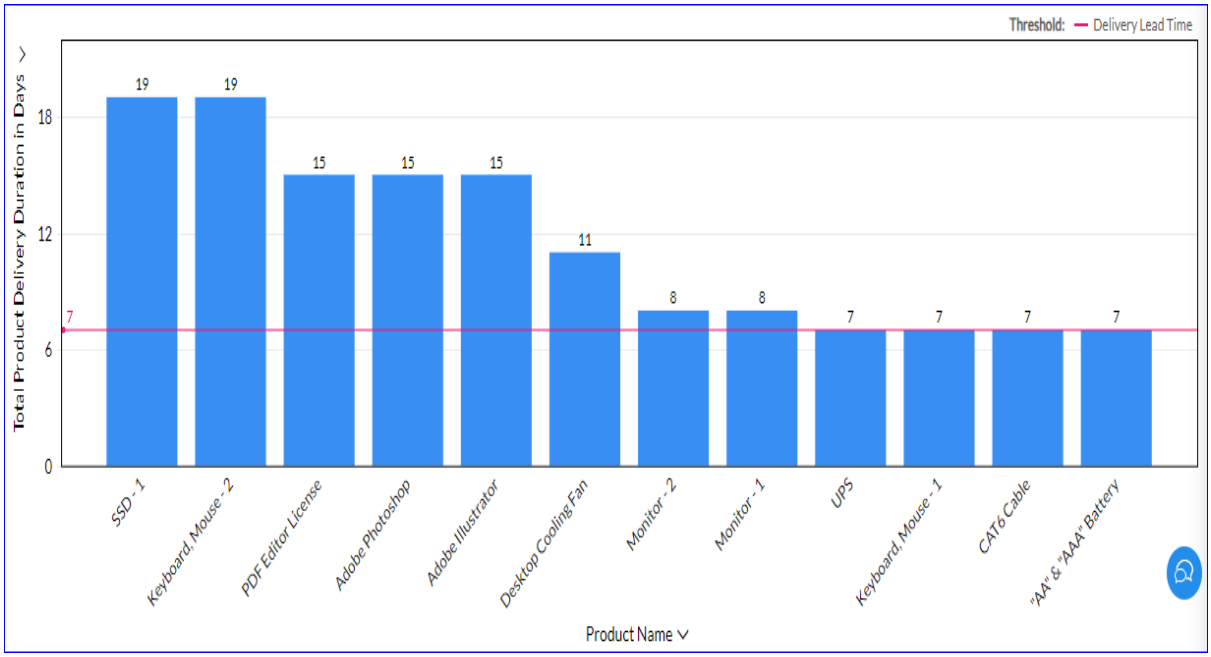

Figure 19: Graph of Total Duration (in Days) of product receiving after submitting to Procurement Department.

In Figure 20, late deliveries of Desktop Full Set, CPU 1, SSD, RAM and Laptop Battery crossing the threshold time 7-day timeline. So, observing the scenarios during my internship period in TEAM Group, it can be concluded that there is no particular threshold time for receiving IT products after submission of purchase requisition to the procurement department. Same reasons go for not receiving IT services from the vendor within 7 days timeline as shown in Figure 25 and Figure 26.

In Figure 20, bar charts of the pending duration of IT items during November 2023 show that all items threshold times crossed 7 days. Here “Desktop full set” which includes a CPU, monitor and an UPS as well as “CPU” which is only the desktop portion of a workstation. These are considered as fixed assets of the company which is known as “Capex” items. And as per procurement team, this is on hold due to high-cost issues. Besides SSD which is a storage device, RAM which is a memory device and laptop battery all are consumable items. These are not counted as fixed assets of company. Those items that are not fixed assets are known as

"Opex" items. As per procurement teams update due to unavailability of our required model and brand it is getting delayed to get products within the timeline. Whereas due to the model availability, laptop battery and SSD are on hold. Still now SCM is working to get us these products in order to meet our requirements.

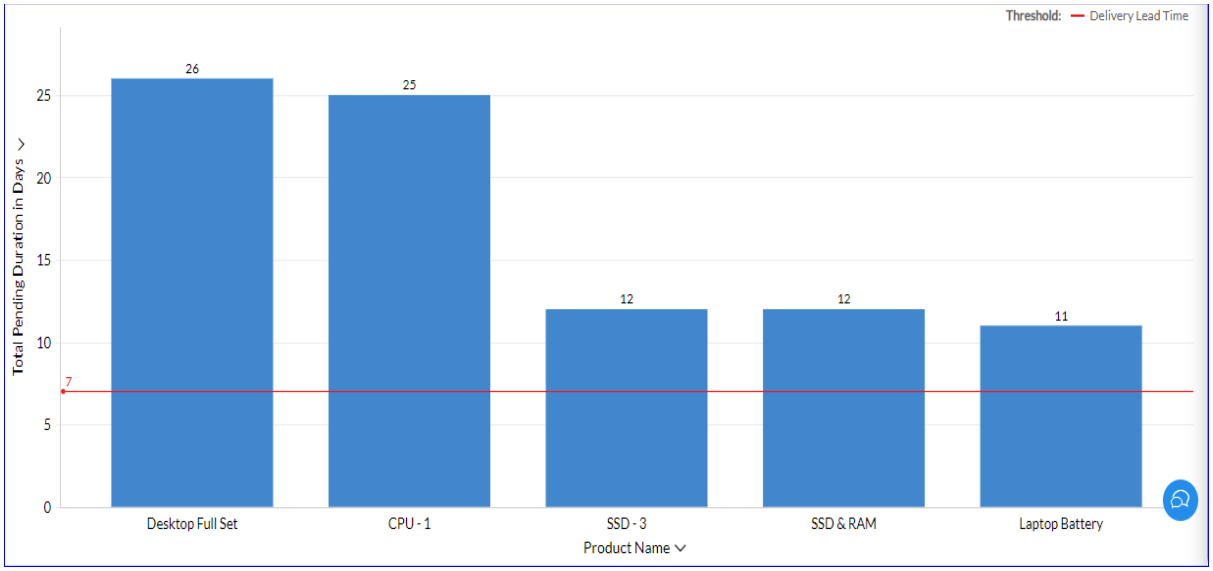

Figure 20: Graph of Product Pending Duration (in Days) after submitting requisition to SCM.

Figure 21 shows the percentage breakdown of IT purchase requisitions that I dealt with during November 2023. It is clearly shown in Figure 21 that I worked with three categories of IT purchases during my internship period. All these categories are mixed with capex and opex items. About 38.5% products are completely new purchases. Renewal products are whereas 11.5% which is quite low. Most of the purchases are replacing IT products as their life cycle has almost ended. It is high in percentage which is 50%.

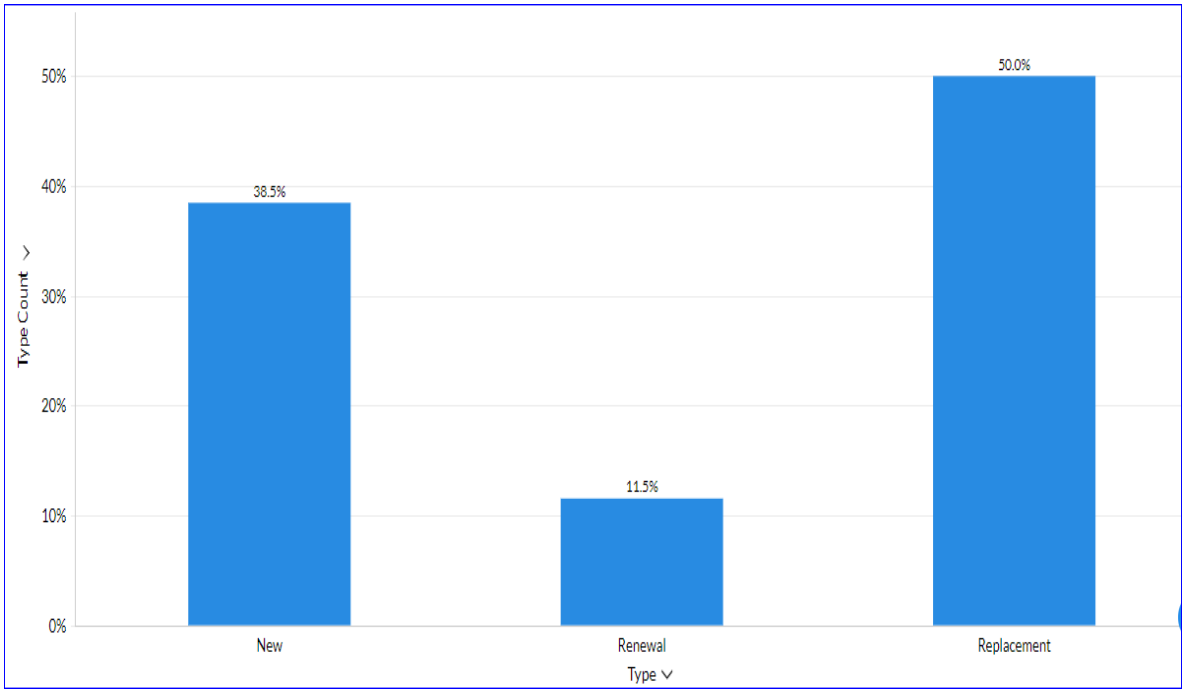

Figure 21: Type of products that I dealt with in November 2023 based on IT purchase requisition.

Figure 22, shows that 7.7% of the works are concerned with Capex items such as New Desktop Set, and 92.5% with Opex items such keyboard, mouse, SSD, UPS, monitor, printer and others.

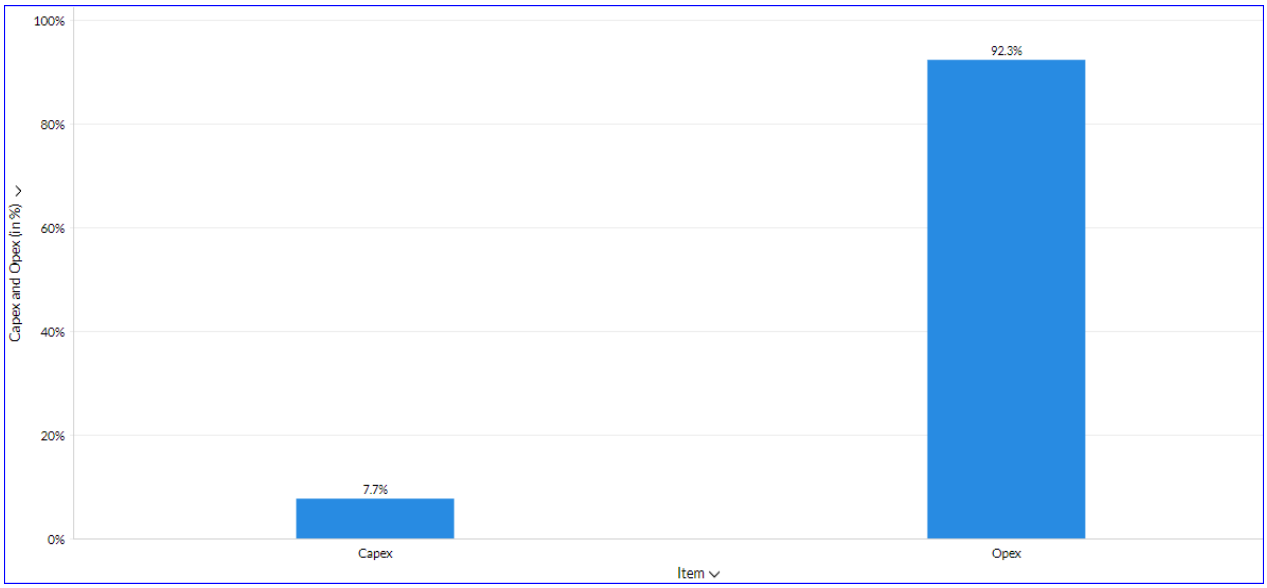

Figure 22: Item wise Overview of Products deal with (in %) of November 2023.

Both the Software and the Hardware identification are one of my important tasks. Figure 23 illustrates that I have worked with Software (New Purchase/Renewal) about 11.5% of the time and Hardware (New Purchase/Replacement) about 88.5%.

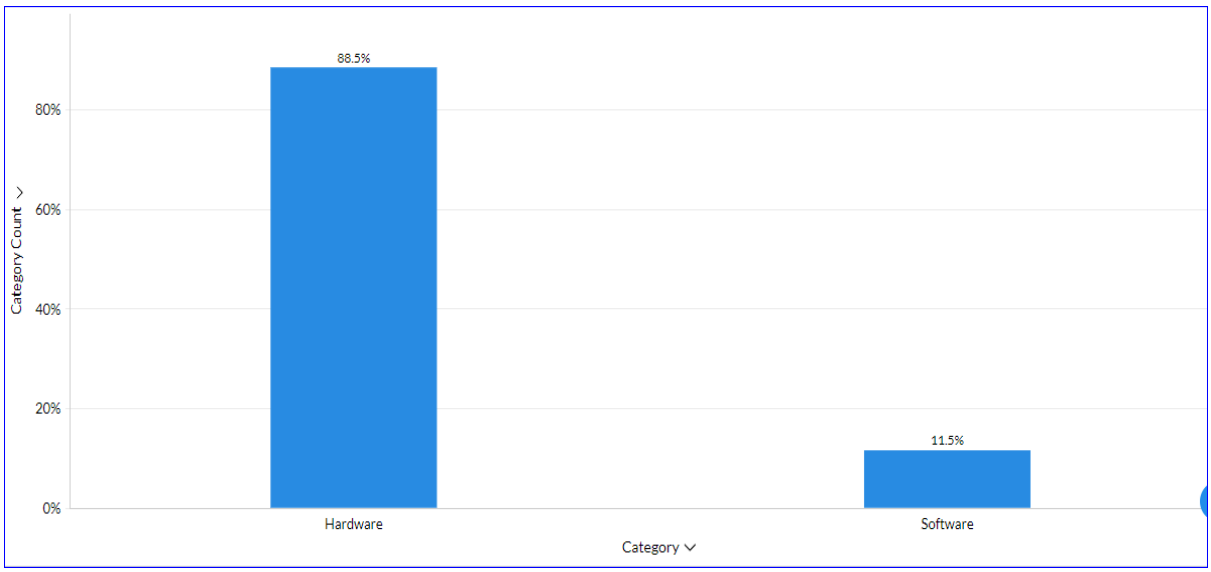

Figure 23: Category wise Overview (in %) of Hardware & Software Products.

3.2 Service Requisition Data Analysis

The purpose of showing Figure 24 is to differentiate between warranty support and servicing of IT products. In warranty cases, it is cost free. On the other hand in servicing cases, it is cost effective. During my internship period all I worked with servicing related products with vendors and procurement team.

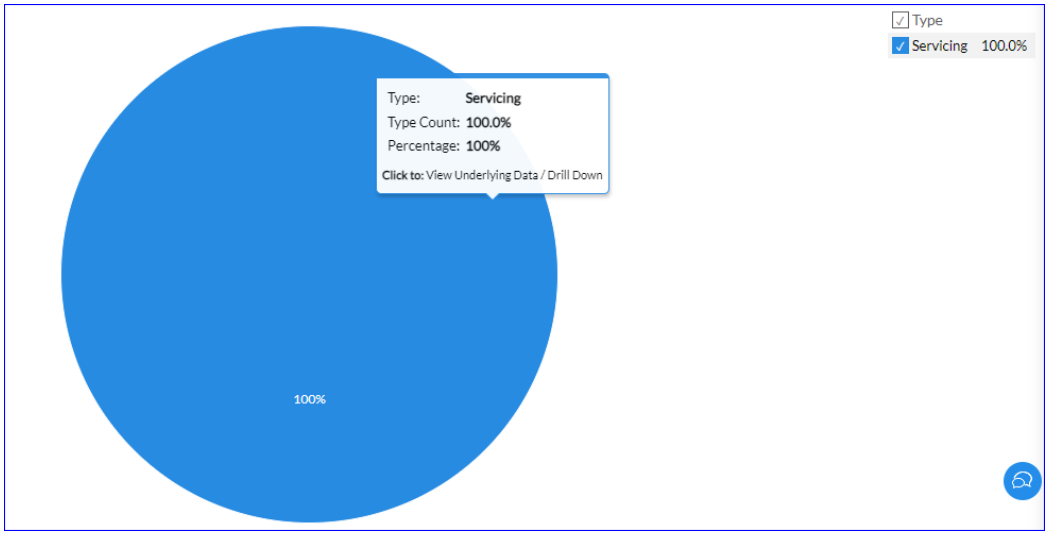

Figure 24:IT Servicing Status ((in %) of November 2023.

Concerning servicing and warranty issues, I haven't worked with any warranty cases. All I worked with IT support issues which are vendor dependent as shown in Figure 24.

Figure 25 shows delivery duration status of IT services in November 2023, which are completely vendor dependent. Due to the increasing trend in servicing, IT and supply chain department of TEAM Group, informed the vendors to deliver services within a maximum of 7 working days. This 7-day time in getting our service is the threshold time (marked by a red line in Figure 25). However, it can be delayed if there's a proper justification. As can be seen from figure 25, except faulty nodes servicing, for all other items vendors serviced and checked from their end taking more time. From figure 25, monitors took 54 days to get repaired instead of 7 days. Because monitors were greater in number. Also, only one vendor did all the servicing for us. Though quantity of laptop and desktop were less but still it failed to get repaired in less than 7 days. Here number for servicing vendor was one. In case of Faulty Nodes, the delay time of providing service is unexpectedly higher as most of the vendors refused to provide the service. As per vendor the amount they provided in quotation was too low. They are familiar with the payment system of this company which is too slow and company provides vendor payment

lately. Therefore, they refused to work initially but later they did it. At the time of writing this Internship report, CCTV servicing did not cross 7-day timeline. But today this is still pending due to vendor unavailability issue for CCTV proper servicing.

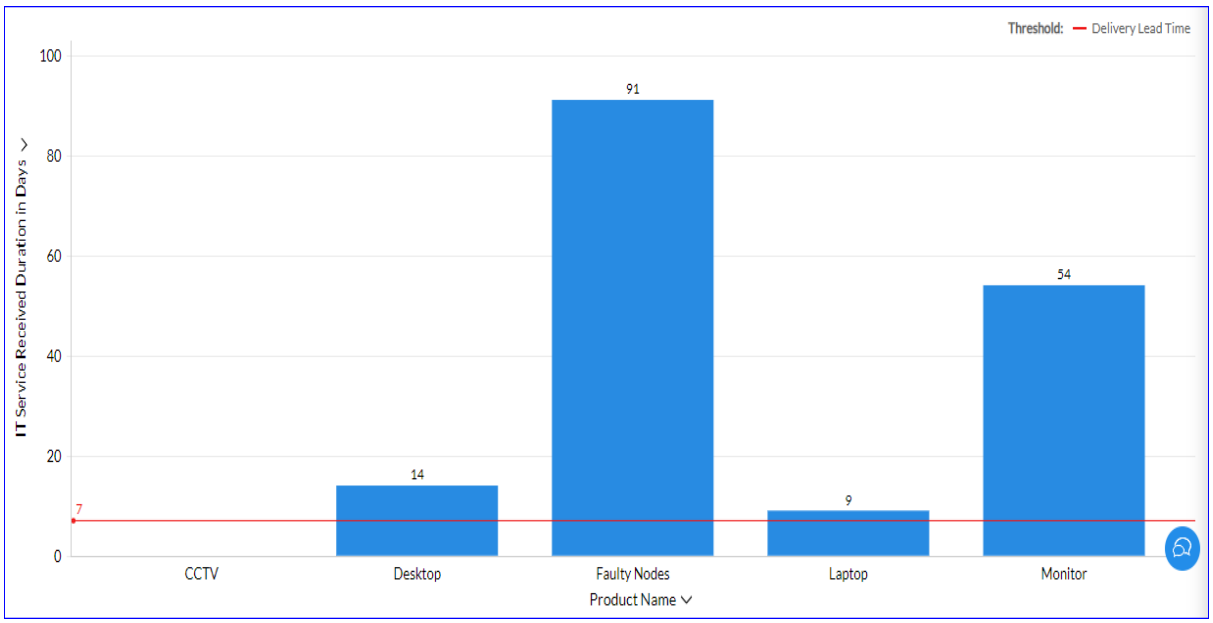

Figure 25: IT Service Received Duration (in Days) Status of November 2023.

As shown in Figure 26, only CCTV servicing is pending in November 2023 which hasn't crossed the lead time (marked by a red line in Figure 26). But after continuously following up with the vendor and SCM department, it has been learned that servicing of CCTV can be done within the 1st week of December 2023, taking extra time of 2 to 6 days.

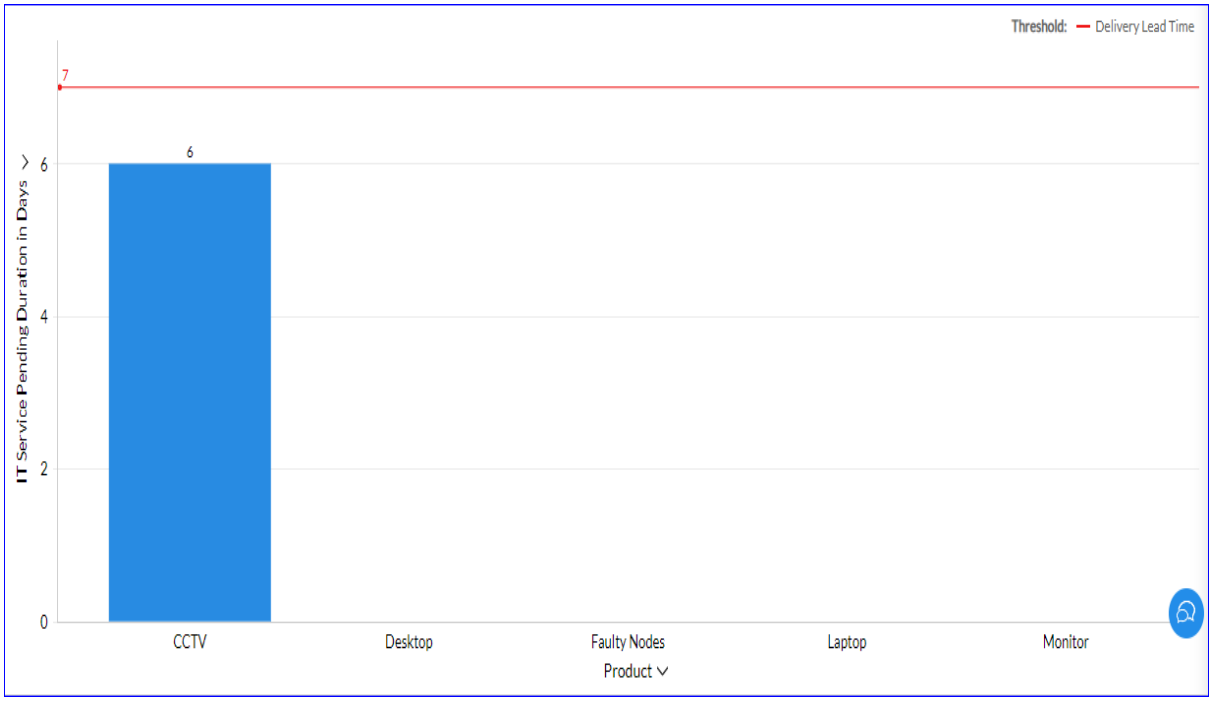

Figure 26: IT Service Pending Duration (in Days) Status of November 2023.

3.3 IT Asset Data Analysis

IT asset information itself is an asset for an organization. IT concerns and management authority need this information to keep the core business alive. It's the most confidential issue for an organization. Nowadays Cyber-attack, bullying, spoofing, and phishing, all are stealing organizational credentials and hence destroying the organization. In this Internship report, I'll share IT Asset information briefly, which helps to understand IT Assets Lifecycle.

Figure 27 shows the item wise percentage of IT Assets of TEAM group in all states registered in ManageEngine since TEAM Group's journey. All states of Assets are "In Use", "In Stock", "In Repair", "In Support", "Disposal", and "Expired". These percentage values show the asset information from 2009 to present. From the figure it can be seen that, the maximum number of workstations which includes laptop, desktop among overall IT Asset has been purchased which is 24.8% of total assets. Next comes monitors which is 18%. In third and fourth place, UPS and

IP camera come respectively, and total 15.3 % UPS and 15.1 % IP cameras have been purchased till now. In the next place, Monitor, UPS and IP Camera come accordingly. Rest of the assets seems to be in negligible percentage, but the number is found huge. Due to confidentiality, this information can't be shared further.

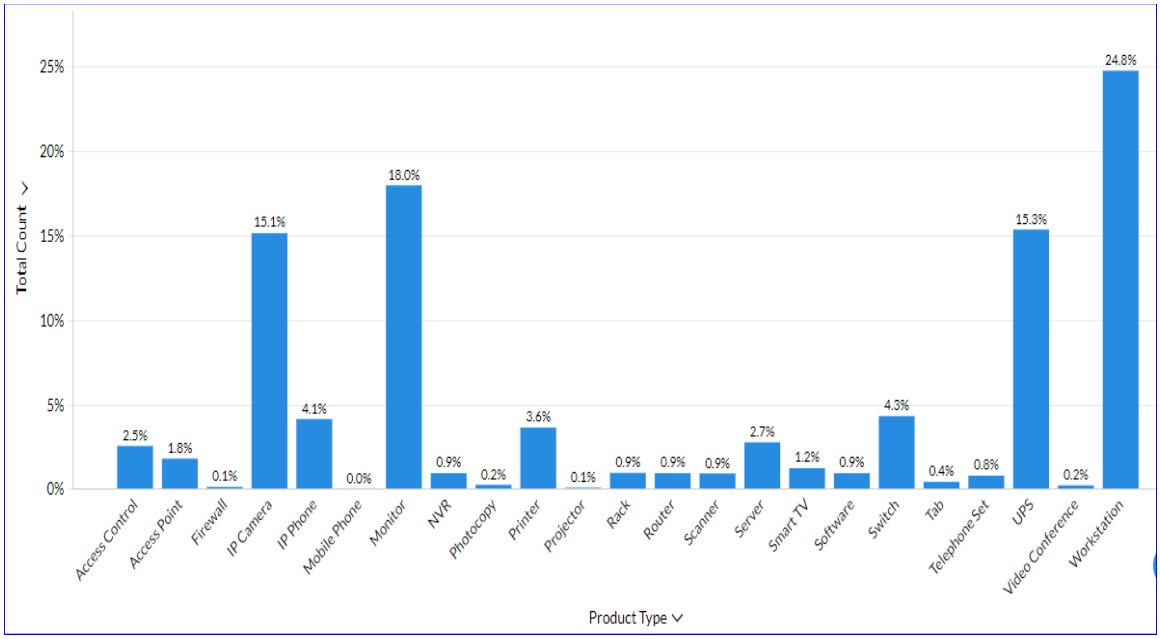

Figure 27: IT Asset Information (in %) Product wise of TEAM Group of November 2023.

Figure 28 describes the percentage of IT Assets are being used at present in TEAM Group. From the graph it's visible that among all IT assets, most of the workstations are "In Use" state now. Next place goes to monitor, IP camera and ups respectively. The number of remaining in use assets are huge, but it has little percentage with respect to total count. Currently, I and the whole IT team is working to fix and update necessary asset information in ManageEngine.

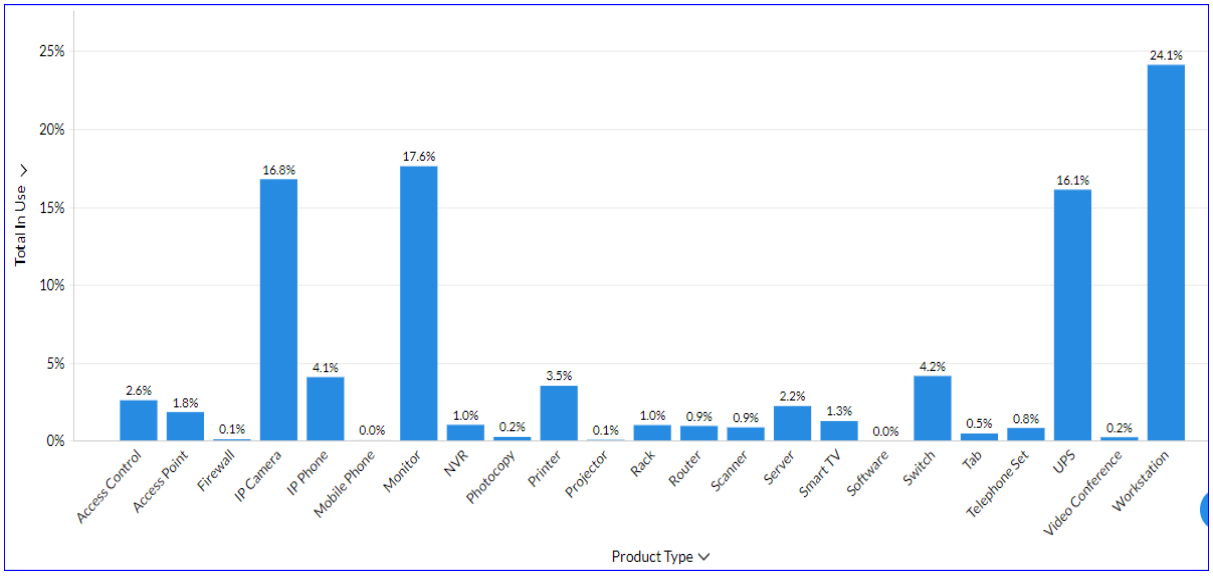

Figure 28: "In Use" IT Asset Status (in %) of TEAM Group till November 2023.

The graph in Figure 29 shows that Workstations, Monitor, and IP Phone are reasonably used for providing emergency support. No other IT Assets are used for emergency support purposes. "In support" assets are those which are basically **"In Stock"** but used before by other users and not in good condition. These assets remain in "IT Custody" most of the time.

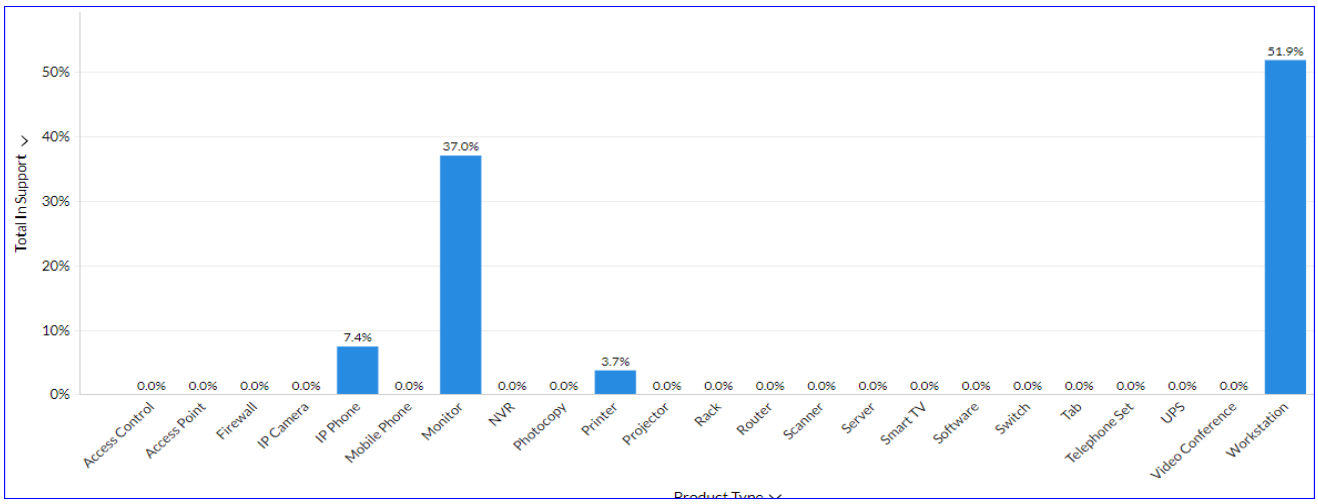

Figure 29: "In Support" IT Asset Status (in %) of TEAM Group till November 2023.

Figure 30 shows the status of In Store IT Assets. In Store assets are those which have been purchased and still undelivered. However, some assets having in good condition are also included. Here the categories Workstation, Monitor, License Software, Switch and Server are the most in number.

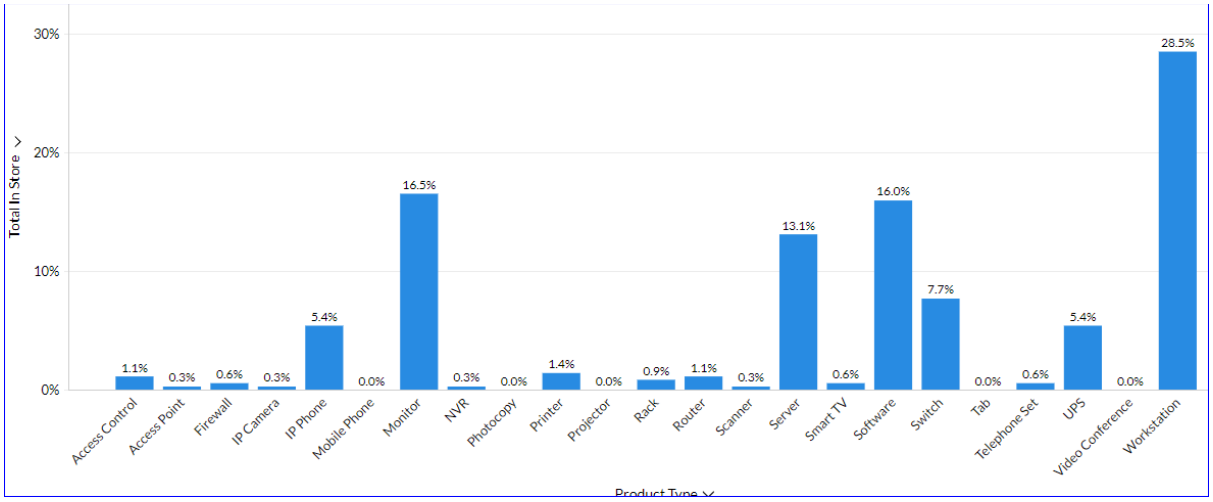

Figure 30: "In Store" IT Asset Status (in %) of TEAM Group till November 2023.

Repair IT Assets means those assets which have been sent to vendor for repair and warranty support. Figure 31 highlights that out of total "In repair" assets, workstation is the highest, 2nd is the monitor. However, these status information are changeable. In most cases, these assets are nowadays irreparable due to old model parts. Also, management approves new purchases as vendors can't provide any warranty support after servicing for those parts. In this job, I always liaise with vendors for ensuring smooth warranty and service support via mail and verbal communication.

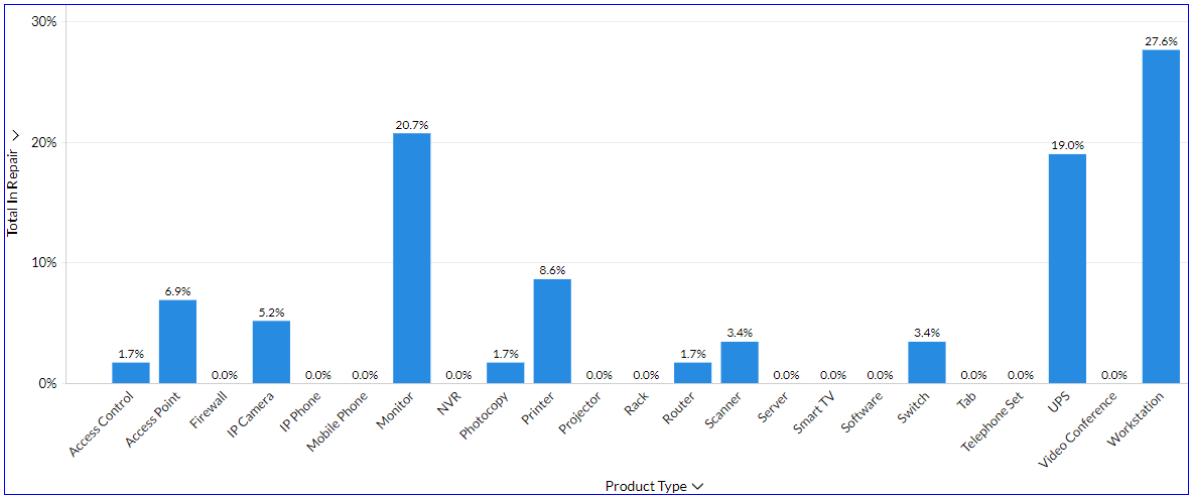

Figure 31: "In Repair" IT Asset Status (in %) of TEAM Group till November 2023.

Figure 32 shows expired asset status of TEAM Group till now. Expired Asset means completely damaged Assets. This organization's IT tried to repair these Assets but failed. Also, these assets occupy the space. Therefore, these assets are properly disposed via the disposal committee.

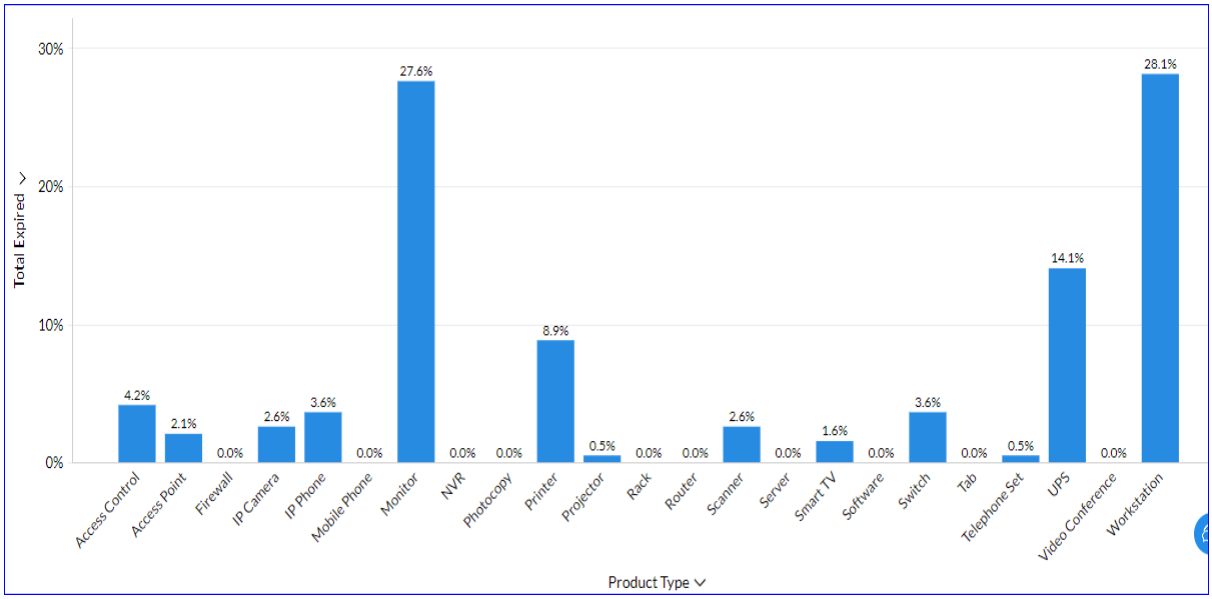

Figure 32: "Expired" IT Asset Status (in %) of TEAM Group till November 2023.

The graphical presentation of Figure 33 shows the IT items those have been disposed till now, out of which workstation is the highest percentage. The number is huge and the reason for this cannot be disclosed due to confidentiality. Most of the items in the workstation are in the old model, had damaged motherboard, damaged and old generation processors, damaged power supplies, low-capacity memory chips which is RAM, low-capacity storage which is Hard Disk, and Burnt Cooling Fan. For monitors, panel boards are damaged. For printers, motherboard circuits are burnt out. Same for UPS, IP Phone and Smart TV as well.

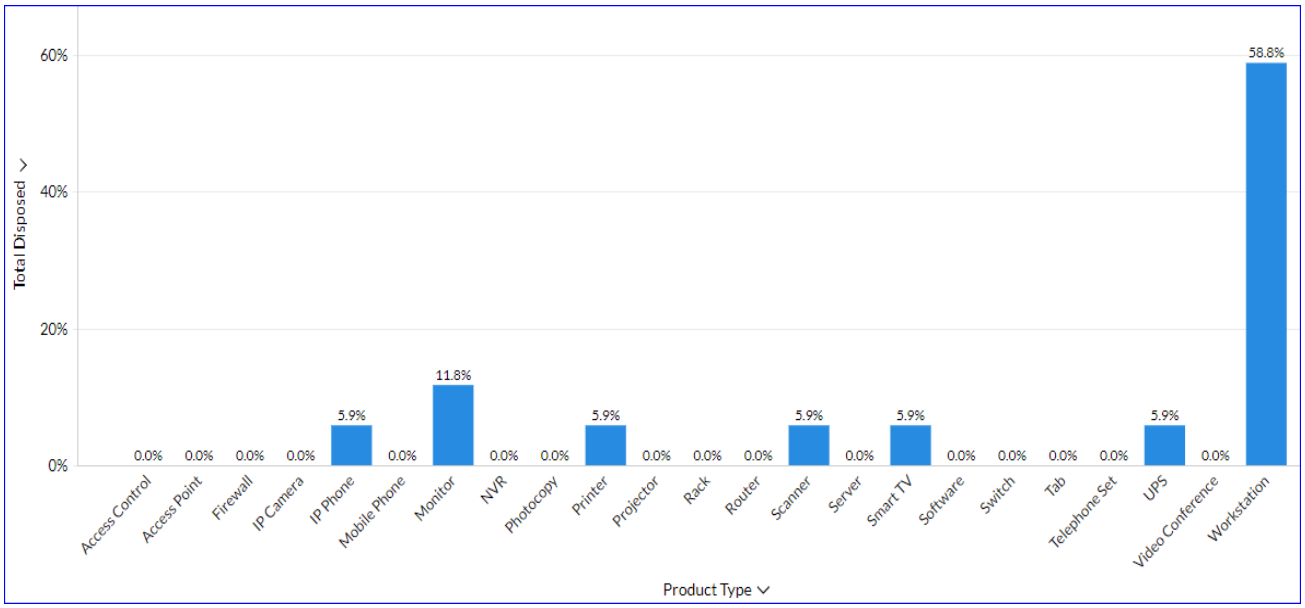

Figure 33: "Disposed" IT Asset Status (in %) of TEAM Group till November 2023.

3.4 Future Procurement Plan

We can predict future procurement plans based on IT Disposed, Expired and In Repair Status Report. Though it's management decision but for one of my job purposes, I'm providing some future procurement analysis for CPU which is very curtail at this moment.

In Figure 34, we can see that 32 CPU needs to be replaced with the brand-new CPU as all of them are of Pentium AMD, with Dual Core processors of different generations. Nowadays, these CPUs no longer work well in organizations due to vast usage of various types of applications, such as windows 10 updates, windows 11 environment, in house software, server upgradation, and poor resources. Even normal MS Word, MS Excel files works can't be done using these CPU. They have also been tested here to increase RAM (memory), HDD and SSD (storage) but failed just because of old generation processor. Hopefully if management approves, all of these will be replaced. Besides CPU, printers will also be replaced as repairing printers is too costly and also shortages of required vendors.

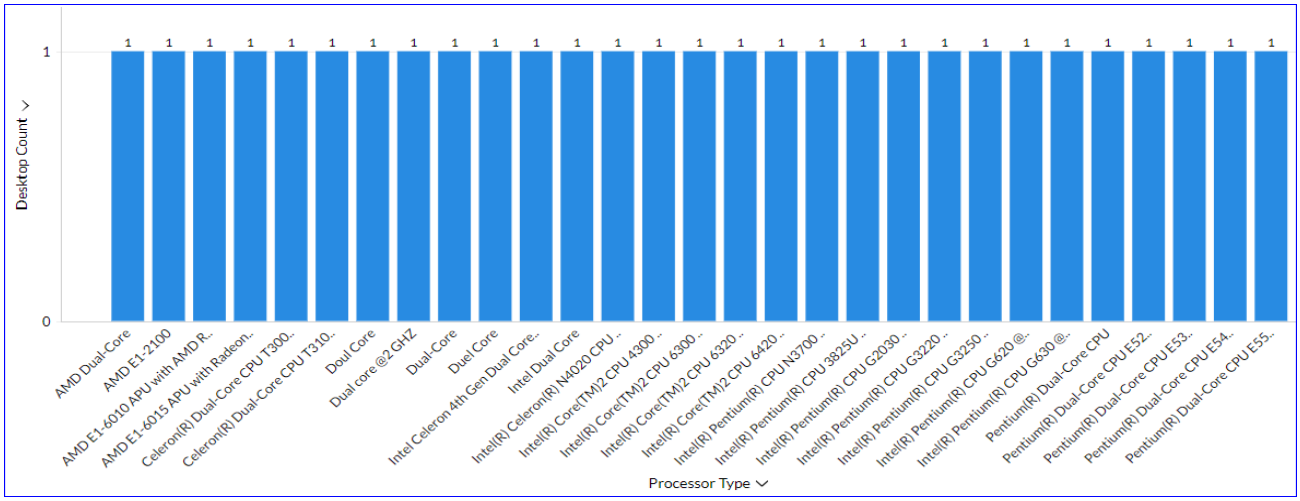

Figure 34: Existing CPU with Old Model Processors (in numbers) in TEAM Group.

3.5 Findings

Throughout this Internship project period, some findings are as given below:

- All IT Assets information are up to date in ManageEngine till today.
- IT Assets that are enlisted in ManageEngine, get scanned everyday which helps us to detect slightest changes in Asset information.
- We can claim vendor support & warranty directly mailing through ManageEngine.
- Users who raise request for IT support, their existing assets gets associated with it. It helps us to identify that how many times users are facing problem while using that asset.
- While verifying upcoming procurement analysis, it's easier to provide justification for purchasing IT Assets by showing ManageEngine report history of IT Assets Lifecycles.
- Any IT report can be generated and analyzed via ManageEngine Analytics Tools. My all-report analysis figures are provided from there (Figure 19 to Figure 34).
- I get "Auto Scheduled" report of Asset counts every day to keep track regarding any changes in IT Asset.

3.6 Limitations

Though ManageEngine software helped a lot in tracking all IT Asset history, I have identified some limitations as follows:

- Sometimes I did not get Auto Scheduled Report in time.
- Sometimes data mismatches in Auto Scheduled Report.
- Adding new user information in ManageEngine Active Directory (AD) takes time. So, I could not be able to add updated asset state information instantly.
- Sometimes mailing problems occur in ManageEngine.

- Some types of attachment files such as PPT, PNG can’t be uploaded.

3.7 Recommendations

To improve ManageEngine Service for IT, the following recommendations are provided.

- As data increases, server resources should be increased when needed.
- Dashboard view for representing IT Asset information can be customized as per need.
- More options should be added for report generation.
- Separate address book should be created for storing organization users’ and vendors’ mail addresses so that they can be found in one click.
- It can be more useful to track performance if SLA could be set and applied properly.
- In most cases of this project period, it took more than 7 days to deliver required IT products. Receiving required IT services also delayed from vendor end which exceeds 7 days. In the entire report it has been highlighted via Figure 19, 20, 25, 26. Several barriers such as vendor sourcing, vendor payment, not getting fund from Finance & Accounts Department are pointed as root cause. Sometimes, vendors delay in providing quotation. After analyzing it has been found that “payment outstanding” is the root cause for it in most cases. Another reason is that vendor analyze market rate and calculate their profit keeping payment duration and outstanding condition in mind. So sometimes they delay in providing quotation. To solve these issues making procurement and services under 7 days period, the best way is to sign up for an SLA Agreement between TEAM Group and Servicing Party, where all are bound to abide by the clauses.

3.8 Conclusion

My primary job role in TEAM Group is to work on “IT Asset & Logistics” part which is under Service Delivery and Infrastructure department. IT Asset History Tracking, Analyzing IT Procurement Requirements, Working on IT Budgets and Approval, Purchase and Service Requisition Approval, Liaising with Supply Chain and Vendor for follow up and support all are in my scope of working.

Throughout this job I gained experience in IT Procurement System, IT Servicing Process which are vendor dependent. Also, I gained knowledge working in Logic ERP Software to keep track of IT Procurements. Additionally, I gained experience in working in ManageEngine Tool which is known as the helpdesk system. IT Asset adding, IT Asset State monitoring all I learned from this tool. This has helped me to become an expert in IT-Logistics Operation.

The main problem that I faced based on my experience is that the IT procurement process is very much bureaucratic. In purchasing requisition approval of Business Unit Head, Service Delivery Head and Department Head are required. For Budget approval, 6 signatures are required in hard copy format. Required signatures from: Concerned End User, her/his Line Manager, Department Head or Business Unit Head, Group CFO, Deputy Managing Director (DMD) and Managing Director (MD). This takes a longer time to submit requisition to the procurement department. Only for newly required IT products budget approval is needed. Even though purchase requisition is approved, without budget approval procurement department cannot accept the requisition.

Another finding is that the procurement department collects 6 signs manually in Comparison Statement (CS) which requires a large amount of extra time. Required signs are: Concerned person from procurement department who prepared CS, Sourcing Head’s sign, Service Delivery Head’s sign, IT Department Head’s sign, Supply Chain Department Head’s sign and

Deputy Managing Director's sign. Without these signs the Purchase Order (PO) cannot be issued to vendor. This system has been followed for long time in TEAM Group and has become a regular practice. This causes me to deliver IT service and support to the concerned end users late.

In resolving this serious issue my suggestion is to make an IT procurement budget at the begging of the year. For the information of "In Support", "In Store", "In Repair" data for IT products for previous 2 to 3 years can be used. Based on that procurement budget, repairing budget can be proposed to the top management which will reduce the lead time of IT product purchase and service. Also, for IT product warranty and instant repairing support, SLA agreement can be made with service providers which has already been mentioned before in Recommendation. Apart from this I haven't faced any major issues during this Internship period.

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