

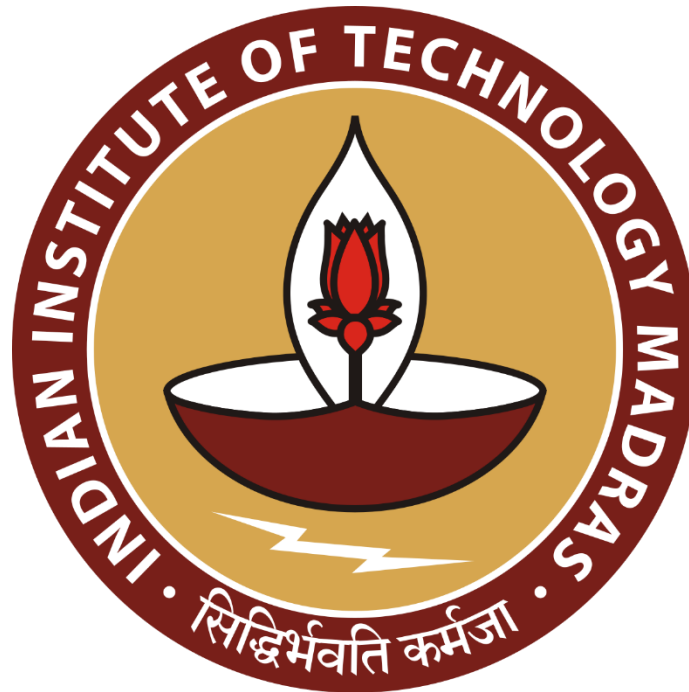
# **Supply Chain And Customer Support Optimization For Pc Tech Solutions**

## **CAPSTONE PROJECT END -TERM SUBMISSION**

Submitted by

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# 1. Executive Summary

This report outlined a practical strategy to revive and improve PC Tech Services, a business specializing in PC/laptop repairs, spare parts, and second-hand electronics. Faced with challenges like customers moving online and increased expenses, the plan focused on boosting our online presence, making operations more efficient, and expanding revenue sources.

The main goals included winning back lost customers, cutting costs, and selling existing inventory. We achieved this through detailed analyses of how we worked, negotiations with suppliers, using smart models for better operations, and generating useful data for a comprehensive report.

We successfully applied some strategies already, like better financial planning, improved customer support, and introducing services such as Annual Maintenance Contracts (AMCs) and rentals for second-hand electronics. This led to stronger customer relationships, more revenue sources, and handling market changes more effectively.

To tackle time-related challenges, we came up with a customer-friendly solution for faster service using a local partner. We were aware of potential issues, like operational hiccups and transportation uncertainties, and had plans to deal with them.

Our data analysis provided practical insights into trends in revenue, service numbers, and customer happiness, helping us plan for the future. In conclusion, this report stressed the importance of ongoing improvement, customer satisfaction, and lasting profitability for PC Tech Services in a changing market. It positioned us for success in the long run.

# 2. Analysis Process

The main purpose of the analysis is to find:

1. Profitability trends for different service types and categories.
2. Identification of high-performing and low-performing services.
3. Identification of services where quality and resources needs to be improved.
4. To find the percentage of customers the firm retains over time, indicating customer loyalty, satisfaction, and the effectiveness of retention strategies.

## **Analytical Tasks and Process:**

### **Data Collection and Initial Steps:**

In collaboration with Mr. BS Chandra Mouli, the company's founder, I acquired comprehensive data by receiving bill books covering the years 2019-2022. This was followed by the meticulous entry of data into Google Sheets for subsequent analysis. Additionally, I conducted an on-site inventory analysis by physically visiting the store room.

**Handling Ambiguity and Addressing Outliers:**

Encountering ambiguous data, especially during the COVID-affected years of 2020 and later-2019, prompted thorough discussions with the employees responsible for service delivery. These collaborative sessions, spanning two Saturdays, were instrumental in understanding and dealing with outliers and abnormal trends.

**Data Preparation and Structuring:**

To ensure the reliability and accuracy of the data, I employed Google Sheets for initial organization, preprocessing, and formatting. This step was crucial in setting the groundwork for subsequent in-depth analyses.

**Metadata and Descriptive Statistics:**

The generation of metadata provided essential context to the structured data obtained from bill books. Concurrently, I calculated descriptive statistics for financial records, offering insights into key aspects of the business's performance.

**Volume and Revenue Analysis:**

Utilizing the structured data, I delved into the analysis of service counts and revenue generated monthly and yearly, spanning the period from 2019 to 2022. This provided a comprehensive overview of the business's operational trends.

**Margin Analysis:**

To understand the profitability of different service categories, I computed the mean margin per category for the years 2019-2022. This analysis was pivotal in identifying areas where profit margins could be optimized.

**Categorical Revenue and Margin Analysis:**

Further breaking down the data, I calculated revenue percentages and mean margins for each service category. This granular analysis enabled a nuanced understanding of the contribution of each category to the overall revenue and profit margins.

**Return on Investment and Trend Analysis:**

Assessing the return on investment for various service categories, I identified trends in both revenue and services. This strategic analysis informed decisions related to resource allocation and business focus.

**Predictive Modeling:**

Leveraging machine learning libraries like Scikit-Learn, I initiated predictive modeling for future stock analysis. This forward-looking approach aimed to optimize profits and enhance inventory management strategies.

Customer Satisfaction Survey and Implementation:

To gauge customer satisfaction, a survey was conducted with 755 members through WhatsApp, utilizing contact numbers extracted from their bills. The seamless linkage of survey information to Google Sheets facilitated in-depth analysis. This also helped us to know what the customers were exactly expecting from us

Identified Areas of Improvement and Implementation:

Based on survey reports, areas where PC Tech Services lagged were identified. Subsequently, customer redressal schemes were implemented to address these concerns, contributing to enhanced customer satisfaction.

Customer Retention and Digital Record-Keeping:

Calculating the customer retention rate and associated measures provided insights into customer loyalty. Additionally, I implemented a systematic approach for digital record-keeping using Google Forms, ensuring efficient management of digital bills, demand tracking, and revenue records.

Customer Satisfaction Survey:

I proposed conducting a survey for our frequent customers through WhatsApp, leveraging contact numbers extracted from their bills. This initiative successfully generated a total of 411 responses. The Google Forms survey, displayed below, facilitated data collection, and the information was seamlessly linked to Google Sheets for further analysis.

PC Tech Services Customer Satisfaction Survey

We are conducting a customer satisfaction survey to gather your insights on your experience with PC Tech Services, including product satisfaction, customer support, delivery services, and overall brand experience. Your feedback is crucial in helping us improve our services and ensure your continued satisfaction. Please take a few minutes to complete the survey by answering the questions below. We appreciate your time and feedback!

Your responses are confidential, and your personal information will not be shared.

kottasaisaranreddy@gmail.com

\* Indicates required question

Email \*

Your email

Customer Name \*

Please enter your name or the firm/company's name on which the bill was provided

Your answer

Contact Number \*

Please provide the contact number of the person/company on which the bill was provided

Your answer

What specific services did you receive from PC Tech Solutions? \*

The firm provides the following services which are categorized as follows:  
Installations: Operating System, Antivirus, Microsoft Tally, Microsoft Office.  
Sales: Desktop Sale, Laptop Sale, Printer Sale.  
Second Hand Sale: Laptop (refurbished), Desktop (refurbished), Printer (refurbished).  
Services: System Security Testing, PC Repair Services and Troubleshooting, PC Troubleshooting, Cloud/Backup Services, Networking/Wired/Wireless Networking, System Security Testing

☐ Sales  
☐ Second Hand Sales  
☐ Services  
☐ Installations

How satisfied were you with your experience at PC Tech Solutions, using a scale \* of 1 (very dissatisfied) to 5 (very satisfied)?

☐ 1  
☐ 2  
☐ 3  
☐ 4  
☐ 5

Please share your honest feedback about your experience with PC Tech Solutions, including any suggestions for improvement.

Your answer

The responses that were obtained through google sheets contained following metadata:

File

Edit

View

Insert

Format

Data

Tools

Extensions

Help

100%

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%

0.00

123

Default...

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## **Tools used for the project:**

**Google Sheets:** I employed Google Sheets for the initial organization and structuring of raw data extracted from bill books. This encompassed preprocessing, formatting, and converting the data into a spreadsheet format, facilitating further analysis. Google Sheets played a pivotal role in organizing raw data and ensuring transparency for future reference.

**Python (Pandas, NumPy, Matplotlib, Seaborn):** For advanced data analysis and visualization, I utilized Python along with Pandas for data manipulation, NumPy for numerical operations, and Matplotlib and Seaborn for creating insightful visual representations. These tools aided in generating clear visualizations such as bar charts, pie charts, and line plots, providing a comprehensive understanding of trends.

**Google Drive:** Serving as a storage platform, Google Drive was used to store supplementary content, including images and reference data. It acted as a centralized location for essential materials, and a link to visual materials supporting the structured data analysis was shared.

**Google Forms:** To conduct a customer satisfaction survey, I leveraged Google Forms. The seamless integration of survey information into Google Sheets facilitated in-depth analysis, providing valuable insights for strategic decision-making.

**Predictive Modeling Tools (Python – Scikit-learn):** I incorporated machine learning libraries like Scikit-Learn for predictive analytics. These tools were scheduled for forecasting for future inventory trends, with the aim of optimizing stock management for PC Tech Services.

This thorough analytical process functions as a strategic guide for PC Tech Services, directing decision-making towards increased profitability, operational efficiency, and customer satisfaction. By closely examining trends in profitability, identifying the performance levels of various services, and addressing any uncertainties in the data, the business gains a nuanced understanding of its operations. This analysis helps optimize profit margins, enhance resource allocation, and nurture customer loyalty.

### 3. Results, Findings and their Implications

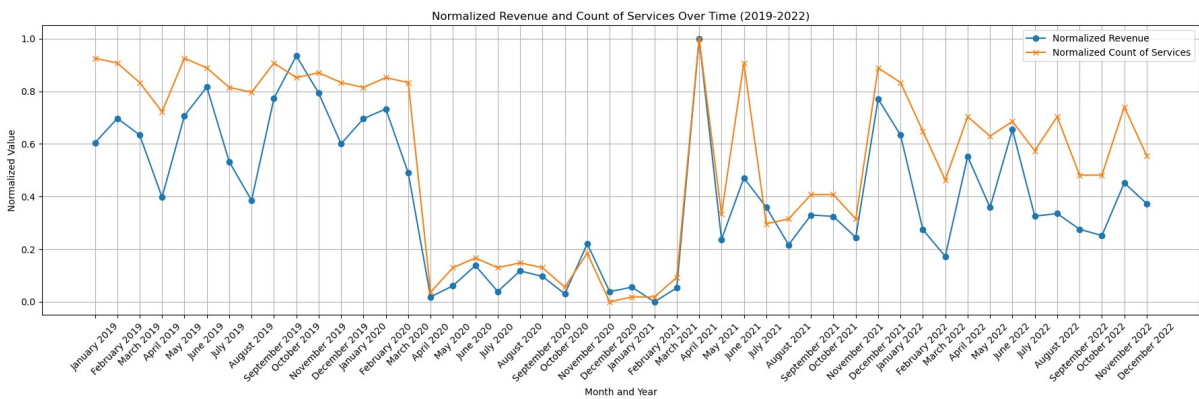
#### Month and Year wise Service Count

Month wise count of services is as shown below:

	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
2019	54	53	49	43	54	52	48	47	53	50	51	49
2020	48	50	49	6	11	13	11	12	11	7	14	4
2021	5	5	9	58	28	53	20	21	26	26	21	52
2022	49	39	29	42	38	41	35	42	30	30	44	34

#### Month and Year wise Revenue Generated (in RS)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	95620	109150	100000	65650	110600	126450	85300	63900	120150	143650	123050	95150
2020	109000	114350	79100	10700	16850	28000	13700	25050	22000	12350	40050	13600
2021	16100	8000	15650	153100	42400	76300	60150	39450	55850	55100	43500	119850
2022	99950	47750	53100	88200	60000	102950	55200	56700	48000	44550	73600	62150



#### Key Observations:

**Seasonal Oscillations:** The service count exhibits noticeable seasonal oscillations throughout the observed years (2019-2022). Peaks and troughs align with specific months, indicating a correlation with external events or market dynamics.

**Impact of COVID-19:** The most prominent disruption occurred during the COVID-19 pandemic, leading to a sharp decline in service count. The lockdown measures and economic uncertainties likely contributed to reduced demand for PC Tech Services during this period.

**Post-Pandemic Recovery:** Post the pandemic, there is evidence of a gradual recovery in service count, suggesting resilience and adaptability to changing market conditions.

**Peak Seasons and Demand:** Notably, peak seasons such as college/university opening days, the start of fiscal years, Diwali and New Years are identified as periods of considerable demand for new/used computer appliances. Understanding and capitalizing on these peak seasons can serve as a strategic advantage for PC Tech Services, allowing them to align their offerings with increased customer demand during specific times of the year.

### Strategic Implications of Service Count Analysis:

**Strategic Planning for Peak Seasons:** Recognizing peak seasons as opportunities for increased demand, PC Tech Services should strategically plan marketing campaigns, promotions, and inventory management to maximize revenue during these periods.

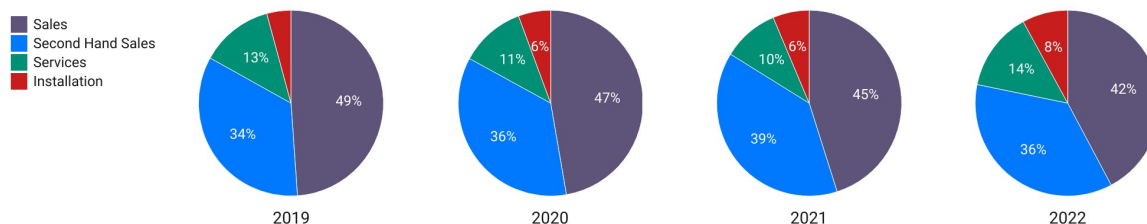
**Post-COVID Recovery Strategies:** Understanding the decline in both service count and revenue in the post-COVID era necessitates the development of targeted recovery strategies. These may include customer engagement initiatives, revisiting marketing strategies, or exploring new service offerings aligned with evolving customer needs.

**Continuous Monitoring and Adaptation:** The observation of seasonal oscillations post-pandemic emphasizes the importance of continuous monitoring of market dynamics. PC Tech Services should remain agile, adapting strategies based on ongoing trends and emerging opportunities in the ever-evolving market landscape.

### Revenue Generated by each category in terms of percentage

	2019	2020	2021	2022
<b>Sales</b>	48.9	47.3	45.1	42.2
<b>Second Hand Sales</b>	34.2	35.7	38.7	36
<b>Services</b>	12.7	11.4	9.81	13.8
<b>Installation</b>	4.23	5.65	6.36	7.98

### Revenue Generated by each category in terms of percentage





### Revenue Contribution Analysis:

**Major Revenue Streams:** The primary observation is that sales contribute the largest share to the overall revenue of PC Tech Services, followed by second-hand sales, services, and installation. This hierarchy indicates the key areas where the company generates its income.

**Shift in Sales Dynamics:** A notable trend is the drop in the percentage of revenue generated by sales. This can be attributed to a significant number of individuals opting for online/e-commerce purchases over traditional offline channels. The shift in consumer behavior towards online platforms may be driven by factors such as a wider selection, competitive pricing, and the convenience of online transactions.

**Increased Demand for Installations and Services:** The observation that installations and services have increased is particularly noteworthy. The surge in demand for these categories is likely linked to the current global trends, including remote work arrangements. As more individuals work from home, there is an increased need for installation services and various tech-related services to support home office setups.

**Impact of Chip Shortage on Second-Hand Sales:** In 2021, there was a significant increase in demand for second-hand laptops/desktops and printers. This heightened demand can be linked to the shortage of chips affecting the production of new laptops/desktops. As a result, consumers turned to the second-hand market as a viable and cost-effective alternative, contributing to the rise in revenue from second-hand sales.

### Strategic Implications of Revenue contribution Analysis:

**Adapting to Online Purchasing Trends:** Recognizing the shift towards online/e-commerce purchases, PC Tech Services should consider enhancing their online presence, improving user experience on their website, and exploring digital marketing strategies to capture a share of the growing online market.

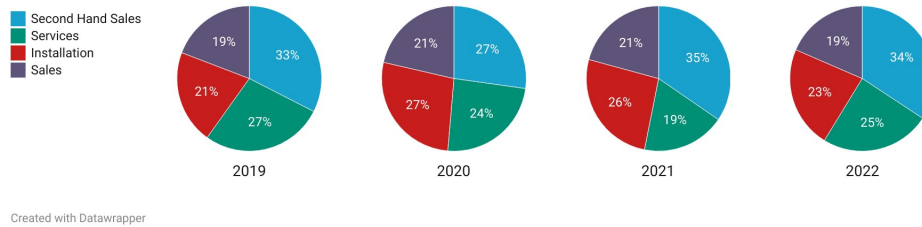
**Catering to Remote Work Trends:** With the increase in demand for installations and services, PC Tech Services can strategically position themselves as providers of comprehensive solutions for remote work setups. This may involve offering specialized services tailored to the needs of home offices.

**Capitalizing on Second-Hand Market:** Given the increased demand for second-hand devices, the company could explore opportunities to expand its offerings in this market. This may involve securing a steady supply of quality second-hand products and implementing marketing strategies to attract customers seeking cost-effective alternatives.

### Volume of each category in terms of percentage

	2019	2020	2021	2022
Sales	19.2	20.3	20.8	18.5
Second Hand Sales	32.5	25.8	34.6	34.2
Services	27.4	22.9	18.6	24.5
Installation	20.9	25.8	26.1	22.7

Volume of each category in terms of percentage



## Volume Analysis:

**Dominant Customer Preferences:** The data analysis reveals a clear trend in customer preferences, with the majority of the firm's customers opting for the purchase of used laptops/desktops and printers. This indicates a strong market presence and customer trust in the company's offerings in the second-hand electronics market.

**Service Preferences:** Following used laptops/desktops and printers, the next most preferred services include repairs, networking, and Cloud/Backup services. These service categories reflect a diverse range of customer needs, including device maintenance, network solutions, and data management.

**Installation and Sales Preferences:** Installation services occupy the third position in customer preferences, indicating that customers value the convenience and expertise provided by the company in setting up and configuring their devices. Sales, although following closely behind, demonstrate a relative decline in preference.

**Factors Influencing Preferences:** The observed increase in second-hand sales and decline in new sales can be attributed to factors such as the reputation of the company in the second-hand market, customer trust, and potentially the economic considerations associated with purchasing used devices over new ones.

## Strategic Implications of Volume Analysis:

**Leveraging Trust and Reputation:** The company should capitalize on the trust and reputation it has built in the second-hand electronics market. This could involve targeted marketing efforts, highlighting the quality, reliability, and cost-effectiveness of its used laptops/desktops and printers.

**Diversifying Service Offerings:** Recognizing the diverse service preferences of customers, the company should consider expanding its service offerings in repairs, networking, and Cloud/Backup services. Offering a comprehensive suite of services enhances customer satisfaction and loyalty.

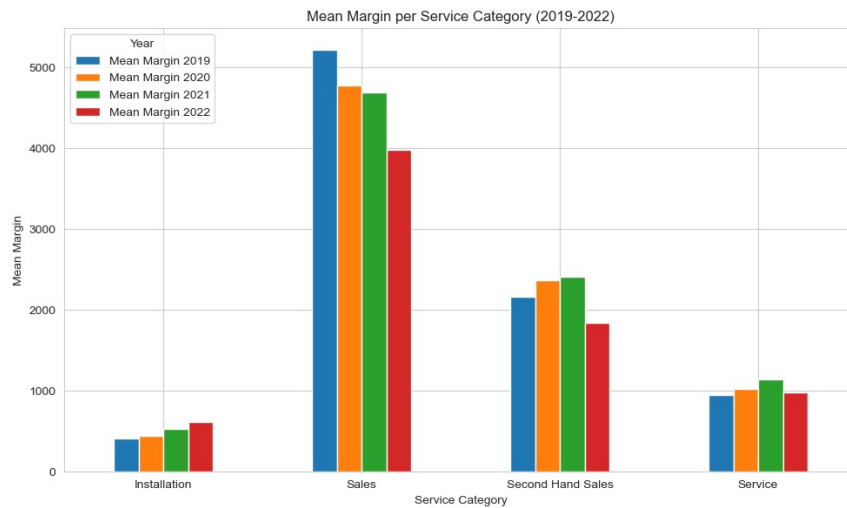
**Enhancing Sales Strategies:** While second-hand sales dominate, the decline in new sales suggests a need for strategic adjustments in sales approaches. This may involve exploring incentives, promotions, or bundling new devices with services to attract customers back to new sales.

**Supply Chain Management:** PC Tech Services should closely monitor the supply chain, establish relationships with reliable suppliers, and adapt inventory management strategies to ensure a steady supply of products, both new and second-hand.

Mean Margin per Service Category (2019-2022)

	2019	2020	2021	2022
--	------	------	------	------

<b>Sales</b>	5218.5	4774	4688.64	3983.33
<b>Second Hand Sales</b>	2163	2367.8	2410.45	1837.74
<b>Services</b>	951.21	1025	1139.83	986.5
<b>Installation</b>	416.27	449.18	525.3	613.59



We can observe that the firm gets high margins from sales, followed by Second Hand Sales, Services and Installation. The mean margin of sales is decreasing and for the second hand sales and services the value is oscillating depending upon the market. The only category with a consistent growth in margin is Installation, which contributes the least to revenue. However, Installations are usually bought in conjunction with Sales, Second Hand Sales, and Services, and because they do not want to lose their consumers, they continue to provide Installation services.

### Profit Margin Analysis:

**Impact of Online/E-commerce Purchases:** The data highlights a steep decline in profit margins, primarily attributed to the rise of online/e-commerce purchases over traditional offline transactions. Online platforms often offer a greater variety of products and competitive prices, prompting consumers to shift their purchasing behavior.

**Challenges in Service Delivery:** Rising traffic and fuel prices in Bangalore pose operational challenges for PC Tech Services in delivering services around the city at optimal times. These external factors contribute to increased operational costs and potential disruptions in service delivery, impacting the overall profitability of the business.

**Consistent Growth in Installation Margins:** A notable exception is the category of installation services, which exhibits consistent growth in profit margins. Despite contributing the least to revenue, installations play a crucial role as they are often bundled with sales, second-hand sales, and services. The company's commitment to maintaining installation services is driven by the desire to retain consumers and provide a holistic customer experience.

## Strategic Implications of Profit margin Analysis:

**Online Presence Enhancement:** Recognizing the impact of online retail on profit margins, PC Tech Services should consider strategies to enhance its online presence. This may involve optimizing the company's website, leveraging digital marketing, and exploring partnerships with popular online platforms.

**Differentiation Strategies:** To mitigate the impact of intense online competition, the company should focus on differentiation. This could include emphasizing the quality of services, offering unique product bundles, or providing superior customer service to set PC Tech Services apart from competitors.

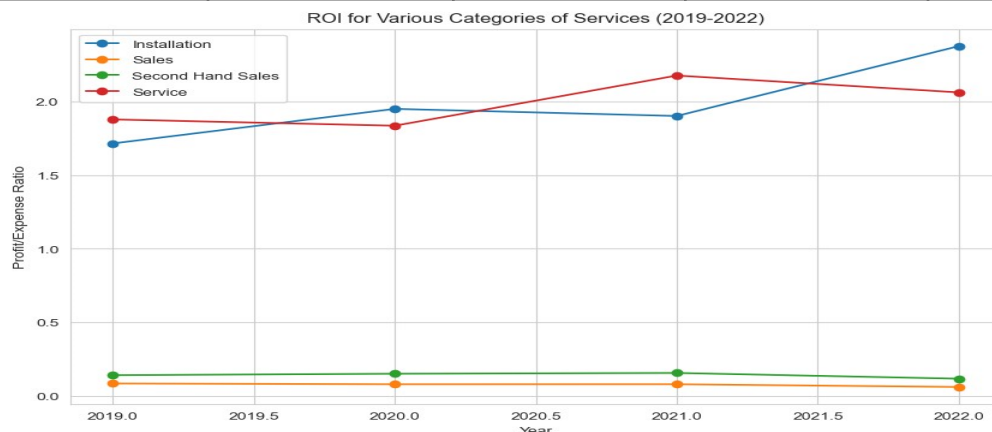
**Logistical Optimization:** Addressing challenges related to traffic and fuel prices in Bangalore requires strategic logistical planning. This may involve optimizing delivery routes, scheduling services during off-peak hours, and exploring cost-effective transportation options.

**Holistic Customer Experience:** Given the consistent growth in installation margins, the company should continue to prioritize installation services as part of its overall customer experience strategy. This approach contributes to customer loyalty and satisfaction, which are valuable in the competitive technology services market.

**Efficiency Measures:** Implementing efficiency measures in operational processes, inventory management, and service delivery can help offset rising costs. This may involve adopting technology solutions, streamlining workflows, and negotiating favorable terms with suppliers.

### Return on Investment per Service Category (2019-2022)

	2019	2020	2021	2022
Sales	0.085841	0.080746	0.080889	0.062212
Second Hand Sales	0.142208	0.152023	0.157322	0.118389
Services	1.878516	1.835821	2.176375	2.062147
Installation	1.715454	1.950178	1.901854	2.375940



Despite being the primary revenue sources with significant sales and high volume, both Sales and Second Hand Sales exhibit notably low return on investment (ROI). Sales reflect the lowest ROI, measuring less

than 10%, while Second Hand Sales portray an ROI below 15%. This suggests that without adequate selling strategies and investment planning, the capital remains relatively idle, potentially affecting overall profitability.

Services and Installations exhibit an ROI of nearly 200%. Scaling up their volume and expanding the range of services could significantly enhance their overall profitability.

### **Return on Investment (ROI) Analysis:**

**Sales and Second Hand Sales:** Despite being primary revenue sources with significant sales and high volume, both Sales and Second Hand Sales exhibit notably low return on investment (ROI).

Sales reflect the lowest ROI, measuring less than 10%, indicating that the capital invested in sales activities yields relatively low returns.

Second Hand Sales portray an ROI below 15%, implying that the return generated from the investment in second-hand product transactions is also relatively modest.

Inadequate strategies may result in idle capital, meaning that the returns generated do not proportionately justify the resources invested in these activities.

**Services and Installations:** In contrast, Services and Installations exhibit a remarkable ROI of nearly 200%. This indicates that the capital invested in providing services and installations yields a significantly higher return compared to Sales and Second Hand Sales.

The high ROI in Services and Installations suggests that these categories are more efficient in utilizing invested resources to generate profitable returns.

**Opportunities for Profitability Enhancement:** The observation underscores an opportunity for PC Tech Services to enhance overall profitability by focusing on scaling up the volume of Services and Installations.

Expanding the range of services offered and increasing the volume of installations could be strategic approaches to leverage the high ROI associated with these categories.

### **Strategic Implications of ROI Analysis:**

**Reassessing Selling Strategies:** PC Tech Services should critically reassess selling strategies associated with Sales and Second Hand Sales. This may involve market analysis, pricing optimization, and identifying areas for cost reduction to improve the overall ROI.

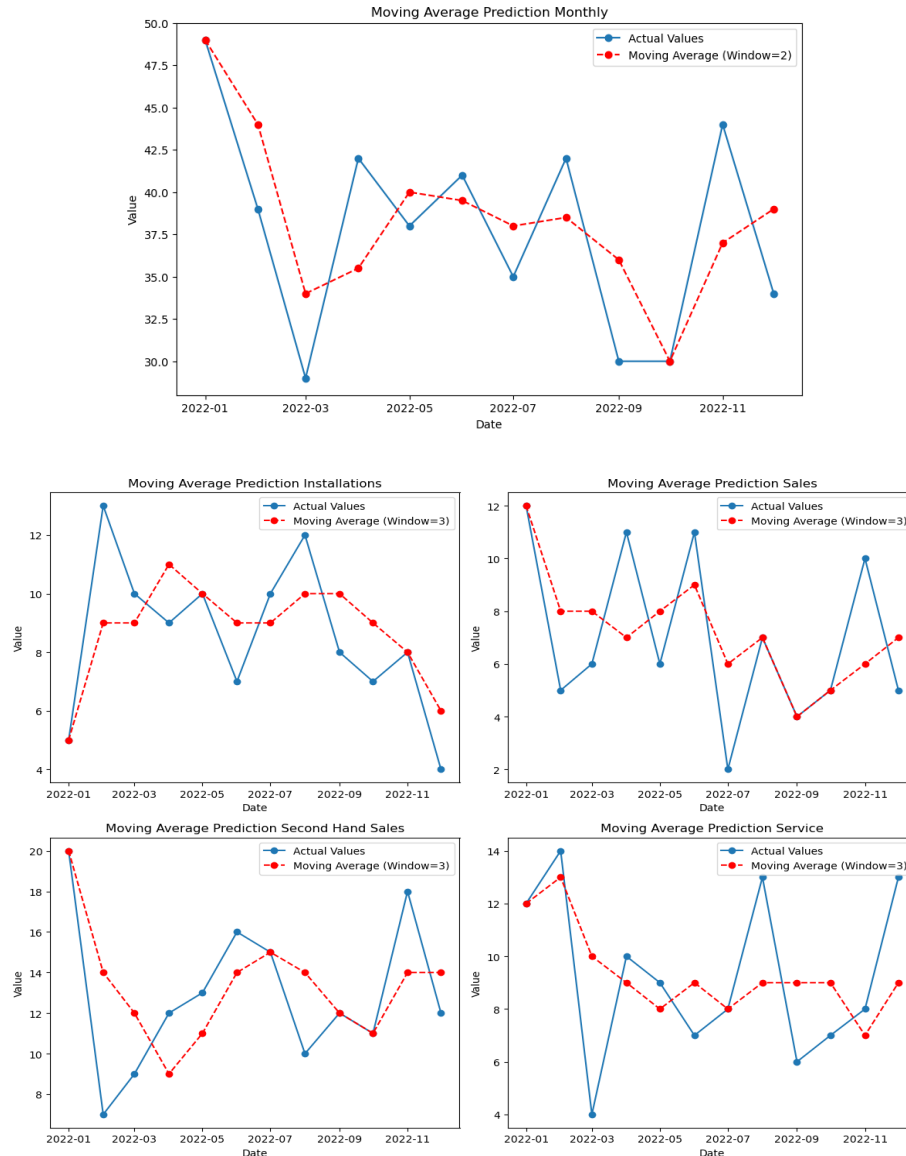
**Investment Planning:** Improved investment planning is crucial. The company should carefully allocate resources and capital to activities that yield higher returns. This may involve reallocating resources from low-ROI activities to high-ROI ones.

**Scaling Up Services and Installations:** Given the significantly higher ROI in Services and Installations, there is a clear opportunity for growth. Scaling up the volume of services offered and expanding the range of installations can contribute substantially to overall profitability.

**Customer-Centric Strategies:** Enhancing customer-centric strategies in Services and Installations can further contribute to their success. This may involve identifying customer needs, providing tailored solutions, and ensuring a positive customer experience to drive repeat business.

**Continuous Monitoring and Adjustment:** Regularly monitoring ROI across all revenue streams is essential. The business environment evolves, and PC Tech Services should adjust strategies based on performance metrics and market dynamics.

## Time Series Forecasting



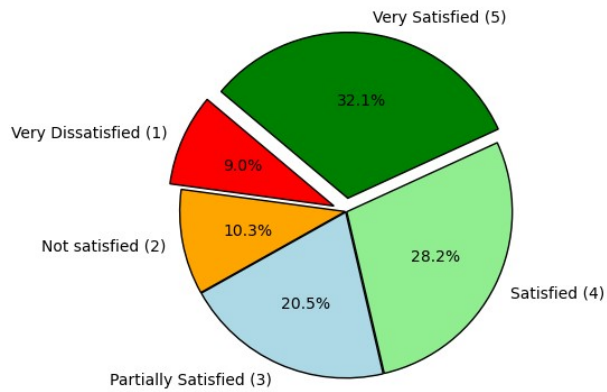
When we tried predicting service counts for 2022, we employed a moving average modeling strategy to predict both the total monthly service count and the monthly count for specific service categories. Despite observing similar trends, discrepancies between actual and predicted values persisted, likely stemming from the use of monthly averages. To address this, we recommend transitioning to a weekly data analysis for future predictions. Weekly data offers a more detailed perspective, allowing us to capture finer variations in service provision that may be overlooked in monthly averages. This adjustment can enhance the accuracy of predictions by better aligning our modeling approach with the dynamic nature of service trends.

## Customer Satisfaction Survey

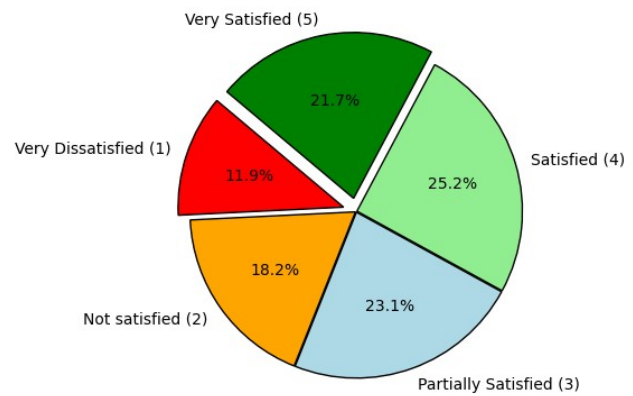
This initiative successfully generated a total of 411 responses. The results from the customer response survey is as follows:

	Very Satisfied(5)	Satisfied (4)	Partially Satisfied (3)	Not Satisfied(2)	Very Dissatisfied(1)
Installation	45.2 %	30.1 %	14 %	6.5 %	4.3 %
Sales	32.1 %	28.2 %	20.5 %	10.3 %	9 %
Second Hand Sales	21.7 %	25.2 %	23.1 %	18.2 %	11.9 %
Services	20 %	22 %	26 %	14 %	18 %

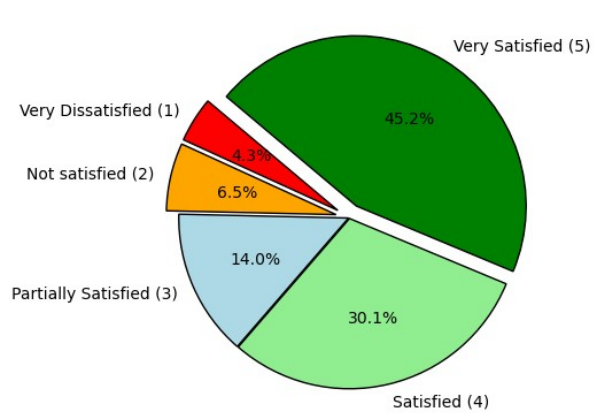
Sales Customer Satisfaction Pie Chart



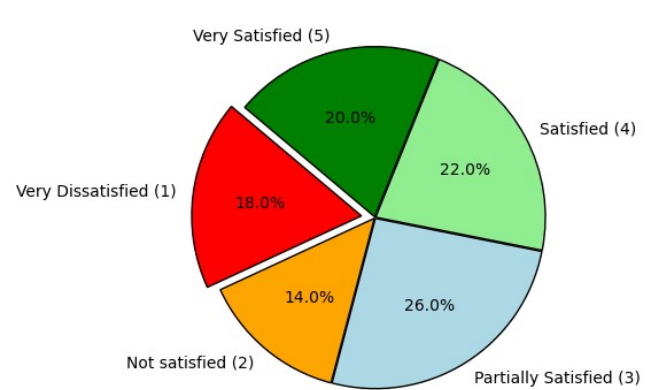
Second Hand sales Customer Satisfaction Pie Chart



Installation Customer Satisfaction Pie Chart



Services Customer Satisfaction Pie Chart



And from the customer satisfaction pie chart of Services we can observe that a significant proportion of the customers are unsatisfied with the services and repairs provided. So the firm should consider hiring employees who are good at hardware, software, troubleshooting and networking.

Most of the members have skillset in sales and installations rather than repairs. Repair and service tasks demand a deeper understanding of computer hardware, software concepts, and networking. In contrast, installations involve following sequential instructions, and sales success relies on both market demand and the trust placed in the company. Coming to the second hand sales, even though the desktops/laptops and printers are refurbished, they might have small defects due to which the customers show a bit of dissatisfaction

### **Challenges in Second Hand Sales:**

**Refurbished Products and Customer Expectations:** Second-hand sales involve offering refurbished desktops/laptops and printers. However, customer dissatisfaction may arise from small defects in these products. Managing customer expectations, providing accurate product descriptions, and addressing defects proactively are crucial in enhancing satisfaction in this category.

### **Addressing Customer Satisfaction Challenges in Services:**

**Employee Skill Set:** The pie chart indicating customer satisfaction with services reveals a significant proportion of unsatisfied customers. To address this, the company should consider hiring employees with strong expertise in hardware, software, troubleshooting, and networking.

Investing in employee training programs and recruiting individuals with diverse skill sets can elevate the quality of services provided, leading to increased customer satisfaction.

**Improving Technical Competence:** Strengthening the technical competence of the workforce is imperative. This may involve continuous training, certification programs, and staying abreast of the latest developments in technology.

**Customer Feedback Mechanism:** Establishing a robust customer feedback mechanism is crucial for understanding specific pain points and areas of dissatisfaction. Actively seeking and addressing customer feedback can contribute to ongoing improvement in service quality.

### **Customer Retention Rate**

We conducted a survey with 755 members to gauge their satisfaction with PC Tech Services. Out of the 411 respondents, 329 members expressed a commitment to sticking with us for future purchases and services. This gives us a customer retention rate of about 43.71%, showing that a significant portion of our customers plan to stay with us.

In terms of satisfaction, 329 out of the 411 participants expressed their intention to continue using our services, resulting in a satisfaction rate of approximately 79.80%. This means that a large majority of surveyed customers are happy with their experiences.

These positive findings highlight the effectiveness of our services and the strong relationships we've built with our customers. The insights from this survey will guide our strategies to enhance and maintain customer satisfaction in the future.



Please use the below link to see the original received data, inventory analysis and predicted data:

[+ BDM PC Tech Services Data](#)

## 4.Problem Solving Strategies, Implementation and Recommendations

### Approach for Regaining lost customers:

**1. Rebuilding Customer Relationships:** Leveraging purchasing history and contact details, the firm initiated direct outreach to previous customers through calls.Enquiries about their past purchases were made, fostering a connection and understanding individual preferences.

**2. Convincing Customers for Offline Purchases:** Through personalized communication, the firm assessed whether customers preferred online or offline purchases.Efforts were made to convince customers to choose offline purchases by emphasizing the quick and efficient support provided by PC Tech Solutions.

**3. Strategic Financial Planning:** Utilizing a time series forecasting approach, the firm analyzed started analyzing requirements and then secured parts on a loan basis from a wholesale store in SP Road. This strategic move helped manage investment effectively, and since prices were fixed prior to stock dispatch, the firm was shielded from the impact of price hikes.

**4. Enhanced Customer Support and Warranty:** PC Tech Solutions introduced a 6-month warranty along with free service and repairs during the warranty period for products purchased.This commitment aimed to enhance customer satisfaction and instill confidence in the reliability of PC Tech Solutions' products.

**5. Data-Driven Revenue Analysis:** The firm conducted data analytics to identify major contributors to revenue generation and volume.This analysis provided valuable insights, enabling the company to optimize its product offerings and marketing strategies.

**6. Introduction of Annual Maintenance Contracts (AMCs):** As part of the firm's restructuring efforts, PC Tech Solutions initiated Annual Maintenance Contracts from the financial year 2023-24. These contracts targeted various entities, including companies, educational institutions, and households, providing a steady source of revenue and fostering long-term relationships.

**7. Rental of Second-Hand Desktops/Laptops:** Recognizing market needs, the firm introduced a rental service for second-hand desktops/laptops. This service, catering to small-scale businesses, students, interns, and working professionals, involved a deposit and monthly rent structure, ensuring a rapid return on investment.

### Results :

The outreach efforts resulted in a strengthened relationship with previous customers, leading to increased trust and loyalty.

The strategic financial planning and fixed pricing minimized the impact of market fluctuations.

The introduction of AMCs and rental services diversified revenue streams and expanded the customer base.

## **Future recommendations:**

Future strategies may involve continued data-driven optimizations, exploring additional services, and monitoring customer feedback for ongoing improvements.

## **Approach for Reducing costs:**

To address time-related challenges caused by heavy traffic and fuel issues, we've implemented a customer-centric solution with specific and measurable outcomes. We commit to delivering services within an hour for customers located within a 5 km range of the Bengaluru metro station, leveraging the proximity of our office (just 1 km away, accessible within 3 minutes by metro). This initiative aims to ensure a swift and reliable service experience, minimizing inconveniences due to traffic delays.

Moreover, through a strategic partnership with the local transport and logistics provider 'Porter,' we anticipate measurable improvements. This collaboration is expected to lead to a cost reduction in fuel expenses and enhance efficiency in navigating through traffic. We plan to measure this cost reduction in percentage terms over a specified period, demonstrating the tangible benefits of our collaboration with Porter.

This alliance not only allows us to serve a broader audience efficiently but also ensures a cost-effective and timely delivery of our services. As we progress, we will closely monitor and report on the specific metrics related to cost reduction and efficiency gains resulting from this partnership. (As of now we are expecting a 40% to 60% reduction in transportation time and resources).

## **Future Recommendations and Risks:**

While our customer-centric solution and partnership with 'Porter' offer substantial benefits, several potential risks should be considered. The commitment to delivering services within an hour may encounter operational challenges during peak demand or unforeseen circumstances. Dependence on 'Porter' introduces a level of risk, as disruptions on their end could impact timely service delivery. Unforeseen traffic conditions and road closures may still pose challenges, affecting our ability to meet the one-hour commitment. Additionally, fluctuations in fuel prices or changes in transportation costs could impact the expected cost reduction percentages. Managing customer expectations and addressing potential technology, communication, and regulatory compliance issues are also critical to ensuring the success of these initiatives. Proactive risk mitigation measures, contingency plans, and ongoing assessments will be essential to navigate these potential challenges effectively.

## **Approach for clearance of Inventory:**

**1. Clearance of New Products:** New spare parts, hard disks, monitors, laptops, and pendrives were strategically sold during high-impact sales events such as Amazon Great Freedom Festival and Flipkart Big Billion Days.

Pricing was optimized to attract customers while ensuring a reasonable profit margin. Leveraging online platforms maximized visibility and accessibility.

**2. Offline Sales for Second-hand Products:** Second-hand laptops, desktops, and printers were sold through offline channels, utilizing word-of-mouth marketing.

Personalized customer interactions allowed for tailored recommendations and trust-building.

This approach targeted specific consumer segments interested in refurbished or cost-effective solutions.

**3. Identifying Outdated Inventory:** A thorough assessment revealed around 72000 rupees worth of outdated inventory. These items were identified as obsolete, and can be sold only upon specific customer requests.

## Results:

**Successful Clearance of Majority Inventory:** The majority of the inventory was cleared during online sales events, ensuring a balance between profitability and stock turnover.

Competitive pricing and strategic timing contributed to increased sales.

**Offline Sales Success:** Offline sales of second-hand products were successful, showcasing the importance of personal connections and customer trust.

The word-of-mouth strategy proved effective in reaching potential buyers.

**Addressing Outdated Inventory:** The outdated inventory was acknowledged, and a strategy was implemented to sell these items selectively, catering to specific customer needs.

To streamline the management of digital bills, demand tracking, and revenue records, we implemented a similar approach. Employees are required to fill out a Google Form after providing a service, ensuring a systematic and digital record-keeping process.

PC Tech Services Cash/Credit bill

For employees

kotiasanareddy@gmail.com [Switch account](#)

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Your email is not part of your response.

\* Indicates required question

Customer Name \*

Your answer

Bill No \*

Your answer

Date \*

Date

dd-mm-yyyy

Particulars and Quantity \*

Your answer

Total Amount \*

Your answer

Upload the scanned copy of bill here \*

[Add file](#)

Submit

Clear form

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Google Forms

CASH / CREDIT BILL				
PC TECH SERVICES				
Computer Hardware, Peripherals, Consumables, Maintenance Contact, Net Working & Software				
Mobile : 94483 11436 e-mail : chandramoulireddy.be@gmail.com				
M/s.		Bill No. : 1801		
		Ref. No. :		
		Date :		
Sl. No.	PARTICULARS	Quantity	Rate	Amount
1	500 56 HDD Library dept.	→	1800	
2	2 56 RAM D222 Arba dept.	→	500	
3	D-Like 5 Pro Network switch 2m cable 1.2m R54512	2	750	1500
			120	120
		8	25	200
4	Canon 260 31000 Printer paper pick up media	3	600	1800

PC Tech Services Cash/Credit bill (Responses) ☆ 📁 ☁						
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	A	B	C	D	E	F
1	Timestamp	Customer Name	Bill No	Date	Particulars and Quantity	Total Amount

Future Recommendations:

- Dynamic Pricing Strategy:** Implement dynamic pricing strategies to adapt to market fluctuations and consumer behaviors.
- Regular Inventory Audits:** Conduct regular inventory audits to identify and address outdated items promptly, preventing accumulation.
- Enhanced Customer Engagement:** Invest in customer engagement strategies, including online and offline channels, to build a loyal customer base.