

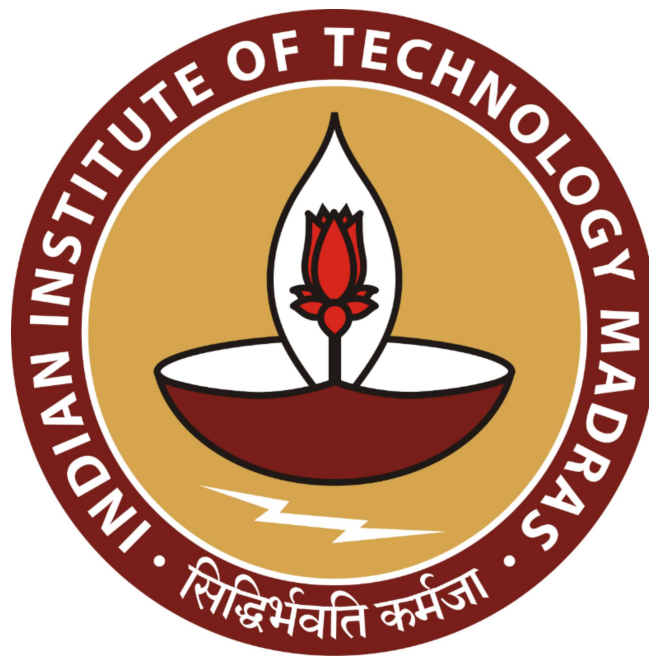
Supply Chain and Customer Support Optimization for PC Tech Services

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project titled “**Supply Chain and Customer Support Optimization for PC Tech Services**”. I extend my appreciation to **PC Tech Services**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.



Signature of Candidate: (**Digital Signature**)

Name: K.Sai Saran

Date: 01/10/2023

1 Executive Summary and Title (200 Words)

This business data management project aims to rejuvenate "PC Tech Services," a B2C firm offering PC/laptop repairing services, spare parts sales, and second-hand laptops and printers, with home delivery options.

The firm faced significant setbacks post-pandemic, losing customers to online shopping and experiencing reduced margins due to fuel and electronics component price hikes.

To address these challenges, my proposed solutions include enhancing the online presence, optimizing the supply chain, and diversifying revenue streams. By leveraging data-driven strategies and adopting innovative technologies, we aim to revitalize PC Tech Services' customer base, improve profitability, and establish a resilient position in the evolving market.

2 Organization Background (150 Words)

The company that I am working with for the Business Data Management Project is PC Tech Services which provides its services from Anjana Nagar, Bangalore. The company was established in 2007 by B.S. Chandra Mouli Reddy, in collaboration with his associates Srinivas, Aruna and a few others. The company's staffing levels fluctuate between 8 to 12 employees depending on the season. PC Tech Services has garnered a stellar reputation in the PC and laptop repair industry over the course of a decade. Additionally, the company offers a comprehensive range of services, including PC and laptop sales and services, networking solutions, software installation, data recovery and sales of printer, UPS, and other spare parts, both new and refurbished. The company's success can be attributed to its unwavering commitment to customer satisfaction and personalized services. Over the years, PC Tech Services has forged strong client relationships, earning trust as a reliable partner in resolving technical issues and sourcing high-quality products. The annual turnover for the fiscal year 2022-23 stands at around 8 lakhs.

3 Problem Statement (Listed as objectives) (50-75 Words)

This project will use business data management techniques to help PC Tech Services identify and address the challenges it is facing. The project will focus on three key objectives:

3.1. Regaining lost customers: PC Tech Services has lost customers to online retailers due to the convenience and lower prices offered by these retailers. The project will analyze customer data to identify why customers have been switching to online retailers. The project will then develop strategies to win back these customers.

3.2. Reducing costs: PC Tech Services' margins have been squeezed by the increasing cost of fuel, electronics components, and other supplies. The project will identify areas where PC Tech Services can reduce its costs. This includes finding more efficient ways to operate the business and negotiating better deals with suppliers.

3.3 Optimizing Current Inventory Sales: PC Tech has a stock worth 4 lakhs that have been lying with them from the past 2-3 years. This project tries to optimize the sales of the current inventory, addressing pricing, inventory management, and customer engagement to boost profitability.

4 Background of the Problem (200 Words)

The COVID-19 pandemic accelerated the transition towards e-commerce, causing a decline in foot traffic to physical stores. PC Tech Services, relying heavily on walk-in customers, experienced a significant drop in sales. The implementation of lockdowns and restrictive measures has given rise to a remarkable upswing in e-commerce, compelling traditional brick-and-mortar enterprises to make a shift towards online channels.

Moreover, the surge in fuel prices and electronics component costs impacted their operational expenses, putting a strain on their profitability. The combination of reduced revenue and increased costs created a financial crisis, hindering their ability to invest in digital transformation and modernization. In the face of such adversity, the company is actively exploring inventive remedies and undertaking digital overhauls to retain their competitive edge amidst the dynamically shifting market conditions.

They also suffered losses as a result of their outdated inventory of electronic components and inadequate inventory management.

5 Problem Solving Approach (400 Words)

5.1. Customer Engagement Enhancement:

- **Data-Driven Customer Analysis:** We will conduct a thorough examination of customer data to discern trends and preferences.
- **Boosting Customer Engagement:** Leveraging this data, we aim to enhance customer engagement and retention significantly.
- **CRM System Implementation:** We will invest in a state-of-the-art Customer Relationship Management (CRM) system to monitor customer interactions and gather feedback effectively.

5.2. Streamlining the Supply Chain:

- **Data-Backed Supply Chain Optimization:** Utilizing data analytics, we will optimize our supply chain by accurately predicting demand, maintaining optimal spare parts inventory levels, and reducing carrying costs.
- **Strategic Supplier Partnerships:** Building strategic alliances with reliable suppliers to negotiate favorable terms for electronic components, ultimately improving our cost-efficiency.

5.3. Diversifying Revenue Streams:

- **Expanding Service Offerings:** To broaden our revenue streams, we plan to offer additional services, including Annual Maintenance Contracts (AMCs) for both businesses and households, along with regular servicing and technical support.
- **Product Expansion:** We will expand our product range, focusing on high-quality, affordable second-hand laptops and printers to attract a wider customer base.

5.4. Advanced Technology Implementation:

- **Efficient Inventory Management:** We will introduce an advanced inventory management system, enabling real-time tracking of stock levels, reducing stockouts, and trimming inventory holding costs.

5.5. Effective Cost Management:

- **Data-Driven Cost Reduction:** Leveraging data analytics, our project aims to identify cost-saving opportunities in logistics, transportation, and energy consumption.
- **Fuel-Efficiency Initiatives:** Implementing energy-efficient practices and optimizing delivery routes will contribute to substantial cost reductions.
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5.6. In-Depth Competitor Analysis:

- **Comprehensive Competitor Evaluation:** Our project will undertake a comprehensive analysis of competitors to gain valuable insights into their strategies, pricing structures, and service offerings.
- **Strategic Positioning:** Armed with competitor insights, we will strategically position PC Tech Services in the market, enhancing our competitive edge.

Data Gathering: Data will be collected, organized, and analyzed in Excel, revealing valuable insights.

Comparative Analysis: Insights will be visually presented using pie charts and bar charts to inform strategic decisions and positioning.

Cost Analysis: Excel will serve as the primary tool for tracking and analyzing costs.

Cost Reduction Initiatives: Bar charts will visually represent the impact of cost-saving initiatives, helping to track progress over time.

Revenue Insights: Pie charts will be employed to visually represent the percentage of revenue from various sales and service categories, offering valuable insights.

Engagement Strategies: Customer engagement strategies will be formulated based on the data analysis findings, aiming for improved retention.

Revenue Tracking: Pie charts will provide a clear overview of revenue distribution among different services and products, aiding in the identification of successful streams.

Inventory Analysis: Excel will facilitate the initial setup, while real-time inventory monitoring will be actively employed.

Feedback Collection: Implementing an advanced CRM system will ensure that customer interactions are closely monitored and feedback is gathered effectively.

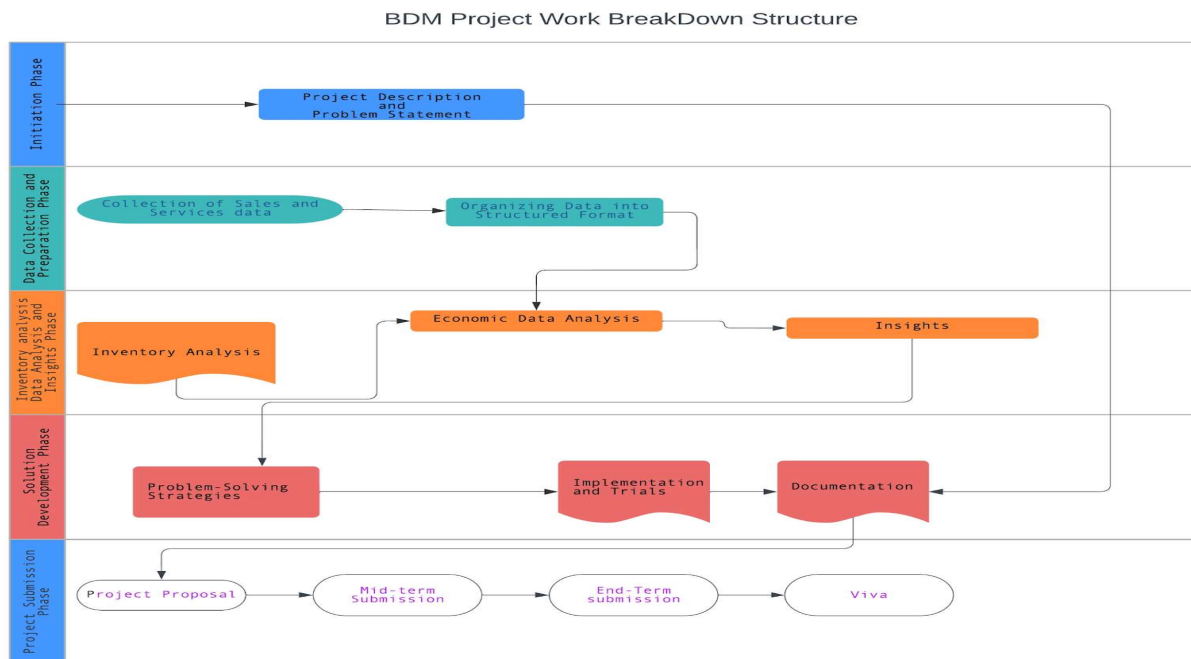
In summary, my approach combines data-driven decision-making with strategic initiatives to address key facets of the business, ranging from enhancing customer engagement and optimizing the supply chain to diversifying revenue streams, efficient technology implementation, cost management, and informed competitive positioning. This integrated approach will drive our success in a dynamic and competitive marketplace.

6 Expected Timeline

Task	Start Date	End Date	Days Taken
1. Project Description and Problem Stmt	20-07-2023	22-07-2023	3
2.Collection of Sales and Services Data	23-07-2023	07-08-2023	16
3.Preprocessing (Organizing Data into Structured Format)	08-08-2023	20-08-2023	13
4.Preparing estimates of Fixed & Variable costs incurred	21-08-2023	24-08-2023	4
5.Inventory Analysis	25-08-2023	27-08-2023	3
6.Economic Data Analysis and Insights	28-08-2023	05-09-2023	9
7.Problem-Solving Strategies	06-09-2023	10-09-2023	5
8.Implementation and Trials	11-09-2023	11-11-2023	62

Task	Start Date	End Date	Days Taken
Task A Project Proposal	01-10-2023	05-10-2023	5
Task B Mid-term Submission	06-10-2023	10-10-2023	5
Task C End-term Submission	11-11-2023	15-11-2023	5

Work Breakdown Structure:



Gantt chart:

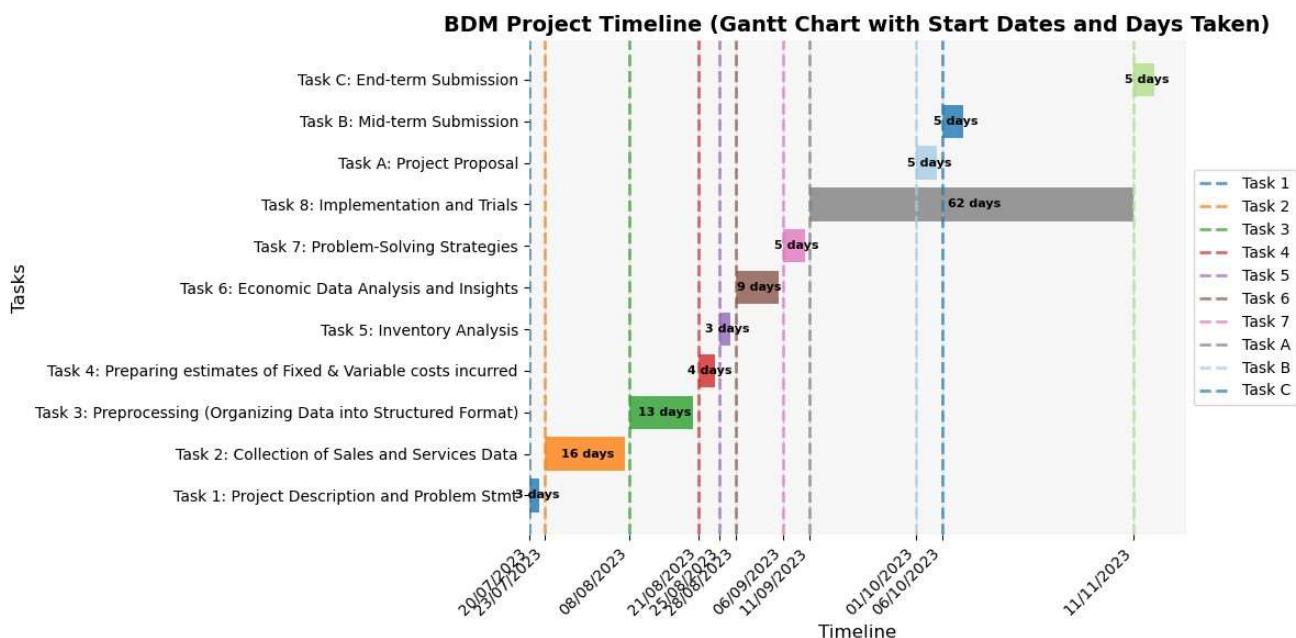


Figure 1 Expected timeline for completion of project.

7 Expected Outcome (150-200 words)

Revenue Recovery: PC Tech Solutions aims to regain lost revenue by expanding into e-commerce and offering new services like Annual Maintenance Contracts (AMCs) and additional product choices.

Improved Profitability: Implementing cost-saving measures and negotiating better component pricing with suppliers is expected to boost profitability despite increased operational costs.

Enhanced Customer Engagement: With a new Customer Relationship Management (CRM) system and data-driven customer insights, PC Tech Solutions anticipates improved customer engagement and loyalty.

Competitive Positioning: By analyzing competitors and using their insights, the company plans to position itself more effectively in the market for a competitive advantage.

Digital Transformation: Investing in technology like advanced inventory management systems will modernize operations, enhance efficiency, and reduce costs.

Financial Stability: Through revenue recovery and cost management, PC Tech Solutions aims to achieve financial stability, enabling further growth.

Adaptation to Market Changes: The project will make the company more adaptable to changing market dynamics, such as shifts in consumer behavior and the growth of e-commerce.

Market Expansion: Expanding product offerings, including second-hand laptops and printers, may attract a wider customer base and expand market reach.

Resilience: Diversifying revenue streams and implementing cost-saving measures will make PC Tech Solutions more resilient to future disruptions.