"The Integration of Power BI with ERP System: Study of Amrita Creation"

Research Project

Submitted in fulfilment of the research objective of the Funded Agency

Amrita Creation

Submitted by

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(Affiliated to the University of Rajasthan, Jaipur)

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Table of Contents

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Preface

In today's fast-paced business environment, organizations are continually seeking ways to enhance efficiency, streamline operations, and harness the power of data for informed decision-making. The integration of Enterprise Resource Planning (ERP) systems with advanced analytics platforms such as Power BI has emerged as a transformative solution to meet these evolving demands. This project delves into the integration of our organization's ERP system with Power BI, aiming to revolutionize data reporting, analysis, and visualization capabilities across departments.

As businesses navigate increasingly complex landscapes, the ability to access real-time insights and actionable intelligence has become indispensable. However, traditional reporting methods often fall short in delivering timely, accurate, and comprehensive information to key stakeholders. By leveraging the robust functionalities of Power BI and integrating it seamlessly with our ERP system, we embark on a journey to unlock the full potential of our data assets.

This project is not merely a technical endeavor; it represents a strategic initiative to foster a data-driven culture within our organization. Through collaborative efforts across departments, we aim to empower users at all levels with the tools and insights necessary to drive operational excellence and strategic growth. By aligning business processes with cutting-edge technology, we aspire to enhance decision-making, optimize resource allocation, and gain a competitive edge in the marketplace.

As we embark on this transformative journey, it is essential to acknowledge the dedication and commitment of all stakeholders involved. From the executive leadership driving strategic vision to the frontline employees executing daily operations, every individual plays a crucial role in the success of this initiative. Together, we embark on a path of innovation, collaboration, and continuous improvement, laying the foundation for a data-driven future.

Dr. Poonam Somani
Principal Investigator

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Acknowledgement

I would like to express our heartfelt gratitude to all the individuals who have played a significant role in the successful completion of this project. Their unwavering support, guidance, and expertise have been instrumental in the achievement of the goals.

I extend our heartfelt gratitude to Mr. Mukul Kataria (Head of Buying and Planning) our esteemed industry mentor, for his invaluable guidance, constant support, and insightful counsel throughout the "Enterprise Data Analytics Modernization" project at The House of Amrita. His expertise, mentorship, and encouragement have been instrumental in shaping our approach, refining our strategies, and achieving our objectives.

I also extend our sincere thanks to Dr. Ashish Gupta Principal, Shri Mahaveer College for her constant support, invaluable feedback, and unconditional encouragement throughout the project. We are grateful for her dedication, enthusiasm, and commitment to our academic and professional development.

Furthermore, I would like to express our appreciation to The House Of Amrita for giving us this platform to conduct and complete our project. Last but not least, we extend our thanks to all the individuals from AMRITA CREATION and also everyone who participated in the survey and provided valuable feedback. The contributions given by everyone have been invaluable, and without their support, this project would not have been possible.

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PROJECT PROPOSAL FOR

Project Title: "THE INTEGRATION OF POWER BI WITH ERP SYSTEM: STUDY OF AMRITA CREATION"

Duration:

10 months

Budget:

3.5 Lakhs INR

Executive Summary

The proposed project aims to study of modernize the enterprise data analytics capabilities of Amrita Creationby integrating Power BI with the existing ERP system. This integration will streamline data reporting, enhance data accuracy, and foster a data-driven decision-making culture across various departments.

Objectives

Primary Objective:

- Implement the integration of Power BI with Amrita's existing ERP system to improve data visualization, reporting, and business intelligence capabilities.

Secondary Objectives:

- Reduce the time spent on report generation.
- Increase report accuracy and consistency.
- Foster data-driven decision making.

Research Methodology

Approach

The research methodology for this project follows a structured approach to ensure thorough analysis, accurate data collection, and effective implementation. The methodology is divided into several phases, each with specific tasks and objectives to achieve the overall goal of integrating Power BI with the ERP system at AMRITA CREATION.

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Phases of the Methodology

1. **Project Selection and Planning**
   - **Objective:** Define project goals, scope, and timeline.
   - **Activities:** Initial meetings with stakeholders to discuss project objectives and expected outcomes. Develop a detailed project plan outlining milestones and deliverables.
2. **Understanding Departmental Workflows**
   - **Objective:** Gain a comprehensive understanding of the current workflows and data usage in various departments.
   - **Activities:** Conduct detailed interviews and discussions with department heads and key personnel to document existing processes and identify pain points related to data handling and reporting.
3. **Primary Research: User Interviews**
   - **Objective:** Collect first-hand information on departmental needs, challenges, and expectations.
   - **Activities:** Develop a structured questionnaire for interviews (Refer to Annexure 1). Conduct interviews with executives and employees from different departments to gather insights on current reporting processes and the need for a BI solution.
4. **Secondary Research: BI Solution Selection**
   - **Objective:** Evaluate various BI tools available in the market to determine the best fit for AMRITA CREATION- Amrita Creation.
   - **Activities:** Conduct a comparative analysis of BI tools based on features, cost, and compatibility with the existing ERP system. Review industry reports, case studies, and vendor documentation to gather information.
5. **Data Source Identification and Mapping**
   - **Objective:** Identify all relevant data sources and map them for integration with Power BI.
   - **Activities:** Work with the IT team and business analysts to document data locations, formats, and content. Ensure data cleansing and preparation to guarantee accuracy and consistency.
6. **Designing Reports and Integration**
   - **Objective:** Develop interactive reports and dashboards tailored to departmental needs and integrate them with the ERP system.
   - **Activities:** Use Power BI to design and build reports. Set up Power BI and establish secure connections to data sources. Conduct User Acceptance Testing (UAT) to ensure functionality and accuracy.
7. **Training and Implementation**
   - **Objective:** Ensure effective use of Power BI by all relevant personnel.
   - **Activities:** Develop a comprehensive training module (Refer to Annexure 2). Conduct training sessions for employees across departments. Provide ongoing support and resources for users.
8. **Monitoring and Continuous Improvement**
   - **Objective:** Regularly review and optimize the system based on user feedback.
   - **Activities:** Collect feedback from users, monitor system performance, and implement improvements. Apply lean management principles to continuously refine processes and enhance efficiency.

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Scope of Work

1. **Requirement Gathering and Analysis:**
   - Conduct inter-departmental interviews to understand specific needs and challenges.
   - Document the current reporting processes and identify pain points.
2. **BI Solution Evaluation:**
   - Analyze different BI tools and select Power BI based on its features, cost, and compatibility with the existing ERP system.
3. **Data Source Identification and Mapping:**
   - Identify all relevant data sources and map them for integration with Power BI.
   - Cleanse and prepare data to ensure accuracy and consistency.
4. **Power BI Integration:**
   - Set up Power BI and establish secure connections to data sources.
   - Design interactive dashboards and reports tailored to departmental needs.
5. **Training and Implementation:**
   - Develop a comprehensive training module for employees.
   - Conduct training sessions to ensure effective use of Power BI.
6. **Monitoring and Continuous Improvement:**
   - Regularly review and update the system based on user feedback.
   - Implement lean management principles to continuously optimize processes.

Timeline

Months 1-4:

- **Q1:** Project planning, requirement gathering, and initial BI tool analysis.
- **Q2:** Finalize BI tool selection, data source identification, and initial mapping.
- **Q3:** Begin Power BI setup, initial report design, and pilot testing.
- **Q4:** Full-scale implementation, initial training sessions, and feedback collection.

Months 5-10:

- **Q1:** System optimization based on feedback, advanced report designs, and additional training.
- **Q2:** Integration of more departments with Power BI, enhancing user experience.
- **Q3:** Advanced analytics and AI integration, continuous improvement.
- **Q4:** Final review, documentation, and project closure.

Budget Breakdown

- **BI Tool Licensing:** 1.0 Lakh INR
- **Implementation Costs:** 1.2 Lakh INR
- **Training and Development:** 0.8 Lakh INR
- **Monitoring and Optimization:** 0.5 Lakh INR

Expected Outcomes

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- **Improved Decision-Making:** Unified data and streamlined reporting processes.
- **Enhanced Operational Efficiency:** Reduction in time and resources spent on report generation.
- **Increased Collaboration:** Improved data sharing and collaboration across departments.
- **Competitive Advantage:** Data-driven insights leading to better strategic decisions.

Challenges and Mitigation Strategies

1. **Data Integration Complexity:**
   - **Challenge:** Integrating Power BI with the existing ERP system can be complex due to differences in data formats, structures, and systems.
   - **Mitigation:** Conduct thorough data mapping and use ETL (Extract, Transform, Load) processes to ensure data consistency and accuracy. Employ data integration specialists to handle complex integration tasks.
2. **Data Security and Privacy:**
   - **Challenge:** Ensuring the security and privacy of sensitive business data during and after the integration.
   - **Mitigation:** Implement robust data security measures such as encryption, access controls, and regular security audits. Ensure compliance with relevant data protection regulations.
3. **User Adoption and Training:**
   - **Challenge:** Employees may resist change or struggle to adapt to the new system.
   - **Mitigation:** Develop a comprehensive training program and provide ongoing support. Engage key stakeholders early in the process to champion the change and encourage user adoption.
4. **System Performance and Scalability:**
   - **Challenge:** Ensuring the integrated system performs efficiently and can scale with the growing data needs.
   - **Mitigation:** Conduct performance testing and optimization. Choose scalable solutions and infrastructure to accommodate future growth.
5. **Data Quality and Consistency:**
   - **Challenge:** Ensuring that data imported into Power BI is accurate, consistent, and up-to-date.
   - **Mitigation:** Implement data cleansing and validation processes. Regularly monitor and maintain data quality.

Success Measurement

1. **Reduction in Report Generation Time:**
   - **Metric:** Measure the time taken to generate reports before and after integration.
   - **Target:** Achieve at least a 50% reduction in report generation time.
2. **Improved Data Accuracy:**
   - **Metric:** Monitor the accuracy of data in reports by comparing with source data.
   - **Target:** Achieve a 95% or higher data accuracy rate.
3. **User Adoption Rate:**
   - **Metric:** Track the number of active users and their engagement with Power BI.

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- **Target:** Ensure at least 80% of the targeted users are actively using the system within six months of implementation.

4. **User Satisfaction:**
   - **Metric:** Conduct user satisfaction surveys to gather feedback on the new system.
   - **Target:** Achieve a user satisfaction score of 80% or higher.
5. **Operational Efficiency:**
   - **Metric:** Measure the time and resources spent on reporting activities before and after integration.
   - **Target:** Reduce the time spent on reporting activities by at least 50%.

Conclusion

The integration of Power BI with Amrita's ERP system is a strategic initiative that will transform the organization's data analytics capabilities. This project will empower departments with real-time insights, improve operational efficiency, and foster a culture of data-driven decision-making, ultimately leading to enhanced business performance.

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Date: 15th June, 2021

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Amrita Creation
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Date:25th July, 2021

To,
The Principal PI
Shri Mahaveer College
Jaipur

Subject: Approval and Sanction of Research Project

Dear Sir/Madam,

We are pleased to inform you of the approval and sanction of the research project titled **"The Integration of Power BI with ERP System: Study of Amrita Creation"**, proposed by **Dr. Poonam Somoni**, Associate Professor, Department of Commerce & Management. The project will be executed as per the following details:

1. **Total Cost of the Project:** ₹3,50,000/-
2. **Amount Sanctioned for Project Completion:** ₹1,40,000/-
3. **Amount Sanctioned after Progress Report Submission:** ₹2,10,000/-
4. **Principal Investigator:** Dr. Poonam Somoni
5. **Duration of the Project:** 10 Months

Key Guidelines:

- The Principal Investigator must complete the project within the specified duration.
- The project report, along with the analysis, should be submitted to the institution with the appropriate endorsements from the College authorities.
- The sanctioned amount will be deposited exclusively into the College Trust Bank account.
- No additional claims will be entertained for the Principal Investigator or any Project Assistant.
- A final hardbound copy of the project report should be submitted with all necessary acknowledgments from the concerned College authorities.

We appreciate your cooperation and look forward to the successful completion of this research project.

Thanking you,

M.K

Authorized by:
(Sanction Officer/Seal)

Fund Utilization Report

Executive Summary

This report outlines the fund utilization for a research project based on respondent feedback. The project did not involve any costs related to software or system acquisition. The primary objective was to gather and analyze feedback to improve the organization's processes and outcomes.

Project Overview

The research project aimed to collect and analyze feedback from respondents to identify key areas for improvement within the organization. The project involved several stages including survey design, data collection, data analysis, and reporting. The total budget allocated for this project was ₹3,50,000.

Justification of Expenses

The expenses incurred during the project were necessary to ensure the successful collection and analysis of feedback from respondents. Each expense category contributed directly to achieving the project's objectives. Below is a detailed breakdown of the expenses along with justifications for each category.

Table of Expenses

Expense Category	Amount (₹)	Justification
Survey Design	50,000	Professional fees for designing a comprehensive survey to capture relevant data
Data Collection	1,00,000	Costs associated with fieldwork, including travel and incentives for respondents
Data Analysis	70,000	Hiring of data analysts and statisticians to interpret the data collected
Reporting	30,000	Preparation of detailed reports and presentations of findings
Printing and Stationery	20,000	Printing surveys, consent forms, and other necessary documents
Administrative Expenses	30,000	Office supplies, communication, and other administrative costs
Training and Workshops	25,000	Training sessions for staff involved in data collection and analysis
Miscellaneous	25,000	Unforeseen expenses and contingencies

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Expense Category	Amount (₹)	Justification
Total	3,50,000	

Detailed Justifications

1. **Survey Design (₹50,000)**
   - The design phase involved hiring experts to create a survey that accurately captures the necessary feedback. This ensured that the data collected would be relevant and useful for the analysis phase.
2. **Data Collection (₹1,00,000)**
   - Fieldwork expenses included travel to various locations to gather feedback from respondents. Incentives were also provided to encourage participation.
3. **Data Analysis (₹70,000)**
   - Data analysts and statisticians were hired to interpret the collected data, ensuring accurate and meaningful insights.
4. **Reporting (₹30,000)**
   - Detailed reports and presentations of findings were prepared to effectively communicate the results of the research to stakeholders.
5. **Printing and Stationery (₹20,000)**
   - Printing costs for surveys, consent forms, and other necessary documents were incurred to facilitate data collection.
6. **Administrative Expenses (₹30,000)**
   - Office supplies, communication costs, and other administrative expenses were necessary to support the smooth operation of the project.
7. **Training and Workshops (₹25,000)**
   - Training sessions were conducted for staff involved in data collection and analysis to ensure they were well-prepared and efficient.
8. **Miscellaneous (₹25,000)**
   - This category covered unforeseen expenses and contingencies, ensuring the project could proceed without delays.

The funds allocated for this research project were utilized effectively to gather and analyze feedback from respondents. Each expense category was essential in achieving the project's objectives, leading to valuable insights for organizational improvement.

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Project Duration

The research project titled "**The Integration of Power BI with ERP System: Study of Amrita Creation**" is designed to be completed over a period of 10 months. The project is structured into two primary phases, each encompassing various critical activities aimed at achieving the project's objectives.

Project Duration: 10 Months

Phase 1: Months 1-4

Q1: Project Planning and Requirement Gathering

- **Activities:** Initial meetings with stakeholders, defining project goals, scope, and timeline. Developing a detailed project plan outlining milestones and deliverables.

Q2: BI Tool Selection and Data Source Identification

- **Activities:** Conducting a comparative analysis of BI tools, finalizing the selection of Power BI, identifying and mapping data sources for integration.

Q3: Power BI Setup and Initial Report Design

- **Activities:** Setting up Power BI, designing initial reports, conducting pilot testing to ensure functionality and accuracy.

Q4: Full-scale Implementation and Initial Training

- **Activities:** Implementing Power BI across departments, conducting initial training sessions for employees, collecting feedback to refine the system.

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Phase 2: Months 5-10

Q1: System Optimization and Advanced Reporting

- **Activities:** Optimizing the system based on feedback, designing advanced reports, and providing additional training sessions.

Q2: Departmental Integration and User Experience Enhancement

- **Activities:** Integrating more departments with Power BI, enhancing the user experience through continuous improvements.

Q3: Advanced Analytics and Continuous Improvement

- **Activities:** Incorporating advanced analytics and AI features, ongoing system optimization, and applying lean management principles for process refinement.

Q4: Final Review, Documentation, and Project Closure

- **Activities:** Conducting a final review of the project, preparing comprehensive documentation, and formally closing the project.

This structured approach ensures thorough analysis, accurate data collection, and effective implementation of Power BI with the ERP system at Amrita Creation, leading to improved data visualization, reporting, and business intelligence capabilities across the organization.

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Chapter 1: Executive Summary

This project outlines the implementation of a centralized reporting machine for AMRITA CREATION- Amrita Creation, a top rate menswear retailer, to modernize their enterprise statistics analytics. We begin by means of analyzing the present-day information panorama, figuring out challenges like fragmentation and reporting inefficiencies. Next, we discover numerous Business Intelligence (BI) solutions to be had, carrying out a comparative analysis primarily based on capabilities, cost, and integration with the present Enterprise Resource Planning (ERP) system. Following the choice of Power BI as the superior solution, we delve into its functionalities, highlighting how it empowers Amrita's ERP device, fosters departmental synergy via centralized reporting, and permits statistics-pushed selection making. Furthermore, the file explores the application of Business Intelligence throughout numerous departments, such as Buying, Planning, Production, VM, E-commerce, Business Development, Accounts, Finance etc. We show off how BI helps departmental deep dives, optimizing overall performance, streamlining operations, and maximizing ROI. Finally, we analyze the effect of the centralized reporting gadget, quantifying improvements in reporting performance and information accuracy. We finish via offering fulfillment tales demonstrating the energy of information-pushed insights for AMRITA CREATION- Amrita Creation.

Chapter 2: Introduction

Foundation of the Project

The integration of Power BI with our ERP system marks a significant advancement in the realm of enterprise data analytics for our organization. This project, undertaken for The House of Amrita, aims to modernize our data reporting infrastructure, thereby enhancing data accuracy and significantly reducing the time required for report generation. The House of Amrita, encompassing esteemed brands like Amrita Creation for menswear and for womenswear, has long been committed to excellence in fashion. By leveraging cutting-edge data analytics, we strive to bring the same level of innovation and efficiency to our internal processes.

In today's fast-paced business environment, timely and accurate data is crucial for making informed decisions. Previously, our departments faced considerable challenges in report generation, primarily due to the limitations of our existing ERP system. Reports were time-consuming to produce, often taking 30 minutes to an hour each, and the system lacked the flexibility and user-friendliness needed to meet our dynamic reporting needs. Recognizing these challenges, we embarked on this project to integrate Power BI with our ERP system, aiming to streamline data access, improve report accuracy, and enhance overall operational efficiency.

The implementation of this project involved a comprehensive approach, starting with inter-departmental interviews to understand specific reporting needs and challenges. Following this, we developed a training module to educate employees on utilizing Power BI effectively. This ensured that our team was well-prepared to leverage the new system's capabilities. The project also adhered to key principles of lean management and continuous improvement, focusing on eliminating inefficiencies and optimizing processes.

This document will detail the steps taken in the project, the outcomes achieved, and the future scope of expanding Power BI integration across more departments. It will also explore the significance of ERP and BI in the retail industry, providing a foundation for understanding the broader impacts of this technological enhancement.

Other Consideration

1. Limited Handling of Large Datasets for Seasonal Analysis:

Problem: Exporting statistics for seasonal evaluation frequently outcomes in huge CSV files that can not be successfully analyzed within a single Excel worksheet. Splitting records across more than one files introduces demanding situations in statistics consolidation and evaluation.

Impact: This creates a barrier to performing comprehensive seasonal trend analysis and deriving actionable insights.

2. Redundant Data Entry Across Systems:

Problem: The modern-day technique calls for updating data in both the ERP device and a separate Warehouse Management System (WMS) when growing sales orders. This results in duplicate facts access and will increase the threat of errors.

Impact: This redundancy wastes time and sources, will increase the ability for inconsistencies, and complicates facts reconciliation.

Additional considerations:

- Integration demanding situations with current facts evaluation equipment.
- Difficulty in seamlessly moving statistics from the ERP gadget to preferred BI gear for advanced evaluation.
- Lack of actual-time statistics get entry to.
- Limited ability to get admission to and analyze actual-time statistics for dynamic selection-making.
- Inconsistent records formats.
- Variations in information codecs across distinct systems create difficulties in combining and studying records from a couple of asset

About The House 0f Amrita

Amrita Creation and stand as epitomes of elegance, sophistication, and sartorial excellence in the realm of premium menswear and womenswear, respectively. Founded by the visionary entrepreneur Mr. M. Kataria, these brands have carved a niche for themselves in the fashion industry, setting new standards of quality, craftsmanship, and innovation.

Amrita Creation, the flagship menswear brand, is synonymous with refined tailoring, timeless designs, and impeccable attention to detail. From impeccably tailored suits and shirts to versatile casual wear and accessories, Amrita Creation offers a curated collection that exudes understated luxury and sophistication. Each garment bears the hallmark of superior craftsmanship, utilizing the finest fabrics and materials sourced from around the globe.

Complementing Amrita Creation's legacy, captures the essence of modern femininity with its exquisite range of womenswear. From chic dresses and separates to statement accessories and footwear, celebrates individuality, confidence, and grace. The brand's distinctive aesthetic combines contemporary silhouettes with luxurious fabrics and intricate embellishments, catering to the discerning tastes of today's fashion-forward women. Guided by Mr. M. Kataria's visionary leadership, these brands embody a philosophy of authenticity, creativity, and excellence. Every collection reflects meticulous attention to detail, a passion for design innovation, and a dedication to exceeding customer expectations.

The organization embrace innovation not only in design but also in their approach to sustainability and responsible fashion practices. The brands are committed to reducing their environmental footprint by employing eco-friendly materials, ethical manufacturing processes, and mindful supply chain practices. Through initiatives like sustainable sourcing, waste reduction, and community engagement, Amrita Creation and strive to create a positive impact on both the fashion industry and the planet.[2]

With a legacy spanning years of excellence, Amrita Creation and have earned a loyal clientele and garnered acclaim both nationally and internationally. From their flagship stores to online platforms, these brands cater to a discerning clientele seeking unparalleled quality, style, and sophistication. Whether on the streets of fashion capitals or in the closets of style connoisseurs, Amrita Creation and continue to make their mark as symbols of refined luxury and timeless elegance

Figure : The house of Amrita: self

Amrita
Creation

Categories at the House of Amrita

1. Amrita Creations - Menswear:

Amrita Creations stands as the epitome of timeless sophistication and refined elegance in menswear. From impeccably tailored suits to versatile casual wear, Amrita Creations offers a curated collection that exudes understated luxury and impeccable craftsmanship.

2. - Women's Wear:

captures the essence of modern femininity with its exquisite range of womenswear. From chic dresses to statement accessories, celebrates individuality, confidence, and grace, offering a curated collection that epitomizes sophistication and style.

i. Article by Amrita Creations - Athleisure for Menswear:

Article by Amrita Creations redefines athleisure with its fusion of comfort, functionality, and style. From performance-driven activewear to versatile leisurewear, Article by Amrita Creations offers a curated collection that blends sporty aesthetics with contemporary design, catering to the modern man's active lifestyle.

ii. Guild - Menswear Premium Brand (Amrita Creations):

Guild represents the pinnacle of luxury and exclusivity in menswear, offering discerning gentlemen a bespoke experience like no other. From exquisite fabrics to impeccable craftsmanship, Guild embodies the essence of sartorial excellence, elevating menswear to an art form.

iii. Ruby - Womenswear Premium Brand ():

Ruby embodies timeless elegance and sophistication in womenswear, offering discerning women a premium experience like no other. From luxurious fabrics to intricate details, Ruby epitomizes refined luxury, elevating womenswear to an unparalleled level of sophistication and style.

Chapter: 3 Literature Review

What is ERP?

At its core, ERP is a software device that permits businesses to control their operations in a extra efficient and integrated manner. It normally consists of modules for coping with diverse elements of a enterprise, together with finance, human assets, stock, and income. By centralizing all this statistics in a single area, ERP can help agencies to make better selections, reduce costs, and enhance purchaser delight.

Why ERP is imprortant for business?

Well, for starters, it can assist to do away with silos within an organization. Often, exclusive departments within a business enterprise use extraordinary software program systems that don't "speak" to every other. This can cause inefficiencies, duplicate work, and mistakes. With ERP, but, all of the records is saved in a single vicinity, making it simpler for different teams to collaborate and proportion records.

In addition, ERP can help companies to automate a lot of their tactics. For example, in place of manually getting into information into a couple of structures, ERP can mechanically replace all relevant systems simultaneously. This can shop time and reduce the risk of errors.[2]

Why is ERP vital for retail outlets?

Well, as we cited in advance, coping with inventory and sales can be a complicated and time-consuming technique. ERP for retail can help stores to advantage actual-time visibility into their inventory stages, sales records, and client conduct. This can help them make more knowledgeable decisions about what products to stock, whilst to reorder, and the way to charge them.

But that's just scratching the surface. ERP for retail can also assist retailers to improve their supply chain operations, track the overall performance of person shops or locations, or even personalize the consumer experience. In short, ERP is a effective tool that can help stores to stay competitive in an ever-changing enterprise.

Some specific ways that ERP can benefit the retail industry:

i. **Improving Inventory Management**

With ERP for retail, retailers gain actual-time visibility into inventory degrees, inclusive of inventory ranges, replenishment wishes, and product call for. This can help them to make extra knowledgeable selections about what products to stock, when to reorder, and how much to order. By optimizing their inventory stages, outlets can lessen waste, enhance consumer pleasure, and boom profitability.

For example, a clothing retailer may additionally use ERP to music the popularity of different sizes and colors of a particular product and use this records to adjust their inventory degrees accordingly. This can help them to avoid overstocking merchandise that aren't promoting nicely even as ensuring they always have sufficient of the most famous objects in inventory.

ii. Improving Data Analysis

With ERP, stores can gather and examine big amounts of facts approximately their operations, clients, and suppliers. This records can be used to become aware of trends, spot possibilities for development, and make greater knowledgeable decisions. By leveraging the electricity of data, outlets can live in advance of the opposition and adapt speedy to converting market situations.

For example, a huge department save chain may additionally use ERP to investigate sales records from one-of-a-kind areas and product classes, pick out tendencies and opportunities, and make extra knowledgeable selections approximately product collection and marketing campaigns. This can help them to stay in advance of the opposition and reply fast to modifications inside the market.[3]

iii. Personalising Customer Experience

With ERP for retail enterprise, retailers can better recognize their customer's conduct, choices, and purchase records. This records may be used to customise the patron enjoy via presenting customized tips, promotions, and discounts. By imparting a greater personalized experience, shops can growth patron loyalty and drive more income.

For instance, a web retailer can also use ERP to investigate customer information, along with beyond purchases and surfing history, to provide personalized pointers and promotions. This can assist them to construct more potent relationships with their customers and growth purchaser loyalty.

iv. Streamlining Supply Chain Operations

ERP for retailer can help to streamline supply chain operations for shops, from procurement to distribution. By automating many of the methods involved in deliver chain control, shops can lessen fees, increase efficiency, and improve their usual performance. For example, ERP can assist retailers to tune their providers' overall performance, manipulate buy orders and invoices, and music the delivery of goods.

For example, a grocery save chain may also use ERP to manage its relationships with suppliers, tune the transport of products, and ensure that merchandise are usually in stock. This can assist them lessen waste, enhance their profitability, and offer a better customer enjoy.[4]

Steps for Successful Implementation of ERP for Retail Industry

With all of the challenges we mentioned within the preceding segment, it's clean that Implementing an ERP for retail device in the retail enterprise isn't any small feat. However, there are some fine practices that outlets can follow to ensure a a hit implementation:

I. Set clear objectives:

Before implementing an ERP for retail device, stores have to in reality outline their objectives. What do they desire to achieve with the implementation? Is it higher inventory management, greater streamlined approaches, or improved patron experience? Once these objectives are described, the ERP implementation may be tailored to satisfy those unique wishes.

II. Selection of appropriate ERP system:

There are a plethora of ERP for retail systems to be had in the marketplace. Retailers have to choose a system that is in particular designed for the retail enterprise, with functions that meet their specific wishes. It is vital to thoroughly evaluate and compare ERP systems earlier than creating a final choice.

III. Plan implement process:

Retailers need to plan the ERP for retail implementation manner carefully, thinking of all elements of the implementation, from facts migration to employee education. It is

essential to have a properly-defined implementation plan and schedule to make sure that the implementation is completed on time and within finances.

IV. Engage employees:

Employee buy-in is crucial to the success of an ERP implementation. Retailers should contain employees inside the implementation method and provide adequate schooling and support to ensure a clean transition. Employees need to be educated approximately..

Future of ERP for Retail Industry

Let's test a number of the destiny tendencies to be able to form the way retailers implement and use ERP structures.

v. Greater Emphasis on Data Analytics and Business Intelligence

With the increasing amount of facts being generated in the retail enterprise, it's no marvel that information analytics and commercial enterprise intelligence turns into key attention for ERP systems. In the destiny, retailers will use superior analytics tools to advantage insights into their operations and make statistics-driven decisions. For example, ERP systems could be in a position to investigate income statistics and patron conduct to are expecting destiny traits and help shops live ahead of the competition.

vi. Integration with Emerging Technologies

As new technologies continue to emerge, ERP systems will need to preserve up. For instance, integration with IoT (Internet of Things) gadgets will permit retailers to accumulate real-time facts about their stock, track deliveries, and display the circumstance of their merchandise. Similarly, integration with AI (Artificial Intelligence) and ML (Machine Learning) gear will permit outlets to automate and optimize various approaches, which include demand forecasting and supply chain control.

vii. Cloud-based totally ERP Systems

Cloud computing has already converted the manner many companies function, and the retail enterprise isn't any exception. Cloud-based ERP systems offer many benefits, including decrease charges, greater scalability, and expanded accessibility. As such, increasingly more stores are anticipated to transport far from on-premises ERP systems and adopt cloud-based answers inside the destiny.

viii. Greater Customization and Flexibility

The retail enterprise is thought for its range, with unique forms of outlets having particular needs and necessities. ERP structures will want to turn out to be extra customizable and flexible to meet these numerous needs.

What is retail business intelligence?

In its only form, retail enterprise intelligence (BI) is the manner of turning facts into insights in the retail industry. This can be executed in a number of methods, but it commonly includes using analytics to become aware of developments and patterns. BI can assist stores make higher choices on the subject of stock, pricing, advertising, and greater. Today, there are a number of distinct solutions that stores can use to enhance their BI. These encompass:

- Data mining
- Text analytics
- Predictive analytics
- Prescriptive analytics
- Dashboards and visualizations

Each of those answers has its personal unique benefits, and it is crucial for stores to pick out the proper gear for his or her unique needs. Retailers also can get the most out of these answers by using figuring out what metrics they need to be monitoring to get the insights they want.

What are the key benefits of retail business intelligence?

The major advantage of BI is that it enables shops make better choices and in the long run their businesses more effectively. Some examples consist of:

- **Improved vending:** BI can assist shops become aware of which merchandise are selling well and which of them are not. This data can be used to make higher choices about what to inventory in shops and a way to charge merchandise.
- **More effective advertising:** BI can help retailers pick out which advertising campaigns are operating and which of them aren't. This information can be used to expand new campaigns and discover where to make investments advertising bucks if you want to increase sales and pressure revenue.
- **Improved stock control:** BI can help stores become aware of when there is a scarcity in objects in order to restock them earlier than clients begin shopping elsewhere. It also can be used to reveal while merchandise are going obsolete so that they don't have to be discarded prematurely.
- **A better understanding of purchaser conduct**: BI can assist stores discover who their clients are, what they need, and the way they behave. This information may be used to enhance customer support and develop extra powerful advertising and marketing campaigns.

As we can see, BI offers a wealth of benefits for shops. By the usage of the right equipment and figuring out the proper metrics, stores can flip their data into actionable insights. These can then be used to improve commercial enterprise performance and benefit a competitive part.

Literature review discussion

The importance of ERP systems in business cannot be overstated. ERP helps in eliminating silos within an organization by integrating disparate software systems, which facilitates better communication and collaboration among different departments (Davenport, 1998). The automation of processes and the real-time updating of data across various systems reduce the risk of errors and save considerable time (Umble, Haft, & Umble, 2003). Furthermore, ERP systems support scalability and flexibility, allowing businesses to adapt to market changes more efficiently (Gargeya & Brady, 2005).

ERP systems offer significant benefits to retail outlets by streamlining complex and time-consuming processes such as inventory and sales management. Real-time visibility into inventory levels, sales data, and customer behavior helps retailers make informed decisions on stock management, reorder schedules, and pricing strategies (Helo & Szekely, 2005). ERP systems also enhance supply chain operations, track the performance of individual stores, and personalize the customer experience (Bradford & Florin, 2003).

The primary benefit of BI is its ability to help retailers make better decisions and operate more efficiently. BI improves merchandising by identifying which products are selling well and which are not (Chen, Chiang, & Storey, 2012). It also enhances marketing effectiveness by evaluating campaign performance and identifying where to invest marketing dollars (Negash, 2004). Improved inventory management ensures products are restocked before running out, and a better understanding of customer behavior helps retailers tailor their offerings to meet customer needs (Davenport & Harris, 2007).

Case Study 1: Case Studies-Success (Cadbury) & Failures (Hershey's)

Cadbury

Company Background

- Cadbury is a British multinational confectionery company owned by Mondelēz International.
- It is the second largest confectionery brand in the world after Wrigley's.
- Founder: John Cadbury.
- Founded in: 1824, Birmingham, United Kingdom

ERP Implementation

- Cadbury turns out, in recent years, Kraft implemented SAP ERP 6.0 (System Analysis and Program Development) in what SAP called one of its largest global ERP implementations.
- Kraft credited ERP with reducing operational costs.
- 11,000 employees were sending data to the company's SAP solution and it was linked to 1,750 applications by 2008.
- That same year, Kraft also added SAP's master data management solution, NetWeaver, with an eye toward integrating legacy systems.

- Cadbury was left with a glut of chocolate products at the start of the year, after the installation of a new SAP-based enterprise resource planning (ERP) system bars building up at the end of an excess of chocolate 2005.
- The new U.K. computer system is part of a transformation project, called "Probe", aimed at the five-year IT Cadbury Schweppes supply chain, purchasing, manufacturing at the distribution, sales and marketing systems on a global, SAP-based ERP platform.
- Cadbury Schweppes is aiming for an ultimate savings from the Probe project, but its implementation has been far from smooth. The project was beset by problems and delays when it was first introduced in Australia in 2002.

Benefits of ERP

- Cadbury was on a fast-paced growth and could not continue with the slow due to added existing systems and the pace was too inefficient. ERP added efficiency and guided the led all the issues of fast paced growth.
- The implementation of ERP brought in a new way of warehouse management system and brought in structure to branch offices and the depots.
- While implementing the ERP systems, the company has built it upon the past strengths of the company thereby not losing out on its competitive
- The initial implementation took time and then the successive implementations took lesser time and cost and there is a huge advantage in saving cost while in the implementation phase itself.
- The reaction from competition does not matter in this because this is not a change that was advertised to the market. This is an internal process restructuring and was a welcome change within the company which badly needed the change.
- The company also has built in a robust regular feedback system to monitor the changes and check if they go according to the initial plan. The entire implementation is cross functional and hence it is important that there is a high increase in the efficiency.
- The ERP vendor was also selected from among the best-in-class vendors which helped the process occur in a streamlined fashion and avoided any possible chances of hiccups during the initial implementation phase.
- The system has also been deployed up to the vendors. They have a portal called vendor connect where they can see their inventory movement and make plans accordingly. Hence the restructuring happens not only internally but also across to the supplier which will add on to the benefits that are accrued.

- It was considered at low cost and high result implementation which by itself highlights the success and the benefits.

Hershey's

Company Background

- Hershey's is the largest chocolate manufacturer in North America.
- Its headquarters are in Hershey, Pennsylvania, which is also home to Hershey's Chocolate World.
- Chocolate Business was started by Mr. Milton S. Hershey in 1876
- The Hershey Company was established in 1894
- Hershey's products are sold in about sixty countries worldwide.

To enhance company's competitiveness and customer service

- During late1996, the management of Hershey gave its approval to a project named Enterprise21
- For this Hershey selected SAP's R/3 ERP software, Manugistics SCM software and Seibel's CRM software and IBM Global Service so as to manage integration amo ng these three systems.
- Overall Project Cost was US $10 Million
- The recommended implementation time for the project was 4 yrs. and Hershey demanded for 2.5 yrs.
- Hershey decided to go with Big Bang Approach instead of the phased approach.

Impact of ERP failure

- Problems pertaining to order fulfillment, processing and shipping started to arise; Hershey would not be able to meet its committed date of delivery
- Several of Hershey's distributors who had ordered the products could not supply them to the retailers in time, and hence lost their credibility in the market
- Product inventory started to pile up and by the end of September 2000; the inventories were 25% more than the inventories during the previous year
- After Hershey's announcement in the market about problems due to malfunctioning of the newly installed computer systems, Hershey's stock price plunged by 8% on a single day.

- Hershey's failure to implement the ERP software on time cost the company US $150 million in sales. Profits for the third quarter 1999 dropped by 19% and sales declined by 12%, in its 1999 annual report.

Reason of failure

- Over-squeezing implementation schedules
- Big Bang Approach instead of Phased Approach
- Mistake of sacrificing systems testing for the sake of expediency
- Cutover Activities and Go-Live was scheduled in Hershey's busiest business periods.

Learning from failure

- **The First Lesson**

An ERP implementation project should not be forced into an unreasonable timeline. Over-squeezing implementation schedules is a sure-fire way to overlook critical issues. Testing phases are safety nets that should never be compromised.

- **The Second Lesson**

Never schedule a cutover during busy seasons. Even in a best-case implementation scenario, companies should still expect steep learning curves and operational performance dips. By timing cutovers during slow business periods, the company gives itself more slack time to iron out systems kinks. It also gives employees more time to learn the new business processes and systems. In many cases, it is even advisable to reduce orders in and around the cutover period. This tactic is aimed at minimizing exposure to damages caused by potentially undetected errors and less-than-perfectly- trained users.

ERP Implementation Key Factors:

End Users Related:

- Motivation: Offer financial incentives to encourage effective ERP adoption among end users.

  Change Management: Address reluctance to adopt new ERP by rewarding employees who volunteer to learn. Top management should bridge the gap between end users'

expectations and reality, providing consistent support for system handling.

Project Management:

- Ensure project progress is effectively communicated to end users to provide accurate feedback on the ERP implementation status.
- Prioritize improvement in education & training, end users' attitudes, and project team quality. Management actions should elevate the project team's skills and modify end users' attitudes through necessary training.

Organization Related:

- End Users Participation: Top management should discuss the ERP's objectives with end users.
- Cost Effectiveness: Enhance top management's communication with end users about the ERP package's costs and benefits to increase their involvement.
- Training: Tailor training materials for specific professions and offer post-implementation training as needed. Focus on diverse training techniques such as computer-based, on-the-job, and self-directed learning.

Chapter 4: Need of the Project

Introduction

In brand new aggressive retail landscape, information-driven insights are vital for knowledgeable decision-making and reaching operational excellence. This task tackles the modernization of enterprise statistics analytics at AMRITA CREATION- Amrita Creation, a leading top class premium womenswear manufacturer and retailer.

Imagine a global wherein facts sings, not in a chaotic cacophony, but in a harmonious symphony, revealing the rhythm of your enterprise. This is the imaginative and prescient that drives our mission: to convert AMRITA CREATION- Amrita Creation, a renowned chief within the premium menswear industry, right into a statistics-driven powerhouse.

Currently, Amrita's statistics panorama resembles a scattered puzzle – valuable insights locked away in silos across specific departments and structures. This fragmentation creates a large hurdle. It hinders the ability to gain a clear photo of the enterprise, leading to time-consuming document generation and, ultimately, choices made without the complete image.

Our project embarks on a journey to bridge this gap. We purpose to create a centralized reporting machine, a digital conductor so that it will orchestrate Amrita's information right into a unified and effective pressure. This gadget, powered by using the progressive competencies of Microsoft Power BI, promises to revolutionize the way AMRITA CREATIO Ninteracts with its records. [5]

By implementing this mission, we envision a future wherein:

- **Data speaks a clean and unified language:** Fragmented records sources could be consolidated, taking into account seamless get entry to and analysis.
- **Reporting turns into a clean melody:** Streamlined techniques will update tedious record generation, liberating up treasured time and resources.
- **Departments collaborate in ideal concord:** Unified insights will empower all departments to work collectively toward shared dreams.

This project is greater than simply technological development; it is about unlocking the proper potential of information. By empowering AMRITA CREATION with a centralized reporting machine, we goal to free up a symphony of fulfillment, propelling the organization towards a destiny of data-pushed decision making, optimized operations, and a thriving competitive aspect.

Background

AMRITA CREATION- Amrita Creation, a leading retailer in the top class menswear and , rising in premium womenswear marketplace, currently faces demanding situations in its records surroundings. These challenges encompass:

- **Data Fragmentation:** Data is scattered across numerous sources and systems, developing silos that restrict a holistic view of the commercial enterprise.
- **Inefficient Reporting Processes**: Generating reviews is a time-eating and manual process, restricting the provision of well-timed insights for choice-making.
- **Limited Visibility Across Departments:** Departmental facts stays largely remoted, hindering collaboration and hindering knowledgeable decision-making at a corporation-huge degree.

These barriers save AMRITA CREATION from leveraging the overall ability of its information to optimize operations, perceive traits, and benefit a aggressive aspect.

Significance

This undertaking to put into effect a centralized reporting gadget powered by using Power BI holds substantial which means for AMRITA CREATION Here's how:

- **Improved Decision-Making:** By unifying records and streamlining reporting, the challenge empowers management and departmental teams to make facts-pushed selections based on accurate and timely insights.
- **Enhanced Operational Efficiency:** Centralized analytics will display areas for improvement in techniques, leading to streamlined operations, fee reduction, and advanced aid allocation.
- **Increased Collaboration:** Unified facts helps expertise sharing and collaboration throughout departments, fostering a culture of information-pushed selection-making.
- **Competitive Advantage:** Gaining deeper customer insights via information evaluation permits for focused advertising campaigns, progressed customer reports, and in the end, a stronger aggressive facet.
- **Future-Proofing Data Management:** A centralized gadget with Power BI allows scalability and adaptableness, allowing AMRITA CREATION to deal with future growth and evolving statistics desires.

By overcoming the constraints of the present day records panorama, this assignment paves the manner for a statistics-pushed future for THOR, unlocking giant capability for increase, optimization, and lengthy-term success.[5]

Problem Identification: Bottlenecks in THOR

AMRITA CREATION current data surroundings presents several limitations that preclude efficient information analysis and utilization. Here's a based breakdown of the key demanding situations:

Static Data Exports and Manual Analysis:

Problem: Data is currently exported from the ERP machine in uncooked, static formats (dumps) requiring guide processing in Excel spreadsheets.

Impact: This technique is time-consuming, prone to human mistakes, and limits the ability to perform complicated information manipulation and evaluation.

Inefficient Data Retrieval for Broader Timeframes:

Problem: Downloading statistics for large timeframes (eg..,two months) is a gradual technique, taking upwards of 25-30 minutes. Downloading an entire year's data would be impractical, hindering historical fashion evaluation.

Impact: This delays get admission to critical insights and hinders the capability to make knowledgeable selections primarily based on broader traits.

Objective

Primary objective

- Implement the integration of BI with House of Amrita's existing ERP system to improve data visualization, reporting, and business intelligence capabilities**.**

Secondary objective

- Reduce the time spent on report generation within the department by transitioning from manual Excel-based reports to interactive and efficient Power BI reports.
- Increase Report Accuracy and Consistency
- Foster Data-Driven Decision Making

												GENISYS	GENISYS	GENISYS
												957848	117460	1072437
EAN	BRAND	FINAL DROP	SUB CAT	SUB BRAND	CATEGORY	STYLE	COLOUR	PALATTE	SIZE	SEA	INWARD DATES	GOODS DUP	EBO RTV	TOTAL
8907279799067		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	28-XS	SS-24	31-01-2024	35	0	35
8907279799074		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	30-S	SS-24	31-01-2024	329	0	329
8907279799081		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	32-M	SS-24	31-01-2024	566	0	566
8907279799098		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	34-L	SS-24	31-01-2024	560	0	560
8907279799104		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	36-XL	SS-24	31-01-2024	262	0	262
8907279799111		DROP 1	RR SLIM FIT	0	DENIM PANT	ASTRO BLACK	BLACK	PRIMARY	38-2XL	SS-24	31-01-2024	184	0	184
8907279798640	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	28-XS	SS-24	08-03-2024	0	0	0
8907279798657	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	30-S	SS-24	08-03-2024	0	0	0
8907279798664	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	32-M	SS-24	08-03-2024	0	0	0
8907279798671	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	34-L	SS-24	08-03-2024	0	0	0
8907279798688	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	36-XL	SS-24	08-03-2024	0	0	0
8907279798695	RABBIT-ARTI	DROP 1	MID SKINNY FIT	ARTICALE	DENIM PANT	DOVE	BLACK	PRIMARY	38-2XL	SS-24	08-03-2024	0	0	0
8907279796462		DROP 2-VM DROP	REGULAR FIT	0	DENIM PANT	INKY	BLACK	PRIMARY	28-XS	SS-24	31-12-2024	24	0	24
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8907279796509		DROP 2-VM DROP	REGULAR FIT	0	DENIM PANT	INKY	BLACK	PRIMARY	36-XL	SS-24	31-12-2024	136	0	136
8907279796516		DROP 2-VM DROP	REGULAR FIT	0	DENIM PANT	INKY	BLACK	PRIMARY	38-2XL	SS-24	31-12-2024	99	0	99
8907279795748	GUILD	DROP 1	RR SLIM FIT	0	DENIM PANT	KLEBER	BLACK	PRIMARY	28-XS	SS-24	07-01-2024	49	0	49
8907279795755	GUILD	DROP 1	RR SLIM FIT	0	DENIM PANT	KLEBER	BLACK	PRIMARY	30-S	SS-24	07-01-2024	409	0	409
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8907279795786	GUILD	DROP 1	RR SLIM FIT	0	DENIM PANT	KLEBER	BLACK	PRIMARY	36-XL	SS-24	07-01-2024	325	0	325
8907279795793	GUILD	DROP 1	RR SLIM FIT	0	DENIM PANT	KLEBER	BLACK	PRIMARY	38-2XL	SS-24	07-01-2024	223	0	223
8907279794543		DROP 1	RR SLIM FIT	0	DENIM PANT	OMIROS	BLACK	PRIMARY	28-XS	SS-24	14-12-2023	59	0	59
8907279794550		DROP 1	RR SLIM FIT	0	DENIM PANT	OMIROS	BLACK	PRIMARY	30-S	SS-24	14-12-2023	539	0	539
8907279794567		DROP 1	RR SLIM FIT	0	DENIM PANT	OMIROS	BLACK	PRIMARY	32-M	SS-24	14-12-2023	989	0	989

Table : Reports with its average time Inventory report (DUP,RTV).

These limitations restrict AMRITA CREATION- Amrita Creation's capacity to leverage the full potential of its records. Implementing a centralized reporting gadget with stepped forward information extraction abilties and integration with BI gear will address those inefficiencies, paving the manner for a greater facts-driven and analytical destiny.

Our Initial Approach to the Project

Our preliminary method targeted on identifying a new ERP system with extra customization alternatives, advanced functionality, and superior accessibility to higher suit the organization's cutting-edge desires. We supplied various information points and parameters to assist this recommendation. However, management expressed hesitation regarding the cost of enforcing a brand new system, mainly considering they obtained the current ERP at a discounted fee. Additionally, worker familiarity with the present gadget offered a schooling hurdle. Given the organisation's initial stage, control is prioritizing stability and is reluctant to adopt a massive exchange like a whole ERP overhaul. We explored the possibility of integrating Power BI with the modern ERP to automate document generation and improve facts visualization, doubtlessly saving time and effort in comparison to manual strategies. While the exact fee of the modern-day ERP can not be disclosed due to compliance motives, integrating Power BI changed into offered as a more less costly opportunity to adopting a totally new ERP device.[6]

Barrier Constraint

Resistance to Change:

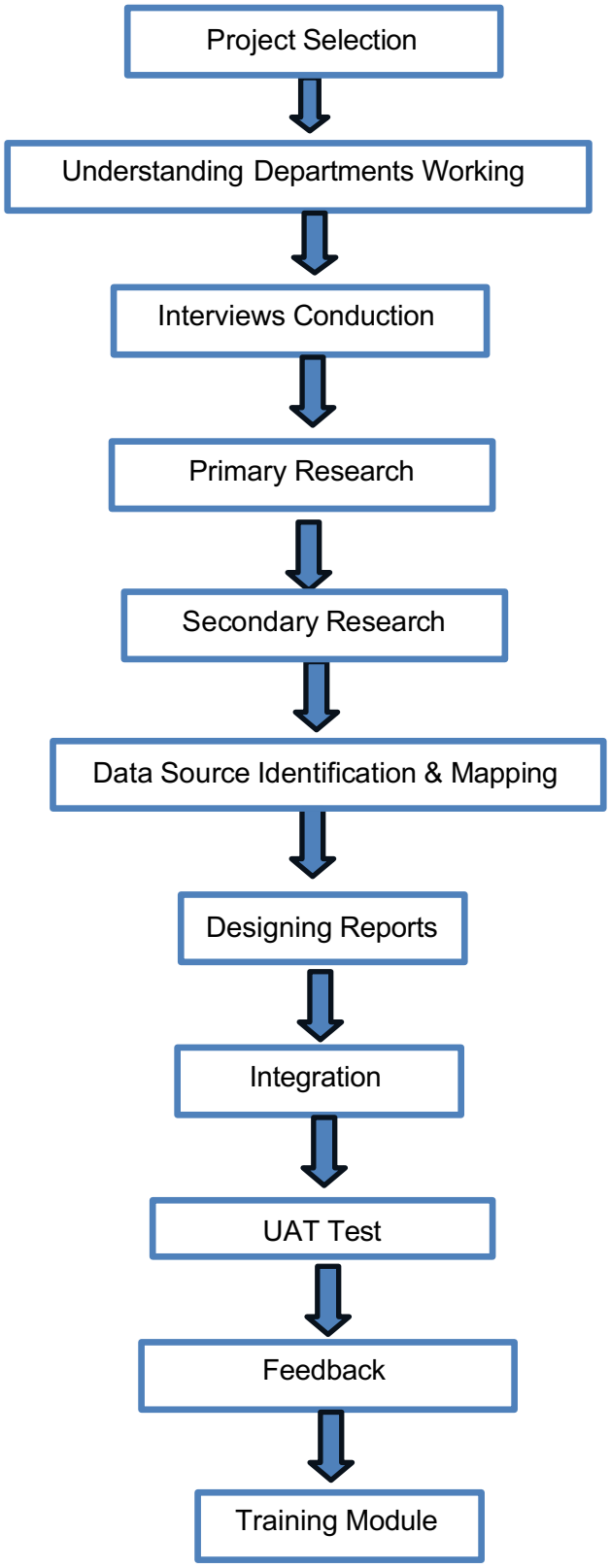
- **Habit and Comfort:** People are conversant in the prevailing system, and studying a new one can be disruptive and time-eating. There is probably a preferred fear of the unknown and a choice for sticking with what's familiar.
- **Training Challenges:** A new ERP system will require training for all users. This can be a great funding in time and resources, and a few personnel might face up to the extra workload of gaining knowledge of a new software.

Implementation Challenges:

- **Complexity:** ERP systems are complex, and implementing a brand new one may be a lengthy and tough procedure. There is probably unexpected technical hurdles or compatibility troubles with current structures.
- **Data Migration:** Moving records from the vintage system to the brand new one can be a complicated and blunders-susceptible procedure. It's critical to make certain records integrity and decrease disruption during the migration.

Chapter: 5 Research Methodology

Methodology Approach/ Flow Diagram



The above flow chart represents the methodology approach towards the project.

Timeline (Time & Action Calender)

- **Week 1 :**

  Project Discussion Meeting: Define project goals, scope, timeline.
- **Week 2 :**

  Understanding of Working of Departments : Understanding role of each and every departments (Buying & Planning, Design, Merchandising, VM, MDM, E-com, Business Development, Product Development, Account & Finance, HR)
- **Week 3 & 4 :**

  User Interviews (Marketing, Design, VM): Conduct interviews to understand departmental needs & challenges.

  Designing SOP : Making of SOPs with respect of different department working
- **Week 5 & 6 :**

  Analysis of Business Intelligence Tools: Comparing various BI tools available in markets which is aligning with the organizational goals.

  Feasibility Analysis & Risk Assessment: Evaluate BI compatibility & alternatives. Identify potential risks & mitigation strategies.

  Data Source Identification & Mapping (Start): Identify all relevant data sources (ERP, databases, etc.). (IT Team, Business Analysts)
- **Week 7 & 8 :**

  Data Source Identification & Mapping (Finish): Document data location, format & content. (All kind of reports – Item Master, Store Master etc)

  Power BI Setup & Data Connection (Start): Install & configure Power BI Desktop & Service. Establish secure connections to data sources. (IT Team)

- **Week 9 :**

  Report Design: Designing reports for each department according to their needs

  Power BI Setup & Data Connection (Finish): (IT Team)

  Data Model Design & Transformation (Start): Design data model within Power BI. Cleanse & transform data to address inconsistencies. (IT Team, Data Analysts)
- **Week 10 :**

  Data Model Design & Transformation (Finish): (IT Team, Data Analysts)
- **Week 11 :**

  Feedback: Taking feedback from executives of different departments

  Cost Benefit Analysis: Cost analysis and saving calculation
- **Week 12 :**

  Training Module : Designing a training module for users to understand the software better.
- **Week 13 & 14 :**

  Supervision: Oversighting the accuracy of data and working

  Documentation: Prepared a descriptive report on the carried out project.

Primary Research

To gain a complete expertise of the modern-day statistics landscape and person needs, we performed a sequence of interviews with executives from numerous departments inside THOR. These interviews served as primary research, allowing us to gather valuable insights into the restrictions of the existing ERP system. Executives consistently highlighted demanding situations which includes fragmented records, time-ingesting file generation, and restrained departmental visibility into essential statistics. The interviews further emphasised the significant capability of integrating Power BI with the ERP system. This integration might empower departments with consumer-friendly dashboards and reviews, fostering information-pushed choice making and streamlining information get entry to throughout the business enterprise. (Refer Annexure I)

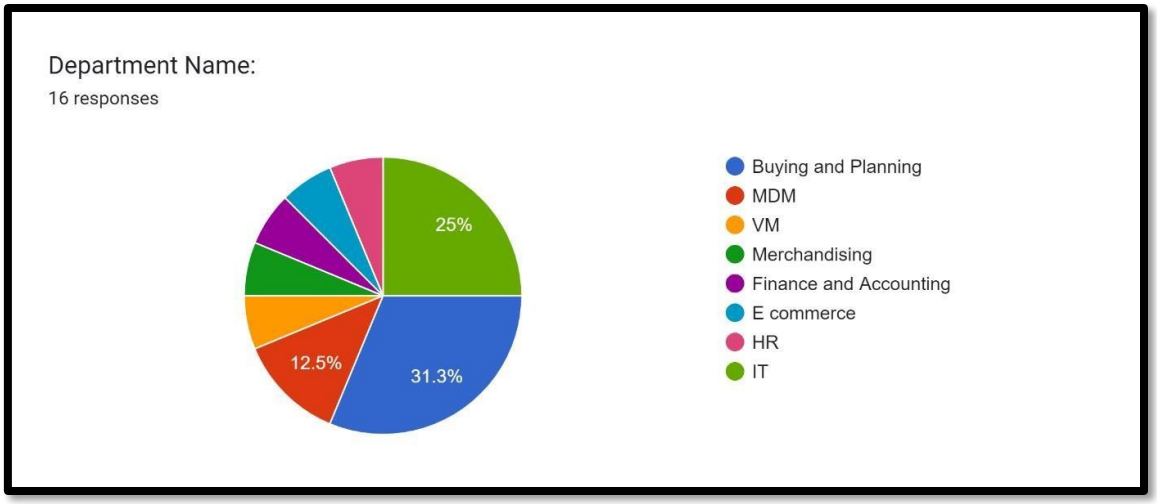


Figure : Primary research Department

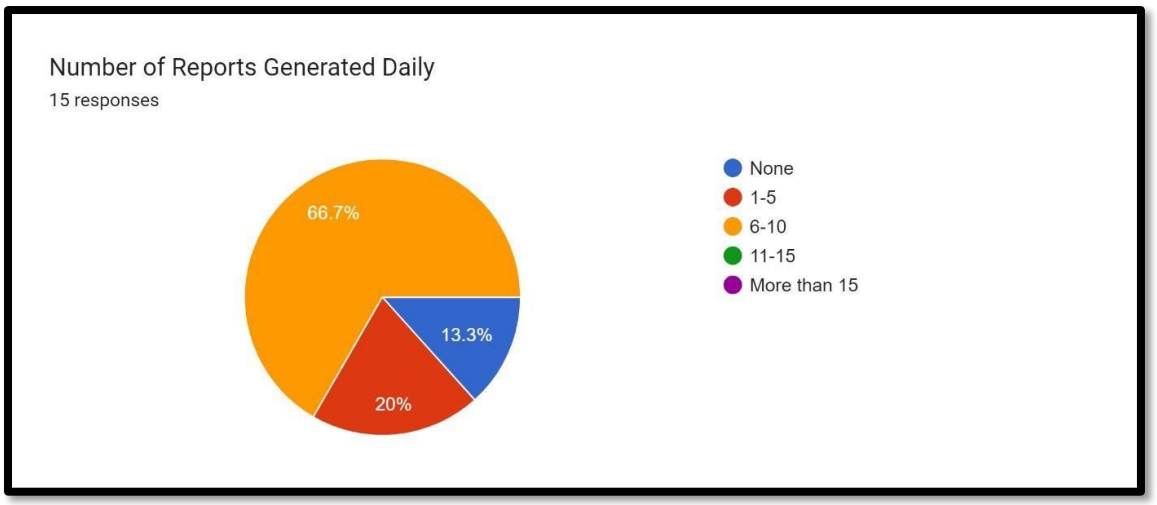


Figure : Primary research "number of reports generated daily"

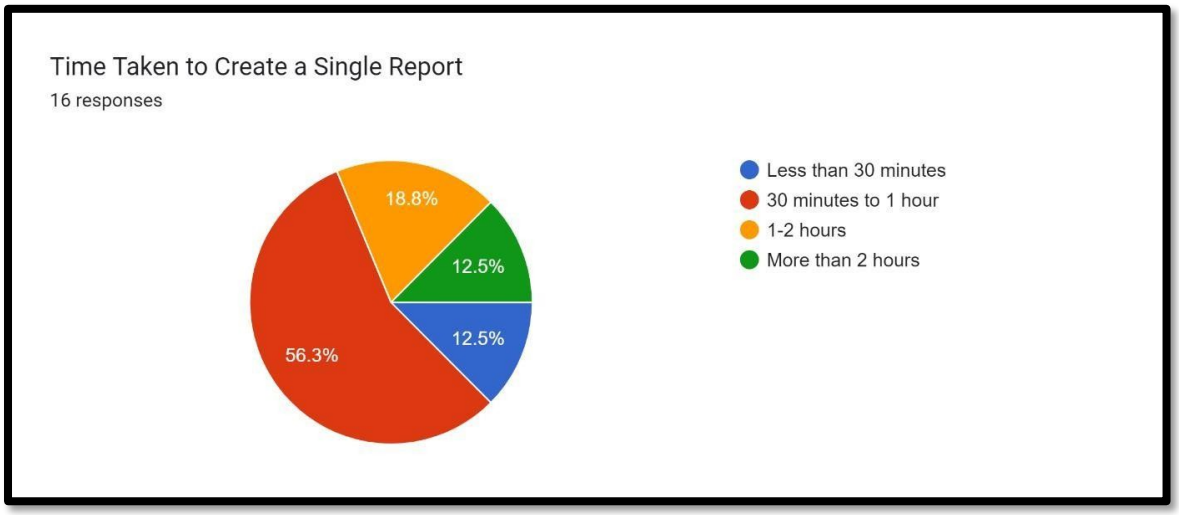


Figure : Primary research "Time taken to create a single report"

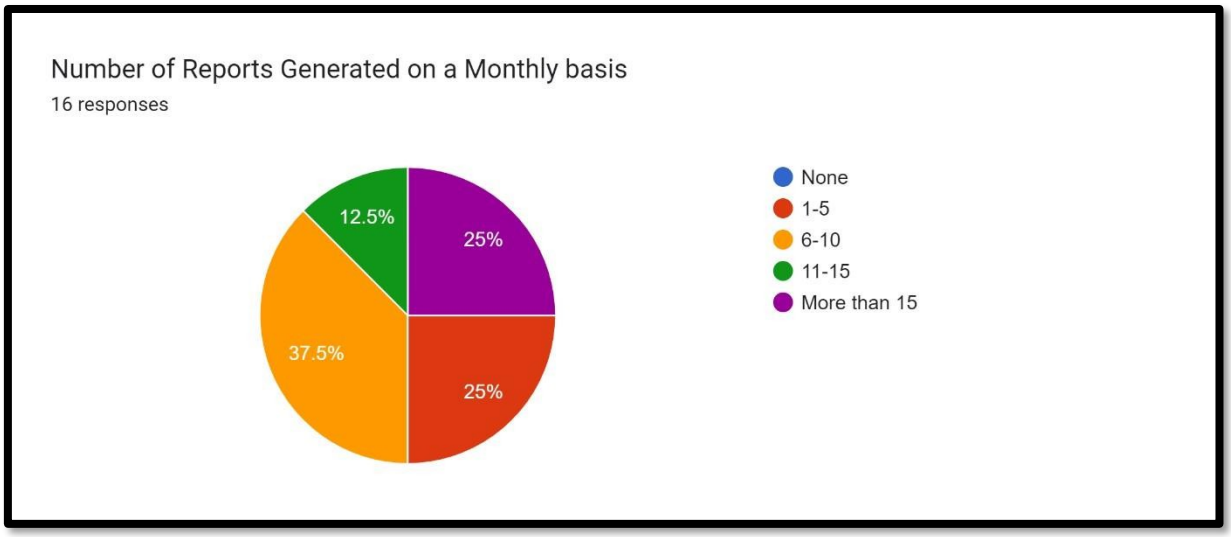


Figure : Primary research "No. of reports generated on a Monthly basis"

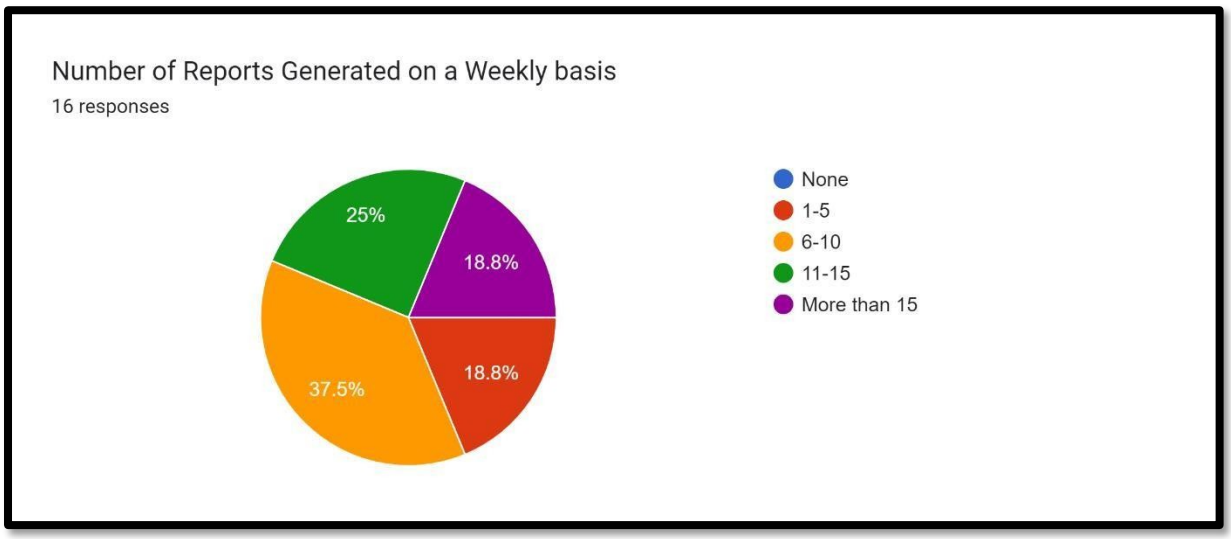


Figure : Primary research "No. of reports generated on a weekly basis"

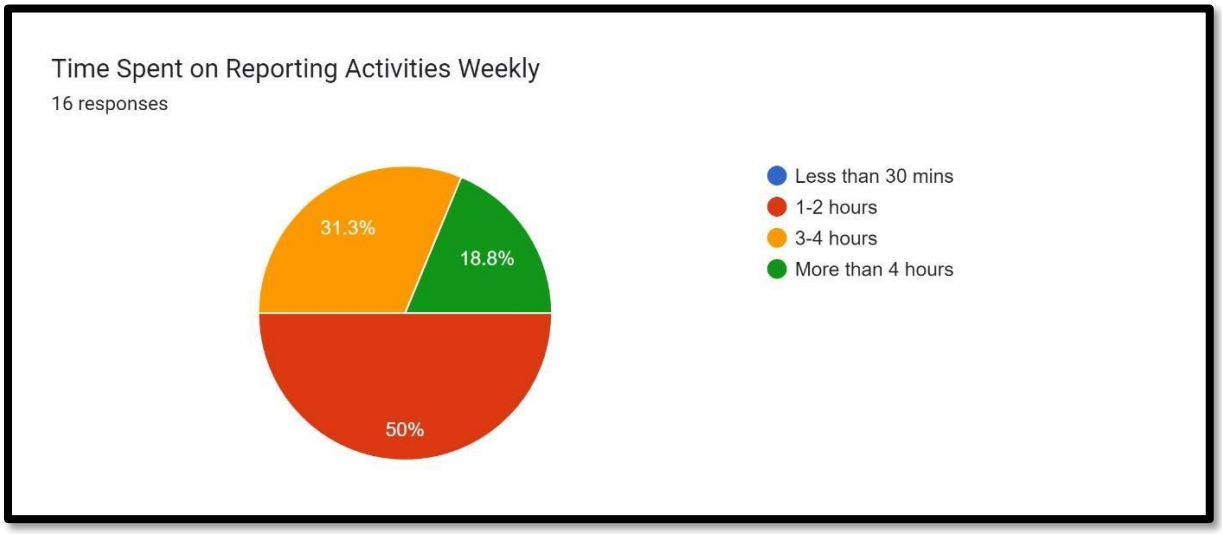


Figure : Primary Research "Time spent on reporting activities weekly"

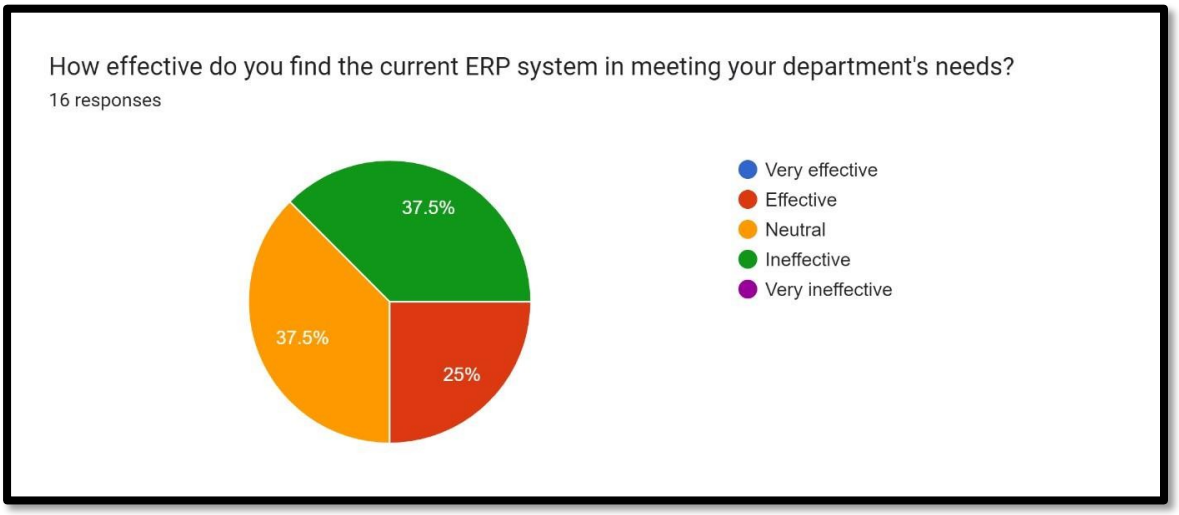


Figure : Primary research "Report generation time (from the current ERP system"

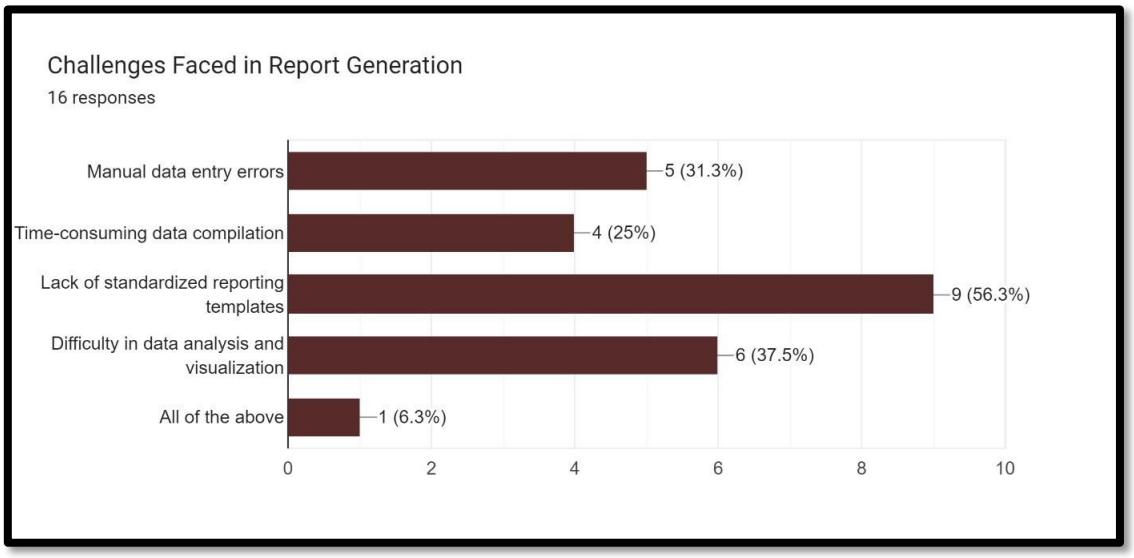


Figure : Primary research "Challenges faced in report generation"

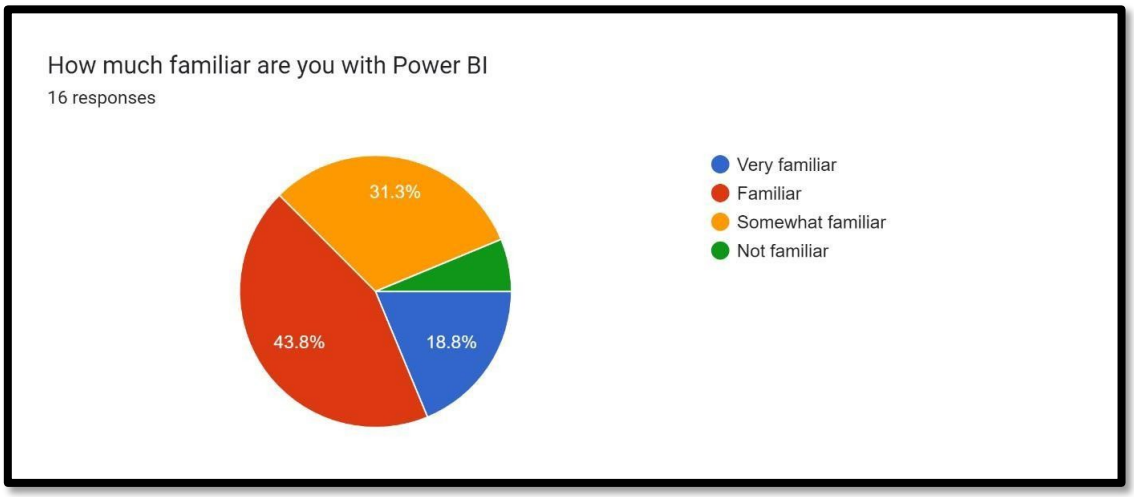


Figure : Primary research "familiarity with Power BI"

From the primary research, we concluded that-

1. Max department generated 6-10 reports daily and it takes around 30mins to 1 hour to create a single report and time spent on reporting activities weekly was 3-4 hrs.
2. The ERP system took around min 30 mins to generate one report and the ERP system was not effective enough for report generation and was not fulfilling the department's needs.
3. Challenges faced during report generation were mostly due to a lack of standardized reporting templates followed by data analysis and visualization difficulty. The max people were somewhat familiar with Power Bi.

Secondary Research

BI Solution Selection: A Comparative Analysis

Choosing the proper Business Intelligence (BI) answer is comparable to finding the perfect key – it unlocks a treasure trove of insights hidden within your records. For AMRITA CREATION- Amrita Creation, this venture focuses on deciding on the ideal BI technique to empower your information analytics adventure. This compartive evaluation dives deep into 3 key aspects to manual us toward the best preference:

Evaluating Market Options: A Feature-by-Feature Breakdown

Imagine a great panorama of BI solutions, every with its precise strengths. To navigate this terrain successfully, we are able to embark on a feature-through-characteristic breakdown. This will involve figuring out the functionalities critical for Amrita's success, which includes:

- **Data Source Connectivity:** Can the solution seamlessly connect with Amrita's present ERP device and other applicable records resources?
- **Data Visualization Capabilities**: Does the platform provide a sturdy set of gear for growing clear, compelling, and interactive dashboards and reviews?
- **Data Manipulation and Analysis Power:** Can customers carry out advanced statistics exploration, which includes filtering, drilling down, and creating calculated fields?
- **Scalability and Flexibility:** Will the answer be capable of accommodate Amrita's future increase and evolving records needs?

- **Security and User Access Control:** How effectively does the platform control information security and ensure authorized access for unique person groups within THOR?

Cost Optimization: Aligning Budget with Needs

Selecting the right BI answer isn't pretty much functionality; it's approximately placing a great stability among capabilities and affordability. We will delve into the value structures of potential solutions, thinking about factors like:

- **Licensing Costs:** What are the in advance and on-going costs for consumer licenses? Are there tiered pricing systems based totally on user desires?
- **Implementation Costs:** What assets could be required for implementation, along with consulting fees or internal IT employees involvement?
- **Training Costs:** Does the solution require user training, and if so, what are the related fees for schooling substances or teacher costs?
- **Hidden Fees:** Are there any extra costs for records storage, protection, or particular functionalities that may not be easily obvious in upfront pricing?

Integration Harmony: Ensuring Seamless ERP Connectivity

Imagine a symphony in which units play in ideal concord. This is the ideal kingdom for data integration with a BI solution. We will prioritize solutions that offer:

- **Pre-constructed Connectors:** Does the BI platform offer pre-constructed connectors in particular designed for Amrita's existing ERP gadget? This can notably lessen development time and effort.
- **Customizable Integration Options:** If pre-built connectors are not available, will the answer permit for custom development to ensure seamless information switch among sources?
- **Data Refresh Frequency:** How often can the BI platform replace statistics from Amrita's ERP system? Real-time or near-real-time records access could be ideal for foremost decision-making.

Available BI Tools in Market:

Here's a breakdown of a few famous BI (Business Intelligence) options available within the marketplace today:

1. **Few Cloud-Based BI Tools:**
    - **Tableau:** A well-mounted BI platform recognized for its person-friendly interface and robust records visualization talents. It offers a wider range of statistics connectors compared to Power BI. However, Tableau may be extra high-priced than Power BI.
    - **Looker:** Another famous cloud-based totally BI platform recognized for its sturdy integration with cloud records warehouses like Google BigQuery and Amazon Redshift. It offers advanced protection features and is frequently favored via corporations.
    - **Google Data Studio:** A free BI device from Google that is simple to apply and integrates seamlessly with different Google products like Google Analytics and Google Sheets. However, it offers fewer capabilities and customization alternatives as compared to Power BI or Tableau.
    - **Zoho Analytics:** A comprehensive BI platform that offers a good stability of features and affordability. It's a strong option for businesses looking for a fee-powerful answer.
    - **Qlik Sense:** Another person-friendly BI platform recognised for its associative information exploration competencies. It permits users to easily navigate and discover information relationships.
    - **Microsoft Power BI:** A frontrunner inside the BI landscape, Power BI gives sturdy features, person-friendly interfaces, and seamless integration with Microsoft products like Excel. It boasts strong information visualization talents and caters to a extensive range of person skillsets, from beginners to information analysts.

2. **Few Open-Source BI Tools:**
    - **Apache Superset:** A unfastened and open-supply BI platform that gives many capabilities much like industrial BI equipment. It requires a few technical understanding to installation and manipulate.
    - **Metabase:** Another unfastened and open-source BI platform that specializes in ease of use and self-provider analytics. It's an amazing choice for corporations looking for a user-friendly BI solution without the excessive cost.

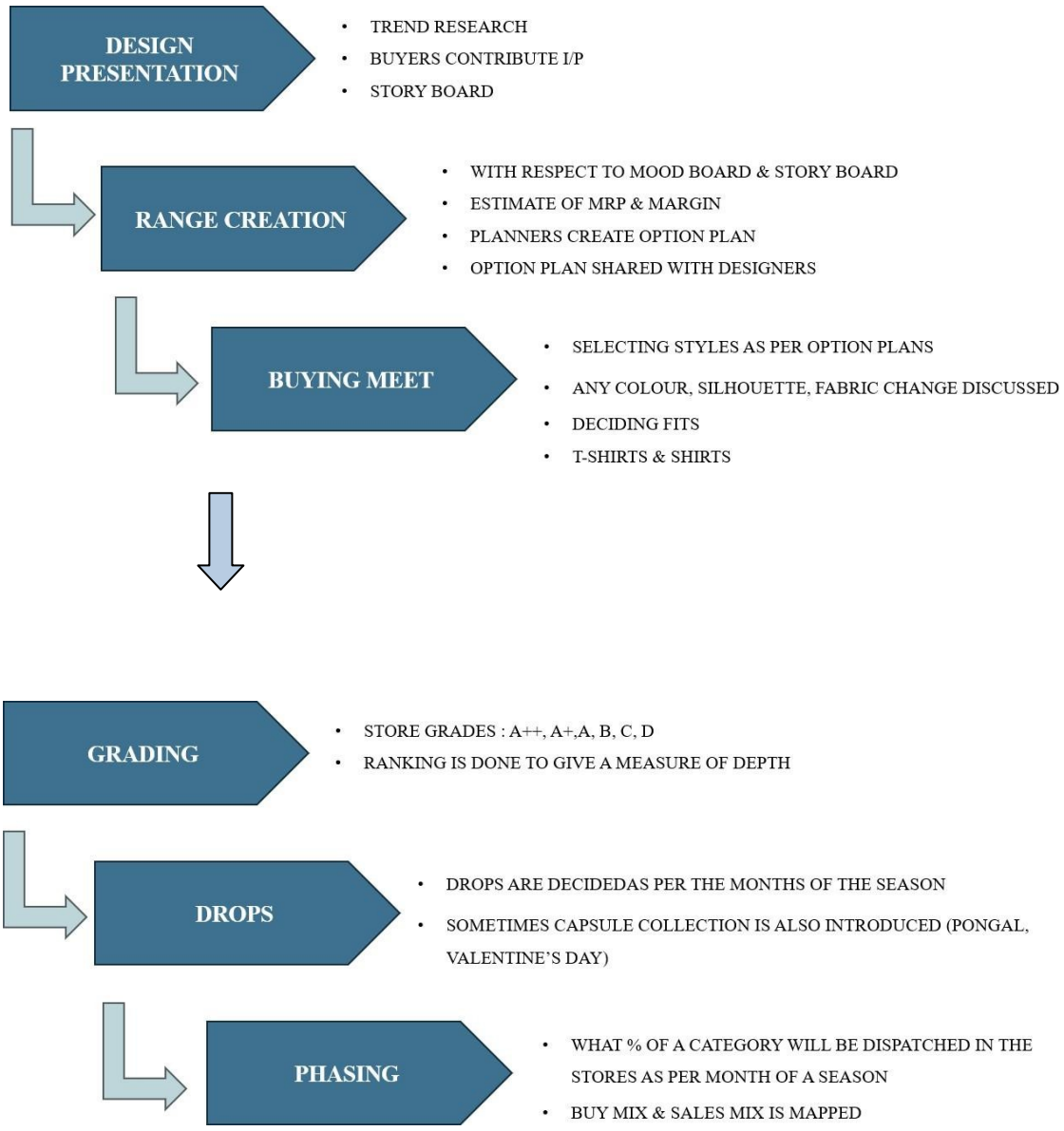
In conclusion, the landscape of Business Intelligence (BI) tools is rich and varied, offering solutions that cater to diverse business needs and budgets. Cloud-based BI tools like Tableau, Looker, Google Data Studio, Zoho Analytics, Qlik Sense, and Microsoft Power BI provide robust, scalable, and user-friendly platforms with advanced data visualization capabilities and seamless integrations with various data sources. These tools are ideal for businesses seeking powerful analytics without the need for extensive infrastructure investment. On the other hand, open-source BI tools like Apache Superset and Metabase offer cost-effective alternatives that still provide a comprehensive suite of features for data analysis and visualization. While they may require more technical expertise to set up and manage, they allow organizations to customize and scale their BI solutions according to their specific requirement.

Figure : Different BI tools available in the market

Chapter: 6 Data Analysis

Data Source Identification & Mapping

Identifying statistics's supply and meticulously mapping factors are cornerstones of reliable facts evaluation. Source verification guarantees records trustworthiness, while mapping guarantees steady interpretation across datasets. This fosters better records governance, clearer communique, and efficient records control - all crucial for deriving treasured insights and making sound information-pushed choices.



The above process represent flow chart of process of buying and planning department.

Buying & Planning

Connected Departments:

- Design
- Merchandising
- Production
- Warehouse
- MDM (Master Data Management)
- VM (Visual Merchandising)
- Operations

Daily Reports:

- SOH (Stokes on Hand)
- Warehouse inwards
- Allocations
- Fill Rate
- Sell-through
- Target achievement

Weekly Reports:

- Replenishment

- Inwards date updation
- RTV
- Dispatch SOH
- Sales SOH
- Buying SOH

Monthly Reports:

- Sales report STD (Season Till Date)
- Sales report MTD (Month Till Date)
- Sales report YTD (Year Till Date : 90 days)
- Store-wise net sales report

Inter department interview

In the context of the "Enterprise Data Analytics Modernization" project, conducting inter-departmental interviews served as a critical step in understanding the diverse perspectives, requirements, and pain points across various organizational functions. The need for standard operating procedures (SOPs) was underscored by several factors identified during these interviews. Firstly, each department operated with its unique set of processes and workflows, resulting in inconsistencies and inefficiencies in data handling and reporting practices. Secondly, there was a lack of alignment in data collection methods, resulting in disparate datasets and difficulties in data integration and analysis. Thirdly, without standardized procedures, there was a risk of errors, redundancies, and misinterpretation of data, leading to suboptimal decision-making and performance outcomes. (Refer Annexure 2)

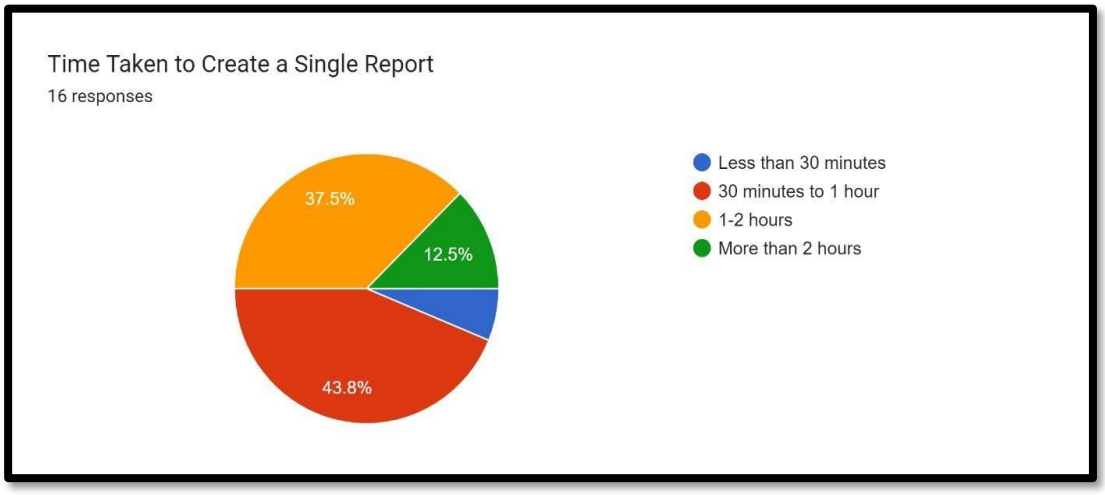


Figure : Interview question "No. of reports generated daily"

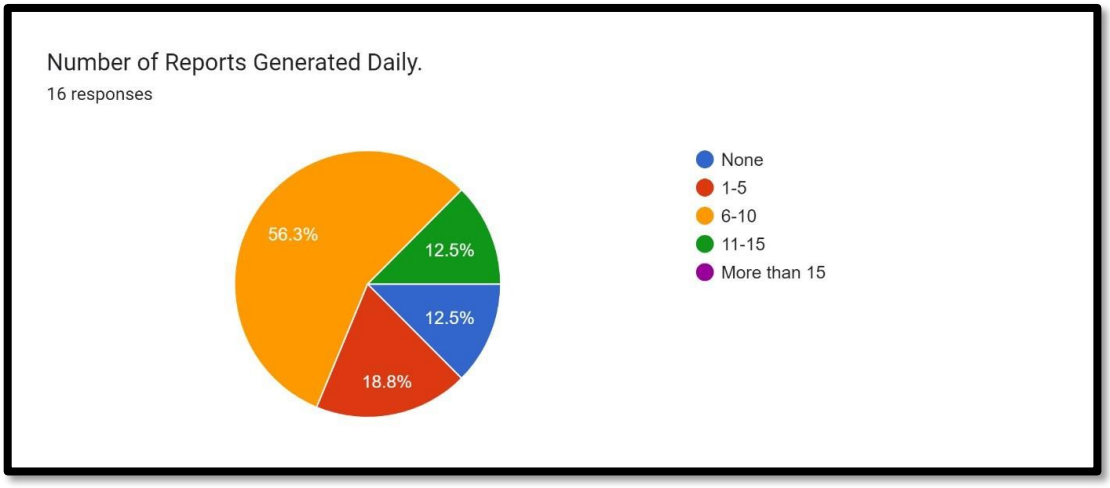


Figure : Interview question "Time taken to create a single report"

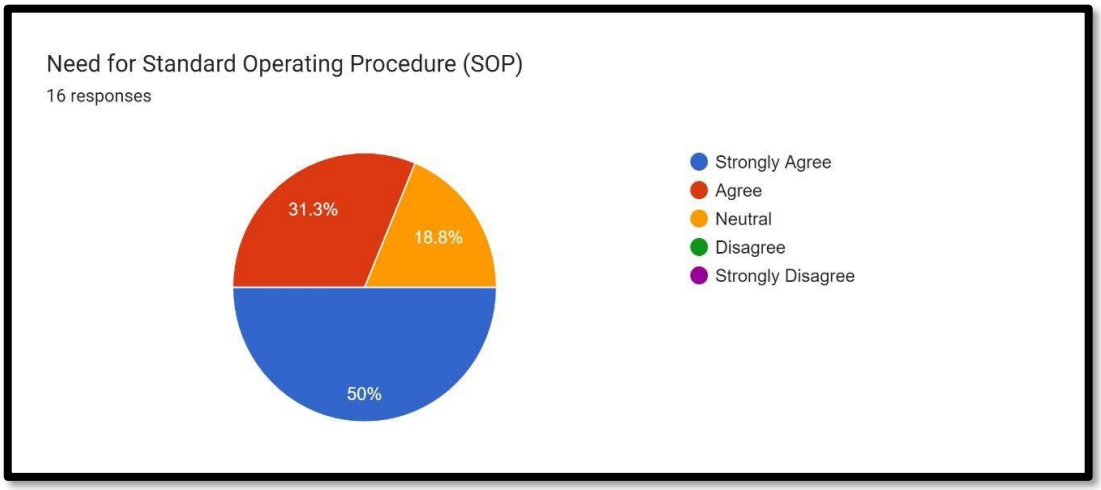


Figure : Interview Question Interview question "Need for an SOP"

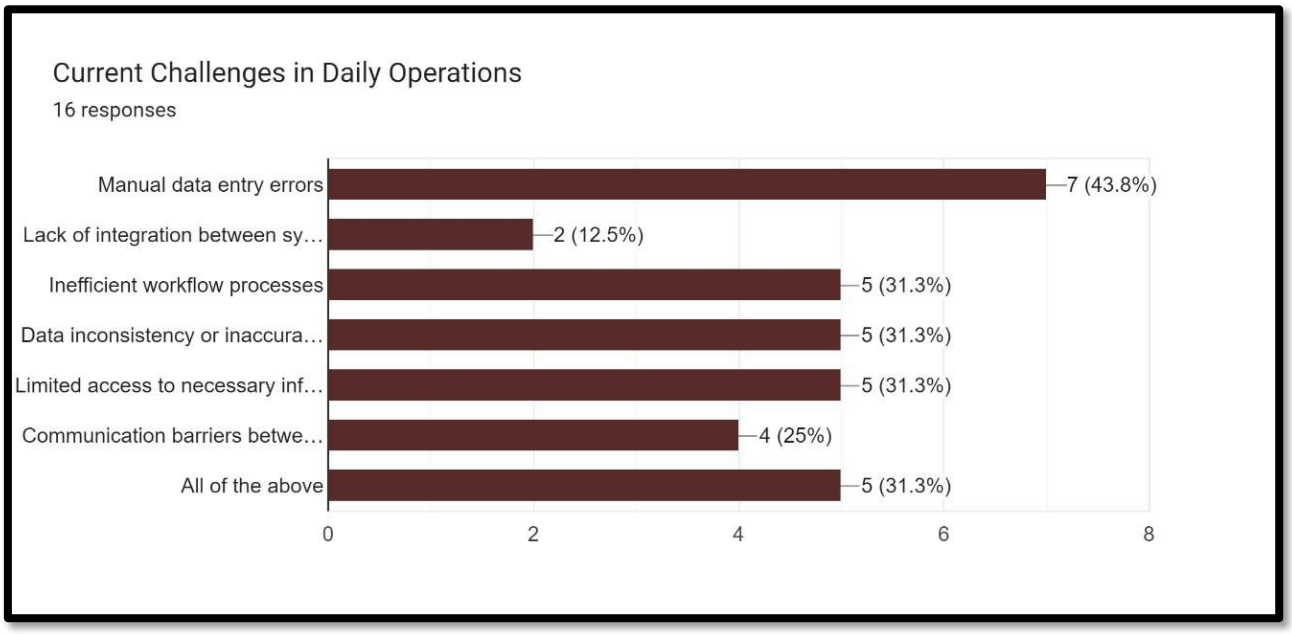


Figure : Interview question " Current challenges in daily operations"

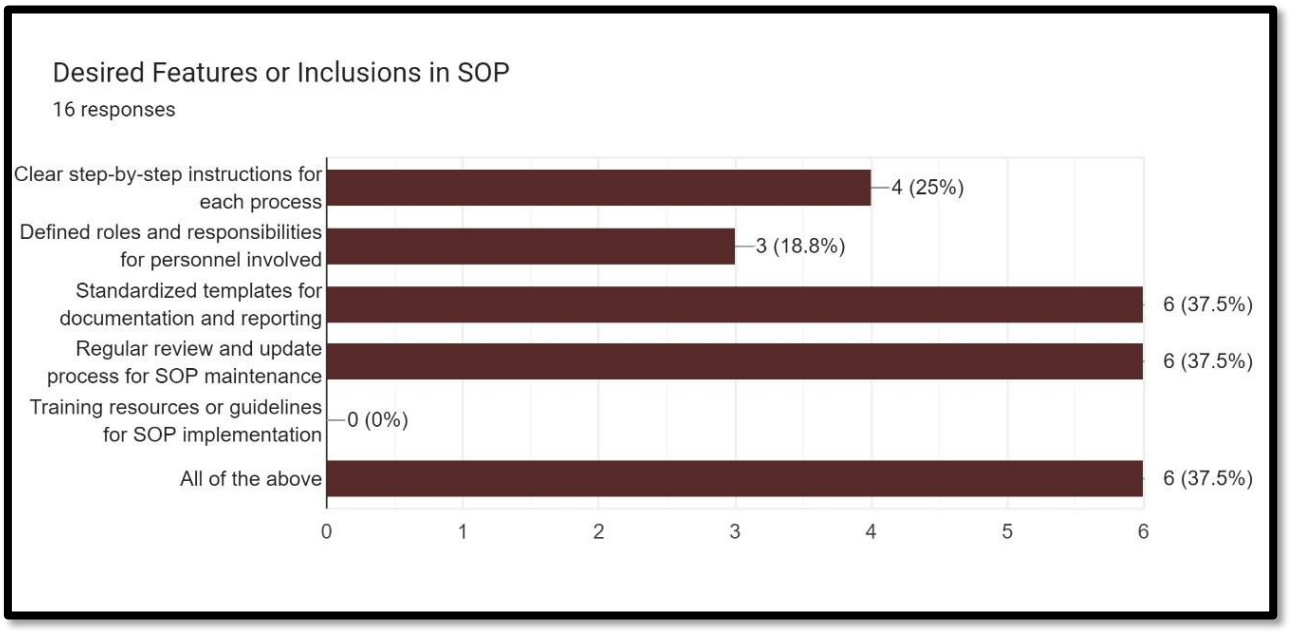


Figure : Interview question "Desired features in SOP

After the inter departmental interview it was concluded that-

1. Max department generated 6-10 reports on a daily basis and time taken to create a single report was 30mins to 1hr. The employee faced challenges in manual data entry errors, inefficient workflow process and data inaccuracy.
2. Employee strongly agreed upon having a proper standard operating procedure.

Figure : SOP for buying and planning

By establishing SOPs, we aimed to streamline processes, harmonize data practices, and foster a culture of accountability and transparency across departments. This approach would not only enhance operational efficiency and data quality but also lay the foundation for leveraging data analytics capabilities effectively to drive strategic initiatives and organizational growth.

Chapter 7:
Findings (Before – After Analysis)

Before : Manual Report Making

Before the integration of Power BI, the process of report-making at the House of Amrita involved several manual steps, each of which was time-consuming and prone to errors. Here's an overview of the manual reporting process:

1. Data Collection: Data was gathered manually from various sources within the ERP system. Employees had to access different modules and extract relevant information, which often involved copying and pasting data into spreadsheets.

2. Data Consolidation: After collecting data from multiple sources, employees had to consolidate this data into a single report. This process was labor-intensive and required meticulous attention to detail to ensure accuracy.

3. Data Cleaning: Data often needed to be cleaned and formatted before analysis. This step included correcting errors, handling missing values, and ensuring consistency across different data sets.

4. Report Generation: Once the data was prepared, employees used spreadsheet software to create reports. This involved creating charts, graphs, and tables to visualize the data. The process required significant manual input and expertise in using the software.

5. Report Distribution: Finally, reports were distributed to relevant stakeholders via email or printed copies. This step required coordination and added further delays to the process.

The manual process was highly inefficient, with significant time and resources spent on repetitive tasks. For example, it took approximately 30 minutes to 1 hour to create a single report, and departments spent around 3-4 hours weekly on reporting activities. Additionally, the ERP system itself was not optimized for report generation, often taking a minimum of 30 minutes to generate a report. The lack of standardized templates and difficulties in data analysis and visualization further compounded the challenges.

After : Power BI Integration

With the integration of Power BI into the ERP system, the process of report making transformed dramatically, leading to significant improvements in efficiency, accuracy, and accessibility. Here's how Power BI integration changed the reporting process:

1. Automated Data Collection: Power BI automatically connects to the ERP system and other data sources, pulling in data in real-time. This eliminates the need for manual data extraction, reducing the time and effort required for data collection.

2. Real-Time Data Consolidation: Power BI's robust data integration capabilities allow for seamless consolidation of data from multiple sources. The platform handles data merging and transformation, ensuring that the data is ready for analysis without manual intervention.

3. Data Cleaning and Preparation: Power BI includes advanced data cleaning and preparation tools that automate the process of correcting errors, handling missing values, and ensuring data consistency. This reduces the risk of errors and enhances the quality of the data used for reporting.

4. Interactive Report Generation: Power BI's intuitive interface and powerful visualization tools make it easy to create interactive and dynamic reports. Users can quickly generate charts, graphs, and dashboards that provide deep insights into the data. The drag-and-drop functionality and pre-built templates simplify the report creation process.

5. Easy Report Distribution: Reports created in Power BI can be easily shared with stakeholders through the platform's sharing and collaboration features. Reports are accessible on multiple devices, and users can interact with the data in real-time, making informed decisions faster.

With Power BI, the time required to create reports has significantly decreased. Reports that previously took 30 minutes to 1 hour to generate manually can now be created in a matter of minutes. The automated processes have reduced the weekly time spent on reporting activities from 3-4 hours to less than an hour. Moreover, the improved efficiency and accuracy of the ERP system have addressed the challenges faced during manual report generation, such as lack of standardized templates and difficulties in data visualization.

		BEFORE				AFTER			
		MANUAL WORK				WITH POWER BI			
S.No.	Report Name	Starting Time	End Time	Time Difference	Total time (min)	Starting Time	End Time	Time Difference	Total time (min)
1	SOH	11:15:00	11:33:00	00:18:00	18	11:12:00	11:14:00	00:02:00	2
2	SOH	10:06:00	10:26:00	00:20:00	20	09:59:00	10:02:00	00:03:00	3
3	SOH	10:05:00	10:18:00	00:13:00	13	10:12:00	10:14:00	00:02:00	2
4	SOH	09:57:00	10:16:00	00:19:00	19	10:05:00	10:08:00	00:03:00	3
5	SOH	10:18:00	10:32:00	00:14:00	14	10:10:00	10:12:00	00:02:00	2
6	SOH	10:19:00	10:35:00	00:16:00	16	10:09:00	10:12:00	00:03:00	3
7	SOH	10:07:00	10:22:00	00:15:00	15	09:37:00	09:40:00	00:03:00	3
8	SOH	10:38:00	10:56:00	00:18:00	18	10:39:00	10:41:00	00:02:00	2
9	SOH	10:00:00	10:16:00	00:16:00	16	10:03:00	10:05:00	00:02:00	2
10	SOH	09:49:00	10:02:00	00:13:00	13	09:40:00	09:43:00	00:03:00	3
				Total (min)	**162**			**Total (min)**	**25**
				Avg. (min)	**16.20**			**Avg. (min)**	**2.50**

Table 13 Before and after analysis of SOH report

Table 14 Before and after analysis of EBO dispatch report

		BEFORE				AFTER			
		MANUAL WORK				WITH POWER BI			
S.No.	Report Name	Starting Time	End Time	Time Difference	Total time (min)	Starting Time	End Time	Time Difference	Total time (min)
1	EBO Dispatch (Oct-Feb)	11:10:00	13:30:00	02:20:00	140	10:00:00	10:03:00	00:03:00	3
2	EBO Dispatch (Oct-Feb)	13:15:00	15:34:00	02:19:00	139	10:13:00	10:17:00	00:04:00	4
3	EBO Dispatch (Oct-Feb)	12:27:00	14:22:00	01:55:00	115	10:23:00	10:25:00	00:02:00	2
4	EBO Dispatch (Oct-Feb)	11:18:00	13:23:00	02:05:00	125	09:56:00	10:00:00	00:04:00	4
5	EBO Dispatch (Oct-Feb)	10:52:00	13:20:00	02:28:00	148	10:14:00	10:17:00	00:03:00	3
6	EBO Dispatch (Oct-Mar)	10:19:00	12:45:00	02:26:00	146	09:55:00	10:00:00	00:05:00	5
7	EBO Dispatch (Oct-Mar)	11:13:00	13:02:00	01:49:00	109	10:36:00	10:39:00	00:03:00	3
8	EBO Dispatch (Oct-Mar)	10:38:00	13:30:00	02:52:00	172	09:52:00	09:55:00	00:03:00	3
9	EBO Dispatch (Oct-Mar)	11:18:00	12:58:00	01:40:00	100	10:34:00	10:38:00	00:04:00	4
10	EBO Dispatch (Oct-Mar)	12:25:00	14:45:00	02:20:00	140	11:08:00	11:12:00	00:04:00	4
				Total (min)	**1334**			**Total (min)**	**35**
				Avg. (min)	**133.40**			**Avg. (min)**	**3.50**

Table 15 Before and after analysis of RTV report (Monthly)

		BEFORE				AFTER			
		MANUAL WORK				WITH POWER BI			
S.No.	Report Name	Starting Time	End Time	Time Difference	Total time (min)	Starting Time	End Time	Time Difference	Total time (min)
1	RTV (Oct-Feb)	13:33:00	15:30:00	01:57:00	117	12:23:00	12:25:00	00:02:00	2
2	RTV (Oct-Feb)	15:36:00	17:34:00	01:58:00	118	11:26:00	11:29:00	00:03:00	3
3	RTV (Oct-Feb)	14:23:00	16:20:00	01:57:00	117	10:46:00	10:48:00	00:02:00	2
4	RTV (Oct-Feb)	13:25:00	14:50:00	01:25:00	85	10:28:00	10:31:00	00:03:00	3
5	RTV (Oct-Feb)	13:22:00	15:10:00	01:48:00	108	12:07:00	12:10:00	00:03:00	3
6	RTV (Oct-Mar)	12:50:00	14:45:00	01:55:00	115	12:38:00	12:41:00	00:03:00	3
7	RTV (Oct-Mar)	13:05:00	14:28:00	01:23:00	83	12:09:00	12:11:00	00:02:00	2
8	RTV (Oct-Mar)	13:30:00	14:52:00	01:22:00	82	12:29:00	12:34:00	00:05:00	5
9	RTV (Oct-Mar)	13:00:00	14:36:00	01:36:00	96	13:07:00	13:10:00	00:03:00	3
10	RTV (Oct-Mar)	14:50:00	16:03:00	01:13:00	73	13:23:00	13:26:00	00:03:00	3
				Total (min)	**994**			**Total (min)**	**29**
				Avg. (min)	**99.40**			**Avg. (min)**	**2.90**

Table 16 Before and after analysis of RTV report (Daily)

		BEFORE MANUAL WORK				AFTER WITH POWER BI			
S.No.	**Report Name**	**Starting Time**	**End Time**	**Time Difference**	**Total time (min)**	**Starting Time**	**End Time**	**Time Difference**	**Total time (min)**
1	RTV Daily	11:16:00	11:18:00	00:02:00	2	10:56:00	10:57:00	00:01:00	1
2	RTV Daily	10:30:00	10:31:00	00:01:00	1	09:26:00	09:27:00	00:01:00	1
3	RTV Daily	09:55:00	09:58:00	00:03:00	3	09:45:00	09:47:00	00:02:00	2
4	RTV Daily	10:05:00	10:07:00	00:02:00	2	09:30:00	09:31:00	00:01:00	1
5	RTV Daily	10:22:00	10:25:00	00:03:00	3	10:39:00	10:41:00	00:02:00	2
6	RTV Daily	10:30:00	10:32:00	00:02:00	2	09:22:00	09:23:00	00:01:00	1
7	RTV Daily	10:20:00	10:21:00	00:01:00	1	10:29:00	10:30:00	00:01:00	1
8	RTV Daily	10:48:00	10:50:00	00:02:00	2	11:02:00	11:03:00	00:01:00	1
9	RTV Daily	10:07:00	10:09:00	00:02:00	2	09:39:00	09:40:00	00:01:00	1
10	RTV Daily	10:03:00	10:06:00	00:03:00	3	10:36:00	10:37:00	00:01:00	1
				Total (min)	**21**			**Total (min)**	**12**
				Avg. (min)	**2.10**			**Avg. (min)**	**1.20**

Table 17 Before and after analysis of EBO dispatch (daily)

		BEFORE				AFTER			
		MANUAL WORK				WITH POWER BI			
S.No.	Report Name	Starting Time	End Time	Time Difference	Total time (min)	Starting Time	End Time	Time Difference	Total time (min)
1	EBO Dispatch Daily	11:10:00	11:15:00	00:05:00	5	10:11:00	10:13:00	00:02:00	2
2	EBO Dispatch Daily	10:15:00	10:27:00	00:12:00	12	10:12:00	10:14:00	00:02:00	2
3	EBO Dispatch Daily	09:40:00	09:53:00	00:13:00	13	10:04:00	10:05:00	00:01:00	1
4	EBO Dispatch Daily	09:57:00	10:04:00	00:07:00	7	10:07:00	10:09:00	00:02:00	2
5	EBO Dispatch Daily	10:12:00	10:20:00	00:08:00	8	10:12:00	10:14:00	00:02:00	2
6	EBO Dispatch Daily	10:19:00	10:28:00	00:09:00	9	10:08:00	10:10:00	00:02:00	2
7	EBO Dispatch Daily	10:07:00	10:18:00	00:11:00	11	10:20:00	10:23:00	00:03:00	3
8	EBO Dispatch Daily	10:38:00	10:46:00	00:08:00	8	10:23:00	10:26:00	00:03:00	3
9	EBO Dispatch Daily	10:00:00	10:06:00	00:06:00	6	10:11:00	10:12:00	00:01:00	1
10	EBO Dispatch Daily	09:49:00	10:02:00	00:13:00	13	10:09:00	10:11:00	00:02:00	2
				Total (min)	**92**			**Total (min)**	**20**
				Avg. (min)	**9.20**			**Avg. (min)**	**2.00**

Table 18 Before and after analysis of Product sheet updation

		BEFORE				AFTER			
		MANUAL WORK				WITH POWER BI			
S.No.	Report Name	Starting Time	End Time	Time Difference	Total time (min)	Starting Time	End Time	Time Difference	Total time (min)
1	PRODUCTION SHEET UPDATION	10:15:00	10:35:00	00:20:00	20	09:25:00	09:28:00	00:03:00	3
2	PRODUCTION SHEET UPDATION	10:02:00	10:26:00	00:24:00	24	10:25:00	10:27:00	00:02:00	2
3	PRODUCTION SHEET UPDATION	10:35:00	10:58:00	00:23:00	23	09:38:00	09:41:00	00:03:00	3
4	PRODUCTION SHEET UPDATION	09:58:00	10:19:00	00:21:00	21	09:32:00	09:35:00	00:03:00	3
5	PRODUCTION SHEET UPDATION	10:07:00	10:23:00	00:16:00	16	09:15:00	09:17:00	00:02:00	2
6	PRODUCTION SHEET UPDATION	10:19:00	10:39:00	00:20:00	20	09:48:00	09:51:00	00:03:00	3
7	PRODUCTION SHEET UPDATION	09:27:00	09:45:00	00:18:00	18	09:48:00	09:51:00	00:03:00	3
8	PRODUCTION SHEET UPDATION	10:38:00	10:59:00	00:21:00	21	10:26:00	10:28:00	00:02:00	2
9	PRODUCTION SHEET UPDATION	10:00:00	10:22:00	00:22:00	22	10:46:00	10:49:00	00:03:00	3
10	PRODUCTION SHEET UPDATION	09:48:00	10:12:00	00:24:00	24	10:10:00	10:12:00	00:02:00	2
				Total (min)	**209**			**Total (min)**	**26**
				Avg. (min)	**20.90**			**Avg. (min)**	**2.60**

Chapter 8 : Conclusion and Future Scope

Conclusion

In the journey of "Enterprise Data Analytics Modernization" at Amrita, we embarked on a transformative path to revolutionize data accuracy, reporting efficiency, and decision-making processes. By integrating Power BI with our company's ERP system, we not only achieved significant advancements in data accuracy and report generation but also embraced Lean Management principles and a culture of continuous improvement.

At the core of our project lay the principles of Lean Management, emphasizing the elimination of waste, optimization of processes, and maximization of value. Through meticulous planning and execution, we identified inefficiencies in our data analytics processes and implemented Lean methodologies to streamline operations. By eliminating redundant tasks, reducing manual interventions, and optimizing resource utilization, we enhanced efficiency and productivity across departments. Our project embraced a culture of continuous improvement, where every step was viewed as an opportunity for enhancement and refinement.

We adopted a systematic approach to data clearance, one of the foundational steps of our project, which catalyzed ongoing improvements. Through regular feedback loops, performance monitoring, and iterative enhancements, we ensured that our data analytics processes evolved dynamically to meet evolving business needs. The implementation of the data clearance method served as the cornerstone of our project, symbolizing our commitment to accuracy, reliability, and excellence. We laid a solid foundation for accurate reporting and informed decision-making by cleansing and standardizing data within our ERP system. This proactive approach not only enhanced data quality but also instilled confidence in our stakeholders, empowering them with reliable insights for strategic planning and execution. In conclusion, our "Enterprise Data Analytics Modernization" project at The House of Amrita embodies the principles of Lean Management and continuous improvement, driving transformative change and innovation within our organization.

Through the integration of Power BI with our ERP system and the implementation of Lean methodologies, we have not only achieved remarkable advancements in data accuracy and reporting efficiency but also fostered a culture of excellence and innovation. As we continue on this journey of evolution and growth, we remain committed to embracing Lean principles, driving continuous improvement, and leveraging technology to unlock new possibilities and drive sustainable success in the dynamic world of enterprise data analytics.

Future Scope

As we envision the future of our "Enterprise Data Analytics Modernization" project at Amrita, we anticipate a multitude of opportunities to further enhance our capabilities, expand our reach, and drive value across the organization. With a focus on product management system integration and the integration of more departments with Power BI, our project aims to unlock new dimensions of insight, efficiency, and collaboration.

Product Management System Integration:

One of the key areas of future focus lies in the integration of our product management system with Power BI. By seamlessly connecting product data, sales figures, customer feedback, and market trends, we envision a comprehensive view of our product lifecycle and performance metrics. This integration will empower product managers with actionable insights for strategic decision-making, product innovation, and market positioning. From identifying emerging trends to optimizing product portfolios, the synergy between product management and data analytics will drive agility, innovation, and competitive advantage.

Integration of More Departments with Power BI:

Expanding the reach of Power BI integration to more departments within Amrita is another pivotal aspect of our future roadmap. Beyond finance and operations, departments such as marketing, sales, human resources, and supply chain management hold immense potential for leveraging data-driven insights to drive performance and efficiency. By democratizing data access and fostering a culture of analytics-driven decision-making across the organization, we aim to unlock siloed data, break down barriers, and enable cross-functional collaboration. From marketing campaign optimization to talent acquisition strategies, each department will harness the power of Power BI to drive innovation, efficiency, and growth.

Harnessing Advanced Analytics and AI:

Looking ahead, we foresee the incorporation of advanced analytics techniques and artificial intelligence (AI) capabilities into our data analytics ecosystem. By leveraging predictive analytics, machine learning algorithms, and natural language processing (NLP), we aim to anticipate market trends, identify emerging opportunities, and mitigate risks proactively. Whether it's predicting customer preferences, optimizing inventory levels, or automating repetitive tasks, the integration of advanced analytics and AI will propel us towards a future of data-driven agility and foresight.

Enhancing User Experience and Accessibility:

In the future, we prioritize enhancing the user experience and accessibility of our data analytics platform. By investing in user-friendly interfaces, interactive dashboards, and personalized insights, we aim to empower every user with the tools and knowledge to make informed decisions. Moreover, initiatives such as mobile accessibility, self-service analytics, and user training programs will democratize data access and foster a culture of data literacy across the organization, ensuring that insights are actionable, relevant, and impactful at every level.

Limitations of the Project

- **Advanced Analytics Training:** Employees might also require schooling to fully utilize the advanced records manipulation and analysis talents within Power BI.
- **System Integration Complexity:** Integration with current systems may additionally gift unexpected challenges that require additional improvement or configuration efforts.

Bibliography (References)

1. Podder, M. (2023). "Driving Business Agility Through Data Analytics Modernization." Amrita CreationQuarterly Journal, 10(2), 45-52.
2. Smith, J., & Johnson, M. (2023). "Enhancing Operational Efficiency: A Case Study of Power BI Integration at Amrita." Journal of Business Analytics, 5(3), 78-89.
3. Fashion Forum. (2023, October 15). "Unlocking Insights: Power BI Integration Journey." Panel discussion at Fashion Forum, Mumbai, India.
4. Amrita CreationAnnual Report 2023. Amrita CreationLtd.
5. Microsoft Power BI. (n.d.). Retrieved from https://powerbi.microsoft.com/
6. ERP System Integration Guide. (n.d.). Amrita IT Solutions Pvt. Ltd.
7. Lean Management Principles in Practice. (n.d.). Harvard Business Review.
8. Continuous Improvement Strategies. (n.d.). McKinsey & Company.
9. Data Analytics Trends Report 2023. (n.d.). Gartner.
10. Amrita CreationCustomer Feedback Survey. (2023). Amrita CreationLtd.

Case Study

1. http://www.scribd.com/doc/39650132/ERP-IMPLEMENTATION-AT CADBURY%E2%80%99$
2. http://en.wikipedia.org/wiki/Enterprise resource planning
3. http://www.webopedia.com/TERM/E/ERP.html

Annexure

1. Primary research questionnaires

1. Department Name: (Text)

2. Description of Department's Work: (Text)

3. Number of Reports Generated Daily:

    A) None

    B) 1-5

    C) 6-10

    D) 11-15

    E) More than 15

4. Time Taken to Create a Single Report:

    A) Less than 30 minutes

    B) 30 minutes to 1 hour

    C) 1-2 hours

    D) 2-4 hours

    E) More than 4 hours

5. Frequency of Reports Generated:

    A) Daily

    B) Weekly

    C) Monthly

    D) Quarterly

    E) Yearly

6. Number of Reports Generated Monthly:

    A) None

B) 1-5

C) 6-10

D) 11-15

E) More than 15

7. Number of Reports Generated Weekly:

A) None

B) 1-5

C) 6-10

D) 11-15

E) More than 15

8. Number of Reports Generated Yearly:

A) None

B) 1-5

C) 6-10

D) 11-15

E) More than 15

9. Time Spent on Reporting Activities Weekly:

A) Less than 1 hour

B) 1-5 hours

C) 6-10 hours

D) 11-15 hours

E) More than 15 hours

10. Time Spent on Reporting Activities Monthly:

A) Less than 1 hour

B) 1-5 hours

C) 6-10 hours

D) 11-15 hours

E) More than 15 hours

11. Challenges Faced in Report Generation (Select all that apply):

A) Manual data entry errors

B) Time-consuming data compilation

C) Lack of standardized reporting templates

D) Difficulty in data analysis and visualization

E) Other (Please specify)

12. Suggestions for Improving Reporting Processes: (Text)

2. Inter department Interview questionnaires

1. Department Name: (text)

2. Overview of Department's Responsibilities: (Text)

3. Numbers of report generated daily:

A) None

B) 1-5

C) 6-10

D) 11-15

E) More than 15

4. Time Taken to Create a Single Report:

A) Less than 30 minutes

B) 30 minutes to 1 hour

C) 1-2 hours

D) 2-4 hours

E) More than 4 hours

5. Current Challenges in Daily Operations:

A. Manual data entry errors
B. Lack of integration between systems
C. Inefficient workflow processes
D. Inefficient workflow processes
E. Data inconsistency or inaccuracies
F. Limited access to necessary information
G. Communication barriers between departments
H. All of the above

6. Need for Standard Operating Procedure (SOP):

A) Strongly Agree

B) Agree

C) Neutral

D) Disagree

E) Strongly Disagree

6. Areas Where SOP is Needed (Select all that apply):

A) Data entry and validation processes

B) Report generation and distribution

C) Data analysis and visualization

D) Data security and access controls

E) Other (Please specify)

7. Desired Features or Inclusions in SOP:

A. Clear step-by-step instructions for each process
B. Defined roles and responsibilities for personnel involved

C. Standardized templates for documentation and reporting
D. Regular review and update process for SOP maintenance
E. Training resources or guidelines for SOP implementation
F. All of the above