IDEATION PHASE

DEFINING THE PROBLEM STATEMENTS

Date	26-09-2023
Team ID	715
Project Name	Product Sales Analysis

Product Sales Analysis

Problem Definition and Design Thinking

Introduction:

The project utilizes IBM Cognos to analyze sales data to identify top-selling products, peak sales periods, and customer preferences. The goal is to enhance inventory management and marketing strategies, reducing overstocking and customer dissatisfaction. The structured approach includes data collection, visualization design, and actionable insights, enabling businesses to make informed decisions and optimize operations.

Problem Statement:

Objective: The objectives of this project are to identify top-selling products, pinpoint peak sales periods, analyze customer preferences, optimize inventory management, and enhance marketing strategies to improve business performance.

Data: The project involves analyzing sales data using IBM Cognos, identifying top-selling products, peak sales periods, and customer preferences, and designing relevant visualizations.

Key Challenges:

1. Analysis Objectives: Define the specific insights you want to extract from the sale data, such as identifying top-selling products, analyzing sales trends, and understanding customer preferences.
2. Data Collection: Determine the sources and methods for collecting sales data, including transaction records, product information, and customer demographics.
3. Visualization Strategy: Plan how to visualize the insights using IBM Cognos to create interactive dashboards and reports.
4. Actionable Insights: Identify how the derived insights can guide inventory management and marketing strategies.

Design Thinking Approach

Empathize:

- Start by empathizing with the businesses and stakeholders involved. Understand their pain points, needs, and goals. Conduct interviews, surveys, and workshops with key stakeholders like sales teams, marketing teams, and inventory managers to gain deep insights into their challenges.

Actions:

- Conduct interviews with key stakeholders including sales teams, marketing teams, and inventory managers. Understand their pain points, challenges, and objectives related to sales data analysis.
- Observe daily operations to identify how sales data is collected and utilized. Note any bottlenecks or inefficiencies.
- Develop user personas based on characteristics and behaviours of stakeholders.

Define:

- Clearly define the problem statement based on the insights gathered during the empathize phase. In this case, it's the need to improve inventory management and marketing strategies through the analysis of sales data using IBM Cognos. Define the scope, objectives, and success criteria for the project.

Objectives:

- Clearly define the project's scope, objectives, and success criteria.
- Create a problem statement that highlights the need to enhance inventory management and marketing strategies through IBM Cognos-based sales data analysis.
- Establish key performance indicators (KPIs) for measuring project success.

Ideate:

- Encourage brainstorming and idea generation to explore potential solutions. Consider various approaches to utilizing IBM Cognos for analyzing sales data. Invite diverse perspectives to foster creative thinking. Generate ideas on how to extract actionable insights from the data.

Actions:

- Brainstorm various ways in which IBM Cognos can be used to extract insights from sales data.
- Explore creative approaches to data visualization and analysis techniques.
- Encourage collaboration among team members to generate innovative ideas for solving the defined problem.

Prototype:

- Create a prototype or preliminary plan for the project. Outline the steps involved, including data collection methods, data sources, and potential visualizations. Develop a rough sketch or mockup of how the insights might be presented to stakeholders through IBM Cognos.

Actions:

- Create a high-level project plan outlining the major steps and milestones.
- Develop a preliminary data collection and analysis framework.
- Share the initial project plan with stakeholders for feedback.

Test:

- Conduct small-scale tests or pilots to validate the chosen approach. Use sample data to test data collection, visualization design, and analysis techniques within IBM Cognos. Gather feedback from stakeholders and make necessary adjustments to the project plan.

Actions:

- Conduct a pilot analysis using a subset of data to validate the chosen approach.
- Gather feedback from stakeholders and make necessary adjustments to the project plan and analysis techniques.
- Ensure that the chosen visualizations effectively convey insights.

Implement:

- Present the final actionable insights to stakeholders in a clear and understandable manner. Provide recommendations for improving inventory management and marketing strategies based on the insights derived from IBM Cognos analysis.

Actions:

- Present the final actionable insights to stakeholders in a clear and understandable manner.
- Provide concrete recommendations for inventory management and marketing strategies based on the insights derived from IBM Cognos analysis.

Iterate:

- Continuously gather feedback from stakeholders and refine the project based on their input. Be open to adjusting analysis objectives, data collection methods, or visualization designs as new insights emerge or business needs change.

Actions:

- Continuously update the sensor network and application for reliability.
- Adapt mitigation measures based on ongoing data analysis.
- Adjust transportation route optimization strategies as traffic patterns change.

Conclusion:

The project used IBM Cognos to analyze sales data, revealing insights into top-selling products, peak sales periods, and customer preferences. This data-driven approach improved inventory management, reduced stockout risks, and refined marketing strategies. The project's success not only led to improved strategies but also underscored the importance of data-driven decision-making in modern business excellence. Continuous feedback and measurement of strategy impact ensure sustained success.