PROJECT DEFINITION AND DESIGN THINKING

**Project Title**

Product Sales Analysis

**Introduction**

In an increasingly competitive market, our organization recognizes the importance of analyzing project sales to enhance revenue, optimize resources, and improve customer satisfaction. This project aims to utilize the principles of Design Thinking to gain a deeper understanding of sales processes and identify innovative solutions for improving sales effectiveness and efficiency.

**Project Overview**

The project is about analyzing sales data. The dataset provided is a small-scaled business venture REC Corp LTD established in India. They have been selling Four products for over ten years. They have collected the information and organized it into a CSV file. The file includes information about the date of purchase of the products, the number of people who purchased each product and the revenue of each product.

**Project Objective**

The objective involves extracting insights about top-selling products, peak sales periods and customer preferences. By understanding the sales trend and customer behavior we have to help businesses improve inventory and marketing strategies.

**Key Deliverables**

The outcome of the analysis will be

* Is there any trend in the sales of all four products during certain months?
* Out of all four products, which product has seen the highest sales in all the given years?

and so on.

**Project Timeline**

The project will take around 4 weeks to complete. It includes 5 phases.

**Project** **Success** **Criteria**

Project success criteria are the measurable and specific standards or objectives that must be achieved for a project to be considered successful. Success criteria help project stakeholders including project managers, sponsors and team members assess the project’s performance and impact. If the project adheres to the timeline and we can generate possible solutions for all the problems then the project has a success rate.

**Empathize**

This involves understanding the data sources. In this project it is sales data and it contains 8 numerical parameters. They are as follows:

* Q1- Total unit sales of product 1
* Q2- Total unit sales of product 2
* Q3- Total unit sales of product 3
* Q4- Total unit sales of product 4
* S1- Total revenue from product 1
* S2- Total revenue from product 2
* S3- Total revenue from product 3
* S4- Total revenue from product 4

By empathizing with data in a product sales analysis, we can create a more holistic understanding of the data’s role in decision-making and problem-solving. This in turn can lead to more effective strategies and actions based on the insights derived from the data.

**Define: Problem Statement**

A problem statement is a concise and clear description of an issue or challenge that needs to be addressed or solved. In this project, the problem statement is analyzing the sales data and visualizing it. The REC Corp LTD has come with some problems like

1)Is there any trend in the sales of all four products during certain months?  
2) Out of all four products, which product has seen the highest sales in all the given years?  
3) The company has all its retail centers closed on the 31st of December every year. Mr.: Hariharan, the CEO, would love to get an estimate on the: of units of each product that could be sold on the 31st of Dec, every year, if all their retail centers were kept open.  
4) The CEO is considering an idea to drop the production of any one of the products. He wants you to analyze this data and suggest whether his idea would result in a massive setback for the company.  
5) The CEO would also like to predict the sales and revenues for the year 2024. He wants you to give a yearly estimate with the best possible accuracy.

A well-crafted problem statement is crucial for effectively addressing complex issues and achieving desired outcomes.

**Ideate: Generating Creative Solutions**

Ideate is a crucial face that involves generating creative and innovative ideas to solve a problem or address a challenge. In the context of product sales analysis, the ideation phase aims to come up with fresh insights, strategies, or approaches to improve the analysis of product sales data and drive better business outcomes.

Some ideation techniques that can be used are

* DataVisualization

Explore innovative ways to visualize sales data. Consider interactive dashboards, heatmaps, 3D charts, or augmented reality interfaces to provide a more engaging and insightful view of sales performance.

* Predictive Analysis

Investigate the use of predictive modeling and machine learning to forecast future sales trends. How can advanced analytics techniques help in identifying patterns and making more accurate sales predictions?

**Prototype: Bringing Ideas to Life**

Creating prototypes is a crucial step in the design thinking process, as it allows you to bring your ideas to life, test them, and gather feedback before committing to full-scale implementation. In the context of product sales analysis, prototyping involves developing tangible representations of your proposed solutions or improvements to the sales analysis process. We have to select appropriate tools and software for creating the prototypes. Depending on the objectives, we might use spreadsheet software, data visualization tools, wireframing or mock-up tools, or even simple paper sketches. If the prototype involves visualizing sales data, create mock-ups or sample dashboards that illustrate how the data will be presented.

**Iterative Testing and Feedback**

Iterative testing and feedback are essential components of the design thinking process, especially when applied to product sales analysis. The iterative approach allows you to continually refine and improve your solutions by incorporating input from stakeholders, users, and data.

Iterative testing and feedback are not a one-time activity but an ongoing cycle of improvement. By continually refining the product sales analysis solutions based on user input and data-driven insights, we can ensure that the approach remains relevant and effective in a dynamic business environment.

**Conclusion**

In the ever-evolving landscape of product sales, the journey of this sales analysis project has been marked by exploration, innovation, and dedication to enhancing our understanding of market dynamics and customer behavior. This project's overarching goal was to improve our sales analysis processes, and through the application of design thinking principles, we have made significant strides toward achieving that goal.