

IMT 598 B : Project Paper : VSN International (Team 4)

Nishit Bhasin, Vanshika Srivastava, Sharique Khan

1. Digital Transformation Strategy

a. Key Reasons for Digital Transformation

The CEO has initiated the digital transformation for several critical reasons:

- **Data Utilization:** The challenge in extracting actionable insights from the large data files provided by the e-commerce vendor is a key driver. The CEO aims to make data more accessible and actionable for quicker and more informed decision-making.
- **Market Competitiveness:** To stay competitive, the CEO recognizes the need to expand into the B2B space, alongside the existing B2C model, requiring new tools and processes for the sales team.
- **Operational Efficiency:** There's an expressed interest in automating processes such as order approvals for significant purchases and notifications to streamline operations and enhance responsiveness.
- **Growth and Scalability:** By leveraging digital tools, the CEO envisions a scalable model that supports both B2C and B2B channels efficiently, allowing for growth without proportionally increasing operational complexities or costs.

b. Phase of Digital Transformation

The organization is in the early stages of digital transformation, focusing on Proof of Concept (PoC) development. This phase involves:

- Building and testing a low code/no code app to integrate and visualize data from the e-commerce operations.
- Automating key business processes (e.g., order notifications and approvals).

- Exploring the integration of B2C and B2B channels within a unified digital platform.

Approach to the PoC Phase

Objective Setting

- Feasibility of Integrating B2B and B2C Sales: We aim to demonstrate that Microsoft Power Platform can handle the complexities of managing two distinct sales channels within a single framework, thus enabling a unified view of our operations.
- Improving Data Analysis Efficiency: Given the CEO's need for quicker, actionable insights from data files, a key objective is to create a solution that significantly reduces the time from data reception to insight generation.

Requirement Analysis:

- B2B Sales Integration: Identifying the specific requirements to support a newly introduced B2B sales model, such as order approval processes and tracking of bulk purchases.
- Data Handling Efficiency: Understanding the pain points in handling the large products.xlsx file, which contains crucial data but is cumbersome to analyze using current methods.

Prototype Development:

- App Creation: Utilizing the products.xlsx file to build an app that not only displays product, sales, and customer data effectively but also supports the process of taking direct orders from businesses through a form view optimized for both Apple and Android phones used by our field sales team.

Functionality Testing:

- Automated Notifications and Approvals: Testing the workflow where an order of 100 or more units triggers an email notification to the CEO and requires approval from the head of sales, ensuring the process is seamless and functional.

Stakeholder Feedback:

- Operational Insights: Gathering feedback from the sales team and the operations lead (us) on the app's usability, efficiency in order processing, and effectiveness in providing actionable insights from the data.

Outcome Evaluation:

- Performance Metrics: Assessing how the prototype has improved data analysis time, supported the B2B sales model introduction, and enabled better decision-making at the executive level.

Examples of Customized Solutions

- Custom App Features: For instance, the browse screen of the app is customized to only show category, subcategory, name, and sale_price, formatted in a reader-friendly manner. This tailoring directly addresses the CEO's need for quickly digestible insights.
- Power BI Reporting: Developing a Power BI report with visualizations specifically chosen to highlight sales trends, category performance, and geographic distribution of sales, directly catering to the strategic interests of the CEO and other stakeholders.

Importance of the PoC Phase for our project:

- Alignment with Strategic Goals: This phase ensures our digital transformation efforts directly support the CEO's vision for growth and efficiency, specifically in leveraging data for strategic decisions and expanding into B2B sales.
- Foundation for Future Scaling: Success in this phase sets a precedent for deploying Microsoft Power Platform solutions across the organization, paving the way for future innovations and improvements in our digital infrastructure.

c. Technologies for the PoC

For this PoC, the following technologies are considered essential:

- **Microsoft Power Platform:** A suite of tools (Power Apps, Power Automate, and Power BI) that enables rapid development of apps, automation of workflows, and advanced data analytics.
- **Power Apps** is used to create a mobile-friendly application for both viewing the extensive product data and enabling the sales force to place orders directly.

- Power Automate is employed to automate the process of notifying the CEO and requiring the head of sales' approval for certain orders.
- Power BI is used for generating insightful reports and dashboards from the data.

The choice of Microsoft Power Platform is strategic due to its:

- Low-code/No-code capabilities: Enables rapid development and iteration, ideal for a PoC within a two-week time frame.
- Integration abilities: Seamlessly works with Azure SQL databases and various Microsoft services, ensuring smooth data flow and utilization.
- Scalability and Flexibility: Offers scalability to accommodate growing data and user needs, plus flexibility to adapt to both B2C and B2B channels.
- Accessibility: Facilitates data access and insights across the organization, improving decision-making processes.

d. Advantages of Chosen Technology

- Speed of Deployment: The low-code/no-code approach significantly reduces development time, allowing for quick testing and iteration.
- Cost Efficiency: Reduces the need for extensive developer resources, lowering upfront development costs.
- User Empowerment: Enables non-developers, like business operations leads, to contribute directly to the digital transformation efforts.

2. Business and Technical Changes for Integrated B2C and B2B View

Data Integration

- Consolidated Database Solution: Streamline the existing Azure SQL database to include both B2C and B2B data. This involves adding a new segment in our database schema specifically for B2B transactions, ensuring that each product sold, whether through B2C or B2B, is recorded uniformly. This consolidation will help in creating a unified reporting and analytics platform.

System Interoperability

- **API-Driven Integration:** Leverage Azure's built-in API capabilities to ensure our e-commerce site, the new PoC app, and other systems like CRM and ERP can exchange data seamlessly. For instance, when a B2B order is placed through the new app, it should automatically update our inventory in the ERP system and record the transaction in the CRM for customer relationship management.

Process Standardization

- **Unified Sales Workflow:** Standardize the order processing workflow for both B2C and B2B sales in the app. While the core process can remain the same, specific triggers or steps unique to B2B orders, like the approval process by the head of sales for large orders, can be incorporated. This maintains operational consistency while accommodating the nuances of B2B transactions.

Role-Based Access and Functionalities

- **Customized App Experience:** Implement role-based views and functionalities within the PoC app. For example, sales personnel in the field should have access to features pertinent to order taking and customer interaction. In contrast, management should have access to broader analytics and reporting features. Utilizing Microsoft Power Platform's built-in security and access control mechanisms can efficiently achieve this differentiation.

Applying Changes to Our Organization

- **For Data Integration:** Our first step is to work with the IT department to expand our Azure SQL database, integrating B2B data streams with our existing B2C data. This will involve creating new data models that can accommodate B2B-specific attributes while ensuring data integrity and consistency.
- **For System Interoperability:** Coordinate with our e-commerce vendor to outline API requirements for integrating the new app with existing systems. This collaboration will ensure that all systems can communicate effectively, supporting real-time data updates and process automation.
- **For Process Standardization:** Conduct workshops with sales, operations, and IT teams to map out the current sales processes for both channels and identify commonalities and differences. This will help in designing a unified yet flexible workflow in the PoC app.
- **For Role-Based Access:** Use the detailed user roles and permissions features of Microsoft Power Platform to configure the app. This involves setting up different user profiles based on job functions and designing the app interface to reflect the specific needs and permissions of each role.

3. The Solution Description

The solution for VSN International entails the development of a mobile-friendly app using Power Apps, integrated with backend systems via Azure SQL Database. This app serves multiple purposes:

- **Data Visualization and Access:** Employees can view comprehensive product, sales, and customer data, facilitating better decision-making and responsiveness to market demands.
- **Order Placement and Management:** The app allows field sales personnel to directly place orders from B2B customers, enhancing efficiency and customer service.

VSN International Power App Link:

<https://apps.powerapps.com/play/e/8e937dde-c6e8-e787-9c28-a32fdef07d19/a/f35d745c-dcd5-4e58-a128-8a52ce66457a?tenantId=8f904034-4f10-43a6-92e4-d35b129c3785&hint=912a133f-0ce4-480b-881f-366a16ea67f1&source=sharebutton&sourcetime=1710283177711>

- **Automated Workflows:** Using Power Automate, the app automates notifications and approvals for significant orders, ensuring that large transactions are quickly flagged for executive attention and approval.
- **Analytics and Reporting:** Power BI reports and dashboards provide deep insights into sales performance, customer behavior, and market trends across both B2C and B2B channels, enabling strategic decision-making.

VSN International Power BI Dashboard and Report Link:

https://app.powerbi.com/links/5NUYl0ollU?ctid=8f904034-4f10-43a6-92e4-d35b129c3785&pbi_source=linkShare&bookmarkGuid=3322bddf-1f41-4f3e-88ac-633fdb89f38

VSN International Power App:

VSN International		
Search items		
Category:	Activity	Sale Price: 133.99
Sub-category:	Fitness	>
Name:	Fitness Mechanism	
Category:	Entertainment	Sale Price: 69
Sub-category:	Movie	>
Name:	Movie Thingamajig	
Category:	Home	Sale Price: 67.95
Sub-category:	Home	>
Name:	Home Improvement	
Category:	Entertainment	Sale Price: 42.95
Sub-category:	Music	>
Name:	Music Gadget	
Category:	Automotive	Sale Price: 124
Sub-category:	Truck	>
Name:	Truck Equipment	
Category:	Entertainment	Sale Price: 169.95
Sub-category:	Music	>
Name:	Music Gear	
Category:	Beauty	Sale Price: 22.99
Sub-category:	Makeup	>
Name:	Makeup Thingamajig	
Category:	Activity	Sale Price: 21
Sub-category:	Camping	>
Name:	Camping Thingamajig	
Category:	Automotive	Sale Price: 118.99

< VSN International

Category:

Activity

Subcategory:

Fitness

Name:

Fitness Mechanism

Color:

Cadet grey

Quantity Sold:

120

Price:

190

Sale Price:

133.99

Year Sold:

2019

State:

California

<

>

✕ VSN International

✓

Category:

Activity

Subcategory:

Fitness

Name:

Fitness Mechanism

Color:

Cadet grey

Quantity Sold:

120

Price:

190

Sale Price:

133.99

Year Sold:

2019

✕ VSN International

✓

Category:

Subcategory:

Name:

Color:

Quantity Sold:

Price:

Sale Price:

Year Sold:

Power Automate Approval Emails:

← Approval details

Order Creation Approval

03/12/24, 3:20 PM

Requested by

VS

Vanshika Srivastava

vanshika@zq6fp.onmicrosoft.com

Comment

Link

Vanshika120

Approver comments

Add a message along with your reply

✓ Approval submitted successfully

← Approval details

Order Creation Approval

03/12/24, 3:20 PM

Requested by

VS

Vanshika Srivastava

vanshika@zq6fp.onmicrosoft.com

Comment

Link

Vanshika120

Approver comments

Add a message along with your reply

Approve

Reject

← Approval details

Order Creation Approval

03/12/24, 6:39 PM

Requested by

VS

Vanshika Srivastava

vanshika@zq6fp.onmicrosoft.com

Comment

Link

Nishit124

Approver comments

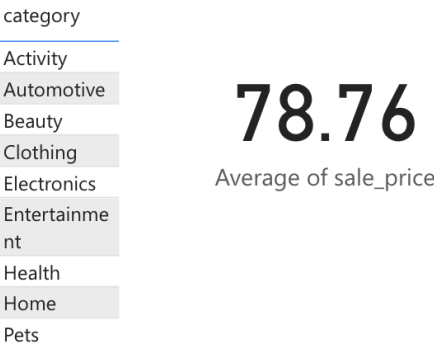
Add a message along with your reply

Approve

Reject

Power BI Dashboard:

A card visual which shows the sale price



A pie chart visual showing the quantity by state

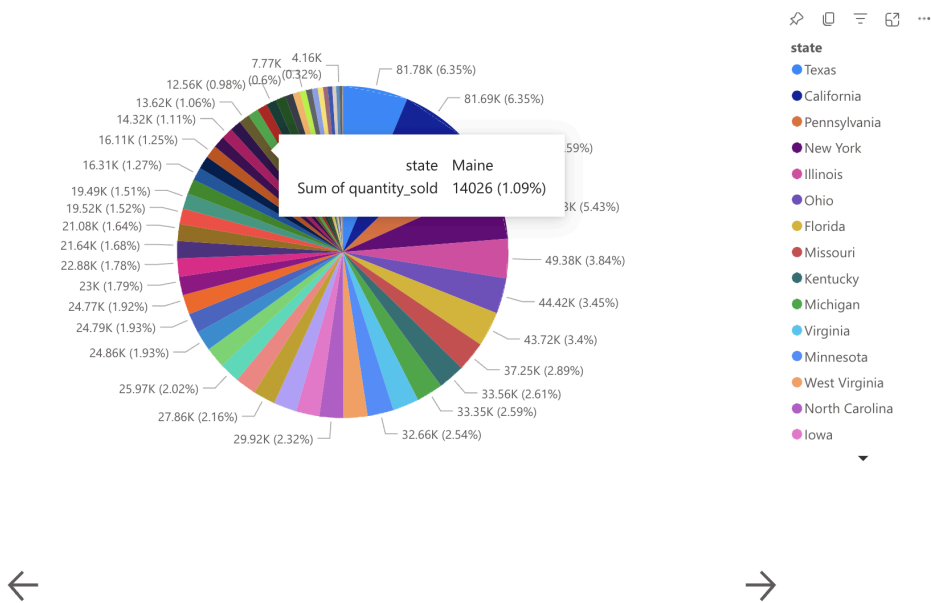
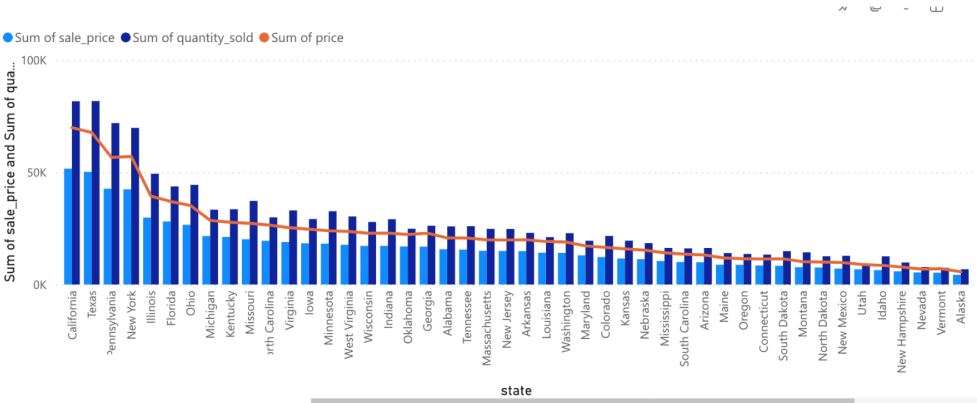


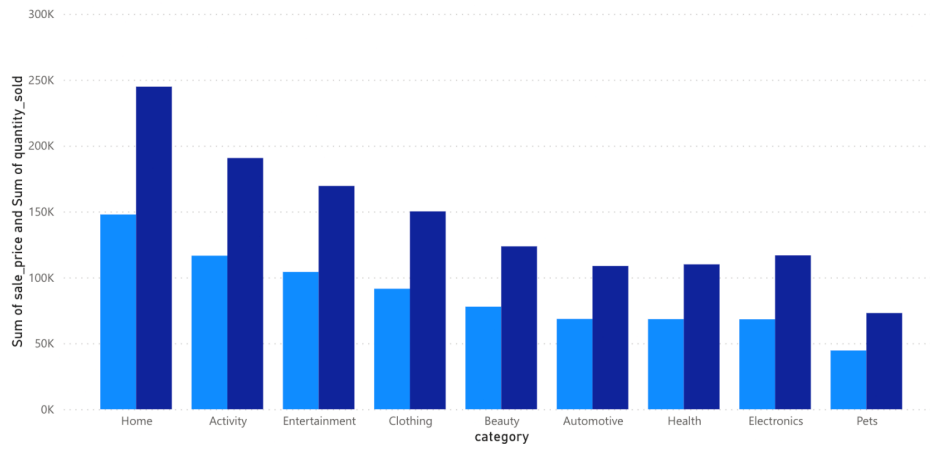
Table visual showing the product name and category

name	category
Aquarium Accessory	Pets
Aquarium Apparatus	Pets
Aquarium Attachment	Pets
Aquarium Component	Pets
Aquarium Contraption	Pets
Aquarium Device	Pets
Aquarium Doodad	Pets
Aquarium Equipment	Pets
Aquarium Gadget	Pets
Aquarium Gear	Pets
Aquarium Gizmo	Pets
Aquarium Implement	Pets
Aquarium Instrument	Pets
Aquarium Item	Pets
Aquarium Kit	Pets
Aquarium Machine	Pets
Aquarium Mechanism	Pets
Aquarium Paraphernalia	Pets
Aquarium Rig	Pets
Aquarium Supplies	Pets

line and clustered column visual showing sale price and quantity sold for each state as columns and price as the line



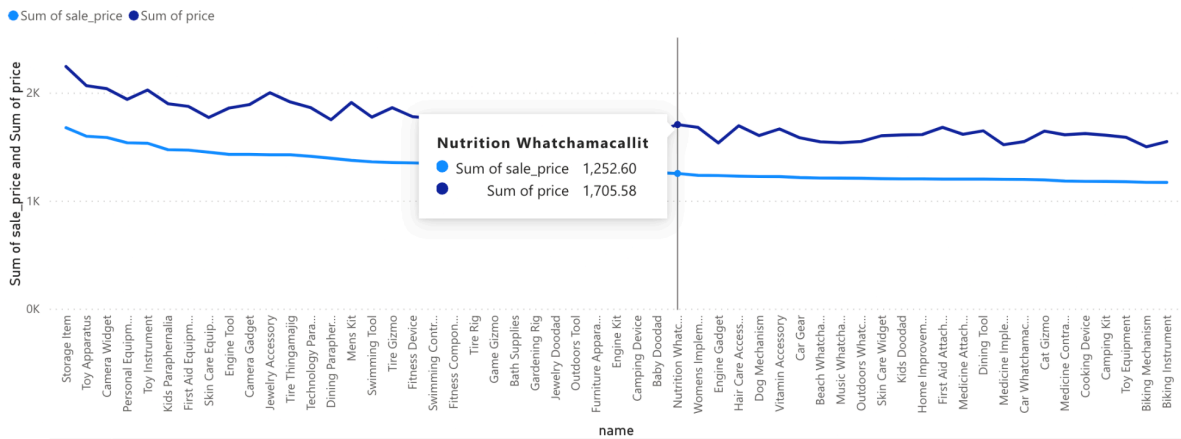
Clustered column chart visual showing sale price, quantity sold, and category



A map visual showing all the states



A line chart visual showing the price and sale price for each product



A Q&A visual which can be used to ask questions from the data

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Ask a question about your data

Try one of these to get started

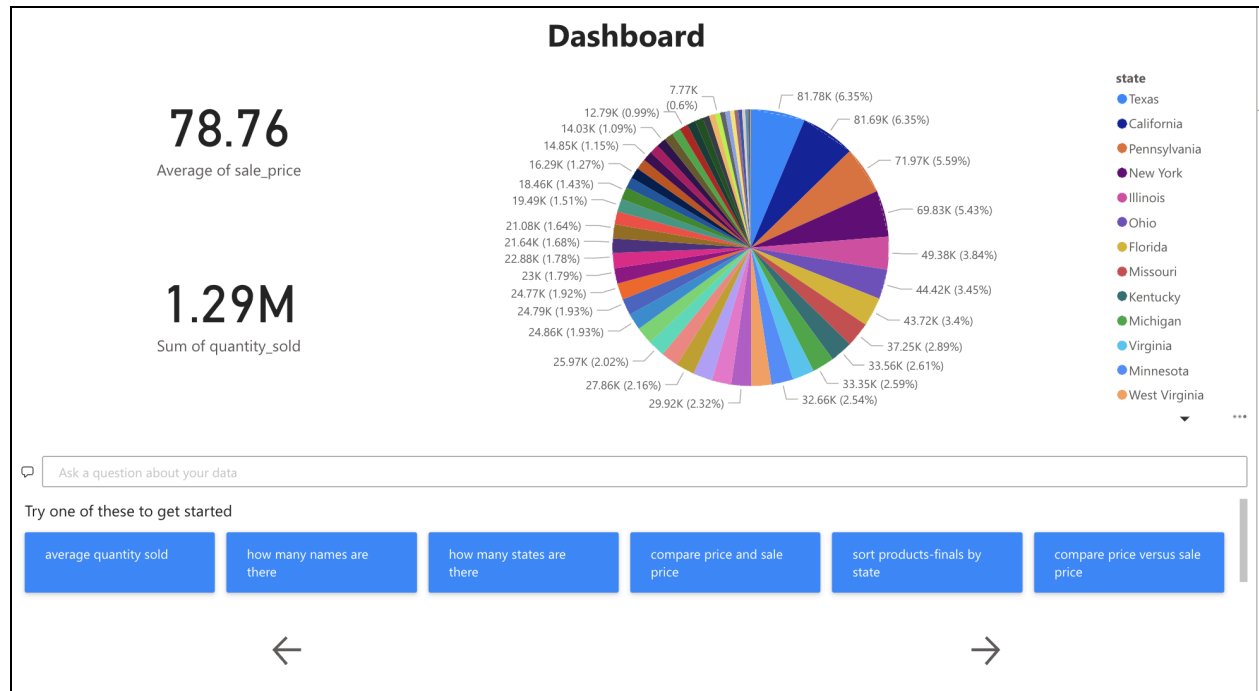
average quantity sold how many names are there how many states are there compare price and sale price

Show all suggestions

A card visual which shows the quantity sold

1.29M

Sum of quantity_sold



This integrated approach not only streamlines operations but also ensures that the organization can quickly adapt to market changes and customer needs while maintaining a competitive edge.