Harnessing the Power of Data with Power BI

Stakeholder Experience

Case study

To help boost sales, Adio, the data analyst at Adventure Works, is tasked with investigating sales, marketing, and customer data. Adio is instructed to create and share a data report with visualizations, based on the insights, patterns, and trends he uncovers during the analysis. Adio knows that creating visualizations with stakeholder experience in mind contributes to improved stakeholder understanding and decision-making. To understand the needs, preferences, and expectations of the stakeholders that form his audience (stakeholder experience), Adio engages in the following process:

Step 1: Identifying stakeholders

The first step in the stakeholder experience process is to determine which stakeholders have an interest in the data analysis and visualizations. Adio identifies the executives, marketing team, and product managers as stakeholder groups for his current project.

Step 2: Defining stakeholder goals

Aware that these stakeholder groups will have diverse needs, preferences, and expectations, Adio moves on to the next step—understanding the different stakeholders' goals, priorities, and requirements. Through consultation with each group of stakeholders, Adio determines their respective interests in the sales data analysis:

- The group of executives is focused on improving the overall performance of the company and is interested in high-level insights that can drive strategic decisions related to their competitors, products, and customer marketing.
- The marketing team is interested in insights into marketing campaign effectiveness and how to improve conversion rates from their website and social media sites to increase sales.
- The product managers want to understand customer behavior, such as product popularity, preferences of different customer segments or groups, and the profitability of each of these segments.

Step 3: Choosing the right visualization type

Adio can now choose visualization types that are tailored to the stakeholders' goals and needs. Bar charts, line charts, and pie charts are common visualization types, but there are many others to consider. The visualizations you choose will depend on the type of data you're working with. You also have to think about which visualization types will best communicate the insights your stakeholders need while being visually appealing and easy to understand. For example:

- For executives, a dashboard with high-level metrics and key performance indicators (or KPIs) such as revenue and profit margins may be the right choice.
- The marketing professionals may find a conversion funnel that tracks the progress of customers from the stage of visiting marketing channels to the final stage of product purchases more useful. A bar chart to compare the effectiveness of

different marketing channels may also be an appropriate choice.

- For the product managers, a map that visualizes the distribution of customer segments may be suitable.

Step 4: Designing with stakeholder experience in mind

Next, you need to design the visualizations with stakeholder experience in mind, ensuring visualizations are meaningful to each group. This means designing visualizations that answer stakeholder questions, are visually appealing, and easy to read, navigate and understand. When designing his visualizations, Adio keeps in mind that:

- The executives prefer visualizations that are concise, easy to understand, and convey key takeaways quickly.
- The marketing professionals are interested in visualizations that can help them identify trends, patterns, and opportunities for improvement.
- The product managers value visualizations that can help them identify gaps, opportunities for growth, and potential issues with specific products.

Step 5: Making visualizations interactive

You can enhance stakeholder engagement, exploration, and understanding of data insights by adding interactive features to your visualizations. For example, you can add filters and sorting options, or explanations that appear when stakeholders hover over different parts of a visualization. Adio uses Power BI to create interactive data visualizations that the stakeholders can explore and interact with. For example, he adds filtering and sorting options. That way, when Adio shares the report, the marketing team can view data by marketing channels or campaigns. Similarly, the product team can view sales distribution data by customer segment or product category.

Step 6: Testing and iterating

Before sharing the visualizations with stakeholders, Adio tests them with a small group of users that represent his target audience. Focus groups involve selecting and recruiting a diverse and representative sample of individuals from the different stakeholder groups and then conducting the focus group sessions. In this final step, you should gather and analyze feedback and make any necessary adjustments to ensure that your visualizations effectively communicate the intended insights. In doing so, you ensure that the stakeholders' needs are met.

Instructions

Create a document

Create a new Word document called *Stakeholder experience*. Use this document to record your answers to the exercise questions.

Answer questions about stakeholder experience

1. What is the primary goal of data visualization in the data analysis process?
2. Briefly define stakeholder experience in the context of data analysis and visualization.
3. Explain two reasons why stakeholder experience is important when creating data visualizations.
4. List the six steps in the stakeholder experience process.
5. How can you identify the goals and preferences of different stakeholder groups when designing visualizations?
6. What is one challenge you think Adio may face in designing data visualizations that meet the needs of the different stakeholders?
7. Briefly discuss what you need to consider when choosing the right visualization type for stakeholders.
8. What is the purpose of making visualizations interactive?
9. A focus group finds a visualization Adio designed difficult to understand. Adio adds more interactive features and updates the design. Which step in the process is Adio engaging in?

10. In no more than two sentences, discuss how you think stakeholder experience can contribute to improving business outcomes through data-driven decision-making.

Solutions

1. **What is the primary goal of data visualization in the data analysis process?**

Ans. The primary goal of data visualization in the data analysis process is to **clearly and efficiently communicate insights, patterns, and trends** derived from the data. This allows stakeholders to understand the information and make informed decisions.

2. **Briefly define stakeholder experience in the context of data analysis and visualization.**

Ans. Stakeholder experience, in the context of data analysis and visualization, refers to the **process of understanding and catering to the needs, preferences, and goals of the individuals or groups who will be consuming and using the data insights presented through visualizations.**

3. **Explain two reasons why stakeholder experience is important when creating data visualizations.**

Ans. **Improved comprehension and decision-making:** By considering stakeholder experience, visualizations are tailored to be clear, relevant, and easy to understand for the intended audience. This ensures that stakeholders can effectively grasp the data insights and make informed decisions based on the information presented.

Increased engagement and buy-in: When visualizations resonate with stakeholders and address their specific interests, it fosters engagement and buy-in. Stakeholders are more likely to trust the data-driven insights and support decisions if they understand how the visualizations were created and what they represent.

4. List the six steps in the stakeholder experience process.

Ans.

1. **Identifying stakeholders:** Determine who has an interest in the data analysis and visualizations.
2. **Defining stakeholder goals:** Understand the specific goals, priorities, and expectations of different stakeholder groups.
3. **Choosing the right visualization type:** Select visualizations that effectively communicate insights based on stakeholder needs and the type of data.
4. **Designing with stakeholder experience in mind:** Ensure visualizations are clear, visually appealing, and cater to the specific questions and interests of each stakeholder group.
5. **Making visualizations interactive:** Enhance engagement and exploration by incorporating interactive features like filters and hover-over information.
6. **Testing and iterating:** Gather feedback through small user groups and refine the visualizations based on their insights to ensure they meet stakeholder needs effectively.

5. How can you identify the goals and preferences of different stakeholder groups when designing visualizations?

Ans.There are several ways to identify stakeholder goals and preferences:

- **Direct consultation:** Through meetings, interviews, or surveys, you can directly engage with stakeholders to understand their specific needs and expectations.
- **Task analysis:** By analyzing the stakeholders' roles and responsibilities, you can infer their likely goals and interests in the data analysis project.
- **Reviewing existing materials:** Analyzing past reports, presentations, or communication materials related to the project can provide clues about stakeholder priorities and interests.

6. What is one challenge you think Adio may face in designing data visualizations that meet the needs of the different stakeholders?

Ans. One challenge Adio faces is **balancing the diverse needs and complexities of the data across different stakeholder groups**. He needs to create visualizations that are both concise and informative for executives, while still providing sufficient detail and exploration options for the marketing team and product managers.

7. Briefly discuss what you need to consider when choosing the right visualization type for stakeholders.

Ans. When choosing the right visualization type, consider the following:

- **The type of data:** Different data types (e.g., numerical, categorical, geographical) are best suited for specific visualization types.
- **The complexity of information:** Simpler visuals like bar charts are appropriate for conveying high-level insights, while scatterplots or heatmaps might be needed for more intricate relationships.
- **The audience's familiarity with data visualization:** If the stakeholders have limited experience with data visualizations, choose simpler and more intuitive types.

8. **What is the purpose of making visualizations interactive?**

Ans. Making visualizations interactive allows stakeholders to **explore the data in more depth, filter information based on their specific interests, and gain a richer understanding of the insights presented**. This can lead to greater engagement and discovery of new insights beyond the initial design.

9. **A focus group finds a visualization Adio designed difficult to understand. Adio adds more interactive features and updates the design. Which step in the process is Adio engaging in?**

Ans. Adio is engaging in **step 6: testing and iterating.** By receiving feedback and making adjustments based on user testing, he ensures the visualizations effectively communicate the intended insights and cater to stakeholder needs.

10. **How do you think stakeholder experience can contribute to improving business outcomes through data-driven decision-making?**

Ans. By prioritizing stakeholder experience in data visualization, you ensure that data insights are effectively communicated and understood by the individuals who need them most. This leads to more informed decision-making, increased buy-in from stakeholders, and ultimately, improved business outcomes driven by data-driven insights.