# Analysis Problem 1: Sales Data

1. Sales Leaders have a hypothesis that less DaysBetweenEvents leads to better win rates. Is this hypothesis true? Create a chart and/or table to test this hypothesis and communicate the impact to our business.

Upon analyzing the sales data, it appears that fewer Days Between Events may lead to better win rates. This is visually represented in the chart provided, which illustrates a higher proportion of wins for deals with lower Days Between Events. While there were some outliers, particularly won deals with a significant number of Days Between Events, the average trend indicates that won deals indeed had fewer Days Between Events compared to lost deals.

While statistical significance testing did not yield a significant difference between won and lost deals, it's crucial to note that this may change with additional data collection.
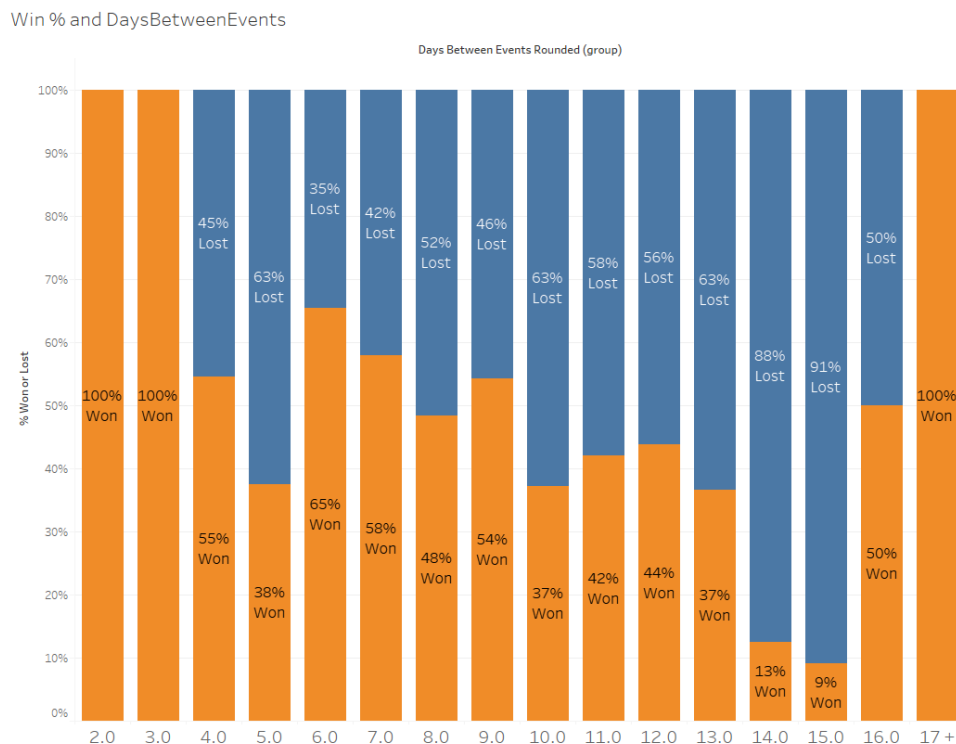
Further details including hypothesis testing results are available in the "DaysBetweenXOutcomeTest" sheet of the attached Excel file.

2. What other relationships between deal attributes and outcomes exist, and represent potential ways we can improve sales performance? What are some ideas of actions we might pursue?

Several other relationships between deal attributes and outcomes have surfaced from the analysis. Notably, deals with a higher number of contacts tend to have a substantially higher win percentage. This suggests that encouraging sales team members to engage with multiple stakeholders could enhance sales performance.
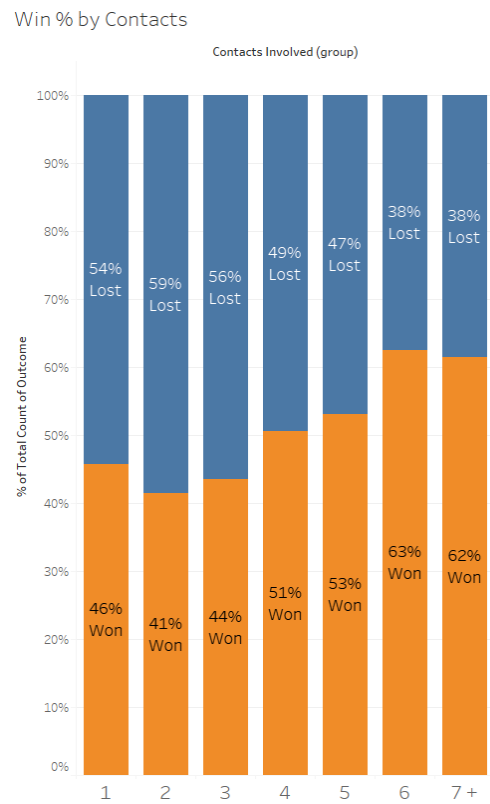
Additionally, deals sourced by the Customer Success team demonstrate significantly higher win rates compared to those sourced by the Marketing or Sales teams. While I would require further context to draw a more detailed conclusion, I beleive this might be attributed to their position in the marketing funnel, potentially working with already onboarded clients. I recommend incentivizing the Customer Success team to source more deals, possibly by revisiting their incentive structure.

	Outcome	
Source	Lost	Won
Customer Success	43%	57%
Marketing	54%	46%
Sales	58%	42%

I did not find any substantial correlation between discount offered and win rates, suggesting that offering discounts may not significantly impact win rates.

3. What is your overall recommendation? What would you recommend as next steps for further considerations/analysis?

Based on the findings, I recommend the following actions:
1. Increase the number of contacts per deal to potentially improve win rates
2. Revisit the incentivization structure for the Customer Success team to encourage more deal sourcing
3. Consider revising the discount strategy, potentially reducing the size and quantity of discounts offered to customers.

Analysis Problem 2: Billable and Effective Utilization %

See Python file for SQL query answers, data cleaning process.