Airline Executive Summary Supporting Documentation

Executive Supporting Documentation

Although there have been recent unfortunate airline crashes and the media's promotion of statistics stating air travel is no longer a safe way to travel, it in fact has never been safer to travel by airplane. Average airline incidents per year is down by almost 50% compared to the previous 15 years. Average airline fatalities per airline incident has also decreased by almost 50% compared to the previous 15 years. From 1985 - 1999, the average fatalities per airline incident were about 0.30 people. Consequently, from 2000-2014, that number has dropped significantly to 0.19 average fatalities per airline incident. Although we would like to see that number drop to zero, the significant decrease over the past 15 years is encouraging nonetheless.

The media has also suggested it is safer to travel by automobile versus airplane. Based on our analysis, we believe this to be a false narrative. From 2000 to 2014, a person was 43 times more likely to be involved in an automobile accident than an airplane incident. From 2000 to 2014, there were 1.31 incidents per 100 million miles driven in the United States. During that same time frame, there were 0.03 airline incidents per 100 million miles flown. Not only does air travel reduce the amount of time a person must take to travel, but it also reduces the chance of a person being involved in an accident.

In addition to the safety increase in air travel, the overall revenue for the airline industry as a whole has been unaffected and continues to positive direction. Overall revenue has increased by almost 20% since 2015 with no sign of slowing down. In that same time period, domestic revenue has increased by 20% and international revenue has increased by 12%. Our bottom line has not been affected by the recent media stories around the potential risks of air travel.

A majority of US airline revenue is generated on domestic flights and I will now provide some additional metrics specific to the US Airline industry as whole. US airline incidents follow a similar path as the overall airline industry when it comes to average incidents per 100 million miles flown. This rate has continued to steadily decrease over the past 14years and is at it's lowest level since 2014. There was a slight uptick in incident rate in 2014, however, this rate has continued to decrease since then.

Overall, I feel that the media stories have not and will not affect our ability to generate positive revenue. This is shown by the next two slides that indicate total passengers and total miles flown for US flights is at an all time high and do not show any signs of decreasing. Airline travel has never been safer and the time saving/safety increase for travelers compared to automobile travel is a no-brainer. Airline travel will continue to generate positive revenue and not see a revenue decrease due to these recent media stories.

Presentation Methodology Justification

I chose to go with a simple color scheme for this dashboard as recommended by Cole Knaflic from our *Storytelling with Data* text book. The gray/blue colors do not create distractions from what the story I am trying to tell. I also chose to highlight the more recent data bars in blue and the historic data bars in gray to direct the audience's attention to the recent data and show the decreases for the more applicable years. For the line graphs, I removed axis labels and labeled the most recent data points directly. As Cole Knaflic says decluttering is the best way to enhance your presentations. I also added the chart title in the top left hand side of each chart. I placed this information in the top left hand corner because this is typically the first spot a reader begins with your document. This is the most important location in a presentation and I felt the most important information was the title to give the reader an overview of what metrics were presented in the dashboard.

For the revenue chart, I went with an area graph to show the total revenue generated by year and that the US flights generated more revenue than the international flights. I went with an area chart for the US incident rate chart to emphasize the larger incident rate in previous years and the smaller rate more recently. I first was going to combine the miles flown and total passengers chart into one slide, but it made the charts too condensed and did not effectively present the data as I wanted. So I separated them out onto their own slides.

Data Sources

Airline Fatality and Incident Data - https://github.com/fivethirtyeight/data/blob/master/airline-safety/airline-safety.csv

Automobile Incident Data - https://www-fars.nhtsa.dot.gov/Main/index.aspx

Overall Airline Revenue Data - http://web.mit.edu/airlinedata/www/2019%2012%20Month%20Documents/Traffic%20and%20Capacity/System%20Total/Total%20System%20Revenue%20Passenger%20Miles.htm

Domestic Airline Revenue Data - http://web.mit.edu/airlinedata/www/2019%2012%20Month%20Documents/Traffic%20and%20Capacity/Domestic/Domestic%20Revenue%20Passenger%20Miles.htm

International Airline Revenue Data - http://web.mit.edu/airlinedata/www/2019%2012%20Month%20Documents/Traffic%20and%20Capacity/International/International%20Revenue%20Passenger%20Miles.htm

US Accident Rate, Fatality Rate and Miles Flown Data - https://www.bts.gov/sites/bts.dot.gov/files/table_02_09_121819.xlsx

US Passenger Totals Data - https://www.bts.dot.gov/annual-passengers-all-us-scheduled-airline-flights-domestic-international-and-foreign-airline

Github Link

https://github.com/kwwaite1129/Example-Project-Work/tree/master/Tableau%20Dashboard