Project Task 2: Executive Summary

DSC640

Taniya Adhikari

Summary

Link to Github

Applied Design methodologies

The design for Executive Summary follows guide **from Chapter 7: Story Telling with Data**. I chose Fixed 16:9 presentation size. Same color concepts and Design principles are applied from **Project Task 1 to executive summary**. (*See link Project Task 1: Summary*)

The general idea is: **Blue** for accidents, **red** for fatalities, and **green** for indicating sales or growth of the industry/company

Story Telling Methodologies

For this part of the presentation, I worked on constructing the narrative structure of the story. The story I wanted to tell was, despite of plane crash incidents before year 2000 and early 2000s, airlines are safest mode of transit around the world and in United States. Airline industry has improved after each major plane crash in the United States. Fatal accidents and fatality rates have declined tremendously for U.S and worldwide. The goal to give recommendations on what we can do to spread this information out. I would like to mention that for Dashboard I used entire data from year 1990-2019 **but for the executive summary I only used latest data from 2000-2020 and 1985-1999 to explain relevant background only**. Slides 1-3 introduces the topic, slides 4-5 gives relevant background, 5-14 explains trend of accidents, fatalities, and financial performance and 14, 15-16 explains risks and recommendations. Slide 17 cites all the sources used. The layout of the slides follows horizontal and vertical logic of presentation.

Slide 1: Introduction page with Title and presenter name.

Slide 2: Overview of the current situation of the media, **a quick 1-2 lines to summarize what my team has done to tackle the problem** and letting the audience know I will be going over my findings *(why we are here?)*

Slide 3: Objectives slide with **bullet points that goes over topics and the order it is presented.**

Slide 4 and 5: Uses same charts from Dashboard - **Maps and Bar chart** to show which geographic region and top airlines have highest accidents and fatalities**. I filtered for 1985-1999 to visualize data before year 2000. The purpose of these 2 slides were to give background and acknowledge that before year 2000 we had a problem of crashes in United States. U.S airlines**

were among the top 15 countries for fatal accidents and total fatalities. This helped me setup the problem, and rest of the presentation focuses on how airline industry has improved significantly and became safest mode of transportation.

Slide 6, 7 8, and 9,: Slide 6-7 shows **Global fatal accidents and fatalities rates per 1 million flights** using line chart and colors mentioned above. Slide 8-9 shows **U.S related fatal accidents and fatalities rates per 1 million flights** using line chart and colors mentioned above. Annotations are used to point out any major ups or downs in the trend and **provide explanation to major plane crashes in 2001, 2009, and 2013**. *(Note: This was deliberately placed like this, world statistics first and then show U.S specific so we can compare them later.)*

Slide 10: Uses **Bubble charts to show side by side comparison** of how fatal accidents and fatalities have declined for U.S and rest of the world. Bubble chart is used because it compares by the size of volume change.

Slide 11: Uses **Bar chart to compare total accidents and fatalities rates** of airlines to different kinds of transportation. *(Note: bubble chart was used in Dashboard)*

Slide 12: Growth of passengers per 1 million departures using Area chart. The purpose is to show **the increase demand and passengers growth for airlines**. Uses annotations to describe major events that effected it and what caused increase or decrease.

Slide 13: Visualizes passenger generated revenue per Available seat per mile in Cents (PRASM) is **industry specific** metric that indicates that airlines are generating profits. Annotations are used to explain any dips in the chart. Uses bar charts instead of line chart to avoid redundancy and bar charts are easier to highlight and bring audience to pay attention.

Slide 14: This **slide compares Revenue Passenger per miles vs. Available seats per miles**. also uses bar chart to show comparison, **because ASM describes capacity of airlines for traveled miles and RPM indicates revenue generated for traveled miles.** Comparing them together shows what percentage of ASM is generating the revenue. Bar charts are easy to show percent comparison. **Also, potential risk is identified in this slide.**

Slide 15: Identified Potential risk regarding fatalities and accidents. used line charts and forecasting for comparison.

Slide 16: Recommendations were made on how to deal with media and public moving forward.

Ethical Considerations: One of the biggest ethical considerations are providing facts about airline safety, whether it favorable or unfavorable. I did not try to hide any information in this. Another, consideration is downplaying the numbers to show good side of the data, to minimize this I used metrics that were provided in the data table itself. Other minor considerations: I deliberately **put one chart at a time**, with couple exceptions to avoid cognitive load**.** Double checked everything to **minimize errors**. I used color-blind friendly palette to ensure accessibility. I also added note in every slide **where I did not use 0 axis, so audience is aware of**

it and do not get misled. In some charts I purposely, did not include 0 axis, because visualizing it was difficult if the number is too large in billions. All the data is from official government websites, educational websites, or aviation organization.

References

Airline Data Project. (n.d.). Retrieved March 3, 2022, from http://web.mit.edu/airlinedata/www/Traffic&Capacity.html

Aviation Safety Network > Aviation Safety Network. (n.d.). Retrieved March 3, 2022, from https://aviation-safety.net/

Fivethirtyeight. (n.d.). *Data/airline-safety at master · fivethirtyeight/data*. GitHub. Retrieved March 3, 2022, from https://github.com/fivethirtyeight/data/tree/master/airline-safety

Jasper, C. (2016, December 8). *Airline earnings, at record in 2016, to decline as oil prices rise*. The Seattle Times. Retrieved March 3, 2022, from https://www.seattletimes.com/business/airline-earnings-at-record-in-2016-to-decline-as-oil-prices-rise/

Motor Vehicle Safety Data. Motor Vehicle Safety Data | Bureau of Transportation Statistics. (n.d.). Retrieved March 3, 2022, from https://www.bts.gov/content/motor-vehicle-safety-data

Rooney, B. (n.d.). *2009 airline revenue: Worst drop ever*. CNNMoney. Retrieved March 3, 2022, from https://money.cnn.com/2010/01/20/news/economy/air_traffic_2009/index.htm

Transit Safety Data by mode for all reported accidents. Transit Safety Data by Mode for All Reported Accidents | Bureau of Transportation Statistics. (n.d.). Retrieved March 3, 2022, from https://www.bts.gov/content/transit-safety-data-modea-all-reported-accidentsb

Wikimedia Foundation. (2022, January 28). *List of fatal accidents and incidents involving commercial aircraft in the United States*. Wikipedia. Retrieved March 3, 2022, from https://en.wikipedia.org/wiki/List_of_fatal_accidents_and_incidents_involving_commercial_aircraft_in_the_United_States