I chose to focus on safety in my story, rather than crashes. Although the data provided represented deaths and incident data, I wanted to focus on safety. I started the project comparing highway fatalities to airline fatalities. My original goal was to focus on the high number of highway deaths and making suggestions with respect to what was causing increases and decreases in the numbers, like texting and driving. This idea quickly fell through, however, when I reviewed the remaining airline datasets.

Documentation from the airline safety data revealed another story, a news article discussing the impact of the airline industry after the Malaysian Airlines incidents (Silver, 2014). Once I found comparable airline revenue data, I decided my story needed to reflect the business, its impact, and recovery plan. I wanted my story to be optimistic and reflect next steps. When it came to addressing the public, I realized I needed to focus on the positive, and become part of the recovery process.

A lot of data preparation was performed in this project. The main airline safety dataset included counts for two different time periods, rather than yearly data. However, the highway dataset from NHTSA included a separate file for each year. Data had to be consolidated and split to match the time periods from the airline data. This was necessary for side-by-side comparisons. I created derived data fields to summarize fatalities and incidents where needed. Datasets were linked by year to make annual comparisons for highway and air.

I developed a custom safety score to rank airlines. I originally had a treemap that reflected the most dangerous airlines, but I want to turn this positive. The following formula was used to compute the safety score: Available Seat Kilometers Per Week/Incidents/ 10000000.

The higher the resulting score, the safer the airline. This also included combining crash data from different data sources.

There were many differences when presenting to a public audience compared to the internal team. When presenting to an internal team, I focused on the details rather than aesthetics. The data story, at that time, concentrated on the current state of the business, impact, and recovery options. In contrast, when presenting to the public, I focused on eye-catching visualizations, and relied on headlines and speech to provide the minimum details required to tell the story. In this case, the story focused on safety and reassuring the public.

If I were to start this project again today, I would create a color template for use across all visualizations. I would also standardize fonts and text sizes. Creating one standardized template up-front would create consistency and save time in the long run. I would also request additional data sources. Some of the sources proposed were summarized and lacked the details, although this is often the case when data wrangling. The most impactful change I would make, however, would be to develop and understand the business outcome required. This evolved as the weeks went on, but having a clear, concise direction at the onset would save a lot of rework.

References:

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