Dashboard Presentation of Airline Safety Statistics

The dashboard needs to be designed to present the current airline data to the management of an airline company. This leads to several assumptions. The audience should already be familiar with airline terminology and be aware of some of the names of airlines, including domestic and international. As the leaders of the business, they are also interested in the facts, supported by actual numbers and statistics. My experience with managers is that they appreciate getting to the nuts and bolts quickly, rather than beating around the bush. My approach was to create charts and tables that easily show the trends of airline accidents and fatalities, and look at trends in the data. I kept the colors and text simple so as not to distract from the data. I wanted the numbers to speak for themselves.

I chose to start with a stacked bar chart that shows airline fatalities by year. Next to it, I have 2 boxes with the number of vehicle and airline fatalities for the same time period. These three charts immediately show 2 things: the number of airline fatalities has trended downward over the last two decades, and vehicle incidents and fatalities far surpass airlines during the same time period. I led with this information to quickly answer the question of whether airline travel is safe.

The next six charts use bar charts to display the top 10 airlines numbers, side by side with scatter plots comparing the same data per ASK. The raw data can be misleading, as carriers with more flights would also have more incidents. The adjusted data clearly shows the top airline offenders are non-US carriers. These charts may also shed some light on the media reports. When reporting raw data, US carriers look unsafe. But when adjusted for ASK, they are actually shown to be much safer.

The large heat map is an interactive table for those managers wanting to look deeper into the numbers. Each column can be quickly sorted for further information supporting the charts above it. The last two charts dramatically show the significant drop in hijackings and fatalities after the 9/11 terrorist attack in 2001. This is a graphic visualization showing just how much safer airline travel has become.