Create a Tableau Story Project Summary

Dashboards:

- First Dashboard 1.0 : https://public.tableau.com/profile/najwa.almulhem#!/vizhome/FlightStory2_0/DelayedFlights?publish=yes
- Final Dashboard 1.1 : https://public.tableau.com/profile/najwa.almulhem#!/vizhome/FlightStory2/DelayedFlights?publish=yes

Summary

In this project, I made an explanatory data visualization about data set, which contains information on United State flight delays, and performance comes from RITA in 2008. My focus was flight delays, main reasons & finding patterns and relationships. I found out that many carriers have a huge number of delays with reasons related to the carrier itself and aircraft more than 50 % of times. Certain months have very high number of delayed flights due to holidays and school breaks. In addition to, having a busy airport means more delays.

Design

The goal is to have a very clear visualization, easy to read, easy to follow and conveys my massage properly. My focus was flights delays .I explored delays per airports, month and carriers .Then I noticed that lots of carriers have a high chance of having delayed flights. Using this insight I explored the type of delays per each carrier and that was also interesting the main reason for delays are related to carrier, NAS and aircraft issues. In order to do that I have made few decisions:

1- Created new variables like :
   - Delayed (Boolean) : a flag for delayed flights either in arrival or departure.
   - Main reason for delay (String): instead of having five columns for delay time, I created one variable for the main reason for delay .I did this by choosing the delay reason with the maximum delay in minutes.
2- Choose colorblind Platte.
3- Changed the origin and destination type to geo data so I can show it in the map.
4- Tried to illuminate the text in the graphs as much as possible by removing x, y-axis, and headers.
5- Created dashboards to group related information, then added those dashboards to my story.
6- Showed the delay per airport, delay reasons, delay per carrier, and delays per months.
7- Had to show the percentage of delays instead of count per carrier to better understand the possibility of delays.
8- Chose specific charts for specific reasons as listed below:
   - I chose a map chart to show the distribution of flights on the map, I did color encoding for representing the number of flights.
   - I also chose map chart to show the distribution of flights delay.
   - I chose bar chart to compare number of flights delay per airports.
   - I chose scatterplot, t check if there is a relationship between arrival delay & departure delay.
   - I chose bar chart to compare number of flights delay per carrier.

- I chose scatterplot to show the distribution of carriers' arrival and departure delay.
- I chose the stacked 100% bar chart for showing the chance of delays per carrier because the relative difference is what really matters here.
- I chose line chart to compare number of delayed and on time flights over time.
- I chose table to compare number of delayed and on time flights per month.
- I chose bar chart to compare number of delayed flights per type of delay.
- I chose the stacked bar chart for showing and comparing number of delayed and on time flights per carrier.
- I chose table to compare and highlight the carriers that have one type of delay with a chance more than 50%

9- After feedbacks, I had to include two external datasets to get airport full names and carrier's full name instead of two or three characters code. This made the workbook runs slower.

10- After feedbacks , I had to change the width & height of story text points

Feedback

Feedback 1:

11- Replace carrier abbreviations or 2 character code with full name or at least show the full name in the tooltip

Feedback 2:

12- Add an introduction point in the beginning of the story.

13- Make story text smaller to have the visualization more clearly.

14- Add airport full name instead of abbreviation or 3-character code.

Resources:

- http://www.airportcitycodes.com/aaa/twoletcod.html
- http://www.leonardsguide.com/us-airport-codes.shtml
- https://community.tableau.com/thread/149232
- https://www.transtats.bts.gov/Fields.asp?Table_ID=236