AIRCRAFT SAFTEY ANALISYS

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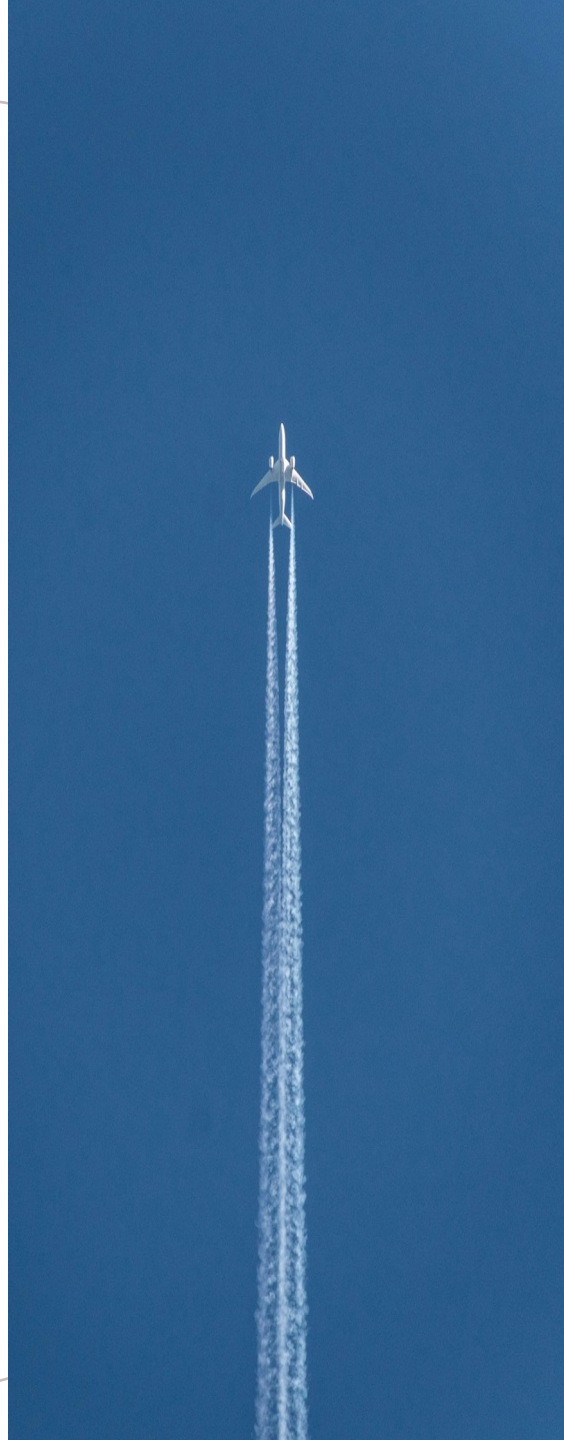
Beyond This Analysis



• *VIRTUCON ENTERS AVATION*

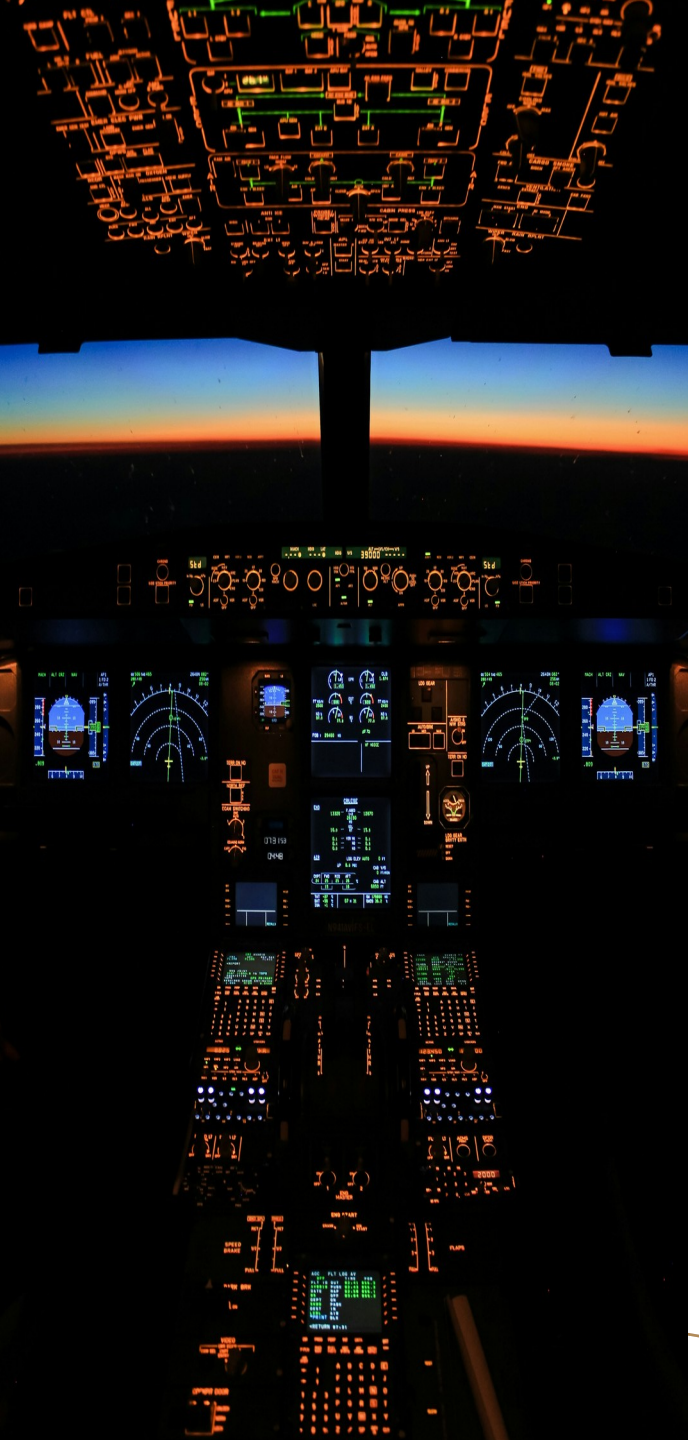
TO SUCCEED IN THE COMMERCIAL AVIATION WE WANT TO FOCUS ON THREE AREAS

SAFTEY
ENVIORNMENTAL IMPACT
EFFICIENT OPERATIONS

HOW WILL WE DO THIS?

We will use data analysis with python on these data sets to unlock the best solutions for our focus areas.

- NTSB Aviation
- BTS T100 Domestic Flight
- ICAO US Airports
- ICAO Aircraft Emissions
- FlightSaftey.org Engines
- Wikipedia Population



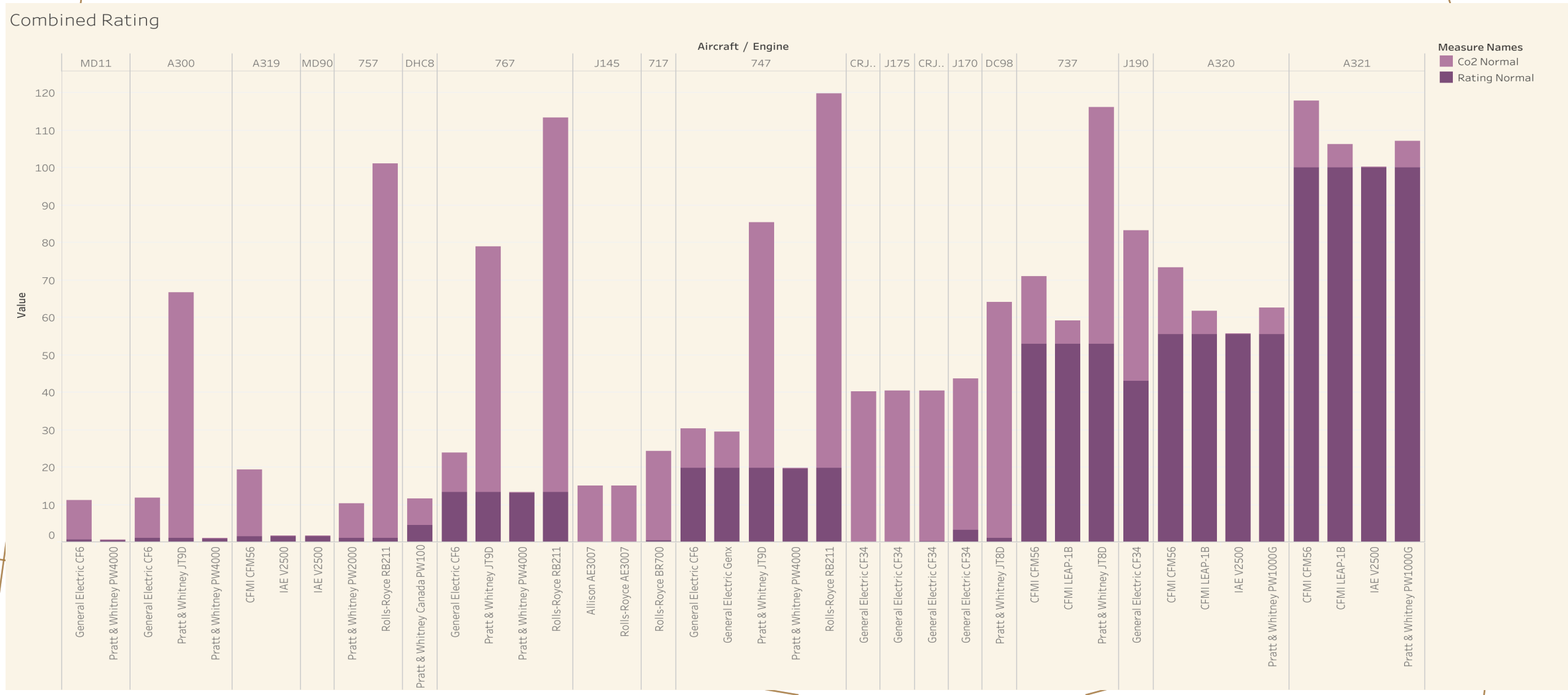
DATA PROCESSING

- We matched airplane model numbers from NTSB with flight data from BTS.
- A saftey score was created using NTSB data. 3 points for a fatality, 2 points for a serious injury, and half a point for a minor injury.
- We found engine information for each aircraft from FlightSaftey.org
- Then we matched engine emissions data from ICAO.
- The Saftey score and emission values were normalized and combined for each aircraft.
- Finally airport codes and flight data from BTS was combined with populatino data to create FPS score.

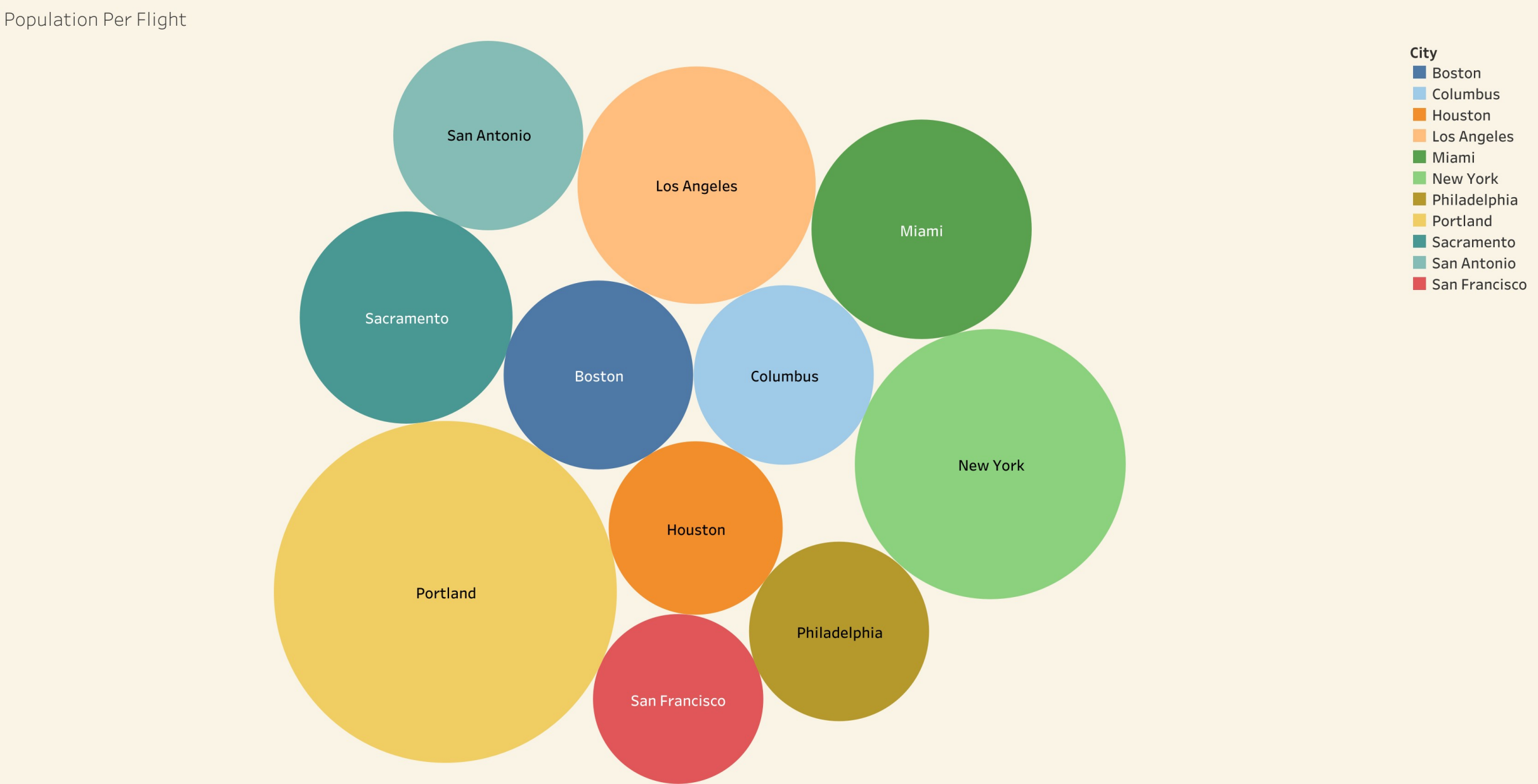
OUR RESULTS

WHAT THE DATA SHOWS US

COMBINED RATINGS CHART



POPULATION PER FLIGHT



RECOMENDATIONS

Having a fleet of aircraft that produce the lowest Co2 will be good for public relations.

Operating the safest aircraft will win passeger confidence.

Type	Narrow Body	Wide Body
Used	Airbus A319 / IAE V2500	McDonell Douglas MD11 / P&W PW4000
New	Embraer ERJ-175 / General Electric CF34	Boeing 767 / P&W PW4000

RECOMENDATIONS

We use Flight to Population Ratio to measure the amout of airline service an area get.

For Portland there are 415 people for every flight that departs the area's airports.

By targeting underserved cities we can gain an operational advantage.

City	State	FPR
Portland	ME	415.73
New York	NY	259.42
Los Angeles	CA	200.56
Miami	FL	171.36
Sacramento	CA	160.14
San Antonio	TX	127.57
Boston	MA	127.01
Columbus	OH	115.06
Philadelphia	PA	114.62
Houston	TX	107
San Francisco	CA	102.55

HOW TO IMPROVE THIS ANALYSIS

Some data sources used for this study had deficiencies.

NTSB data set missing many values.

Population data was for loosly defined metro areas. We'd like more control of what "area" was counted.

We only accounted for Co2 gas emissions but there are may other emission types.

THANK YOU

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