# Aircraft Acquisition Strategy for Commercial and Private Aviation Venture

# Project Overview

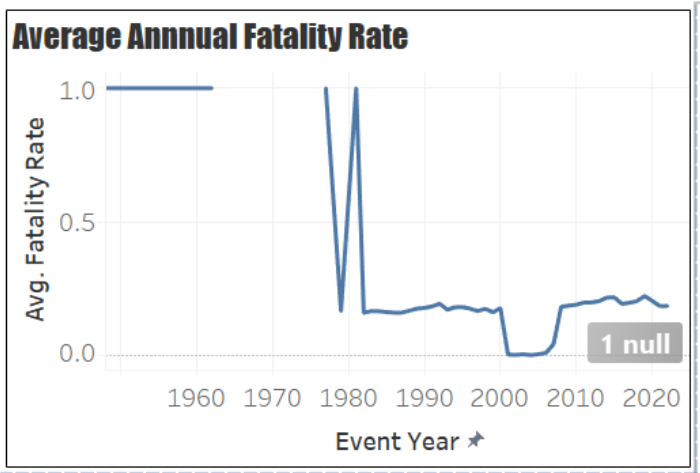
- Our company is embarking on an exciting expansion into the aviation sector, aiming to diversify our business portfolio by purchasing and operating aircraft for both commercial and private enterprises.
- This strategic move taps into growing demand for flexible, premium air travel options while positioning us in a high-value industry with strong long-term potential.
- As with any new venture, it is critical that we fully understand the operational risks inherent to aviation, particularly regarding aircraft safety and reliability, to ensure we protect our brand, investments, and customers.

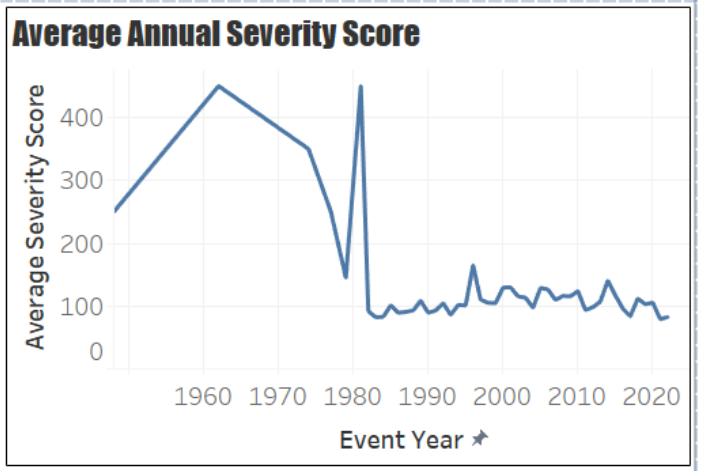
## Project Goal

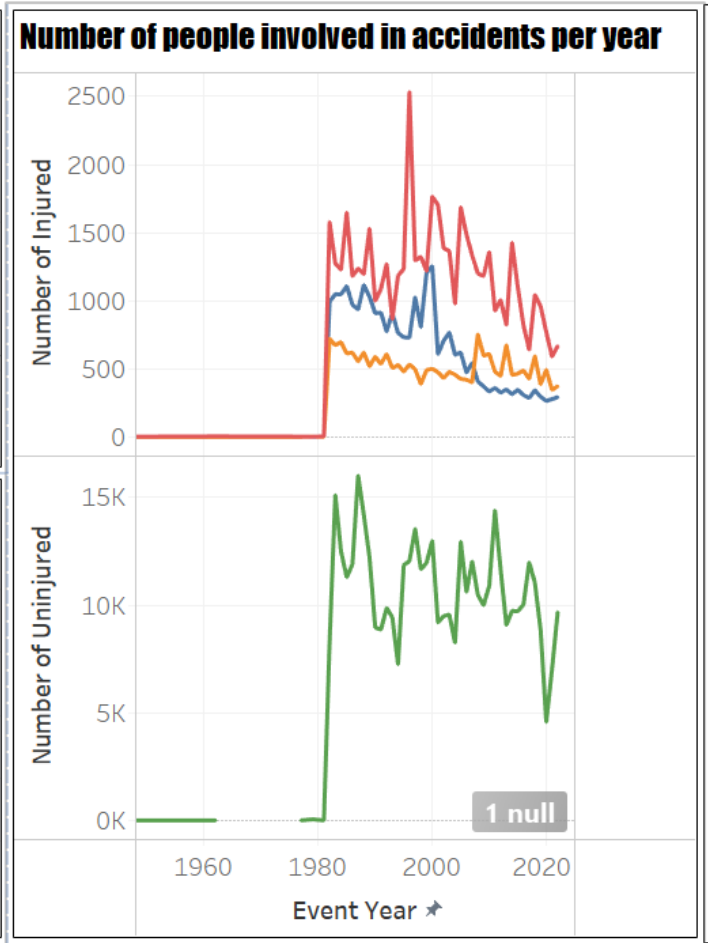
Our **goal** was to identify aircraft models that present the lowest operational risk based on analysis of historical aviation incident data. To achieve this goal, we formulated three key questions to guide our data analysis and eventually make an informed decision. In these three questions, we sought to establish:

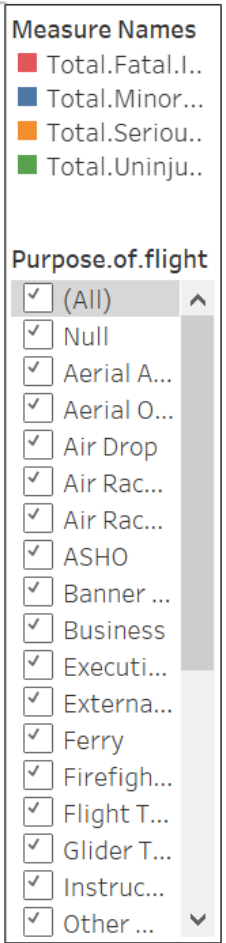
1. Aircraft makes/models with the lowest rates of fatal and serious accidents
2. Aircraft make/models have the fewest incidents resulting in the aircraft's damage
3. Identify aircraft that are suitable for private and commercial enterprises

# Trends of Aviation Risk Metrics

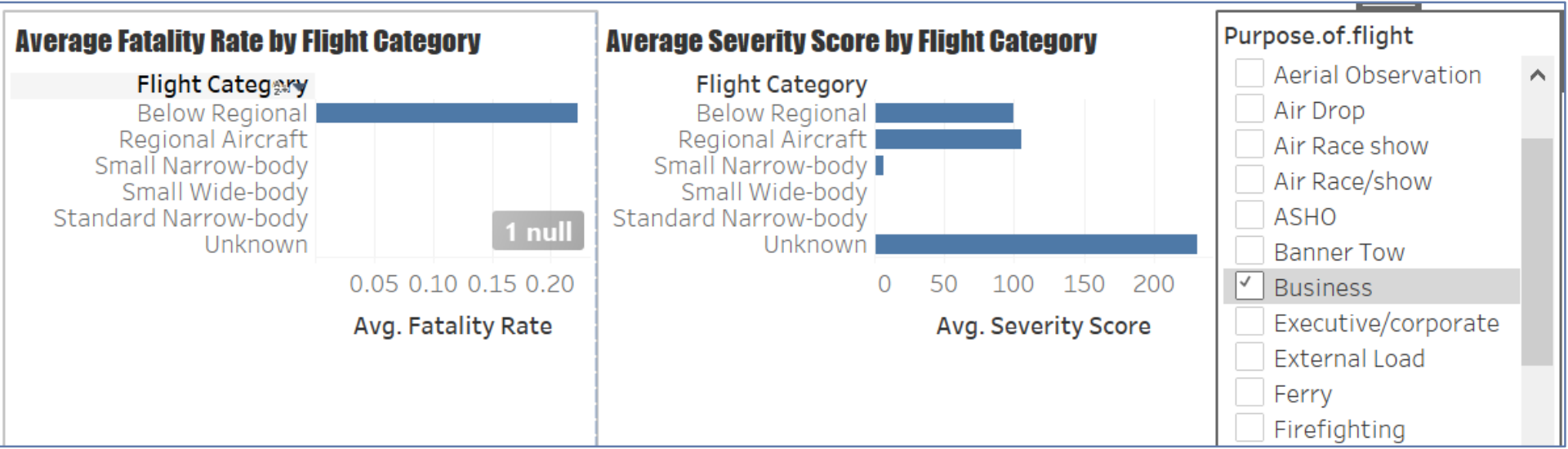


# Fatality Rate and Severity Score by Flight Category (Commercial Enterprise Aircraft)



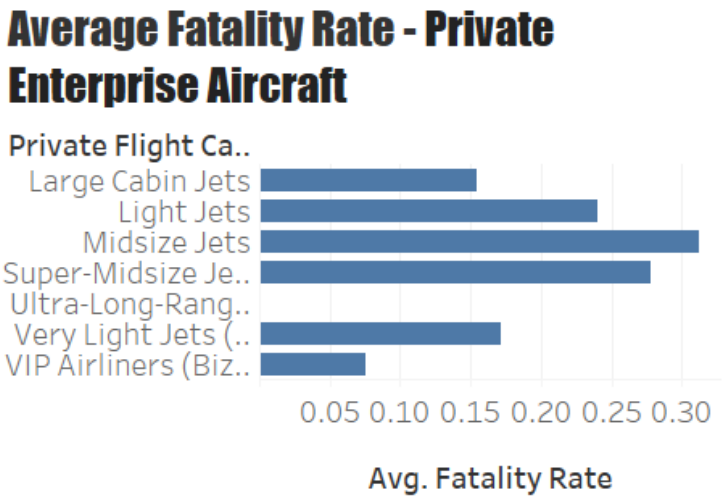

***Notes***

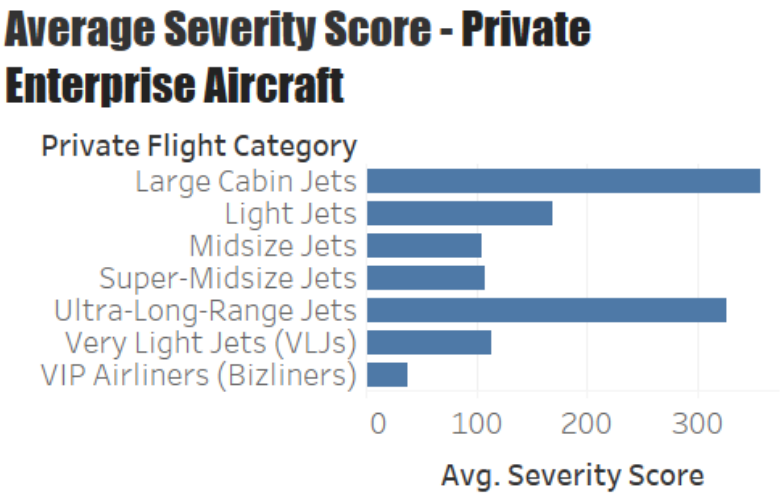
*Considering the general purpose of flight, we consider dropping public aircrafts (neither commercial nor private - owned by state and government authorities), ferry, positioning, executive/corporate. Also, other categories excluded include skydiving, flight test, other work use and personal, as they fall outside the categories of interest.*

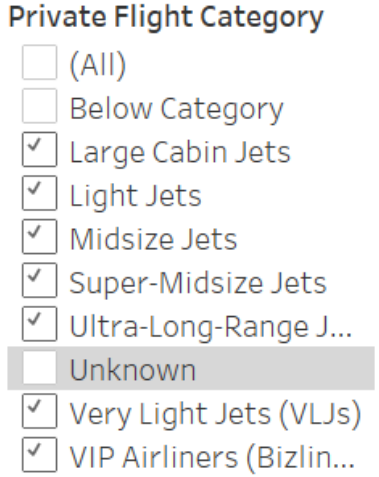
*Aligning with our business focus of commercial enterprise, we consider categories with purpose of flight as business. Using the flight category, we consider the* ***Standard Narrow-body*** *and* ***Small Wide-body*** *flight categories since they have zero fatality rate.*

*Similarly, the two categories have zero severity score. Implying low risk aircrafts.*

# Fatality Rate and Severity Score for Private Enterprise Aircraft



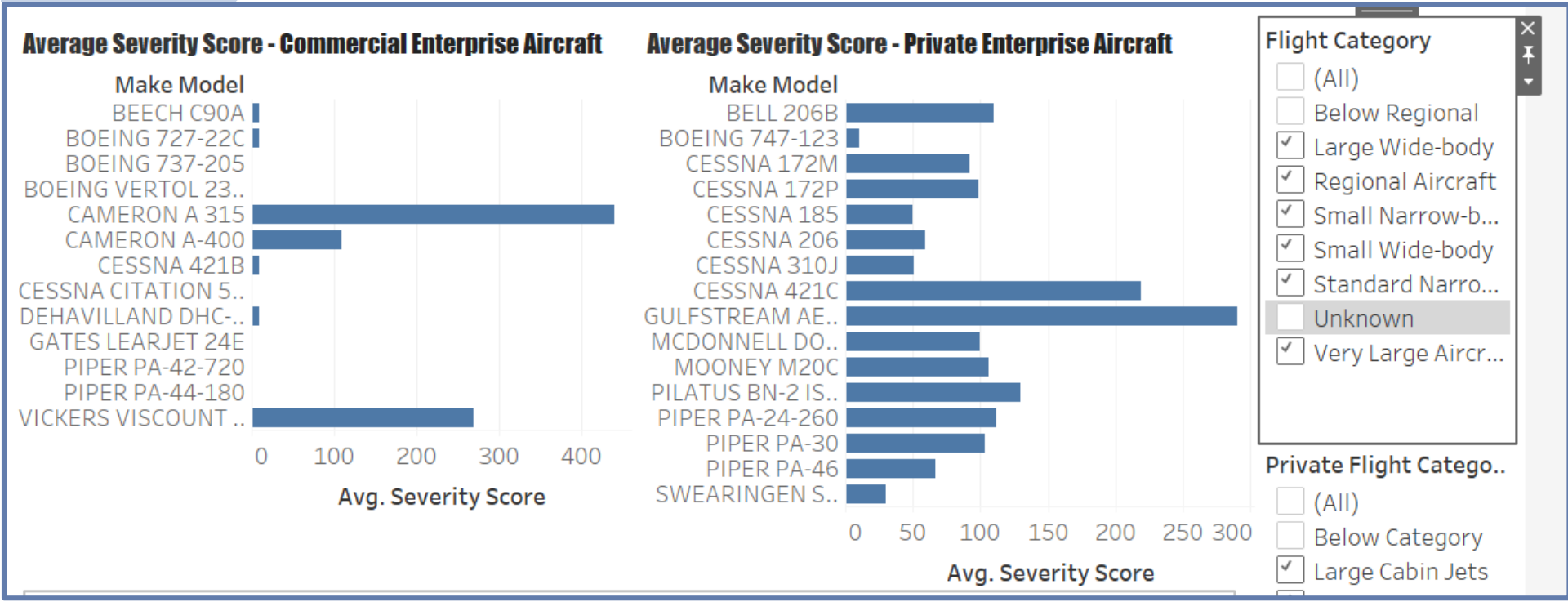

***Notes***

*Using the fatality rate information and private flight category, the proposed make and models for corporate business lines are as follows;*

*In ranking, based on fatality rate, Ultra-Long-Range Jets have lowest risk with (fatality rate of zero), followed by VIP Airliners (Bizliners) at 0.075, Large Cabin Jets (0.15), Very Light Jets (0.17), Light Jets (0.24). We consider* ***Ultra-Long-Range Jets*** *as low risk flight based on this metric.*

*Similarly,* ***Ultra-Long-Range Jets*** *have zero rating on severity score for some of its makes/models. Thus best pick for acquisition*

# Fatality Rate and Severity Score for Private Enterprise Aircraft




**Commercial Enterprise** : Aircrafts with zero risk ratings were considered and picked for consideration as those that can be acquired for commercial enterprise. The summary is as tabulated below, with our findings narrowing in favour of **PIPER PA-44-180** and **PIPER PA-42-720** being under Standard Narrow-body and Small Wide-body respectively.

**Private Enterprise**: Similarly aircrafts with zero risk ratings were considered and picked for consideration as those that can be acquired for private enterprise. The CESSNA 172P under U**ltra-Long Range Jets** has zero severity score

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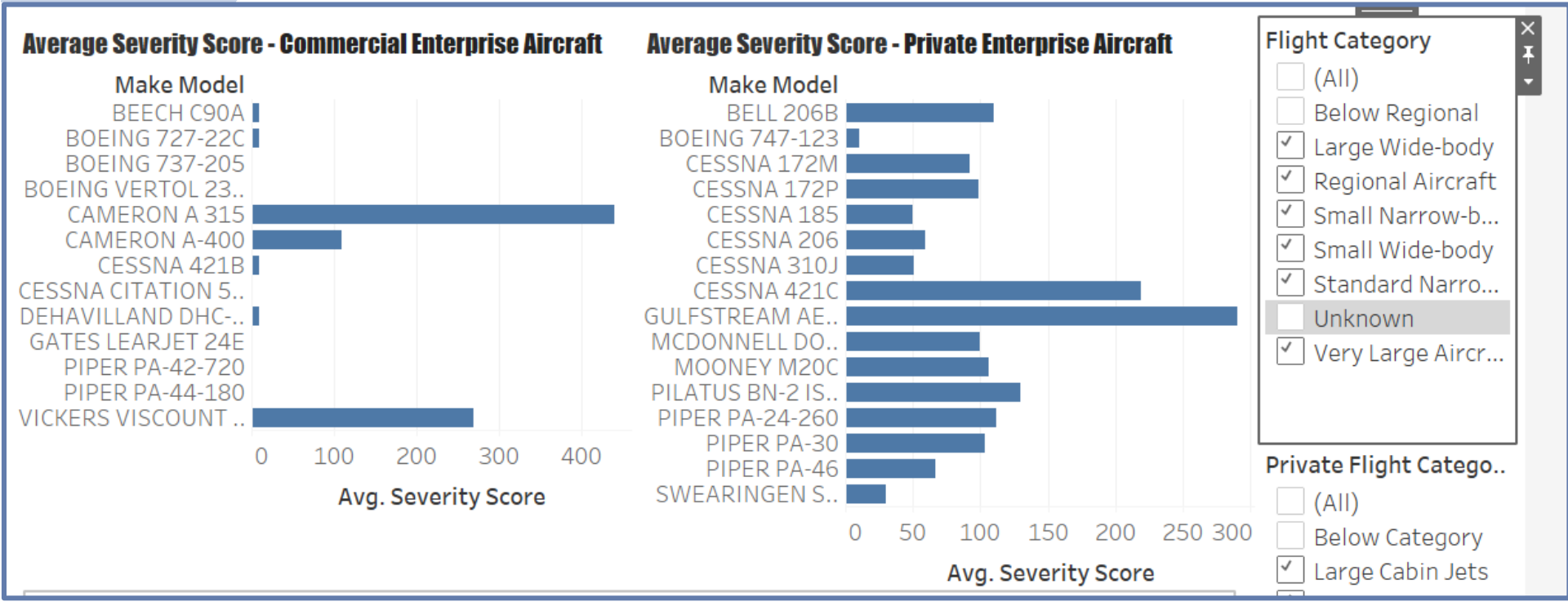


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# Recommendations

## Commercial Aircraft Acquisition

Based on risk assessment, two categories of aircrafts with zero fatality and severity emerge.

- The **Standard Narrow body** which has passenger capacity of between 150 and 220 passengers. The suitable aircraft make and model for consideration is **PIPER PA-44-180**
- The **Small Wide-body** which has a passenger capacity of between 220 and 300 passengers. The suitable aircraft make and model for consideration is **PIPER PA-42-720**

These two aircrafts recommended provide the company with an to explore Medium-haul domestic including short, Medium to long-haul international flights. Thus, with the acquisition, the company can commercially explore both domestic, regional and international airline routes.

## Private Aircraft Acquisition

Based on risk assessment, one category of aircraft present zero fatality rate and severity score. This aligns well with our risk centered approach, that is;

- The company through the head of aviation division should consider acquisition of **Ultra-Long-Range Jets** with a passenger range of 12 to 19 passengers. The most suitable aircraft under this category is **CESSNA 172P**.

The aircraft can provide global nonstop flights (e.g., between New York to Tokyo). Thus, favorable for Ultra-long haul of private clients.

# THANKS!

**Any questions?**

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