AVIATION RISK ASSESSMENT: SELECTING LOW-INCIDENT AIRCRAFT FOR COMMERCIAL USE

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This presentation showcases the findings of a detailed data analysis conducted to evaluate the safety risks of different aircraft models. The goal was to support the company's expansion into the aviation industry by identifying aircraft with the lowest accident and injury records.

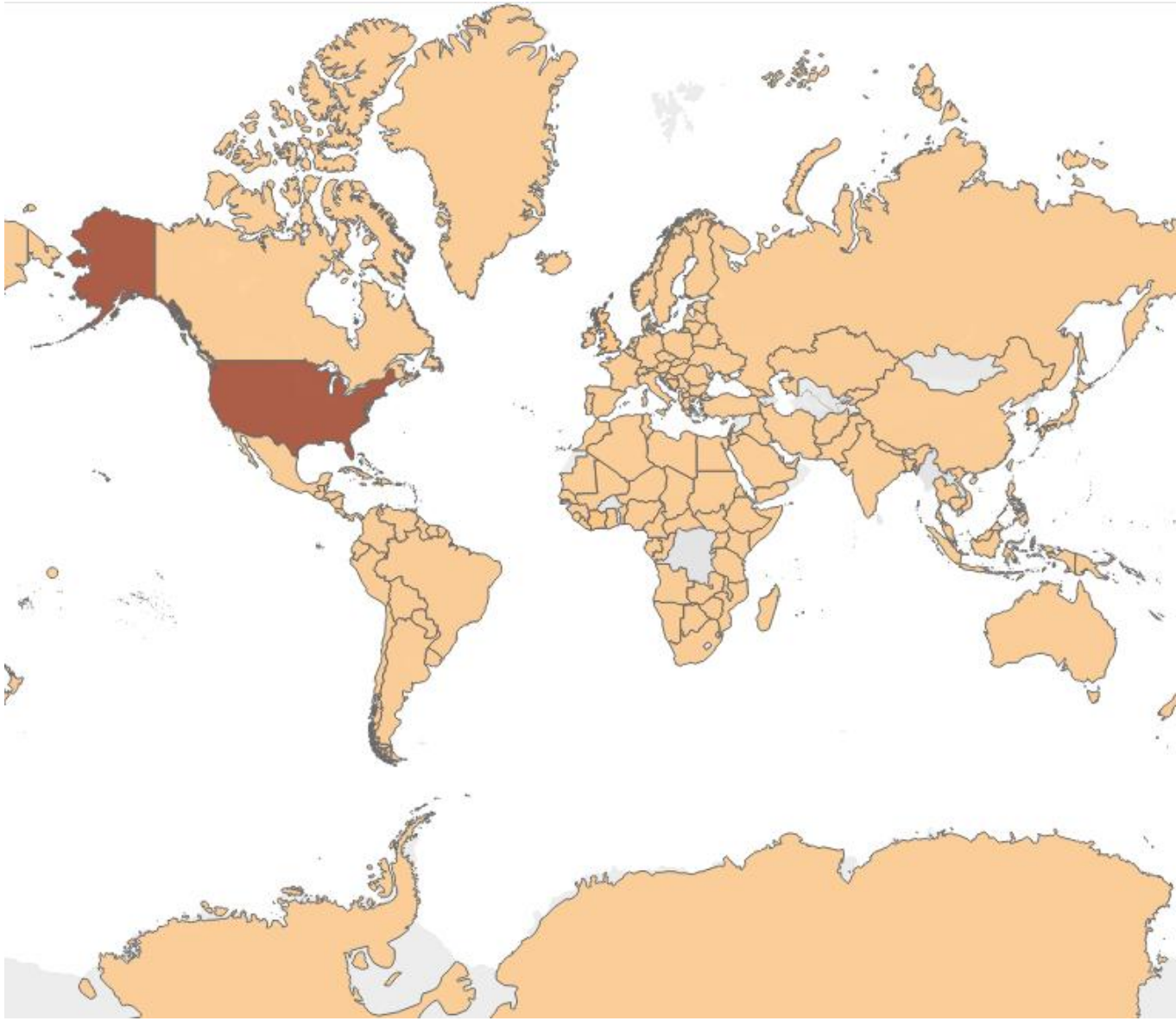
Using historical aviation data, key factors such as aircraft make, model, accident frequency, and severity of injuries were assessed. The analysis highlights a set of aircraft that consistently demonstrate low-risk profiles, making them ideal candidates for both commercial and private use.

These findings provide the aviation division with actionable insights to inform safe, strategic, and cost-effective aircraft purchasing decisions as the company enters this new market.

GLOBAL FATALITY DISTRIBUTION

+ An analysis of fatalities by country shows that the USA had the highest number of fatal injuries, recording 30,190 in total. This is significantly higher than other countries, with Russia reporting 765 and Canada 946 fatalities—at least 30 times fewer than the US.

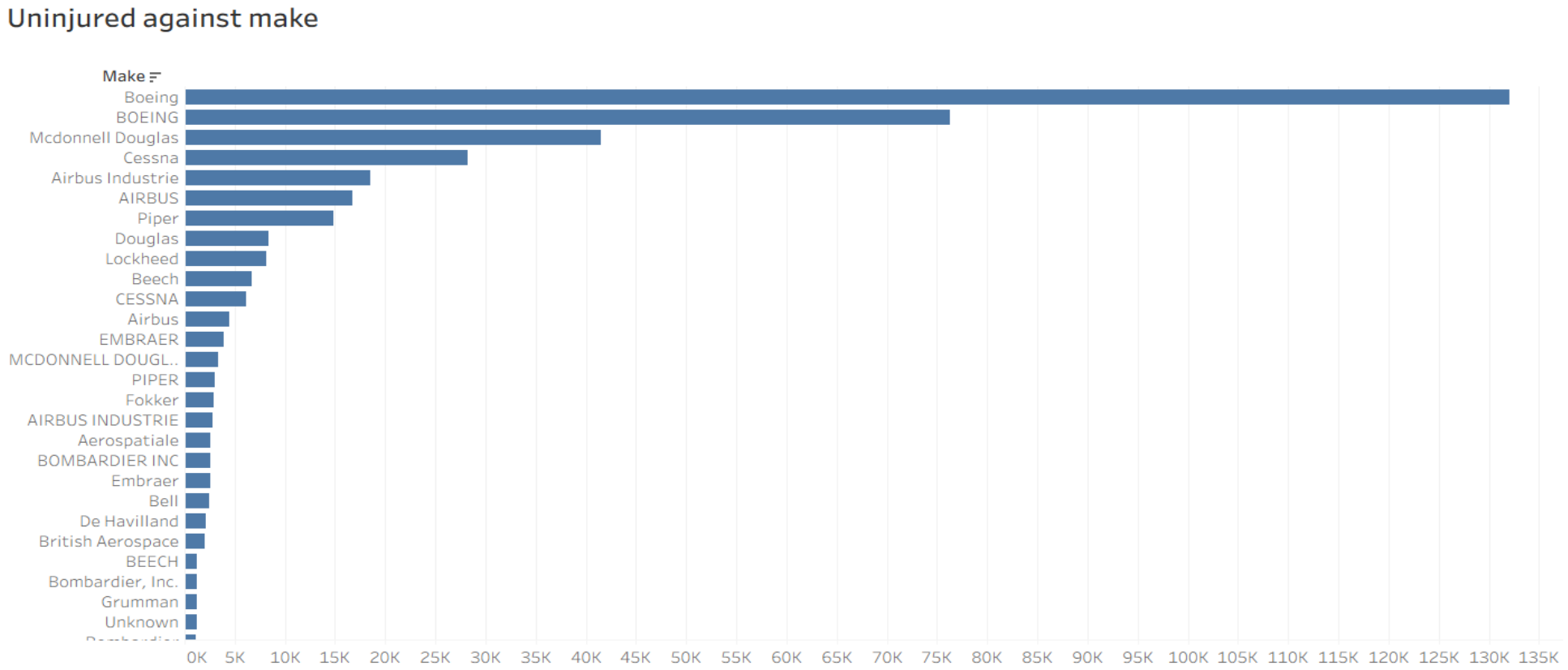
+ This shows that the United States recorded significantly more aviation fatalities than any other country, with over 30,000 fatal injuries, nearly 30 times higher than countries like Russia and Canada, highlighting its vast aviation activity and industry scale.



UNINJURED PASSENGERS BY AIRCRAFT MAKE

+ Boeing records the highest number of uninjured passengers, followed by McDonnell Douglas and Cessna , which may reflect a strong safety record, high passenger volumes, or extensive global use.

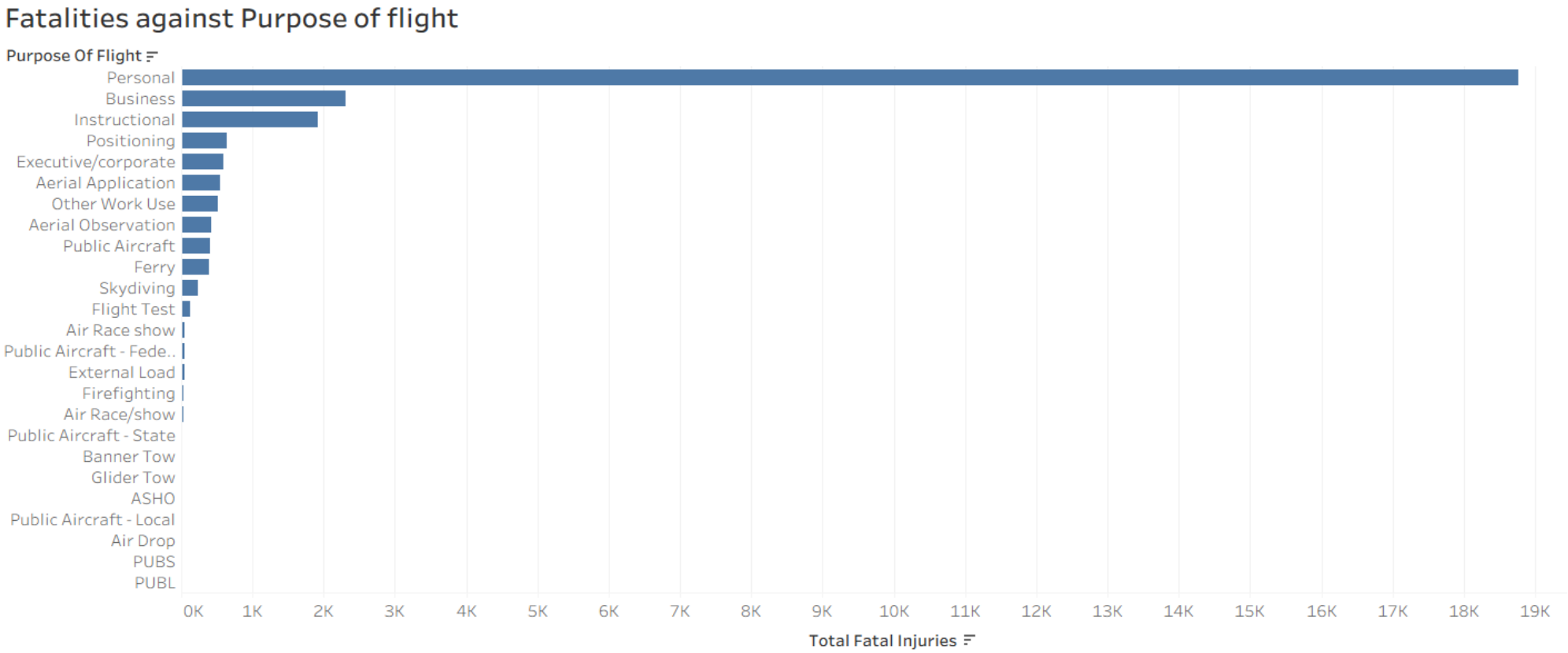
+ However, a **high number of uninjured passengers could also indicate a higher number of total accidents**, suggesting that both usage volume and incident frequency should be considered when interpreting safety.



FATALITIES BY PURPOSE OF FLIGHT

+ Personal flights account for the overwhelming majority of fatalities, far exceeding those from business, instructional, or corporate flights, highlighting a key area of risk. This also implies that most accidents occur on small personal planes and not commercial planes.

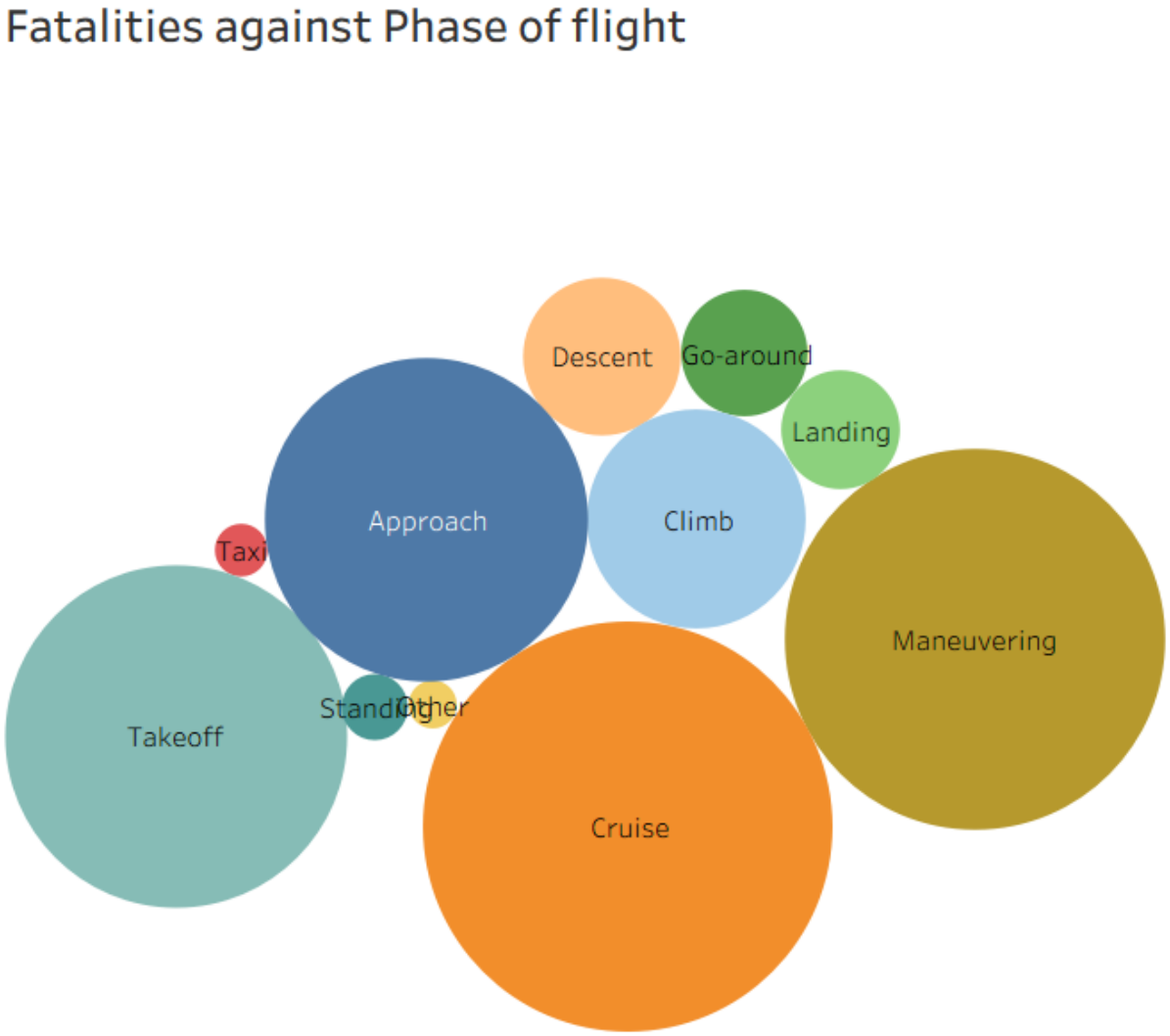
+ Higher fatalities in personal flights may also reflect their higher frequency, suggesting that usage volume—not just purpose—plays a significant role in risk levels.



ANALYSIS OF FATALITIES BY FLIGHT PHASE

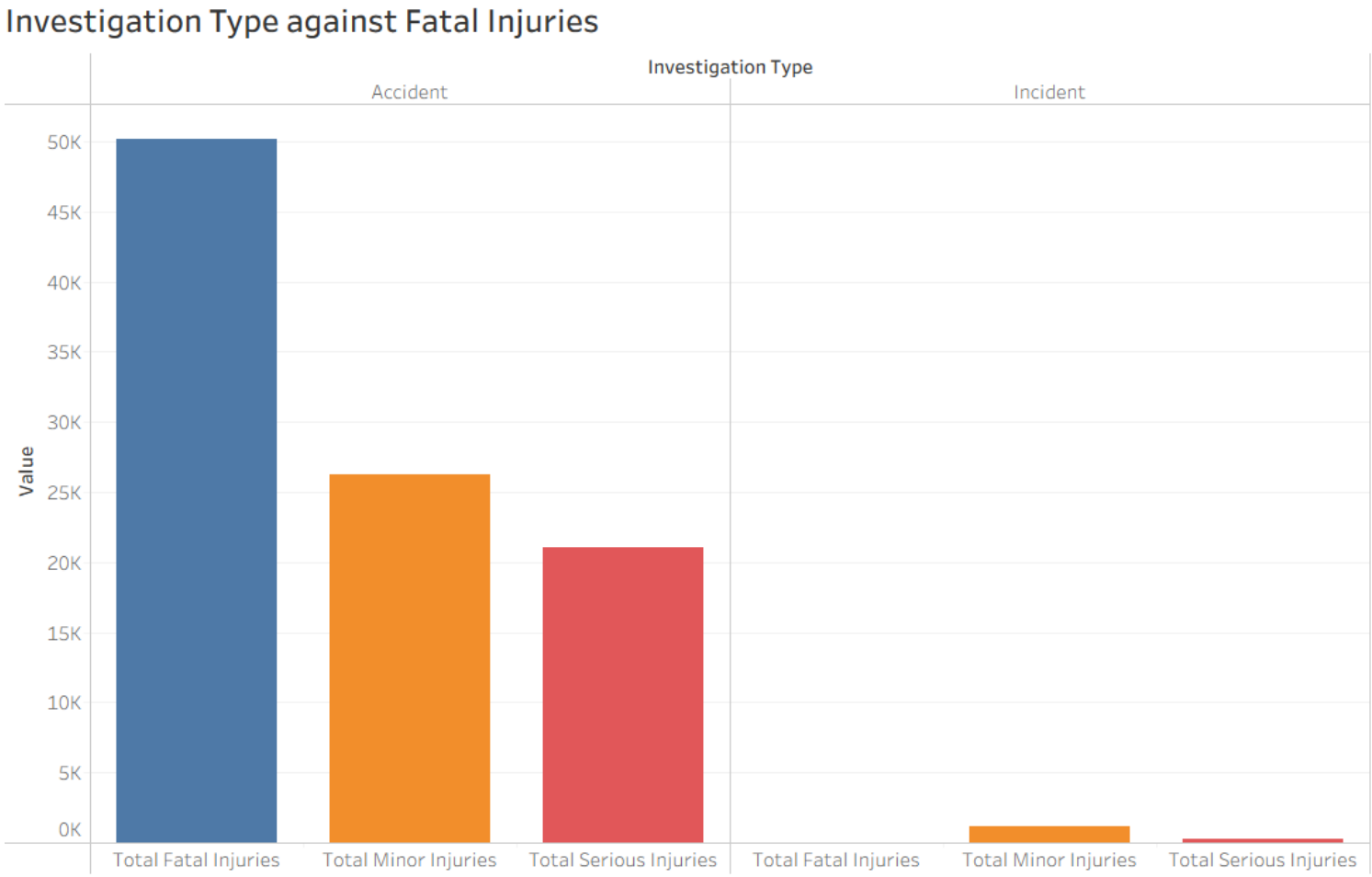
+ **Highest Fatality Phases:** The largest circles, indicating the most fatalities, are seen during the Maneuvering, Cruise, Approach, and Takeoff phases. This suggests these phases are the most hazardous, likely due to complex operations (maneuvering), long exposure time (cruise), and increased pilot workload (approach and takeoff).

+ **Lowest Risk Phases:** Phases like Taxi, Standby, and Other have much smaller circles, indicating fewer fatalities. These ground or less intensive flight stages tend to be safer, likely due to lower speeds and more controlled environments.



COMPARISON OF INJURY SEVERITY BY INVESTIGATION TYPE (ACCIDENT VS. INCIDENT)

+ **Fatalities Occur Almost Exclusively in Accidents**: The chart shows that total fatal injuries overwhelmingly occur during accidents, with values **exceeding 50,000**. In contrast, incidents result in nearly zero fatal or serious injuries, confirming that fatalities are a strong indicator of accident-level events.
+ Minor Injuries Span Both Investigation Types: While minor injuries are more common in accidents, a small but noticeable number still occur during incidents. This suggests that although incidents are less severe overall, they can still result in non-fatal harm, warranting thorough investigation and safety follow-up.



CONCLUSION

+ Boeing aircraft recorded the **highest number of uninjured passengers**, suggesting that in the event of an accident, they offer a **higher likelihood of survival**, making them a strong safety-conscious option for the company to consider when choosing which aircraft to invest in.