

SUGGESTIONS QUESTIONS

General Safety & Risk Assessment

1. Which aircraft models have the lowest accident rates?
2. How does the accident rate vary between commercial and private aircraft?
3. Which manufacturers have the best safety records based on historical data?
4. What is the relationship between aircraft age and accident occurrence?
5. Are there specific flight phases (e.g., take-off, landing) where certain aircraft are more prone to accidents?

Aircraft Design & Performance

6. How does the number of engines impact accident frequency and severity?
7. Do larger aircraft (higher passenger capacity) have more or fewer accidents per flight compared to smaller aircraft?
8. Are there specific aircraft types (jet vs. Turboprop) that have lower risk levels in commercial vs. Private operations?

Geographic & Operational Considerations

9. In which countries or regions do most accidents occur, and what aircraft are commonly involved?
10. How do different weather conditions affect accident rates for different aircraft?
11. Do certain aircraft types perform better in specific climates or geographic regions?

Injury & Damage Analysis

12. Which aircraft have the lowest fatality rates in past accidents?
13. What is the correlation between aircraft type and the severity of injuries (fatal, serious, minor, uninjured)?
14. How often do specific aircraft sustain irreparable damage in accidents?

Regulatory & Financial Considerations

15. How do different aircraft models compare in terms of safety regulations and compliance?
16. Which aircraft require the least amount of maintenance to maintain high safety levels?
17. What is the long-term cost of operating different aircraft in terms of repairs and insurance based on accident history?

PRESENTATION MATERIALS

INTRODUCTION

As the company expands into the aviation industry, it seeks to purchase and operate aircraft for both commercial and private ventures. However, with no prior experience in the sector, the company must carefully assess potential risks associated with different aircraft types. Understanding historical accident data is crucial in determining which aircraft models offer the lowest risk, ensuring safety, regulatory compliance, and cost-effectiveness.

GENERAL OBJECTIVE

To identify the safest and most reliable aircraft for commercial and private operations by analysing historical accident data, assessing risk factors, and providing actionable insights for informed decision-making.

SPECIFIC OBJECTIVES

1. **Analyse Aircraft Safety Records** – Examine historical accident data to identify aircraft models with the lowest accident and fatality rates.
2. **Evaluate Risk Factors by Aircraft Type** – Assess how factors such as aircraft age, manufacturer, engine type, and passenger capacity influence accident frequency and severity.
3. **Assess the Impact of Weather and Geographic Location** – Determine how different weather conditions and regions contribute to aircraft accidents and identify aircraft best suited for various environments.
4. **Compare Commercial vs. Private Aircraft Risks** – Investigate whether commercial or private aircraft have higher accident rates and identify models that are safer for each category.
5. **Provide Data-Driven Recommendations for Aircraft Selection** – Develop a risk-based ranking system to help the company choose the safest and most cost-effective aircraft for its new aviation division.