PowerPoint Presentation Structure

Aviation Risk Analysis:
Recommendations for Safer Aircraft Investment

Based on NTSB Data (1962–2023)

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Date: 15/06/2025

Executive Summary

Company wants to expand into aviation

- Goal: Determine safest aircraft to buy and operate
- Based on historical accident and fatality data

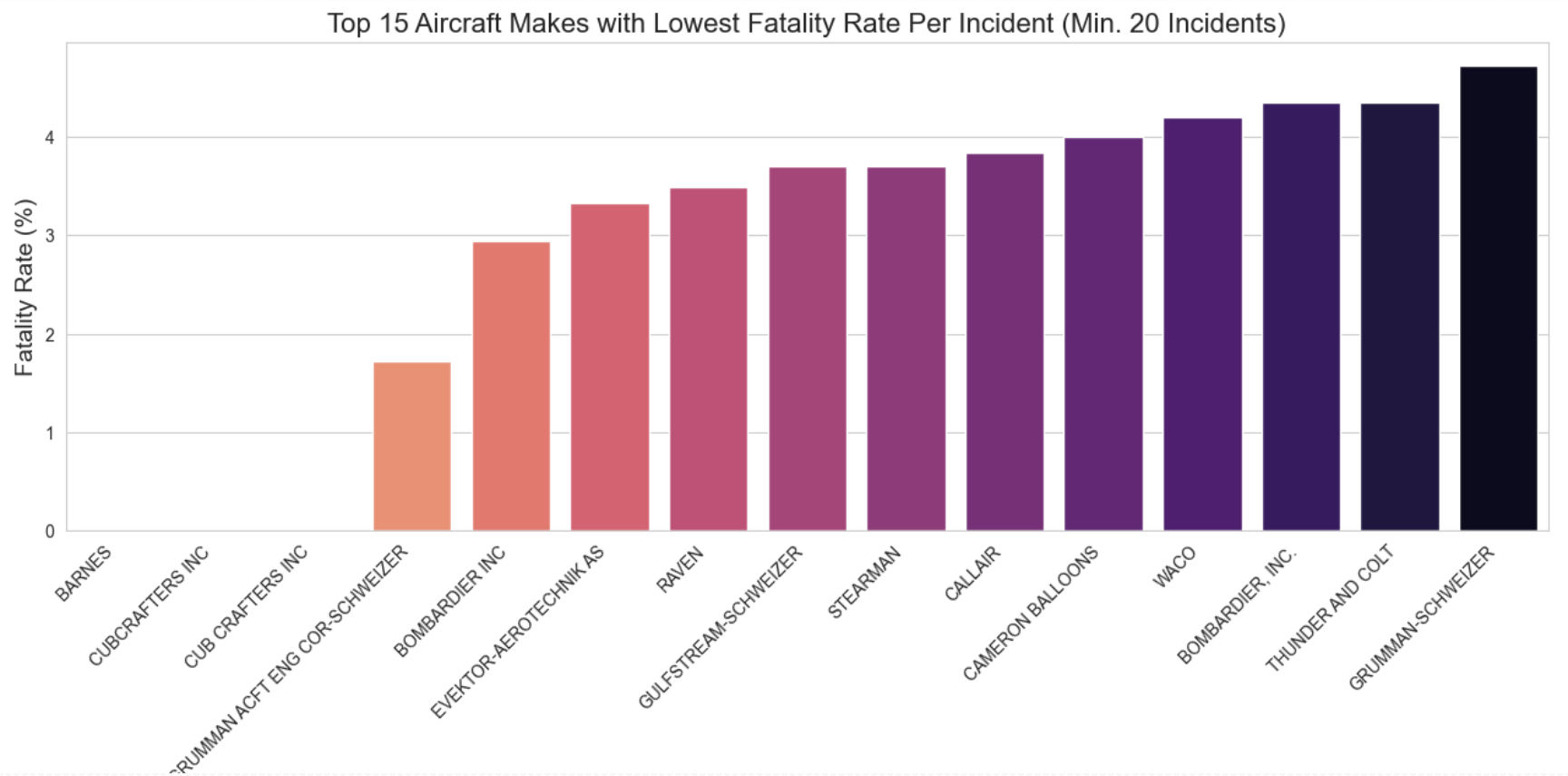
Methodology

- Cleaned and analyzed 88,889 accident reports
- Focused on model, engine type, flight purpose, and fatality risk
- Developed risk scores and ranked aircraft

Aircraft Safety Insights

List of safest aircraft by model Bar chart: Top 10 models with lowest fatality rates (min 20 incidents) Callout: e.g., “Cessna 172 has 0.03 average fatality rate over 200+ incidents”

Top 15 aircraft makes with lowest fatality rate per incident



Engine Type Risk

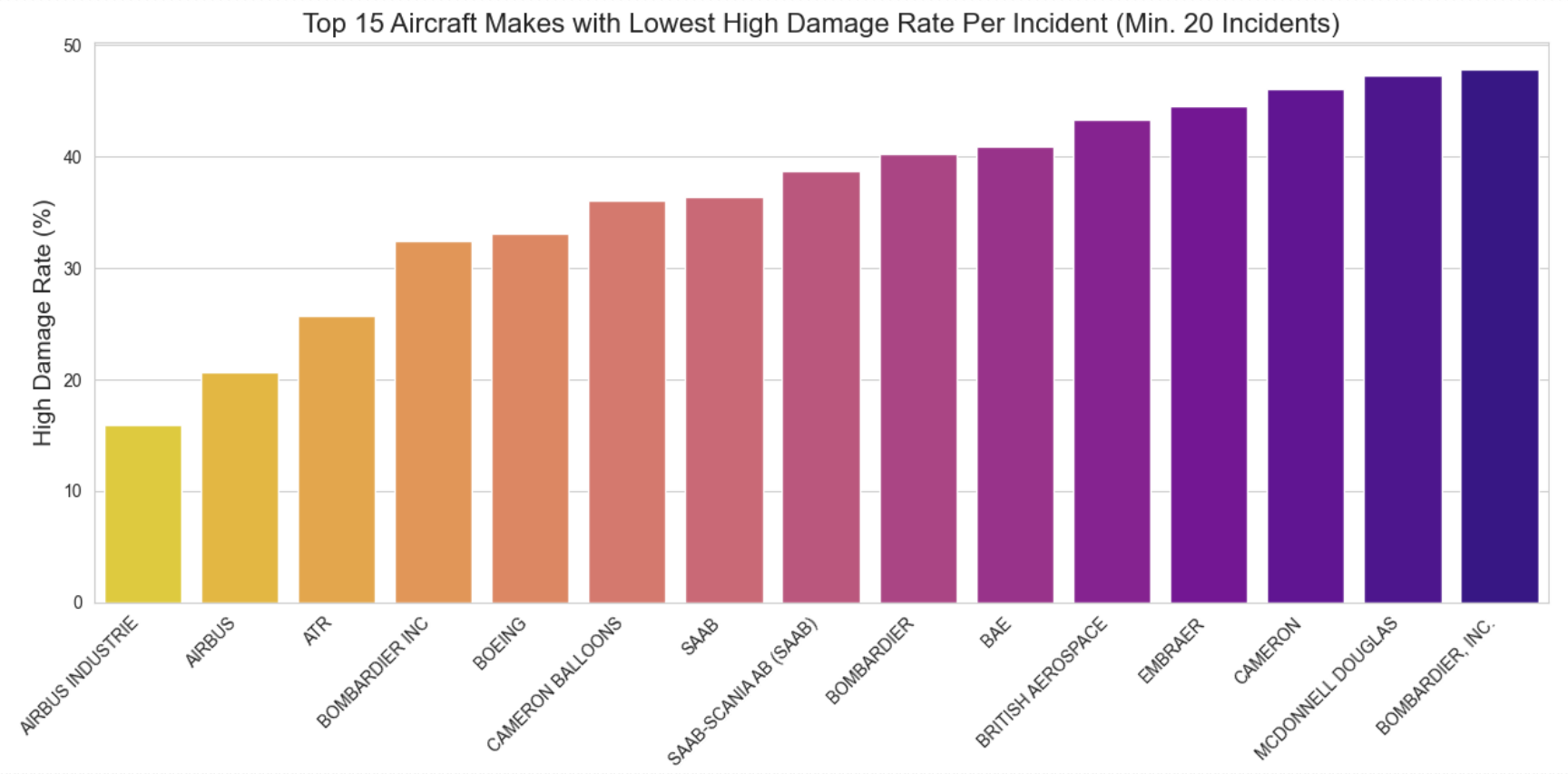
Chart: Average fatality rate by engine type

Summary:

Turboprop/turbojet engines show fewer fatalities

Reciprocating engines (piston-based) are more common in risky incidents

Top 15 Aircraft makes with lowest high damage rate per incident

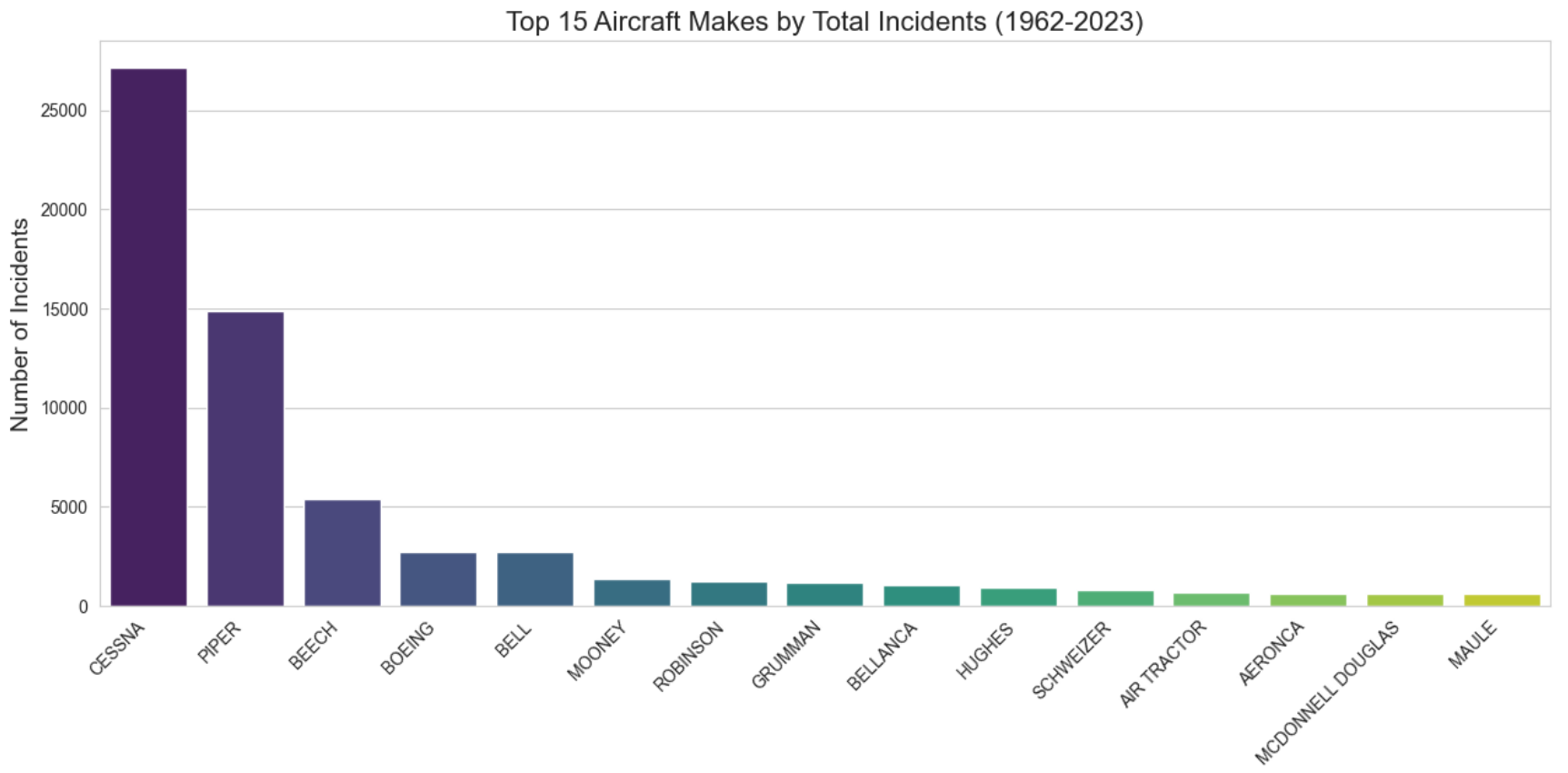


Flight Purpose Risk

Chart: Fatality rates by purpose (e.g., personal, commercial, training)

Insight: Personal flights are 3× more fatal than commercial flights

Top 15 aircraft makes by total incidents



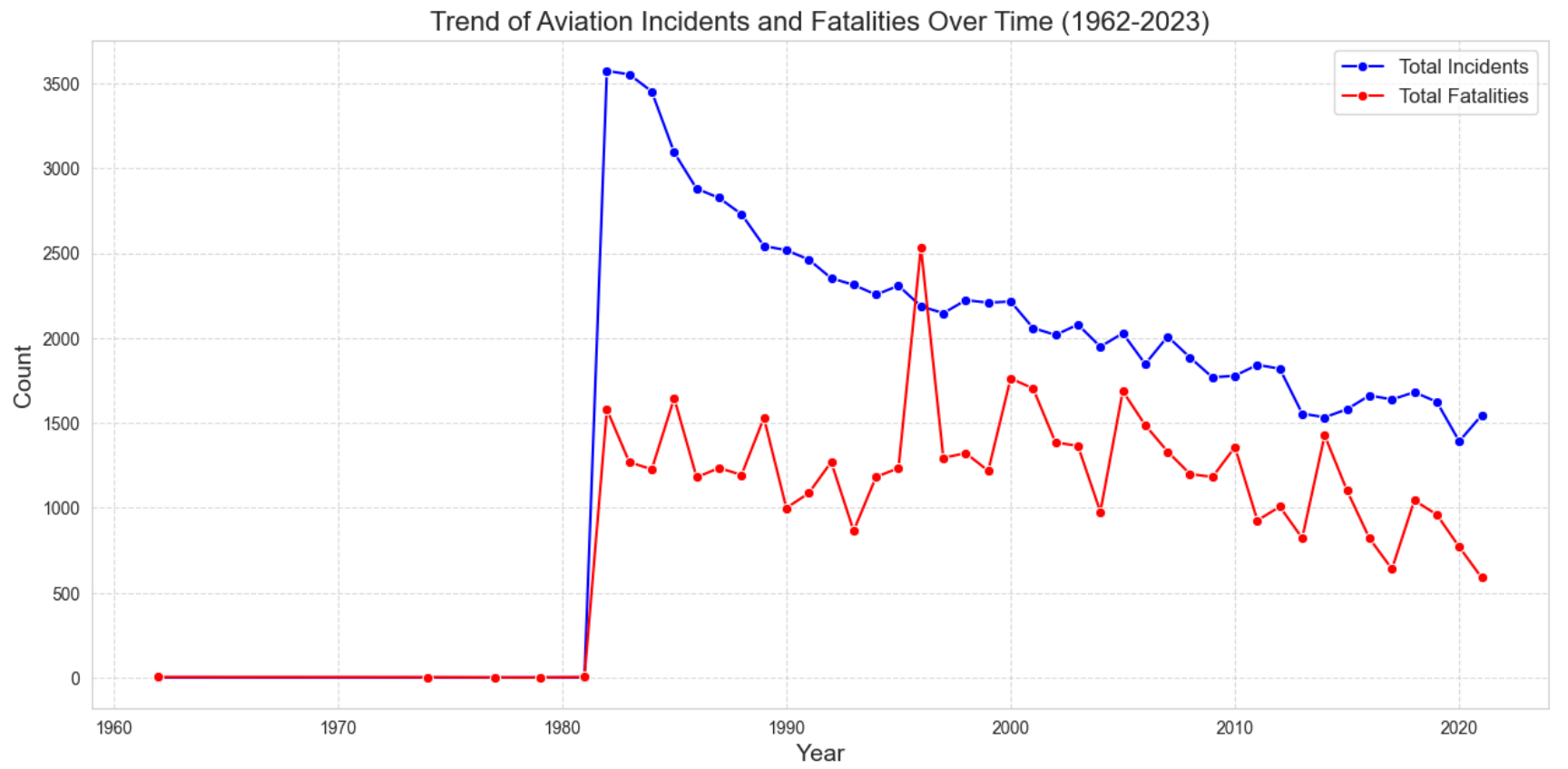
Safety Over Time

Line graph: Accidents per year

Line graph: Average fatality rate per year

Insight: Aviation safety has improved steadily since the 1980s

Safety Over Time graph



Key Recommendations

- Purchase models with >20 events and fatality rate <5%
- Prefer newer twin-engine or turboprop aircraft
- Avoid older aircraft primarily used for recreational or personal use

Interactive Dashboard

Screenshot of Power BI dashboard

Mention filters: aircraft, engine, weather, flight phase

Encourage hands-on exploration

Next Steps

- Conduct due diligence on top models
- Integrate risk scoring into procurement process
- Explore maintenance/parts availability for shortlisted aircraft

Thank you