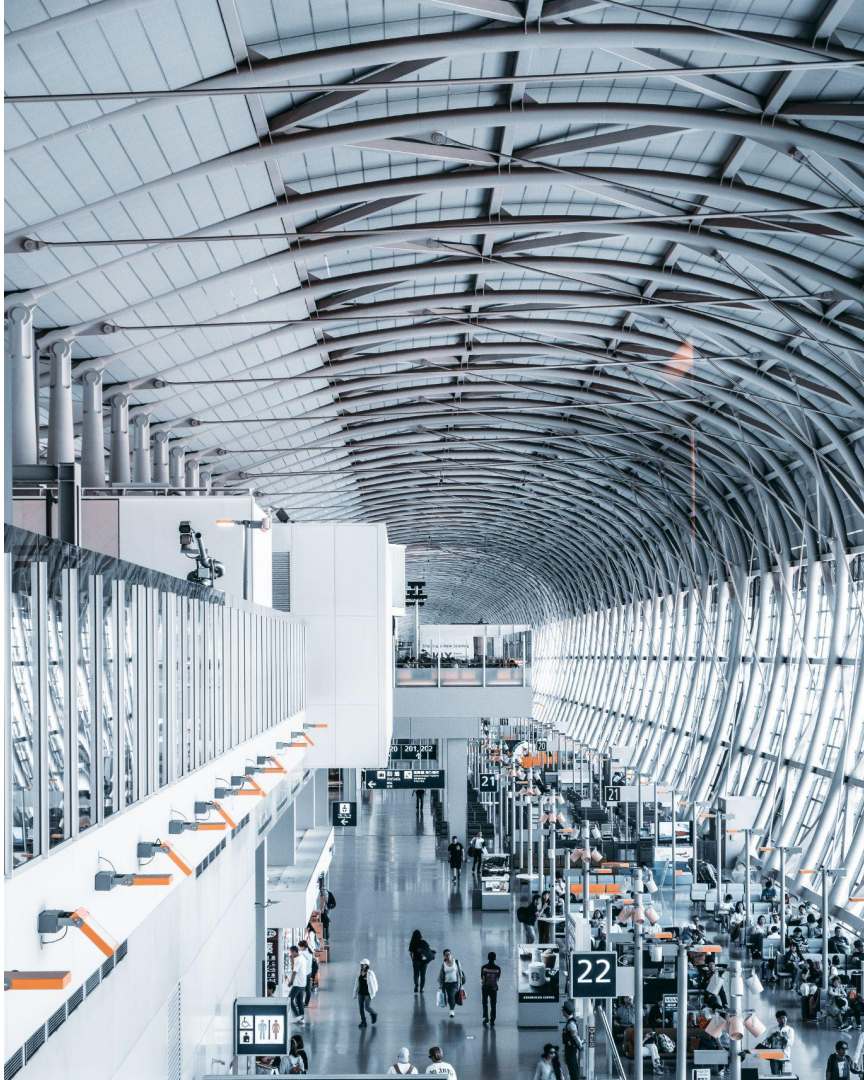
Risk Analysis: New Aviation Division

October 6, 2023



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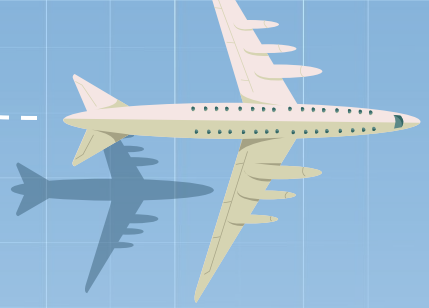

Business Problem

Data Overview

Analysis

Recommendations

Future Insights

Findings

We found Bombardier to have 0 fatalities in inclement weather.

Business Problem

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Identify the lowest risk aircrafts in inclement weather

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Business Problem | Data Overview | Analysis | Recommendations | Future Insights

Data

- Aviation accident data from National Transportation Safety Board from 1962-2023
- 89,000 observations from US and foreign

Conditions

- Professionally built aircrafts
- Top 10 manufacturers*
- Inclement weather
- Past 30 years*

Limitations

- Total number of flights per year
- Total number of passengers
- Ambiguous reporting data

Analysis

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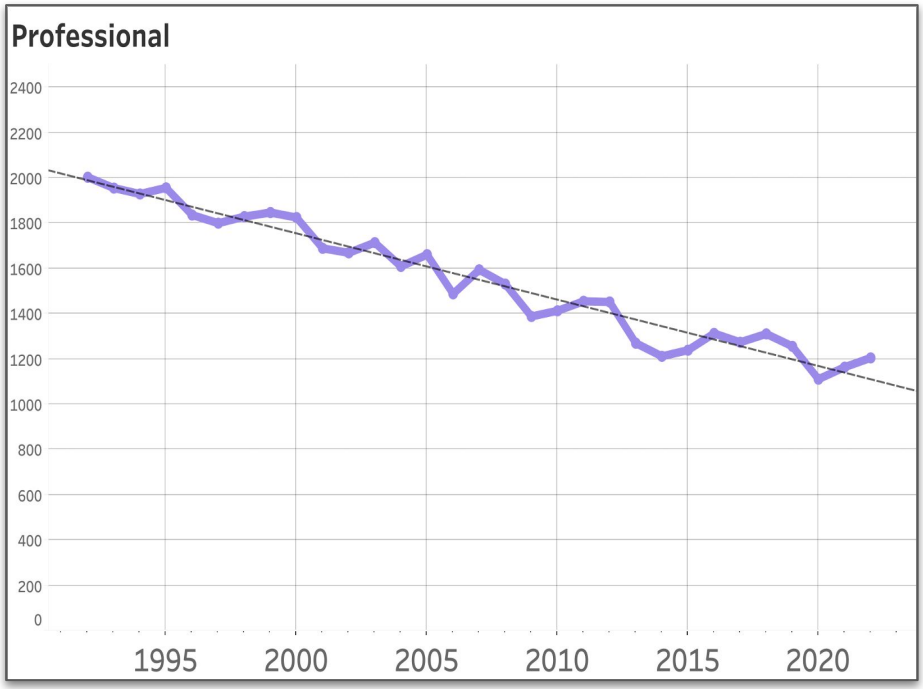
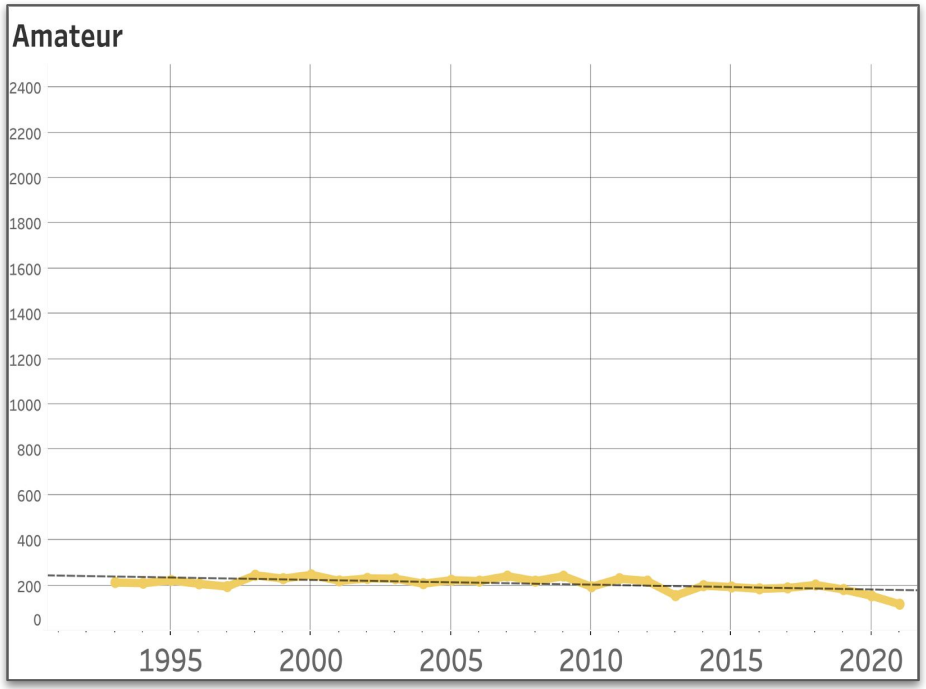
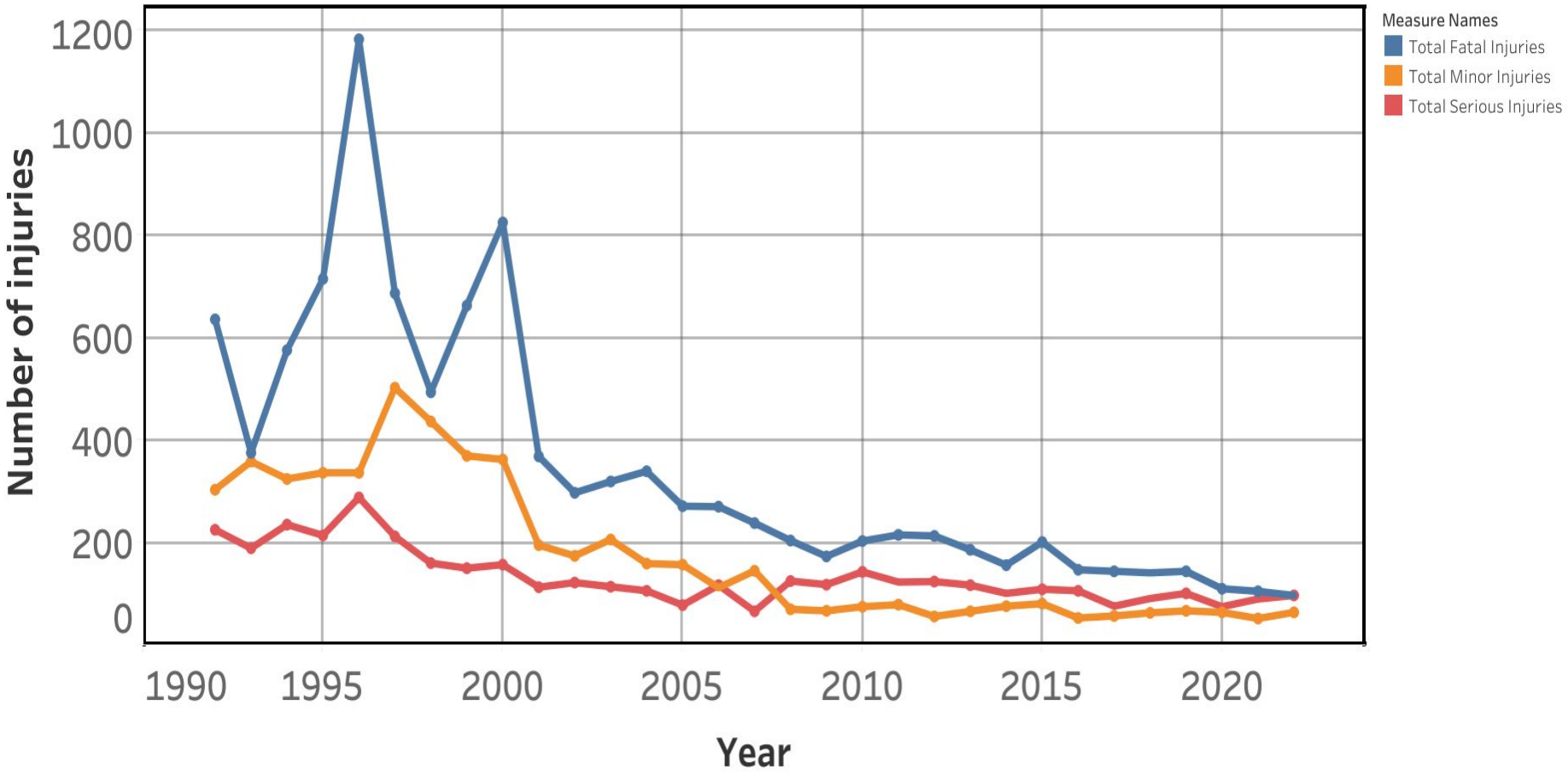
Stronger Accident Decline in Professional vs. Amateur Aircrafts

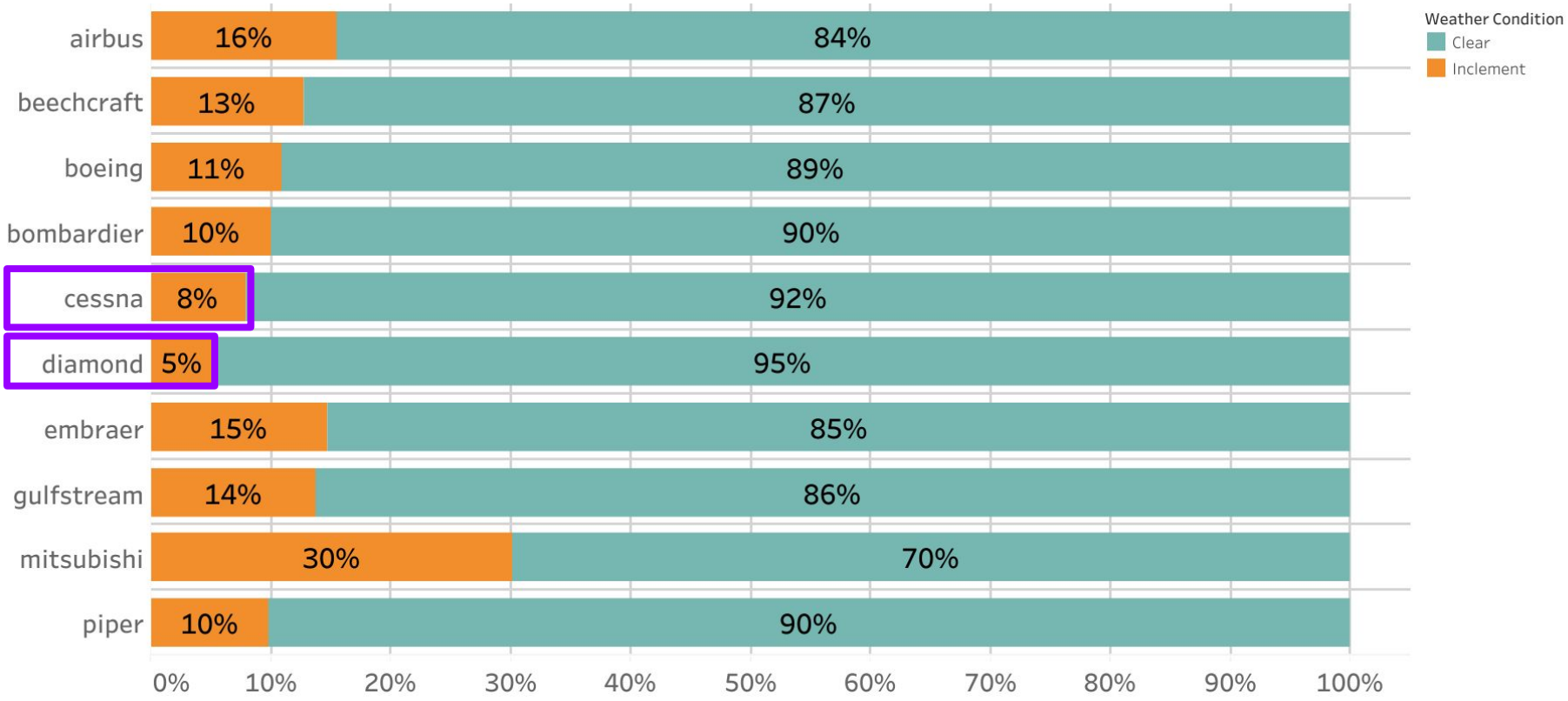




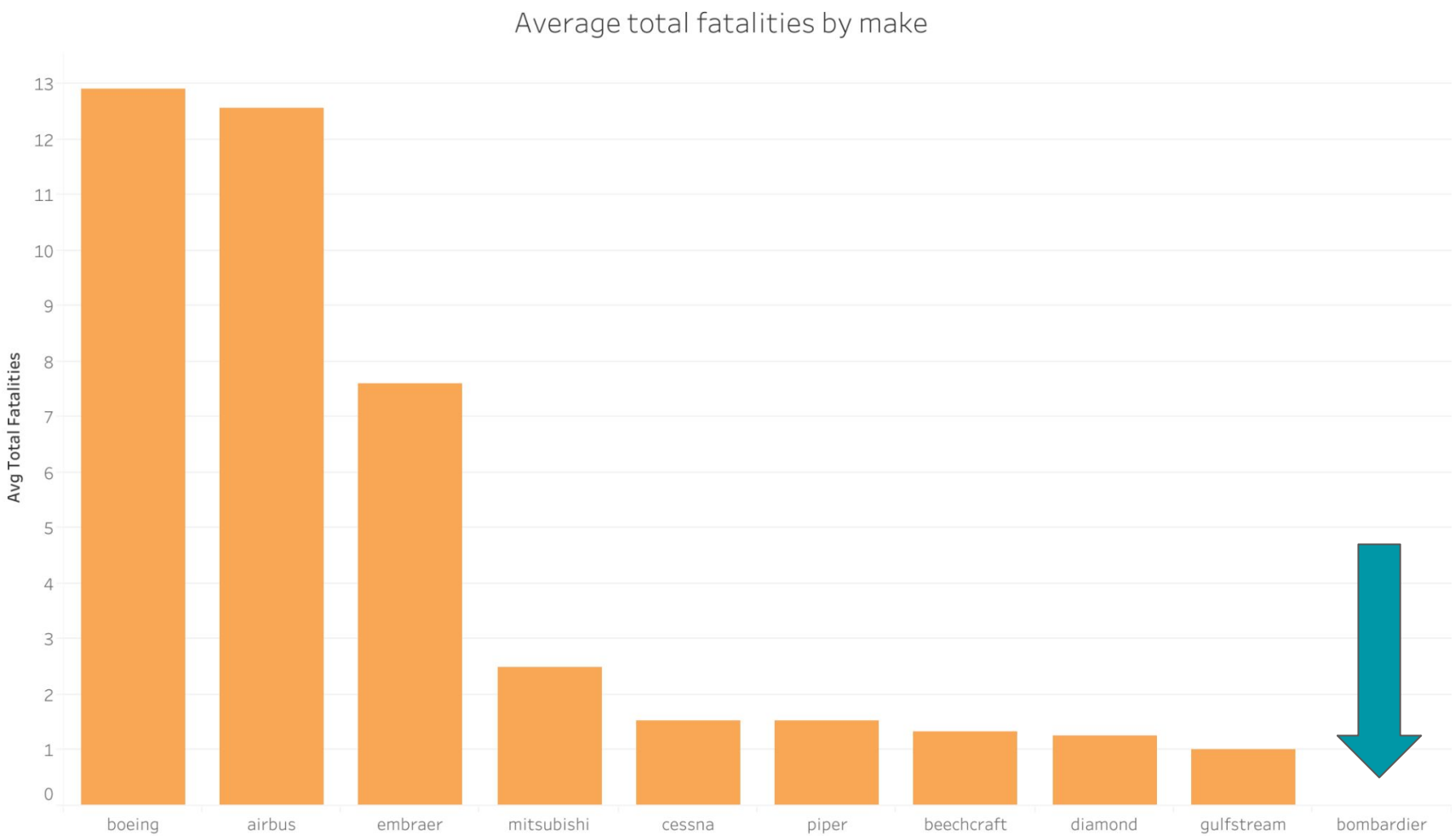
Severity Assessment: Injury Type Across Time



Risk Assessment: Total accidents by weather condition



Manufacturer Performance: Inclement Weather by Severity



Recommendations

1. Choose professionally built aircraft

2. Manufacturer - Bombardier had 0 accidents with fatalities in inclement weather over the last 30 years

3. **Alternative options**:
   a. Diamond had the lowest percentage of its accidents that occurred during poor weather conditions
   b. Cessna also had a low percentage of accidents in bad weather along with far more data supporting that result

Future Insights

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1. Expand analysis with total number of flights and passengers data
2. Analyze location data to identify favorable air routes
3. Study economic data including cost from manufacturers
4. Implement FRAT (Flight risk assessment tool) for pilots*

Questions?

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Appendix

1. 30 years for aircraft lifetime
2. Top 10 companies
3. 1950s air safety standards
4. FRAT Tools