



Data Sharing

Beyond FOQA and ASAP

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ALPA Aviation Safety Chairman

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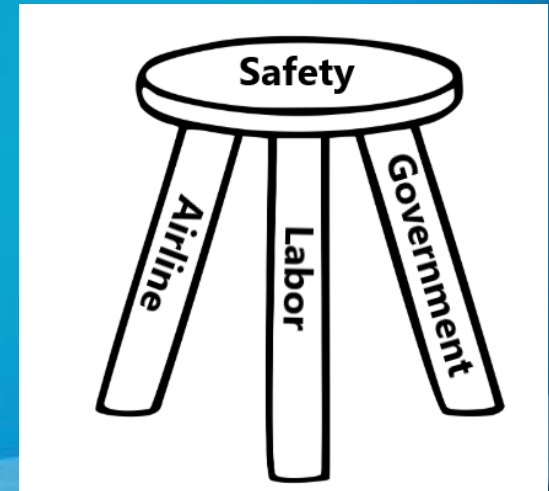


Introduction

- Steve Jangelis
 - Delta A-320 Captain
 - ALPA Aviation Safety Chair
 - Co-Chairman of FAA’s Runway Safety Council
 - CAST and ASIAS Primary Representative for ALPA
- Air Line Pilots Association
 - 34 Airlines in US and Canada
 - 61,000 members

Aviation Safety in the United States

- Supported by individual programs at individual airlines
- Share information at a national level
- Allow collaboration between all stakeholders
- Do not compete on safety
- Built on trust



Airline Safety Programs

- Include Airline, Union, and Safety Regulator
- Companies encouraged to have a Just Culture
 - Allows for due consideration of honest mistakes
- FAA oversight strategy: “Compliance Philosophy”
 - Transparent exchange of information
 - Mutual cooperation
 - Goal is to identify and fix the root cause
- Non-punitive and non enforcement corrective actions

Aviation Safety Action Program (ASAP)

- Voluntary Safety Reporting System
- Event review committee votes on inclusion or exclusion based on “Big Five”
- Consists of FAA, Employee Groups, and Airline
- Non-punitive corrective action may occur
- New automatic inclusion of reports included in FAA reauthorization

Flight Operation Quality Assurance (FOQA)

- Data collection program
- Events will be flagged and categorized
- Gatekeepers reach out to crew to retain anonymity
- Created for aggregate analysis, not to catch or track individual flights
- “FOQA data” may be defined to be more than the standard QAR or other data source

US Protections

- Protected from public disclosure under 14 CFR Part 193
 - Content of report
 - Identity of employee
 - Airline's identity
- Incentive to redact pilot deviations
- Critical for success of airline and national-level programs

National Collaborative Safety Programs

- Government Funded
- Participation from all stakeholders
 - Regulator
 - Labor
 - Airline
 - Manufacturer
- Collects ASAP, FOQA, and other data from the NAS

ASIAS

- Aviation Safety Information Analysis & Sharing
 - Data used solely for advancement of safety
 - Conduct directed studies, vulnerability discoveries, and monitors risk
 - Provides platform for all stakeholders to view deidentified data
- Fusion
 - Combination of all data sources
 - Builds complete picture of events for better analysis
 - Example of progress since the inception of these programs
 - 45 participating commercial air carriers

Protection

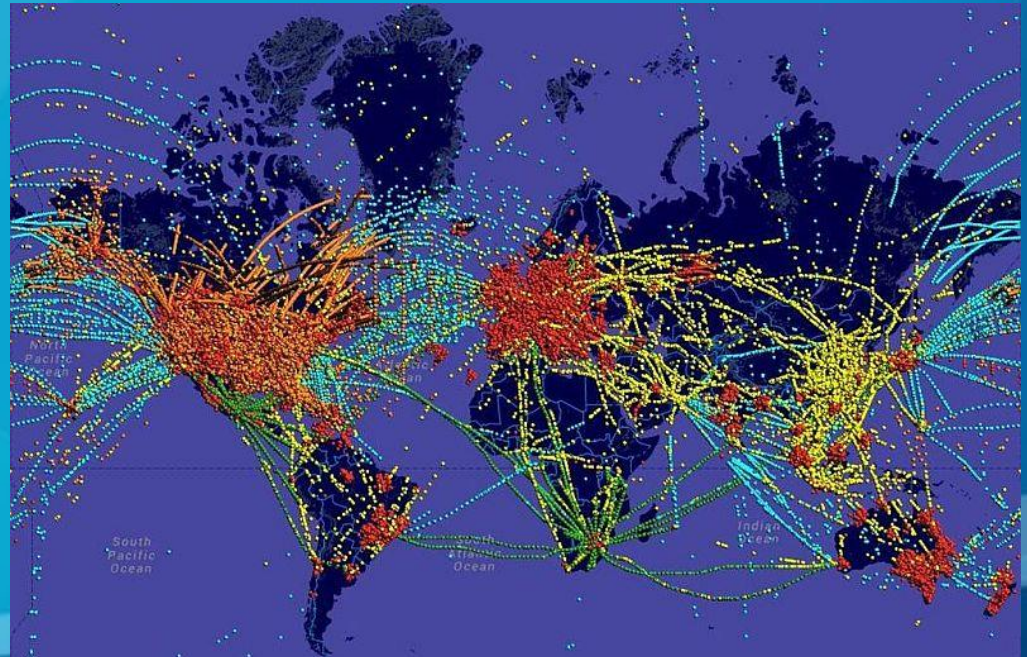
- Information held by government contractor (MITRE)
- Discards identifying information within 24 hours of receiving it
- Signed MOU with all participants

CAST

- Commercial Aviation Safety Team
- Goal is to reduce the U.S. commercial fatality risk by an additional 50% from 2010 to 2025
- Members include government, labor, industry, and observers (international organizations and the NTSB)
- Produces Safety Enhancements and CAST Reports
- Evolved from reactive to predictive
- Coordinates with ASIAs in data analysis to identify and track potential safety concerns

International Considerations

- International data usage agreements may be difficult
- Can improve on international information sharing programs



Big Data

- “A new attitude by businesses, non-profits, government agencies, and individuals that combining data from multiple sources could lead to better decisions”
- “Data of a very large size, typically to the extent that its manipulation and management present significant logistical challenges”

New Data Sources to Airlines

- ADS-B Out
- Data Comm
- Systems monitoring from the manufactures
- No current protections
- Potential improvements to safety
- Agreements about data use would likely need to be modified before using these sources



Big Data Incorporation

- ASIAs has proven that data sharing can help identify risks
- Use of big data can be beneficial at individual airlines as well

However:

- Need to be legally protected
- Used only for safety
- Consider the risks

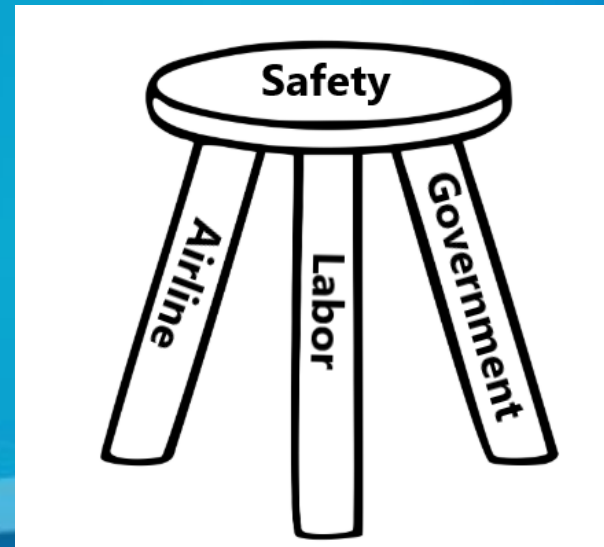


Collaboration for Safety

- Best results come from collaboration
- All parties have the same primary goal
- The safety of one stakeholder effects the entire airspace
- Must trust each other to do the right thing
- No political agendas

Trust

- Key to gather critical information
- Start slowly and build
- Will improve safety management systems
- Will improve safety culture at a national and individual level



Conclusion

- More data sources available
- New sources may create complete pictures
- Collaborate between labor, airline, and regulator is critical
- Trust between is key
- Resist misuse of data (non-safety applications or punitive actions)

Big data holds endless answers, but must be used solely to create a safer operation.

Thank you

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Air Line Pilots Association, Int'l