

Approach and Methodology

CAST applies its integrated, data-driven strategy to reduce the commercial aviation fatality risk in the United States by—

- Analyzing safety data/information.
- Identifying hazards and underlying contributing factors.
- Developing specific safety enhancements (SE) to address risk.
- Tracking implementation and effectiveness of SEs.
- Sharing its knowledge with the international community.

The Joint Implementation Measurement Data Analysis Team (JIMDAT) monitors the implementation and effectiveness of deployed SEs in the CAST safety portfolio.

Recent CAST Studies

Recent CAST-chartered studies have resulted in SEs addressing the following topics and risk areas:

- Approach and Landing Go-Around
- Approach and Landing Misalignment
- Loss of Control/Airplane State Awareness
- RNAV Departures and STAR Operations
- Runway Excursions
- Takeoff Misconfiguration
- Terrain Awareness and Warning System
- Traffic Collision Avoidance System
- Wrong Runway Departures

Benefits of Being Connected

- Awareness of systemic risks and potential risk mitigation strategies.
- Access to continuous monitoring of metrics based on data-driven, risk-based analysis.
- Key input to a Safety Management System through awareness of the CAST safety portfolio.
- Awareness of emerging risks.



2008
Robert J. Collier
Trophy Recipient

AVIATION WEEK ⁷
Laureates
2018 Aviation Week
Laureate Award winner,
Commercial Safety category

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THE COMMERCIAL AVIATION SAFETY TEAM

Working in Partnership to
Enhance Safety

www.cast-safety.org

Overview

CAST came together in 1997 to form a partnership between government and the aviation industry, focused on improving safety in commercial aviation. Key aviation stakeholders work cooperatively to—

- Identify safety risks.
- Develop mitigations.
- Monitor the effectiveness of safety enhancements.

These goals are accomplished through—

- Data-driven risk management,
- A focus on implementation, and
- Voluntary commitments.

CAST's work, along with other safety initiatives, reduced the U.S. commercial fatality risk by 83 percent from 1998 to 2008.

CAST proposes risk mitigation strategies industry can implement to reduce identified risks. Its efforts—

- Have dramatically improved aviation safety in the United States and worldwide.
- Continue to drive future **safety improvements**.

CAST's current goal is to reduce the U.S. commercial fatality risk by an additional 50 percent from 2010 to 2025.

Looking Ahead

Since its creation, CAST has evolved and the group has moved beyond the reactive approach of examining past accident data to a proactive approach that focuses on detecting risk and implementing mitigation strategies before accidents or serious incidents occur.

CAST is transitioning to prognostic safety analysis, leveraging voluntary safety programs such as the Aviation Safety Action Program (ASAP), Flight Operational Quality Assurance (FOQA) program, and Air Traffic Safety Action Program (ATSAP), which give CAST insight into millions of operations, allowing it to identify potential systemic safety issues and trends.

Implementation of Safety Management Systems (SMS) for part 121 operators continues. Awareness of CAST SE information can be a vital input to each operator's SMS, especially supporting safety risk management.

CAST works with the Aviation Safety Information Analysis and Sharing (ASIAS) program to connect a wide variety of safety data and information sources across industry by—

- Monitoring known risks.
- Evaluating the effectiveness of deployed mitigations.
- Detecting emerging risks.

Global Strategy

CAST shares its analysis and mitigation strategies with international aviation communities to improve safety throughout the regions of the world. CAST coordinates with international aviation organizations such as—

European Union Aviation Safety Agency (EASA)

International Air Transport Association (IATA)

International Civil Aviation Organization (ICAO)

Flight Safety Foundation (FSF)

ICAO Regional Aviation Safety Groups

CAST / ICAO Common Taxonomy Team

CAST and ICAO jointly chartered the CAST/ICAO Common Taxonomy Team



(CICTT) to develop common taxonomies and definitions for aviation reporting systems to promote a common safety agenda. The following CICTT taxonomies and definitions are available at www.intlaviationstandards.org

- Aircraft
- Aircraft Engine
- Air Traffic
- Hazards
- Human Factors
- Occurrence Categories
- Phases of Flight
- Positive Taxonomy
- System/Component Failure or Malfunction