## Commercial Aviation Safety Team

(CAST)



#### In the U.S., our focus is set by the White House Commission on Aviation Safety



- 1.1 Government and industry should establish a national goal to reduce the aviation fatal accident rate by a factor of five within ten years and conduct safety research to support that goal.
- 1.2 The FAA should develop standards for continuous safety improvement, and should target its regulatory resources based on performance against those standards



Federal Aviation Administration

# The National Civil Aviation Review Commission (NCARC)

on Aviation Safety Provided Additional Direction



- FAA and the aviation industry must develop a strategic plan to improve safety, with specific priorities based on objective, quantitative analysis of safety information and data.
- Government should expand on their programs to improve aviation safety in other parts of the world.





#### http://www.cast-safety.org/



Federal Aviation Administration

### **CAST Vision – Mission – Goals**

#### Vision

Key aviation stakeholders acting cooperatively to lead the worldwide aviation community to the highest levels of global commercial aviation safety by focusing on the right things.

#### Mission

 Enable a continuous improvement framework built on monitoring the effectiveness of implemented actions and modifying actions to achieve the goal.

#### Goal

- Reduce the US commercial aviation fatal accident rate 80% by 2007
- Maintain a continuous reduction in fatality risk in US and International commercial aviation beyond 2007.









10-20-05 CAST-064





Joint Safety Analysis Teams (JSAT)	Data analyses	
Joint Safety Implementation Teams (JSIT)	Safety enhancement development	
Joint Implementation Measurement Data Analysis Team (JIMDAT)	Master safety plan Enhancement effectiveness Future areas of study	



#### SE 126 – Mitigation of Hazardous Material Fires *Overview*

- In April 2013, CAST approved SE 126 to address the growing risk of hazardous material fires
- Output 1 of SE 126 is the results of a gap analysis evaluating the causal and contributing factors of the three recent HMF accidents



#### SE 126 – Mitigation of Hazardous Material Fires *Output 1 Tasks*

- Analyze the three HMF accidents since 2006 to analyze and identify problems and contributing factors. Rank these factors based on their severity and future applicability.
- Review additional known HMF incidents reported through ASIAS to validate and further expand the list of potential problems.
- Develop a comprehensive list of existing potential mitigation technologies, including those proposed in SE 127 – Cargo Fire Management. Evaluate these technologies for their potential to prevent or reduce the severity of the problems identified in 1) and 2). THERE WERE NONE: HMFs >> Class A Fires
- Rank and prioritize the remaining problems based upon their risk and severity.
- Develop a list of research concepts to develop / enable technologies that can potentially mitigate the remaining risk identified in 4).
- Capture all information and recommendations in a report and provide to JIMDAT and CAST for review, approval, and follow-on action.



## SE 126/Output 1 WG Participants

Air Line Pilots Association	FAA Office of Accident Investigation and Prevention		
Airbus FAA Office of Hazardous Materials Safety		<b>~</b>	
Boeing	FAA William J. Hughes Technical Center		
Coalition of Airline Pilots Association	Federal Express	со-сн	AIRS
FAA Aircraft Certification Service	MITRE Corporation		
FAA Flight Standards Service	UPS	<b>~</b>	



## Categories of Intervention Strategies

50 intervention strategies were applied 122 times

	Average of:		
Level of Intervention Strategy	Average OE	Min OE	Max of OE
Package	3.58	3.21	3.96
Container	2.91	2.53	3.33
Regulatory	2.31	1.44	3.06
Aircraft	1.67	0.15	3.33
Operator Procedures	1.39	0.83	1.94
Flight Crew	0.73	0.22	2.15
Other	0.44	0.44	0.44



## **Next Steps**

 Identify intervention strategies that are "shovel ready" (i.e. technology already exists to allow for implementation).

- Few are expected

 Assess the feasibility of the intervention strategies proposed by the Output 1 WG

- An area intentionally omitted until now

