

INTERNATIONAL LEADERSHIP

CAST Safety Enhancements



Federal Aviation
Administration

FY 2009 Performance Target

“Assist China with the adoption of at least five of the mutually agreed upon Commercial Aviation Safety Team (CAST) safety enhancements to maintain China’s safety performance during rapid growth of the aviation system.”

Flight Plan Objective and Performance Target

Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.

Performance Target: Work with the Chinese aviation authorities and industry to adopt 27 proven Commercial Aviation Safety Team (CAST) safety enhancements by FY 2011. This supports China’s efforts to reduce commercial fatal accidents to a rate of 0.030 fatal accidents per 100,000 departures by FY 2012.

	FY 2005	FY 2006	FY 2007 ¹	FY 2008	FY 2009 ³
Target	N/A	N/A	7 CAST SEs	5 CAST SEs	5 CAST SEs
Actual	N/A	N/A	10 CAST SEs ²	5 CAST SEs	

¹ In FY 2007, this measure replaced the Aviation Safety Leadership measure for FY 2006, the commercial air carrier fatal accident rate in China. No prior year data are available for the new measure.

² Nine of the 10 CAST SEs completed in FY 2007 were from the original list of 27; the 10th CAST SE (SE-164) was not.

³ In FY 2009, the name of this measure changed from Aviation Safety Leadership to CAST Safety Enhancements.

Definition of Measure

Unit of Measure: Number of CAST SEs implemented by China.

Computation: The completion of each separate CAST SE. A total of 27 SEs have been selected for China through the end of FY 2011.¹ When this measure was added to the Flight Plan in FY 2007, a yearly estimate was developed only to assist in the measuring of success; there is no agreement with China that a specific number be completed on an annual basis. The initial estimates were as follows:

FY 2007: 7, FY 2008: 7, FY 2009: 5, FY 2010: 4, FY 2011: 4.

These estimates will be adjusted annually to ensure that by the end of FY 2011, the agreed on 27 SEs will be completed, per agreement with China. Based on the completion of 14 of the 27 by the end of FY 2008, the updated annual estimate is:

FY 2009: 5, FY 2010: 4, FY 2011: 4.

Formula: A count of the number of CAST SEs implemented by China during the fiscal year.

Scope of Measure: The 27 CAST safety measures that have been selected for China. CAST has many more to choose from, but China agreed to start with these 27 in FY 2007.

Why the FAA Chooses this Measure

Initially, FAA used a commercial fatal accident rate in China to measure this objective. This was a five-year rolling average. There were several problems with this measure. First, there was very little the United States and the FAA could do to influence this rate. The rate was so low, with relatively little traffic, that any accident at all would cause the FAA to fail. Second, the FAA felt it was a mistake to impose accident rate targets onto other sovereign nations. Finally, with a rate target, there was little the FAA could measure that was in its control.

Therefore, after much research, we believe that the selection of CAST SEs is a better choice. CAST identifies

precursors and contributing factors to ensure that resources address the most prevalent categories of accidents. These SEs have contributed significantly to the safety improvement of the United States commercial aviation system. Therefore, we believe that China's adoption of these standards will enhance safety over time. Second, this is easily measurable. There is a universe of 27 enhancements that China has selected.

Source of the Data

Proof of implementation will come from a variety of sources, including, but not limited to: email from US officials who have attended meetings with Chinese aviation officials, minutes of meetings with the Chinese Aviation Administration (CAA), and pronouncements by senior Chinese officials.

Statistical Issues

Because China is a sovereign nation, we do not have the means to independently verify implementation of these initiatives throughout China. However, the Chinese in the past have been very conscientious about commercial aviation safety. As the fastest growing commercial fleet in the world, China has maintained an impressive accident rate.

Completeness

There are no completeness data issues associated with this measure since it is a simple count of the projects completed.

Reliability

Again, we are relying on the words and deeds of Chinese officials. Over time, verification will come when the accidents that the Chinese do have do not display the precursors that the CAST SEs are designed to prevent.

¹The 27 CAST SEs are:

1. SE-1, TAWS (Implementation completed in FY 2007)
2. SE-2, SOP's (Implementation completed in FY 2007)
3. SE-3, Precision-like approach
4. SE-11, CRM (Implementation completed in FY 2007)
5. SE-12, CFIT training (Implementation completed in FY 2007)
6. SE-14 Safety Culture
7. SE-15, Safety Culture
8. SE-16, Safety Culture
9. SE-23, Approach and Landing training (Implementation completed in FY 2007)
10. SE-26, Loss of Control SOP's (Implementation completed in FY 2007)
11. SE- 27, Risk Assessment
12. SE-28, Safety Information
13. SE-30, Human Factors (awaiting development of material by CAST)
14. SE-31, Airplane Upset Recovery training
15. SE-10, Proactive Safety Programs
16. SE-29, Safety Information (Implementation completed in FY 2007)
17. SE-9, MSAW (Implementation completed in FY 2007)
18. SE-13, ATC training - CFIT prevention (completion in FY 2008)
19. SE-46, Runway Incursion - ATC
20. SE-47, Runway Incursion - ATC
21. SE-49, Runway Incursion – SOP template (completion in FY2008)
22. SE-50, Runway Incursion - SOP GA operations (low priority in NARAST)
23. SE-51, Runway Incursion - SOP 'best practices' (completion in FY 2008)
24. SE-52, Runway Incursion - SOP vehicle operations (completion in FY 2008)
25. SE-55, Runway Incursion – ATC situational Awareness (completion in FY 2008)
26. SE-59, Runway Incursion – ATC 'read-back' (Implementation completed in FY 2007)
27. SE-60, Runway Incursion - Pilot Training