

**Approach and Landing Accident Reduction
Joint Safety Implementation Team**

**Implementation Plan
For
Policies for ALAR (Safety Culture)**

Statement of Work: (1&2 SE-14, 3 SE-15, 4 SE-16)

The purpose of this project is to develop a strategy to promote a safety culture at each Part 121 air carrier specifically targeting approach and landing accident reduction (ALAR). Ensure that essential safety information generated by an airplane manufacturer and by the FAA is included in company operating manuals and in training programs for pilots and other appropriate employee groups. Teams within each air carrier would jointly develop manuals and training programs striving for the highest safety goals. The teams would further ensure that the content of those manuals would be rigorously followed in training programs and in day-to-day operations. It is recognized that rulemaking may be necessary to clarify existing requirements specifying the content and use of company operating manuals.

Lead Organization for Overall Project Coordination (LOOPC):

ATA (LOOPC), RAA, NACA

Outcome:

Each U.S. air carrier operating under 14 CFR part 121, manufacturers and repair stations as appropriate, will demonstrate better performance in respect to approach and landing accidents through voluntary collaboration in existing and proposed programs promoting safety from within.

Background: Many milestones mark the development to date of an aviation safety environment promoting safety culture from within, among them:

1. Public Law calling for certificate holders to maintain the highest level of safety in the public interest (existing since 1958)
2. Comprehensive regulations and FAA policy specifying flight instructor and check airman functions and conduct, including standardization meetings (existing since the 1970s and earlier)
3. Public Law permitting the Secretary of the Department of Transportation to delegate to non-government persons (designated examiners) the awarding of airmen's certificates (existing since 1958)
4. Comprehensive FAA policy specifying the functions and conduct of aircrew program designees, or APDs (existing since 1983)

5. Advanced Qualification Program (AQP) permitting modern training of flight crew based on crew concept, CRM, and data analysis for continual program improvement (existing since 1990)
6. Flight crew training in crew resource management, or CRM (voluntarily training conducted since the late 1970s, mandatory training conducted since 1998)
7. Comprehensive FAA guidance recommending Air Carrier Internal Evaluation Programs, including a model program guide (existing since 1992)
8. Comprehensive FAA guidance recommending a Voluntary Disclosure Reporting Program (existing since 1992)
9. FAA regulation requiring a Director of Safety at each Part 121 certificate holder, responsible for keeping the highest management officials fully informed of the safety status of the entire air carrier operation (existing since 1995)
10. Comprehensive FAA guidance specifying recommended functions and conduct of the Director of Safety (existing since 1999)
11. Comprehensive FAA guidance specifying recommended quality control measures to be taken by an air carrier providing simulator flight training by way of outsourcing to a contractor (existing since 1996)
12. A special FAA certification program division, a national program office, and comprehensive FAA guidance to implement the Certification, Standardization, and Evaluation Team (CSET). CSET would assist local FAA offices in certification of air carrier start-ups. The expertise of CSET would include promoting best practices to each air carrier start-up and to its local FAA overseers (existing since 1997).
13. A national program office and comprehensive FAA guidance to implement the Air Transportation Oversight System (ATOS). ATOS would address an air carrier's entire safety system in terms of identifiable safety attributes. Emphasis in ATOS is on prevention of accidents, enlisting each air carrier under ATOS to effect preventive measures, as well as corrective measures. (existing since 1998).

Output #1

CEOs and other key officers made more visible and more effective in promoting Safety Culture.

Resources: ASY-1 (LOOC), CAST co-chairs, airplane manufacturers, operators, AOA-1, airline CEOs and DOS, industry associations (ATA, RAA, NACA, CAA, AIA, etc.).

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| Timeline: | CAST endorsement (G approval): | Expected, September 2000 |
| | Initial distribution of the | |
| | Guidance materials: | 60 days from CAST endorsement |
| | Commitment Statement Due | 90 days from CAST endorsement |
| | First report back to CAST: | 120 days from CAST endorsement |

Actions:

- Safety culture guidance material such as, Operator’s Aviation Safety Handbook, SAE-G18 Committee document, FAA Audit Tool, or other similar guidance, endorsed by CAST.
- Guidance material, accompanied by a cover letter signed by the FAA Administrator and CAST co-chairs and a commitment statement, distributed by ASY to CEO of every Part 121 certificate holder.
- CEO's forward signed copy of commitment statement to industry association or CAST representative.
- Senior management, through the Director of Safety, report to CAST progress made on the above items and any new initiatives to improve their carriers safety culture.

Output #2

Directors of Safety are made more visible and more effective in promoting safety culture.

Resources: ATA (LOOC), CAST, RAA, NACA, CAA, Directors of Safety.

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| Timeline: | CAST endorses HBAT 99-19, "14 CFR Part 121 and 135 Air Carrier Safety Departments, Programs, and the Director of Safety" | Expected, September 2000 |
| | Industry organizations distribute HBAT to DOS First report back to CAST | 60 days from CAST “G” 120 days from CAST “G” |

Actions:

- HBAT 99-19 endorsed by CAST as good guidance material.
- Industry organizations (ATA, RAA, NACA, CAA, etc.) contact the DOS of its member airlines and convey a copy of HBAT 99-19.
- DOS's, working through senior management, will implement guidance contained in HBAT 99-19.
- DOS's report back to the respective industry association periodically, or to CAST representative until all elements of an effective safety program are implemented.
- JIMT tracks implementation and DOS effectiveness in promoting safety culture.

Output #3

Director of Safety ensures the establishment of a process to identify, review, analyze and include appropriate safety information in training programs and in manuals used by flight crews and maintenance staff.

Resources: ATA (LOOC), CAST, RAA, NACA, CAA, ALPA, APA, Directors of Safety.

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| Timeline: | CAST endorses HBAT 99-07, "Flight Standards Policy Company Operating | Expected, September 2000 |
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| Manuals and Company Training Program Revisions for Compliance With Current Airplane Or Rotorcraft Flight Manual Revisions" | |
| Industry organizations distribute HBAT to DOS | 60 days from CAST "G" |
| First report back to CAST | 120 days from CAST "G" |

Actions:

- HBAT 99-07 endorsed by CAST as good guidance material.
- Industry organizations (ATA, RAA, NACA, CAA, etc.) contact the DOS of its member airlines and convey a copy of HBAT 99-07.
- DOS's, working through senior management, will apply principles contained in HBAT 99-07 to training programs and manuals used by flight crews and maintenance staff.
- DOS's report back to the respective industry association periodically, or to CAST representative until all elements of an effective safety program are implemented.
- JIMT tracks implementation and DOS effectiveness in promoting safety culture.

Output #4

FAA fully implements the AFM database for inspectors' use.

Resources: AFS-600 (LOOC), AIA, manufacturers, and FAA Flight Standards and Aircraft Certification services, specifically including ANM-100 and AEGs.

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| Timeline: | CAST endorses HBAT 99-16, "Announcement of New Database System on the FAA Intranet: Airplane Flight Manual Revisions and Aircraft Manufacturers Operations Bulletins" | Expected, September 2000 |
| | Industry organizations distribute HBAT 99-16 to manufacturers and to DOS | 60 days from CAST "G" |
| | AFS-600 populates database w/ records | 180 days from CAST "G" |
| | First report back to CAST | 180 days from CAST "G" |
| | Subsequent reports to CAST | Each 90 days, until database 100% implemented |

Actions:

- HBAT 99-16 endorsed by CAST as good guidance material.
- AIA contacts its members and conveys a copy of HBAT 99-16.
- Manufacturers supply AFS-600 with all future AFM-revisions for each model affected.
- Manufacturers supply AFS-600 with all future Operator's Bulletins, or the equivalent, for each model affected.
- FAA (AFS-600, ANM-100, AEG) populates the database with existing records in the most effective way possible for use by FAA inspectors, and all new records.

Relationship to Current Aviation Community Initiatives:

- **Operator's Aviation Safety Handbook (or similar guidance).** This Handbook was ratified by an international group of representatives at a recent aviation safety conference in Paris (June, 2000) sponsored by Airbus, Air France, and by the Global Aviation Information Network (GAIN), of which the FAA is founding member. This Handbook speaks primarily to air carrier chief executive operators (CEOs) and to their principal safety officers, required in US regulations (14 CFR part 121) as directors of safety, or DOS. The Handbook is founded on the premise that safety culture is most effectively established and maintained when it comes from within the corporation, and is promoted from the top down. It is expected that the timeliness and wide implementation of the Handbook, or similar guidance, will cause the CEO, the DOS, and other key officers to be more effective performers in promoting safety culture and ALAR.
- **Director of Safety (DOS).** A DOS is required by 14 CFR Part 119, and now has explicit functions defined in guidance issued by the FAA. Those functions comprise all of the elements of safety culture described in Background, items 1 – 13, above. It is expected that the FAA guidance re the DOS and CAST's focus on ALAR will cause the Director of Safety to be a more effective performer in promoting safety culture and ALAR.
- **HBAT 99-07.** This bulletin provides comprehensive FAA guidance specifying an air carrier's responsibilities (1) to keep manuals current, (2) to ensure timely delivery of essential safety information, consisting of airplane flight manual (AFM) revisions and operations bulletins issued by the manufacturer, and (3) to ensure timely action in response to those revisions and bulletins. Effects are more effective manuals used by flight crew [and maintenance], more effective surveillance in respect to manuals by the FAA, and desirable impact on ALAR.
- **HBAT 99-16.** Complementing HBAT 99-07, HBAT 99-16 announces the implementation of a centralized database system for use by the FAA. FAA inspectors may refer to the records in that database to track each air carrier's timeliness and effectiveness in response to essential safety information generated by the manufacturer or by the FAA.
- **ASAP.** Comprehensive FAA guidance has recently been issued recommending each air carrier's voluntary participation in an Aviation Safety Action Program (ASAP) and specifying the terms of its operation. Under ASAP a participating air carrier would encourage its employees to come forth with observations bearing on safety. Under all but certain specific conditions those observations would not incur FAA penalties, but would encourage a collaboration of managers, employees, and the FAA to address and correct safety hazards before an accident might occur. (existing since April, 2000)

- **FOQA: Public Law, FAA regulations, and comprehensive FAA guidance to enable implementation of Flight Operational Quality Assurance programs (FOQA).** Under FOQA participation by an air carrier would be voluntary. Copious data from flight data recorders would be de-identified and used for analysis and identification of accident precursors. An air carrier would take corrective actions before an accident might occur, based on its analyses. At some later time, de-identified FOQA data and analysis might be shared among air carriers in order to share the safety benefits of FOQA among all air carriers. (expected in 2000)

- **Revised Air Carrier Training Rules.** A re-write of 14 CFR Part 121, subparts N (Training Program) and O (Crewmember Qualifications), is under way. The rulemaking will promote safety culture, including better discipline re manuals and training programs, and will reduce the number of ALAR accidents. The NPRM is expected in December, 2000. A lengthy public comment period is expected because of the scope and complexity of the rulemaking package. The NPRM will propose the following:
 - ❑ to confer greater responsibility on examiners and check airmen employed by the air carrier (see Background, items 2 and 4, above)
 - ❑ to require (rather than recommend) that air carriers have a quality control system for major outsourced flight crew training (see Background, item 10, above)
 - ❑ to clarify regulations regarding the manuals used by the flight crew [and maintenance] to ensure that necessary manuals are complete, accurate, available and appropriately used.

- **TICC.** Air Transport Association (ATA) committee work will result in improved distribution of material contained in the flight crew operating manuals (FCOM) generated by aircraft manufacturers such as Boeing. The Technical Information Communication Committee (TICC) of ATA has developed an electronic system by which changes to the FCOM will be distributed by, say, Boeing Company to the majority of Boeing aircraft operators virtually at the click of a mouse button. Essential information will be translated, routed, and delivered far more quickly and reliably than today.

Performance Goals & Indicators for Outcomes/Outputs:

Goal: A major improvement in ALAR
Indicator: Part 121 air carrier ALAR rate decreases

Output #1

Goal: CEOs become high-visibility advocates of safety culture
Indicator: Every Part 121 CEO receives a copy of “Operator’s Aviation Safety Handbook”, SAE-G18 Committee document, FAA Audit Tool

Indicator: Every Part 121 CEO reports all elements of an effective safety program are implemented in accordance with the guidance in that Handbook, or equivalent guidance endorsed by CAST

Output #2

Goal: Directors of Safety become high-performing advocates of safety culture

Indicator: Every DOS receives a copy of HBAT of 99-19.

Indicator: Every DOS reports all elements of an effective safety program are implemented in accordance with the guidance in that bulletin.

Output #3

Goal: Director of Safety ensures inclusion of essential safety information in training programs and in manuals used by flight crews and maintenance staff.

Indicator: DOS reports AFM revisions and bulletins generated by the airplane manufacturer are promptly received and promptly implemented in manuals and training programs used by flight crews and maintenance staff.

Output #4

Goal: FAA fully implements the AFM database for inspectors' use in surveillance.

Indicator: The database described in HBAT 99-16 has ample staff to populate the database with records pertaining to all aircraft used in all operating Parts of the CFR, and to support daily changes in records contained in the database.

Indicator: FAA inspectors report satisfaction with completeness, currency, and ease of use of the database.

Indicator: Surveillance determines that the operators are addressing changes in a timely manner when generated by the manufacturers.

Programmatic Approach:

Organizational strategy

The FAA Act of 1958 established the inherent obligation of any air carrier certificate holder to maintain the highest level of safety in the public interest. Besides its regulatory and enforcement functions, the FAA has developed many voluntary programs for the promotion of safety culture from within an air carrier corporation. Those programs range from Aircrew Program Designees (APDs) and check airmen to ASAP and FOQA. It is incumbent on the air carriers and their employee groups to embrace these voluntary programs gladly and to implement them as effectively as possible. The CEO and the Director of Safety are the principal advocates of safety culture within the corporation, without whose tireless efforts an effective safety program fails. Collaboration between managers and non-manager employees is absolutely essential.

Concurrently, the FAA should promote collaboration with operators for safety. The FAA will meet its own statutory obligation to promulgate regulations and standards in the public safety

interest by proceeding with the rule changes in 14 CFR part 121 (N and O). Those rule changes will modernize training requirements. They will unburden air carriers in some respects, but will require more discipline in respect to certain processes involving safety culture, such as quality control of outsourced flight crew training and manuals used by flight crews [and maintenance]. The Lead Organization for Overall project Coordination (LOOPC) is AVR-1. The Lead Organizations for Output Coordination (LOOC) are identified in each Output of this Implementation Plan. The roles and responsibilities of the LOOPC and LOOC are described in the CAST approved JSIT Process Document.

Implementation activities

In collaboration with industry (operators, aircraft manufacturers, industry associations, and employee groups) the FAA will promote voluntary programs advancing safety culture. Industry and employee groups will join in their shared safety mission by implementing those voluntary programs. The FAA will press the rulemaking effort in 14 CFR part 121 (N and O) to ensure that its expected safety benefits in ALAR are not unduly delayed.

Key Products and Milestones:

- Public Law, FAA regulations and guidance for FOQA – NPRM Signed July 5, 2000

Plan and Execution Requirements:

Industry stakeholders should commit at the highest levels to embracing and staffing the voluntary programs available to them that will promote safety culture from within. In particular, CEOs should make their own high-level commitment to safety culture and should increase the scope and visibility of the office of the Director of Safety. CEOs, DOS, and other key players in the corporation should join together to implement the safety and quality control processes detailed under ATOS and ASAP, and promised under FOQA. Associations such as ATA, NACA, ALPA, APA, and others should not wait for the FAA to act, but should eagerly step up to the safety benefits of collaboration to prevent ALA. If additional FAA guidance materials become necessary for FAA inspectors or industry users, FAA managers must readily provide adequate manpower and funding to meet those needs.

Risk Description:

The FAA Act of 1958 established that the primary responsibility to protect the public safety interest rests with the holder of an air carrier operating certificate. The FAA was established to oversee air carriers' safety performance, not to manage or operate an air carrier on behalf of its owners. Inadequate motivation on the part of industry stakeholders shifts the challenge to the FAA of protecting the public safety interest. This challenge is more effectively met by voluntary performance on the part of industry than by coercion on the part of the FAA. Absent an adequate voluntary commitment to safety culture, the public safety is compromised and an air carrier's own future is put at risk

Some of the most promising safety systems in years are now available to air carriers voluntarily embracing them – such as ATOS, ASAP, and prospectively, FOQA. Absent an adequate voluntary commitment to those specific safety systems, an air carrier faces an unnecessary risk of ALA and accidents from other causes.

The most complex rulemaking effort currently under way at the FAA is the sweeping re-write of 14 CFR part 121, subparts N and O. In many ways it is also the most ambitious rulemaking effort because it proposes to modernize air carrier training and qualification rules in so many ways. Besides promoting safety culture in the broad sense, the rulemaking would spread the safety benefits of AQP without requiring participation in AQP to the full extent required under AQP rules. Those safety benefits would affect air carriers not willing or able to enroll in the AQP process. Typically such air carriers are small ones or start-ups, the very ones sometimes most in need of those safety benefits. If special interests push too hard against certain requirements proposed in the rulemaking package, the resulting delay would cause considerable damage to the safety impact of the package.

Risk Mitigation Plan:

Industry and the FAA will commit adequate resources to promote safety culture under the various voluntary programs now available. FAA will provide adequate staff and funding to support FAA safety programs and related rulemaking projects.

The FAA will work with industry groups within the provisions of the Administrative Procedures Act to ensure that the desired safety benefits of the proposed rule changes are conveyed to the public without undue economic burden on air carriers.

Impact on Non-FAR Part 121 or International Applications:

Coordination with international organizations such as ICAO and JAA is continuous. While those organizations have their own safety agendas addressing ALAR, they stay in touch with the ALAR JSIT and routinely exchange safety agenda information with the ALAR JSIT.

Impacts and risks identified by the ALAR JSIT are conveyed to other organizations as appropriate, such as the general aviation teams convened under the JSC. Those teams generally return in kind.