

BACKGROUND

The forecasted growth in air transportation requires new measures and greater effort from all stakeholders- including airport operators- to achieve continuous improvement in the level of aviation safety. The use of Safety Management Systems (SMS) at airports can contribute to this effort by increasing the likelihood that airport operators will detect and correct safety problems before those problems result in an aircraft accident or incident. Airports need to prepare for the implementation of SMS due to the predicted growth in aviation, while maintaining the current level of safety. The FAA will implement SMS throughout its organizational structure and will require the same from its stakeholders. The FAA supports harmonization of international standards, and has worked to make U.S. aviation safety regulations consistent with International Civil Aviation Organization (ICAO) standards and recommended practices. The FAA intends to implement the use of SMS at U.S. airports to meet the intent of the ICAO standard in a way that it complements existing airport safety regulations in 14 Code of Federal Regulations (CFR) Part 139.

OBJECTIVE

The FAA is conducting a pilot program to evaluate the implementation of SMS at airports of varying size and complexity. The pilot program will allow airports and the FAA to gain experience establishing airport specific SMS that are tailored for the individual airport. This information will provide FAA information on SMS best practices and lessons learned that will be helpful as FAA considers development of a Notice of Proposed Rulemaking to incorporate SMS into 14

C.F.R. Part 139, Certification of Airports.

BENEFITS ANTICIPATED

For airport operators, the application of a systematic, proactive, and well-defined safety program as is inherent in SMS allows an airport to continue to improve safety in the face of significant forecasted growth in air traffic activity. The use of SMS at airports can contribute to this effort by increasing the likelihood that Airport Operators will detect and correct safety problems before they result in an aircraft accident or incident. The FAA benefits from the opportunity to assimilate the experience of airport operators in developing an SMS for airports of widely varying activity levels and operational complexity. The FAA anticipates moving to a more formal requirement for the use of SMS at U.S. airports, consistent with the recent ICAO amendment to Annex 14 to make SMS a mandatory standard at international airports. Experience gained through review of the SMS plans developed under this pilot program will be extremely useful in development of a general U.S. standard.

APPROACH

Because SMS is not a regulatory requirement in the U.S. at this time, the SMS Manual and program developed under the pilot program should remain separate from the *Airport Certification Manual (ACM)* required in 14 CFR Part 139. (FAA would need to approve any changes to the ACM itself). FAA Airport Certification Safety Inspectors may ask to review the airport's SMS documents, but will not consider the SMS (or lack of an SMS) a factor in compliance with Part 139. The SMS Manual and program plan should not simply apply existing guidance that has been developed in other countries with their own safety oversight rules, or duplicate SMS plans of airports subject to those rules. Rather, the SMS Manual and plan should complement existing U.S. safety requirements in 14 C.F.R. Part 139, and be consistent with Part 139, FAA Advisory Circulars, and the Airport Certification Manual specific to the airport's current operation. Therefore, the SMS Manual and program plan should address which elements of the airport operator's existing practices and guidance materials currently meet SMS requirements,

which elements do not, and how these practices and documents will be revised in the future for consistency with the SMS plan.

DELIVERABLES

The development of the SMS Manual and program should be completed 6 months after award of the AIP grant. To help FAA evaluate the SMS airport specific development process, copies of the following documents must be provided to the FAA as they are completed. The FAA encourages sponsors and their consultants to refer other interim draft documents, questions, and comments to the FAA at any time in the process for consultation and information exchange.

a. Gap Analysis

The gap analysis should identify procedures, policies, documentation, and actions that the airport needs to implement as part of its SMS that go beyond the current Part 139 requirements addressed by the airport's ACM.

The gap analysis should determine whether deficiencies exist between current operations and the principles of SMS. To conduct the gap analysis, there must be identified benchmarks and best practices. These will normally come from surveys, committee analysis and brainstorming, professional organizations, or other sources, including other Airport Operators.

Compare the results of benchmarks and best practices to the four elements of SMS:

1. Safety Policy and Objectives
2. Safety Risk Management
3. Safety Assurance
4. Safety Promotion

Estimated completion date: 2 months from project start

b. Draft Plan

Produce a draft of the complete SMS Manual and program. The draft should address the gap analysis and describe safety risk management, risk mitigation strategies, and documentation processes.

Estimated completion date: 5 months from project start

c. Final Plan

A copy of the final SMS Manual and program to be implemented by the sponsor.

Estimated completion date: 6 months from project start

The contents and scope of the SMS Manual and Program plan should address the following:

- 1) Written safety policy statement and description of how it is communicated to airport employees.
- 2) Identification and description of the airport safety goals.

- 3) A plan for employee SMS indoctrination and training. SMS indoctrination training should provide an outline of proposed curriculum and resources.
- 4) Documented process to identify training requirements for systems safety.
- 5) A plan to validate training effectiveness and the process to gain training feedback, including useable metrics.
- 6) A defined process to communicate safety policies and objectives throughout the organization. Include examples of how information will be communicated and any processes for follow-up.
- 7) A plan and description of employee non-punitive reporting systems, existing and new.
- 8) An organizational chart identifying the names and safety responsibilities of all key personnel, such as the following:
 - Top Management
 - Safety Manager
 - Department Heads Managers
 - Established Safety Committees and Chairpersons
- 9) Description of the safety risk management process, including application of "The Five Phases of SRM," as discussed in the FAA Advisory Circular 15015200-37, Introduction to Safety Management Systems for Airport Operators.
- 10) Guidance on the use of SRM and trend analysis.
- 11) Defined process for documenting the results of SRM to include a description of how documents will be stored, i.e., electronic or paper.
- 12) Description of how top management will follow-up on SRM to ensure safety mitigation strategies are appropriate.
- 13) A description of the airport quality management and/or risk management program (if applicable) and its integration into the Airport SMS.
- 14) Description of a plan to integrate apron safety management into the Airport SMS. (FAA review of the plan will be limited to measures to prevent accidents or incidents involving aircraft.) The plan could include:
 - A description of current apron safety management practices already in place such as reporting requirements to the NTSB, Flight Standards, or the Occupational Safety Health Administration (OSHA).
 - An explanation of how current apron safety management practices meet the intent of SMS. This could include the safety plans and practices of tenants and operators at the airport, which should complement the airport SMS.
- 15) A detailed method to document self-auditing processes and their findings. Self-auditing may be part of the airport self-inspection process. If it is, explain how the self-inspection process addresses systems safety, i.e. if the self-inspection program identifies a hazard on the airport it should determine the risk and document the process for follow-up.
- 16) A detailed method to document self-inspection reviews, analysis, and findings.
- 17) A description or plan to integrate the tailored SMS program plan into the overall operation of the airport.
- 18) Documented plan for training and education, safety communication, competency, and continuous improvement processes.
- 19) Procedures to promote safety awareness and participation in non-punitive reporting systems.
- 20) Process to document and review lessons learned from within the organization.

- 21) Schedule for implementation and anticipated associated costs.

SPECIAL NOTES

- A. The consultant team should include members with specialized experience and expertise in: 14 CFR Part 139 regulations, human factors analysis related to aviation/airline safety and hazard prevention, airport emergency management principles and applications, environmental issues impacting airport operations, technical writing and aviation industry.
- B. When describing qualifications related to their previous work, proposers should provide available web addresses for electronic versions of relevant reports and studies where available.

INFORMATION FURNISHED TO THE GOVERNMENT

All documents submitted by a sponsor or its agent to the FAA for review under this grant remain the property of the sponsor.

Final SMS documents and plans will be considered public information. Gap analyses, draft SMS manuals and plans, and other interim documents may be submitted with a request for confidentiality. The Freedom of Information Act requirements of 5 U.S.C. 552, as amended, will apply to any such request.