

# U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION National Policy



Effective Date: 03/18/16

SUBJ: Safety Management System

- This order establishes the Safety Management System (SMS) policy for the Federal Aviation Administration (FAA) and requirements for FAA organizations incorporating SMS and/or International Civil Aviation Organization (ICAO) State Safety Program (SSP) frameworks to form the overall FAA SMS. Specifically, this order:
- **a.** Furthers safety management by evolving to a more process-oriented system safety approach with an emphasis on Safety Risk Management (SRM) and Safety Assurance.
- b. Sets forth basic management principles to guide the FAA in safety management and safety oversight activities.
- **c.** Requires adopting a common approach to implementing and maturing an integrated SMS, including fostering a positive safety culture and other attributes as applicable.
- d. Defines the roles and responsibilities of the FAA organizations, FAA SMS Executive Council, and FAA SMS Committee regarding safety management.
- 2. This order applies to the following Lines of Business (LOB) and Staff Offices: Air Traffic Organization (ATO), Aviation Safety Organization (AVS), Office of Airports (ARP), Office of Commercial Space Transportation (AST), the Office of the Next Generation Air Transportation System (ANG), and the Hazardous Materials Safety Program in the Office of Security and Hazardous Materials Safety (ASH). This order is written to allow for application to other FAA organizations as deemed appropriate by the Administrator.

Michael P. Huerta Administrator

Distribution: Electronic

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### **Chapter 1. General Information**

### **1. Purpose of This Order.** This order:

- **a.** Establishes the Safety Management System (SMS) policy for the Federal Aviation Administration (FAA) Lines of Business (LOBs) and Staff Offices incorporating SMS and/or International Civil Aviation Organization (ICAO) State Safety Program (SSP) frameworks. These organizational SMSs work together to form the overall FAA SMS.
  - **b.** Explains the SMS principles and requirements.
  - **c.** Standardizes terminology for safety management, where appropriate.
- **d.** Defines the roles and responsibilities of the FAA organizations, FAA SMS Executive Council, and FAA SMS Committee regarding safety management.
- **e.** Requires FAA organizations to establish guidance for their own SMS activities and their industry segment regarding the implementation and incorporation of SMS.
  - **f.** Establishes the commitment for continuous improvement of SMS.
- **2. Audience.** This order applies to the following LOBs and Staff Offices: Air Traffic Organization (ATO), Aviation Safety Organization (AVS), Office of Airports (ARP), Office of Commercial Space Transportation (AST), the Office of the Next Generation Air Transportation System (ANG), and the Hazardous Materials Safety Program in the Office of Security and Hazardous Materials Safety (ASH). In the document where the term "applicable FAA organizations" is used, it refers to the organizations listed above. This order is written to allow for application to other FAA organizations as later deemed appropriate. <sup>1</sup>
- **3. Where You Can Find This Order.** You can find this order on the MyFAA employee Web site: <a href="https://employees.faa.gov/tools\_resources/orders\_notices">https://employees.faa.gov/tools\_resources/orders\_notices</a>.
- **4.** Cancellation. This order replaces FAA Order 8000.369A, *Safety Management System*, dated May 8, 2013.
- **5. Explanation of Changes.** This revision does the following:
  - **a.** Removes background information regarding the Statutory Basis for SMS and System Levels.
  - **b.** Clarifies the oversight role and the product/service provider role within the FAA.
- **c.** Clarifies the difference between Safety Assurance within the FAA and Safety Assurance of product/service providers.
  - **d.** Adds information to address hazard tracking and monitoring.

<sup>&</sup>lt;sup>1</sup> This order does not apply to external product/service providers. However, Chapter 2, Section 3 and Chapter 3, Section 4.b address the connection between the FAA's SMS and its oversight of the SMSs of external product/service providers.

**e.** Adds content to describe roles and responsibilities regarding governance and execution of SMS.

- **f.** Removes the requirement for FAA organizations to develop implementation plans for SMS and, instead, requires continuous improvement of SMSs within LOBs and Staff Offices to demonstrate that they are implementing SMS and tracking performance.
- **g.** Introduces the concept of identifying Significant Safety Issues (SSIs) and connects the FAA's Risk-Based Decision Making Strategic Initiative to SMS.

### Chapter 2. Background

#### 1. Rationale for SMS.

- a. To support its mission to provide the safest, most efficient aerospace system in the world, the FAA continues to evolve its SMS to systematically integrate the management of safety risk into business planning, operations, and decision making. SMS activities leverage existing effective safety management practices in the FAA, and the Risk-Based Decision Making Strategic Initiative was established to further enable the evolution of SMS in the FAA.
- **b.** SMS enables the FAA to enhance safety by allocating resources efficiently and effectively based on data-supported analysis and assessment, while responding to
  - (1) Changing industry business models and growth;
  - (2) The aerospace system's increasing complexity; and
  - (3) The current and future challenging budget environment.

#### 2. International Standards.

- **a.** Annex 19 to the Convention on International Civil Aviation, Safety Management, contains safety management standards. These standards include frameworks for SSP, applicable to Member States as regulators, and SMS, applicable to product/service provider organizations. As a member of ICAO, the United States (U.S.) has committed to comply with ICAO safety management standards.
- **b.** This order comprises part of the FAA's fulfillment of Annex 19. Because the FAA includes both regulatory and product/service provider organizations, the Agency chose to implement SSP and SMS.<sup>2</sup> FAA SMS will meet most of the tenets of both the ICAO SSP and SMS frameworks, thereby ensuring interoperability among safety management functions across FAA organizations.

#### 3. Oversight of Product/Service Providers.

a. This document refers to aviation product/service providers over which FAA has safety oversight responsibility. Entities that provide products and services include airports, manufacturers, operators, maintenance organizations, training organizations, air traffic service providers, and others. Entities may be organizations or individuals. Aviation product/service providers are responsible for the safety of their products and services; they must be in compliance with safety regulations and standards established by the Department of Transportation (DOT) and the FAA. The DOT and the FAA are responsible for establishing the safety regulations and standards that provide requirements for aviation product/service providers' systems. The FAA's responsibilities include: defining the requirements for those systems; applying risk-based safety oversight; and verifying that the safety systems of the aviation product/service provider meet applicable requirements and that their processes, products, and services continue to do so during the operational phases of their lifecycle.

<sup>&</sup>lt;sup>2</sup> For additional information regarding the U.S. State Safety Program, refer to AVP300-15-U.S. State Safety Program, Version 1.0.

**b.** With SMS, the FAA is better able to allocate resources and conduct safety oversight using safety management principles. The FAA establishes safety management requirements for, and promotes SMS implementation in, product/service provider organizations, as appropriate. The FAA verifies compliance with regulations using a variety of means such as audits, evaluations, and inspections and confirms implementation and effectiveness of the aviation product/service provider's safety systems. In this way, FAA personnel are used more efficiently, and there is a higher level of confidence that an aviation product/service provider will meet safety standards, even when not under direct observation by FAA personnel.<sup>3</sup>

- **c.** With SMS, the FAA will still assure product/service provider compliance with regulations. Therefore, direct observation and surveillance is still required in the FAA oversight activities. However, they are used differently than in the past. Rather than solely assessing compliance with the regulations, the FAA will assess the effectiveness of service providers' safety management capabilities and performance.
- **d.** Regulations serve as safety risk controls. FAA organizations with product/service provider oversight responsibility apply the concepts of Safety Risk Management (SRM) to decisions that may lead to the initiation of regulatory changes through rulemaking. Doing so ensures that regulations address hazards in the aerospace system and provide boundaries on acceptability of design and performance of products and services. Regulations and subsequent oversight activities are part of a systematic strategy of risk control.
- **e.** The FAA conducts SRM throughout the levels of the aerospace system for the purpose of managing safety at the highest level. Here, the FAA implements risk management strategies of regulations, standards, and policy. Aviation product/service providers are responsible for managing safety for their operations. They control resources and activities of people directly exposed to hazards and are in a position to directly control risk related to those hazards. This would include design and performance of actions to control risk within the expectations of regulations relevant to their operations. This is, essentially, "effective compliance." At no point is the FAA, in an oversight capacity, responsible for primary Safety Assurance or for performing SRM for an individual or organizational aviation product/service provider. However, the FAA, in an oversight capacity, uses its Safety Assurance processes within SMS to oversee product/service providers' application of SRM.
- **4. Safety and Quality.** There are organizations in the FAA that have implemented Quality Management Systems (QMS) that meet the International Organization for Standardization (ISO) 9001 Standard. Organizations with a QMS can leverage QMS processes to meet the requirements in this order. Organizations that do not have a formal QMS can still use quality management principles to develop processes to meet the SMS requirements. Safety management and quality management are complementary and must work together to achieve the overall safety objectives of the organization. A primary objective of the FAA is to ensure that it has processes and procedures in place so that safety performance is maintained at an acceptable level (i.e., safety management) and specified product/operational results are achieved (i.e., quality management). SMS requires that the design and implementation of organizational processes and procedures identify safety hazards and control and/or

<sup>&</sup>lt;sup>3</sup> This section is specific to the FAA's role in oversight. Therefore, in this case, the term personnel includes FAA employees and designees, or others who might act on behalf of the FAA Administrator in an oversight role.

mitigate safety risk in aviation operations. QMS provides a structured approach for assuring that these processes and procedures function as intended, correct non-conformances when they do not, and continually improve their effectiveness. While SMS provides the mechanisms for the FAA to carry out its regulatory, certification, and continued operational safety management functions within a framework of risk-based decision making, a QMS can ensure that this framework is operating in a structured, repeatable fashion and is able to meet its intended objectives. When those objectives are not met, QMS provides the means to improve.

### **Chapter 3. SMS Components**

- 1. Overview. SMS is the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices, and policies for the management of safety risk. The four main components of an SMS are: (1) Safety Policy, (2) Safety Risk Management, (3) Safety Assurance, and (4) Safety Promotion. They provide a means of defining SMS within the FAA and a systematic approach to describing and achieving the desired safety performance. The applicable FAA organizations must meet the requirements in this chapter. The components are described further below.
- **2. Safety Policy.** Safety Policy is the organization's documented commitment to safety, which defines safety objectives and the accountabilities and responsibilities of its employees in regard to safety management. The safety policy of the applicable FAA organizations must be documented; communicated to all employees and responsible parties; consistent with FAA and U.S. SSP goals and objectives; and reviewed periodically to ensure it remains relevant and appropriate to the organization. The applicable FAA organizations must establish and implement safety policy that:
  - **a.** Describes what the organization is trying to achieve through its SMS.
- **b.** Outlines the requirements, methods, and processes the organization will use to achieve the desired safety outcomes.
- **c.** Establishes senior management's commitment and expectation that the organization will continually improve safety. The safety policy further establishes and defines senior management's expectation of high safety performance.
  - **d.** Reflects management's commitment to:
- (1) Implement procedures and processes for establishing and meeting measurable and attainable safety objectives;
  - (2) Provide resources to implement and operate the SMS and manage safety risk; and
  - (3) Support promotion of a positive safety culture.
- **e.** Establishes roles, responsibilities, and accountabilities regarding the organization's safety performance. For organizations with oversight responsibilities, the policy establishes basic guidelines for compliance and enforcement personnel.
  - **f.** Promotes the use of reporting systems described in Chapter 3, Section 4.
- **g.** Outlines an emergency response plan that provides for the safe transition between normal and emergency operations where applicable.
- **3. Safety Risk Management (SRM).** All applicable FAA organizations must establish and maintain an SRM function that provides for initial and continuing identification of hazards and the analysis and assessment of safety risk. The applicable FAA organizations' SRM functions ensure that appropriate safety risk controls are developed and employed operationally. Validation of system performance and

effectiveness of implemented risk controls and risk management strategies occurs under the Safety Assurance component, discussed in the following section. An organization's SRM must meet the intent of the policy set forth in the latest version of FAA Order 8040.4, *Safety Risk Management Policy*, and accomplish the following:

- **a. System analysis.** Establish an understanding of significant system design and performance factors, human interface, processes, and activities to the level necessary to identify hazards.
- **b. Identify hazards.** Identify and document hazards or those things that have the potential to affect safety risk in sufficient detail to determine the associated safety risk (within the system description).<sup>4</sup>
- **c. Analyze safety risk.** Determine and analyze the severity and likelihood of potential effects associated with identified hazards.
- **d. Assess safety risk.** Compare the safety risk of each identified hazard's effect to established safety performance targets and/or rank hazards based on risk. The objective is to determine the acceptability of the safety risk of each hazard.
- **e. Control safety risk.** Design and implement safety risk control(s) for hazards with associated unacceptable risk.
- **f.** Track and monitor. Track identified hazards and monitor implemented safety risk controls/mitigations to ensure that they achieve their intended objectives. Tracking and monitoring is described in a monitoring plan and is primarily accomplished through Safety Assurance functions.

#### 4. Safety Assurance.

- **a. Safety Assurance Within FAA.** All applicable FAA organizations must establish and maintain Safety Assurance processes to ensure that safety risk controls achieve their intended objectives and are used to assess operations to identify hazards. Safety Assurance includes monitoring systems of interest and assessing the need for new risk controls, modification of ineffective risk controls, or elimination of those no longer needed due to changes in the operational environment. These monitoring activities apply whether the operations are accomplished internally or outsourced (e.g., contracted activities or designees). The organization's Safety Assurance processes must include:
- (1) Data/information acquisition. Collect, manage, and monitor operational data to assess the safety performance of the segment of the aerospace system for which the organization is responsible; assess the performance of the SMS; identify hazards; and measure the effectiveness of, and conformity to, safety risk controls. Collection and monitoring of data/information include the following:
- (a) Employee reporting system(s). Establish and maintain a safety reporting system in which employees can report safety issues or concerns. Data obtained from this system are monitored

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<sup>&</sup>lt;sup>4</sup> The security of information in safety critical systems should also be considered in hazard identification.

<sup>&</sup>lt;sup>5</sup> SRM is applied when hazards are identified through Safety Assurance processes.

to identify emerging and existing hazards and to assess performance of risk controls in the operational systems.<sup>6</sup>

- (b) Investigation. Collect data and investigate incidents and accidents to identify hazards or ineffective safety risk controls.<sup>7</sup>
- (c) Monitoring, evaluations, and audits. Monitor, evaluate, or audit standards, systems, programs, and processes on a routine basis to determine the performance and effectiveness of safety risk controls both within the FAA and in aviation product/service provider organizations for which the FAA organization has oversight responsibility. Also, conduct regularly scheduled evaluations of the SMS to determine if the SMS as a whole conforms to its requirements.
- (2) Data/information analysis. Analyze data to assess safety performance, identify hazards, and measure the effectiveness of safety risk controls.
- (3) System assessment. Conduct assessments of the effectiveness of safety risk controls and the overall performance of the SMS.
- (4) Corrective action. Prioritize and implement corrective actions to mitigate or eliminate safety issues identified during system assessments.
- (5) Management reviews. Conduct regular reviews of SMS effectiveness and assess the need for changes, and implement changes to the SMS to achieve continuous improvement. These reviews should be conducted on a consistent schedule that is appropriate to the organization (e.g., quarterly, bi-annually, annually).
- **b.** Safety Assurance of Product/Service Providers. FAA organizations with services/offices that perform oversight of product/service providers (i.e., AVS, ARP, ASH, and AST) must allocate resources for product/service provider Safety Assurance with priority given to areas of highest risk. FAA organizations performing Safety Assurance of product/service providers' design and performance must use the following processes:
- (1) Data/information acquisition. Collect, manage, and monitor aerospace system data/information to assess the performance of the product/service providers' SMSs; identify hazards; and measure the effectiveness of, conformity to, and need for changes to product/service provider safety risk controls set by the responsible FAA organization. Collection and monitoring of data/information include the following:
- (a) Stakeholder reporting system(s). FAA organizations with oversight responsibility establish and maintain a means for stakeholders to report hazards, issues, concerns, occurrences, incidents, etc.

<sup>6</sup> FAA organizations must ensure the security of voluntarily submitted data as required by Title 49 of the United States Code (49 U.S.C.) 40123 and 44735.

<sup>&</sup>lt;sup>7</sup> The role of accident investigation is primarily a function of the National Transportation Safety Board (NTSB); however, FAA offices need to consider their role in this function as well.

<sup>&</sup>lt;sup>8</sup> FAA organizations that perform oversight (i.e., AVS, ARP, ASH, and AST) have a dual focus regarding Safety Assurance. These organizations assure the safety of their own organizations and the safety of the product/service providers they oversee.

(b) Auditing of product/service providers (surveillance and sampling). Conduct audits of their product/service providers' products, processes, and services, as agreed to with those organizations, to: assess conformity with safety risk controls established by the organization providing oversight and validate outputs of the product/service providers' SMSs.

- (c) Investigation. Establish criteria and procedures to investigate accidents, incidents, and instances of suspected non-compliance with regulations.
- (2) Data/information analysis. Analyze the data/information described in Chapter 3, Sections 4.b(1) (above).
- (3) System assessment. Organizations with oversight responsibility conduct assessments of the effectiveness of safety risk controls within the components(s) of the aerospace system for which they have oversight responsibility.
- (4) Corrective action. Prioritize and implement corrective actions to mitigate or eliminate safety issues identified during system assessments.<sup>9</sup>
- **5. Safety Promotion.** Applicable FAA organizations must establish and maintain a safety promotion function. Safety promotion is a combination of training and communication of safety information to support the implementation and operation of an SMS in an organization. It includes actions taken to create an organizational environment where safety objectives can be achieved in fulfillment of its mission.
- **a. Personnel competencies.** Applicable FAA organizations must ensure that the workforce has the necessary competencies to perform their duties relevant to the operation and performance of the SMS.
- b. Safety culture. Applicable FAA organizations must promote a positive safety culture throughout the organization, which is characterized by an adequate knowledge base, personnel competency, communications, training, informed decision making, and information sharing in which lessons learned and best practices are developed and shared. All levels of management must actively promote and provide leadership to foster a positive safety culture. A safety culture consists of the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands. In the desired safety culture, people acknowledge their accountability and act on their individual responsibility for safety. They trust, use, and rely on the organization's processes for managing safety. There is good communication in the organization, and personnel continue to learn and develop through training and coaching. The ways in which an organization works to improve its safety culture are best determined by the organization's management.

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<sup>&</sup>lt;sup>9</sup> For additional information regarding compliance, refer to the current FAA Order 8000.373, *Federal Aviation Administration Compliance Philosophy*, and the current version of FAA Order 2150.3, *FAA Compliance and Enforcement Program*.

## Chapter 4. Interoperability, Governance, and Continuous Improvement

**1. Interoperability of the SMS.** SMS provides a common approach for conducting safety oversight at the FAA level. The effectiveness of the system relies on communication and coordination among FAA organizations in regard to safety risk.

- **a. Basic Requirements.** In order to ensure interoperability of SMS across the FAA, all applicable FAA organizations must adopt:
  - (1) Common definitions and understanding of hazards and risk.
  - (2) Common safety risk management processes and objectives.
  - (3) A common system for managing safety performance, including:
    - (a) An approach to identifying Significant Safety Issues (SSI), and
    - (b) An approach to establishing safety performance targets and acceptable levels of risk.
- (4) A common tool or system to track Aerospace System Level safety issues, including hazards and safety risk mitigations.
- **b.** Tools and Methodologies. Through the Risk-Based Decision Making Strategic Initiative, the FAA and all applicable FAA organizations must adopt the following tools and methods for meeting the requirements above:
- (1) Safety Data Taxonomies. Common taxonomies to improve the consistency and commonality of data sources and facilitate the sharing of existing and new data sources throughout the FAA, and with stakeholders.
- (2) Safety Data Access. Improved data access to support information sharing, enhance FAA decision making and enable executives and managers to better focus organizational resources on areas of greatest safety risk.
- (3) Safety Risk Management. The current version of FAA Order 8040.4, *Safety Risk Management Policy*, and its supporting guidance material to ensure consistent application of safety risk management processes.
- (4) Hazard Tracking. The Hazard Identification, Risk Management and Tracking (HIRMT) system to collect, manage, and report on Aerospace System Level safety issues containing hazards and risk mitigations. All applicable FAA organizations are responsible for capturing and reporting the progress of identified Aerospace System Level safety issues in HIRMT. <sup>10</sup>

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<sup>&</sup>lt;sup>10</sup> Aerospace System Level safety issue is defined by a set of criteria documented in the FAA Aerospace System Level Safety Issue Criteria document, which can be found on the SMS page on the FAA Intranet.

#### 2. Governance.

#### a. FAA SMS Executive Council.

(1) Responsibilities. This order establishes the FAA SMS Executive Council. The FAA SMS Executive Council is responsible for setting the strategic direction for SMS implementation across the FAA. It provides executive-level guidance and conflict resolution for FAA SMS-related issues. It also approves SMS guidance and the list of FAA-level SSIs developed by the FAA SMS Committee. The FAA SMS Committee keeps the Council apprised of SMS activities across the FAA. The Council resolves any issues that the FAA SMS Committee raises, which may include disagreements related to SRM. The FAA SMS Executive Council is ultimately responsible for the development and continuing maintenance of the U.S. SSP document and for monitoring and reporting on SSP implementation and the indicators relating to levels of safety in the U.S. aerospace system.

- (2) Composition. The FAA SMS Executive Council is composed of senior-level management personnel, including the Assistant Administrators of ANG and the Office of Finance and Management (AFN); the Associate Administrators of ARP, AST, ASH, and AVS; and the ATO Chief Operating Officer. <sup>11</sup>
- **b. FAA SMS Committee.** This order establishes the FAA SMS Committee, which will work with and report to the FAA SMS Executive Council. This committee provides assistance to FAA organizations regarding safety management. It meets at regular intervals and at the discretion of the committee chairperson to exchange SMS information.
- (1) Responsibilities. The FAA SMS Committee provides advice and guidance to the responsible program offices to help them fulfill their authority and responsibility to evolve SMS. It serves as a forum for discussion of safety policy, SRM, Safety Assurance, and safety promotion across all member organizations. The Committee develops the list of candidates for FAA SSIs, submits the list to the FAA SMS Executive Council for approval, and assigns ownership for assessing and addressing cross-organizational issues. The Committee resolves disagreements between FAA organizations regarding safety management, including disagreements related to SRM, and escalates disagreements to the FAA SMS Executive Council that it cannot resolve at the Committee level. The Committee provides regular status reports to the FAA SMS Executive Council. The FAA Executive Council delegates management of the U.S. SSP to the Associate Administrator for Aviation Safety (AVS-1) and the FAA SMS Committee.
- (2) Composition. The SMS Committee is composed of safety professionals from each organization incorporating SMS (ATO, AVS, ARP, AST, ANG, and ASH) and other organizations, as necessary. AVS-1 designates an individual to chair the committee. The chairperson is responsible for providing written notice of all meetings to committee members and, in coordination with the executive secretary, keeping minutes of the meetings. The ATO provides the position of executive secretary of the committee.
- (3) Assignments. The SMS Committee may form ad hoc working groups and standing teams to address specific issues related to incorporating SMS throughout the FAA. Composition of those

<sup>&</sup>lt;sup>11</sup> As part of the management of the U.S. SSP, the NTSB is invited to the FAA SMS Executive Council when there is a need to discuss SSP-related matters.

working groups and teams will consist of member representatives as required from across the FAA. Ad hoc working groups will be disbanded upon completion of their task. Standing teams must be formed by charter, and the SMS Committee has the authority to establish and sign charters. One such standing team is the Safety Collaboration Team (SCT), which was formed to conduct safety risk analyses of significant planned changes that affect National Airspace System (NAS) operations.

- (4) Funding. Resources for support staff and working group activities are provided as determined by AVS-1. Unless otherwise stated, each member's organization is responsible for his or her own costs associated with committee membership, including support for assessing and addressing cross-organizational issues.
- c. Office of Accident Investigation and Prevention (AVP). Responsibilities. AVP manages the AVS SMS, FAA SMS, and U.S. SSP programs and maintains their supporting policies, processes, and tools in support of AVS-1, the FAA SMS Executive Council, and the FAA SMS Committee. The office also manages the FAA Administrator's Risk-Based Decision Making Strategic Initiative, which is designed to establish tools and methodologies that support safety management principles and SSP requirements. It manages the identification of SSIs within AVS, as well as cross-organizational SSIs at the FAA level. It also coordinates safety risk analysis efforts for SSIs, tracks approved safety risk mitigations, and measures safety performance for AVS and the FAA. AVP is responsible for operating and maintaining the HIRMT tool. It also provides consultative services and guidance to help organizations regarding the use of the system.
- **3.** Continuous Improvement of SMS. To fulfill senior management's commitment and expectation that the organization will continually improve safety, management will need to conduct regular reviews of SMS effectiveness and assess the need for changes to the SMS. This requires a consistent auditing process to ensure that SMS requirements are being met across the agency and a functioning process for obtaining maximum benefit from lessons learned as they relate to the operation of SMS. In support of continuous improvement of SMS, all applicable FAA organizations must:
  - **a.** Develop and maintain a means to monitor and track SMS implementation progress.
- **b.** Develop and maintain a means to measure performance of the SMS, including establishing performance measures and metrics and adapting the SMS as necessary.
  - **c.** Report SMS implementation and performance information to management.

## **Chapter 5. Administrative Information**

- **1. Distribution.** This order is distributed to all offices in Washington Headquarters, regions, and centers, with distribution to all field offices and facilities.
- **2. Related Publications.** The following documents are related to the subject matter in this order:
  - a. Department of Transportation (DOT), Safety Management Systems Guidance Document
  - **b.** FAA Order 8000.373, Federal Aviation Administration Compliance Philosophy
  - **c.** FAA Order 2150.3, FAA Compliance and Enforcement Program
  - **d.** FAA Order 8040.4, *Safety Risk Management Policy*
  - e. FAA Order VS 8000.367, Aviation Safety (AVS) Safety Management System Requirements
  - **f.** FAA Order 1100.161, Air Traffic Safety Oversight
  - g. FAA Order JO 1000.37, Air Traffic Organization Safety Management System
  - **h.** FAA Order 5200.11, FAA Airports (ARP) Safety Management System
  - i. FAA Order NG 1000.44, Assistant Administrator for NextGen Safety Management System
  - **j.** Air Traffic Organization, Safety Management System Manual
  - **k.** Safety Risk Management Guidance for System Acquisitions (SRMGSA)
  - **l.** Flight Safety Analysis Handbook, Version 1.0
  - m. FAA Office of Commercial Space Transportation Safety Management System (SMS) Manual
- **n.** Title 14 of the Code of Federal Regulations (14 CFR) part 5, *Safety Management Systems for Domestic, Flag and Supplemental Operations*, (80 FR 1308, January 8, 2015)
  - o. International Civil Aviation Organization Annexes 1, 6, 8, 11, 13, 14, and 19
  - **p.** *ICAO Safety Management Manual* (Document 9859)
  - **q.** AVP300-15-U.S. State Safety Program, Version 1.0
- **3. Authority to Change This Order.** The FAA Administrator has authority to issue changes and revisions to this order.

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## **Appendix A: Definitions**

As used in this document, the following words or phrases are defined:

- 1. Acceptable Risk The level of risk that individuals or groups are willing to accept given the benefits gained. Each organization will have its own acceptable risk level, which is derived from its legal and regulatory compliance responsibilities, its threat profile, and its business/organizational drivers and impacts.
- **2. Accident** An unplanned event or series of events that results in death, injury, or damage to, or loss of, equipment or property.
- **3. Aircraft Accident** An occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.
- **4. Aerospace System** U.S. airspace, all manned and unmanned vehicles operating in that airspace, all U.S. aviation operators, airports, airfields, air navigation services, pilots, regulations, policies, procedures, facilities, equipment, and all aviation-related industry.
- **5. Audit** A systematic, independent and documented process for obtaining records, statements of fact or other information and evaluating it objectively to determine the extent to which policies, procedures, or requirements are met.
- **6.** Control See *Safety Risk Control*.
- **7. Corrective Action** Action to eliminate or mitigate the cause or reduce the effects of a detected nonconformity or other undesirable situation.
- **8.** Evaluation Denotes the process whereby data is assembled, analyzed, and compared to expected performance to aid in making systematic decisions.
- **9. Hazard** A condition that could foreseeably cause or contribute to an accident.
- **10. Incident** An occurrence other than an accident that affects or could affect the safety of operations.
- **11. Interoperability** The ability for each organization's SMS to be part of a larger SMS framework through interdependent processes and/or components with shared principles, information, and governance.
- **12. Likelihood** The estimated probability or frequency, in quantitative or qualitative terms, of a hazard's effect or outcome.
- **13. Product/Service Provider** An organization engaged in the delivery of aviation products or services.
- **14.** Risk See *Safety Risk*. The terms Risk and Safety Risk are used synonymously.
- **15. Safety** The state in which the risk of harm to persons or property damage is acceptable.
- **16. Safety Assurance** Processes within the SMS that function systematically to ensure the performance and effectiveness of safety risk controls and that the organization meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

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**17. Safety Culture** – The shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands.

- **18. Safety Management System (SMS)** The formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. It includes systematic procedures, practices, and policies for the management of safety risk.
- **19. Safety Objective** A measurable goal or desirable outcome related to safety.
- **20. Safety Performance** Realized or actual safety accomplishment relative to the organization's safety objectives.
- **21. Safety Policy** The documented commitment to safety of an FAA Line of Business (LOB) or staff office, or an aviation service/product provider, organization, or certificate holder, which defines its safety objectives and the accountabilities and responsibilities of its employees with regard to safety.
- **22. Safety Promotion** A combination of training and communication of safety information to support the implementation and operation of an SMS in an organization.
- **23. Safety Risk** The composite of predicted severity and likelihood of the potential effect of a hazard.
- **24.** Safety Risk Control A means to reduce or eliminate the effects of hazards.
- **25. Safety Risk Management (SRM)** A process within the SMS composed of describing the system, identifying the hazards, and analyzing, assessing, and controlling risk.
- **26. Severity** The consequence or impact of a hazard's effect or outcome in terms of degree of loss or harm.
- **27. State Safety Program (SSP)** An integrated set of regulations and activities established by a State aimed at improving safety.
- **28.** System An integrated set of constituent elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets.