

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



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## SUBJ: Flight Standards Safety Management System (FSSMS) Requirements

This order defines the requirements to be met by Flight Standards (FS) organizations in support of the Aviation Safety Safety Management System (AVSSMS). The focus of this order is aviation safety. It does not address occupational safety, health, or personnel safety issues, unless those issues affect aviation safety. Each FS functional organization plays a role in the FSSMS. Functional offices' processes must ensure full conformance and alignment with this order. This order enables FS to continue its proactive approach to improving safety performance through its requirement to:

- Maintain organizations capable of overseeing aviation safety;
- Identify hazards that can impact the safety of the aerospace system and establish controls/mitigations to reduce safety risk in a prioritized manner; and
- Track identified hazards to ensure that risk remains known and acceptable.

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## Chapter 1. General

## 1. Purpose of This Order.

**a. Applicability.** This order defines the requirements of Federal Aviation Administration (FAA) Order VS 8000.367, AVS Safety Management System (AVSSMS) Requirements, and FAA Order VS 8000.370, Aviation Safety (AVS) Safety Policy, by establishing the functional requirements and processes for the Flight Standards Safety Management System (FSSMS) in support of the FAA and Aviation Safety Safety Management System (AVSSMS). The FSSMS integrates the management of safety into its business planning, operations, and decision-making process. Through Safety Management System (SMS) activities, Flight Standards (FS) leverages existing technical and safety management processes and practices.

**Note:** This order is not intended to provide guidance on the acceptance and continued oversight of the SMS required under Title 14 of the Code of Federal Regulations (14 CFR) part 5 nor the SMS Voluntary Program (SMSVP) Standard. Guidance for the SMS as required under the SMSVP is addressed in FAA Order 8900.1, Flight Standards Information Management System, Volume 17, Safety Management System.

**Note:** The FSSMS may include terms and techniques found in the requirements specified within 14 CFR part 5. The FSSMS, however, is not based on 14 CFR part 5 regulatory requirements, but rather the International Civil Aviation Organization (ICAO) standards for a State Safety Provider as defined in FAA Order 8000.369, Safety Management System, and Order VS 8000.367. FS is responsible for the safety oversight of its regulated entities as part of the FAA's State Safety Program (SSP).

- **b. Purpose.** The FSSMS is not intended to replace current certification, oversight, and risk management guidance. The FSSMS equips FS to respond to safety challenges and the needs of FS, including safety data collection, analysis, protection, and sharing capabilities. This is accomplished by incorporating proactive and reactive safety management techniques, such as Safety Risk Management (SRM), in the development, modification, and implementation of regulations (risk controls), safety policies, and guidance materials.
- **2. Audience.** This order applies to all personnel in FS. This order is primarily used by FS management; by those organizations who are directly involved with developing or implementing guidance, rules, methods of compliance, or directives; and organizations involved in implementing and managing the FSSMS.
- **3.** Where You Can Find This Order. You can find this order on the MyFAA employee website at https://employees.faa.gov/tools\_resources/orders\_notices and the Dynamic Regulatory System (DRS) at https://drs.faa.gov. Operators and the public can find this order on the FAA's website at https://www.faa.gov/regulations\_policies/orders\_notices and DRS.
- **4. What This Order Cancels.** FAA Order 8000.377, Flight Standards Safety Management System (FSSMS) Requirements, dated January 9, 2023, is canceled.

## 5. Organizational SMS Roles and Responsibilities.

- **a. FS Director.** Responsibilities include:
- (1) Representing FS on the AVSSMS Management Board responsible for setting the strategic direction for the FSSMS and establishing FS safety goals and objectives; and
  - (2) Establishing and monitoring objectives in accordance with FS Safety Policy.
- **b.** The Safety Management Division (AFB-400). AFB-400 is the Office of Primary Responsibility (OPR) for FSSMS policy. Responsibilities include:
  - (1) Ensuring FSSMS policy is current and aligned with the AVSSMS;
  - (2) Representing the organization on matters before the AVSSMS Coordination Group;
- (3) Coordinating Aviation Safety (AVS)-level risk assessment activities with FS organizations;
- (4) Coordinating the development, monitoring, and reporting of FS safety and quality objectives;
- (5) Supporting FS organizations through monitoring the systems and components of the aerospace systems within their purview in accordance with Chapter 3, Safety Assurance;
- (6) Providing support for action as required in response to the system assessment results in accordance with Chapter 3; and
- (7) Providing support for safety risk assessment in accordance with Chapter 5, Safety Risk Management.
- **c.** Office of Safety Standards (OSS). Collectively, the divisions within OSS are the OPR for developing and implementing guidance and directives; and establishing regulatory rules and methods of compliance for aircraft, airmen, and certificated entities. Responsibilities also include:
- (1) Monitoring the systems and components of the aerospace systems within their purview in accordance with FS Safety Assurance (SA);
- (2) Taking action as required in response to the system assessment results in accordance with SA;
  - (3) Performing risk assessment in accordance with FS SRM; and
- (4) Providing subject matter experts (SME) in support of FS and AVS/FAA-level safety risk assessments.

d. Offices of Air Carrier Safety Assurance (ACSA) and General Aviation Safety Assurance (GASA). ACSA and GASA are the OPRs for conducting safety oversight, surveillance, and continuous operational safety activities of the product/service providers in accordance with the provisions in Order 8900.1 and FAA Order 1800.56, National Flight Standards Work Program Guidelines (NPG). Responsibilities include:

- (1) Providing SMEs in support of AVS- and FAA-level risk assessment;
- (2) Identifying and reporting potential hazards, ineffective risk controls, and changes in the product/service providers' operational environment that may introduce new hazards or affect safety risk;
  - (3) Assessing product/service providers' compliance with regulatory requirements;
- (4) Assessing the effectiveness of safety risk controls set by product/service providers and determining the need for additional safety risk controls or changes to existing controls; and
- (5) Assessing the overall performance of the product/service providers' operational system/processes.

#### 6. Overview.

#### a. About the FSSMS.

- (1) The FSSMS is a formalized and proactive approach to system safety. Since the FAA is both an oversight/regulatory organization (FS) and an Air Navigation Services Provider (Air Traffic), the FAA chose to implement the SMS within our existing SSP structure. This was done in order to improve our ability to provide the safest, most efficient aerospace system in the world. FS is implementing the SMS to integrate the management of safety risk into business planning, operations, and decision making at the system level. The FSSMS is designed to manage the safety and technical requirements established by FAA regulations, which are disseminated through the existing policies, processes, procedures, and programs currently used to identify, analyze, assess, and control safety in the National Airspace System (NAS).
- (2) The FSSMS improves the ability to track and measure the "common cause" regulatory failures across CFR groups. It enhances the requirement to establish safety objectives and performance measures to evaluate the effectiveness of regulatory risk controls at the Aerospace System Level (ASL) by measuring their performance. This enhances traditional safety performance measures and requires FS to evaluate their design effectiveness in controlling hazards in the NAS.

#### b. Continuous Improvement and Support.

(1) The FSSMS supports the FAA safety mission, which emphasizes continuous improvement of safety and the integration of safety management activities across FAA organizations and programs. Continuous efforts to assess and, when necessary, develop and implement regulatory controls to improve the safety and efficiency of air travel in the United States is inherent in, and relevant to, the design and scope of the FSSMS.

(2) Safety management and quality management are complementary and must work together to achieve the overall objectives of FS. A primary objective of the FSSMS is to establish a management system that has business processes in place so that safety performance is maintained at an acceptable level (safety management) and specified operational results are achieved (quality management). Quality management supports the SMS by providing a structured approach to monitoring FS business processes to assure conformance, identify nonconformances, provide tools for correction, and enable continuous improvement.

- (3) The SMS provides the framework to enable FS to measure and ensure the effectiveness of its oversight operations. In an evolving NAS, the continuous improvements in oversight processes and policies are extremely important. By assessing the implementation and effectiveness of FS technical safety and organizational requirements, FS can identify system-level performance issues, opportunities for improvement, and new areas in which to focus new policy development.
- **c. FSSMS Components.** The four FSSMS components are combined to create a systemic approach to managing and ensuring safety. These components are:
- (1) Safety Policy. The documented organizational policy that defines management's commitment, responsibility, and accountability for safety. Safety Policy identifies and assigns responsibilities to key safety personnel.
- (2) Safety Assurance (SA). A set of processes that verifies that the organization meets or exceeds its safety performance objectives and the effectiveness of safety risk controls through the collection, analysis, and assessment of information.
- (3) Safety Promotion. The combination of training and communication of safety information to support the implementation and operation of an SMS within FS.
- (4) Safety Risk Management (SRM). A process of describing the system; identifying the hazards; and analyzing, assessing, and controlling safety risk.

## Chapter 2. Safety Policy

1. Introduction. The Safety Policy links organizational safety objectives to the organization's goals and establishes employee accountability and responsibility for achieving those goals. Order VS 8000.370 fulfills requirements described in Order VS 8000.367 and provides the foundation for, and commitment to, implementing and operating an SMS in FS.

## 2. General Requirements.

- **a.** Flight Standards (FS). In accordance with FAA Orders VS 8000.367 and VS 8000.370, FS will:
  - (1) Prioritize allocation of resources for safety management based on safety risk;
- (2) Set ambitious annual safety performance objectives using the strategic planning and business planning process;
- (3) Establish relevant, timely, measurable, and attainable targets to achieve the safety performance objectives;
- (4) Document safety objectives and safety performance targets (SPT) in the FS Business Plan;
  - (5) Review safety performance objectives; and
- (6) Determine the acceptable level of safety performance for the component(s) of the aerospace system for which it has oversight responsibility.
  - **b. FS Directors.** In accordance with Order VS 8000.370, the FS directors are required to:
    - (1) Establish and document safety objectives and SPTs in FS' Business Plans; and
    - (2) Review FS safety performance relative to their SPTs on a quarterly basis.

## **Chapter 3. Safety Assurance**

1. Introduction. Order VS 8000.367, Chapter 4, Safety Assurance, defines the requirement for FS SA. Through its various SA systems (e.g., Safety Assurance System (SAS), Enforcement Information System (EIS), Accident and Incident Data System (AIDS), Service Difficulty Reporting System (SDRS), and quality management), FS monitors its safety and organizational oversight processes, both internal and external, to ensure the performance and effectiveness of safety risk controls, that the organization meets its safety objectives, and conformance with FAA safety policies and procedures.

#### 2. System Description.

- **a.** Focus of the FSSMS. The FSSMS has a dual SA focus, with an emphasis on both FS as an organization and the regulated entities (product/service providers) under FS regulatory purview. The objective of the SA component of the FSSMS is twofold:
- (1) Support identification of potential new hazards and determine whether or not implemented risk control strategies are adequately mitigating safety risk (FS-centric). This is accomplished by:
- (a) Measuring and assessing the effectiveness of safety risk controls set by AVS to determine the need for additional safety risk controls or changes to existing controls;
  - (b) Assessing FS conformance with FAA safety policies and procedures;
  - (c) Evaluating FS safety performance against organizational safety objectives; and
- (d) Monitoring the conformance and performance of the systems and components of the aerospace system for which FS has oversight responsibility to identify potential new hazards, ineffective risk controls, and changes in the operational environment that may introduce new hazards or affect safety risk levels.
- (2) Monitor the safety performance of the systems and components of the aerospace system for which FS has oversight responsibility. This is accomplished by:
- (a) Assessing certificated entities' compliance with regulatory requirements and any other safety risk controls set by the FAA, as well as those developed as a result of the certificate holder's (CH) SRM processes; and
  - (b) Assessing the performance of the CH's operational systems/processes.
- **b. Regulatory Compliance.** Since regulatory compliance is the safety benchmark, safety risk controls are assessed through initial certification and oversight based on existing regulatory risk controls. FS assures compliance of regulations through acceptance or approval of the CHs' operating manuals and/or established programs/procedures, as well as surveillance of the programs and procedures presented in those manuals. FS SA of the aviation industry in the United States is accomplished through oversight of service providers and certificated airmen spanning all sectors of the aviation industry under FS' regulatory responsibility.

c. Tools. FS SA tools include internal and external safety reviews, evaluations, audits, inspections, surveillance, data tracking, data analysis, and investigations. These tools provide confidence that certificated entities' individual and organizational outputs, regarding design and performance of products and services, meet safety requirements (external SA), and provide information regarding the effectiveness of established regulatory risk controls and FS compliance with its policies and procedures (internal SA). Overall, FS SA ensures compliance with FAA regulatory risk controls, orders, standards, and policies, and provides awareness of opportunities for FS and its regulated entities to improve safety levels and minimize risk.

- 3. SA Process Requirements. In accordance with Order VS 8000.367, FS organizations with oversight responsibilities for developing and implementing guidance and directives and for establishing regulatory rules and methods of compliance for aircraft, airmen, and certificated entities must:
  - **a.** Monitor their systems and processes to:
    - (1) Assess FS conformance with FAA safety policies and procedures; and
    - (2) Assess FS safety performance against organizational safety and quality objectives.
  - **b.** Monitor the components of the aerospace system to:
    - (1) Assess product/service provider's compliance with regulatory requirements;
- (2) Measure and assess the effectiveness of safety risk controls set by the FAA, to include those developed as a result of the product/service providers' SRM processes, and determine the need for additional safety risk controls or changes to existing controls, if applicable; and
- (3) Identify potential new hazards, ineffective risk controls, and changes in the operational environment that may introduce new hazards or affect safety risk.

#### 4. Safety Performance Management (SPM).

- **a. SPM Purpose.** The information provided by the SA processes as part of the SPM provides FS with the means to determine whether its internal and external activities and processes are working effectively to achieve its safety objectives. This enables FS leadership to be aware of emerging safety issues and support decision making, including determining whether actions are required to further mitigate safety risks to ensure the service achieves its stated safety objectives. FS accomplishes this through the identification and creation of safety objectives, safety performance indicators (SPI), SPTs, and safety performance triggers, which allow FS to monitor its performance and measure the safety performance of its regulated entities and the effectiveness of established risk controls.
- **b. Data Acquisition and Analysis.** In order to ensure that safety is maintained and improved both within FS and its regulated entities, FS must monitor both the performance and conformance of FS processes and those established by its regulated entities. This is accomplished

through data acquisition and analysis within our existing certification, oversight, and investigation processes.

- (1) Data Acquisition. Collect and maintain data necessary to assess the requirements listed in paragraph 3 above. In addition to the standard data sources used by FS organizations, data collected from the following nonexclusive list should be used:
  - (a) Employee and stakeholder reporting;
- (b) Investigations data from accidents, incidents, complaints, compliance, and enforcement;
  - (c) Audits/evaluations of FS; and
  - (d) Oversight surveillance of product/service providers.
- (2) Data Analysis. Data analysis is conducted on the data acquired to assess system performance, identify potential hazards (including frequency of events), measure the effectiveness of safety risk controls (i.e., SPTs identified in monitoring plans are met), and identify instances of nonconformance. This approach to SPM enhances FS' ability to:
  - (a) Maintain an effective oversight system;
  - (b) Identify, develop, and implement specific safety actions and safety initiatives;
- (c) Evaluate and modify existing safety risk controls to ensure they remain effective; and
- (d) Evaluate and modify FAA policies and procedures to ensure they remain effective.

#### 5. System Assessment.

**a. System Assessment Purpose.** The system assessment is based on the data analysis to identify performance trends, potential new hazards, or ineffective safety risk controls (i.e., safety conformance and performance targets identified in objectives or monitoring plans are not met) and determine conformance with requirements. SPM data acquisition and analysis provide FS with the means to determine whether its internal and external activities and processes are working effectively to achieve its safety objectives. This determination is accomplished by the performance of a system assessment of the system being evaluated. See Figure 3-1, Cross-Functional Flowchart, which summarizes the SRM and SA process.

## b. Responsibilities.

(1) AFB-400 responsibilities include identifying risks that transcend individual regulated entities, straddle multiple sectors of the industry, and/or rise to the level at which they require national or governmental attention.

- (2) Responsibilities of the OPR for the issue under consideration:
  - (a) Responsible organization for the accomplishment of the assessment.
- (b) Depending on the issue, may use a variety of tools and techniques to conduct the system assessment.

## 6. Disposition of System Assessment Results.

- a. Conformance/Performance Achieved. If the system is determined to be in conformance with requirements and standards and it meets the desired performance results, the responsible organizations may continue operation. The results of the assessment determination require no further action except to meet documentation and reporting requirements, as applicable.
- **b.** Nonconformance/Performance Not Achieved. The results of the assessment determination have two possible outcomes and associated corrective actions.
- (1) Identification of Potential Hazards or Ineffective Risk Controls. The results of the assessment determination are directly related to an issue or event that can affect safety in the NAS and/or have a systemic impact on its operations. This outcome requires the responsible organizations to initiate the SRM process. When a potential system-level safety hazard or ineffective control is identified, contact AFB-400 to initiate SRM.
- (2) Identification of Nonsystemic FS Policies, Procedures, or Technical Standards (TS). The results of the assessment identify a possible nonconformance with FS regulatory and/or administrative business processes. This outcome requires the responsible organizations to follow the AVS Nonconformity and Corrective Action (NCA)<sup>1</sup> process or other reporting process approved by FS.

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<sup>&</sup>lt;sup>1</sup> The AVS NCA is outlined within AVS-001-016, Nonconformity and Corrective Action (NCA) Process.

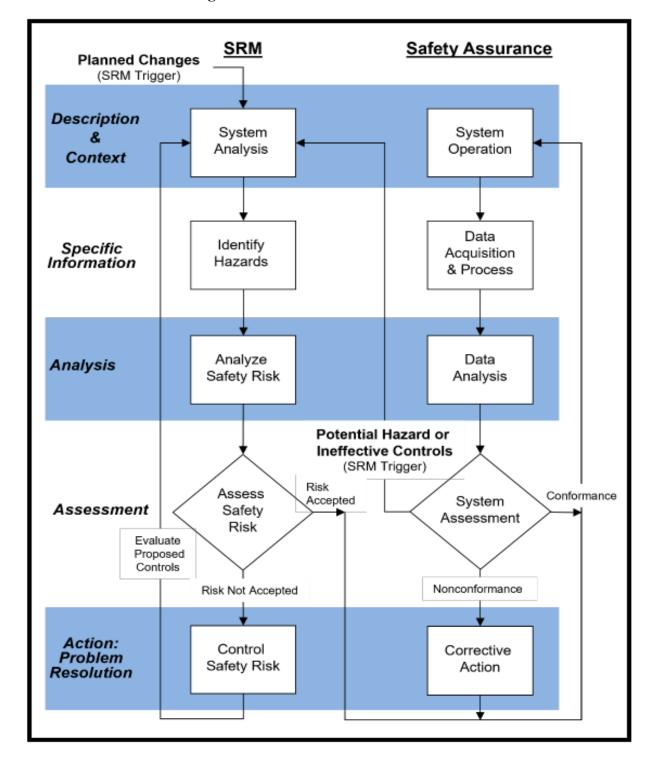


Figure 3-1. Cross-Functional Flowchart

## **Chapter 4. Safety Promotion**

1. Introduction. FS Safety Promotion consists of training and communication of safety information in support of the FSSMS. Safety Promotion is essential to support the operational objectives of FS. FS complies with the expectations identified in Order VS 8000.367 and Order 8000.369 by leveraging the existing training and communications processes. FS also provides education through continual communication of safety relevant information to both encourage and support a positive safety culture among FS employees and aviation service providers.

#### 2. General Requirements.

- **a. Training.** FS provides initial and ongoing training to its employees in safety roles specific to their specialty. This includes initial technical training and on-the-job training (OJT) throughout the employees' employment. FS develops training criteria by conducting a Job Task Analysis (JTA) which considers the duties and competencies required for each position. FS safety positions include four main areas of technical specialization: General Aviation Operations, General Aviation Airworthiness, Air Carrier Operations, and Air Carrier Airworthiness.
- (1) FS training includes indoctrination training to introduce and familiarize employees with the organization, followed by courses tailored to the employee's job function and specialty. Thereafter, FS identifies additional training needs during its annual calls for training requirements. These requirements are role-based and focused on competency.
- (2) The FAA's electronic Learning Management System (eLMS) provides online courses and instructor-led training, as well as tracks capabilities for Individual Development Plans (IDP) and competency management. The eLMS serves as the official training record for all FS personnel.
- (3) For details on training and competency requirements for FS, refer to Order 8900.1 and FAA Order 3140.20, Flight Standards Service National Training Program.
- b. Communication. FS employs a robust safety communication system that serves the needs of both our internal and external stakeholders utilizing a combination of formal and informal channels supported by mandatory and voluntary reporting programs. FS communicates with employees through broadcast email and video messages, FAA intranet/internet and social media accounts, informational workshops and conferences, town halls, and many other publications. FS shares safety information with service providers through industry conferences and seminars, Congressional briefings and factsheets, presentations, workshops, panel discussions, and video messages. FS provides safety information and guidance to service providers through publications such as advisory circulars (AC), Information for Operators (InFO), Safety Alerts for Operators (SAFO), Notices to Air Missions (NOTAM), and General Notices (GENOT). FS mandatory and voluntary reporting programs include, but are not limited to:
- (1) Mandatory Reporting. The FAA maintains the SDRS, a reporting system in which aircraft owners/operators and certificated repair stations (CRS) can report, via a web-based system, maintenance and/or service problems for any aircraft, engine, or component. Service

difficulty reporting is mandatory for commercial operators, air carriers, and CRSs. For those persons subject to mandatory service difficulty reporting, FAA regulations provide the specific information required for the occurrence or detection of each failure, malfunction, or defect.

- (2) Voluntary Reporting. Voluntary reporting enables FS to collect safety data that may not be captured by a mandatory incident reporting system. Title 14 CFR part 193 describes when and how the FAA protects voluntarily reported information from disclosure as provided for in Title 49 of the United States Code (49 U.S.C.) § 40123, Protection of Voluntarily Submitted Information. This method encourages the resolution of safety issues through corrective action rather than through punishment or discipline without fear of recrimination, and it can help to educate appropriate parties in preventing a reoccurrence of the same type of event. Examples of voluntary reporting mechanisms follow below in subparagraphs (3) through (8).
- (3) Aviation Safety Action Program (ASAP). The purpose of ASAP is to prevent accidents and incidents by encouraging CH employees to voluntarily report safety issues and events. ASAP provides for the education of appropriate parties and the analysis and correction of safety concerns that are identified in the program. ASAP is based on a safety partnership between the FAA and the CH and may include any third party, such as an employee labor organization. ASAP allows the reporting and collecting of safety information that may not otherwise be obtainable.
- (4) AVS Voluntary Safety Reporting Program (VSRP). The internal AVS-wide VSRP is an integral part of a positive, vibrant safety culture and provides a confidential, nonpunitive mechanism for AVS employees to voluntarily report aviation-safety-related issues and concerns. The VSRP uses AVS employee input to identify leading indicators and significant aviation safety issues, operational deficiencies, noncompliance with regulations, and deviations from policies and procedures.
- (5) Voluntary Disclosure Reporting Program (VDRP). The VDRP is intended to improve safety compliance by forgoing a civil penalty when a regulated entity promptly discloses to the FAA an apparent violation and takes prompt action satisfactory to the FAA to correct the violation and preclude its recurrence. Therefore, VDRPs serve an important role in achieving compliance and improving aviation safety.
- (6) FAA Hotline Program. The FAA Hotline Program consolidated two hotline programs: the Administrator's Hotline and the Consumer Hotline. The Administrator's Hotline was established to provide FAA employees with high-level management attention for concerns that were not being resolved by established administrative processes. The Consumer Hotline was established for consumers with questions about FAA services. FAA Order 1070.1, FAA Hotline Program, prescribes the operations, responsibilities, and requirements of the Hotline Program.
- (7) FAA Safety Hotline. The FAA Safety Hotline provides a single venue for employees and the general public to report concerns involving the FAA. It provides a means for persons with knowledge of unsafe aviation situations, improper recordkeeping, or safety violations to report these without fear of recrimination. The FAA Office of Audit and Evaluation (AAE) collects and forwards all safety-related issues to the appropriate offices.

(8) FAA Safety Recommendation Program. As aviation safety inspectors (ASI), investigators, or any other FAA employee identify potential safety deficiencies, they are encouraged to submit recommendations to correct those deficiencies as part of the FAA Safety Recommendation Program. The program provides a vital method of communication for employees to voice safety concerns and ensures that they will be investigated by the appropriate FAA office.

- **3. Safety Culture.** Pursuant to the FAA's policy of creating and maintaining a just safety culture, the FSSMS provides a means to identify and communicate hazards and safety concerns within the FAA's safety culture of "No Fear" reporting.
- **a. Promoting Safety.** Safety culture is defined as the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands. A strong safety culture gives priority to safety at all levels in the organization and reflects genuine commitment to safety. FS uses its SMS to promote a just safety culture that values reporting and learning through policies that align safety goals with organizational standards, training, voluntary reporting, and best practices.
- **b.** Improving Leadership. FS promotes a safety culture that strengthens leaders' competence in mutual learning, change management, and coaching others for improvement and growth. FS endeavors to develop a leadership corps that practices these values and behaviors at every level in the service to foster FS organizational health and improve the safety culture.
- **c. Expectations.** FS seeks to integrate and continuously improve a positive safety culture through its SMS to foster and reinforce the following behavioral expectations. This will enable employees and managers to practice systems thinking in the SMS for Risk-Based Decision Making (RBDM).
- (1) Shared beliefs, assumptions, and values on safety with emphasis on and support for reporting and learning at all levels;
- (2) Shared values, actions, and behaviors that demonstrate a commitment to giving priority to safety over competing goals and demands;
- (3) An atmosphere of trust in which employees at all levels feel free to provide essential safety-related information or report on safety hazards with no fear of punishment; and
- (4) Policies that describe and support safety reporting requirements, encourage employees to provide proposed solutions and safety improvements when possible, and prohibit behaviors and actions that discourage these practices.

## Chapter 5. Safety Risk Management

1. Introduction. FS SRM manages FS-level<sup>1</sup> safety issues. SRM is one of the four components of the FSSMS that enables FS to manage safety within the aerospace system. SRM provides critical information for decisionmakers by thoroughly analyzing the system, identifying hazards, analyzing and assessing safety risk, and developing controls to reduce safety risk to an acceptable level. SRM facilitates communication and coordination across FAA organizations for enhanced safety risk decision making.

#### 2. General Requirements.

#### a. Applicability.

(1) The FS SRM is applicable to organizations developing and implementing guidance and directives, and establishing regulatory rules and methods of compliance for aircraft, airmen, and certificated entities.

#### (2) Apply SRM when:

- (a) Potential safety hazards are identified through the SA process;
- (b) There is a need to develop safety risk controls to be applied in the NAS, typically established through rulemaking<sup>2</sup>;
- (c) The FAA SMS Committee or the AVSSMS Coordination Group requests action on an identified/potential safety issue; and/or
  - (d) Making planned changes to the NAS and/or its controls.
- **b.** Coordination With the AVSSMS Coordination Group and AFB-400. When a safety issue (hazards and/or their associated safety risk) is determined to affect more than one service or office or FAA organizations outside of AVS, the process described in Order VS 8000.367 must be followed. AFB-400 is responsible for coordination with the AVSSMS Coordination Group to ensure:
- (1) FS safety management functions (processes, procedures, tools, and terminology) are standardized across AVS services and offices (S/O);
- (2) Resolution or elevation of disagreements between AVS S/Os regarding safety management;

<sup>1</sup> An FS-level safety issue that was determined not to meet the escalation criteria as prescribed in the current version of the FAA Safety Risk Management Guidance document.

<sup>&</sup>lt;sup>2</sup> SRM relates to rulemaking in two ways. The first is when SRM is conducted and it is determined that mitigating the safety risk associated with an identified hazard requires a new or modified regulation to mitigate safety risk. In addition, when a proposed rule has the potential to affect safety risk in the aerospace system, the rule is assessed using SRM to ensure the safety risk is acceptable.

(3) FS safety issues that may affect multiple lines of business (LOB) and/or S/Os are presented to the AVSSMS Coordination Group for its consideration; and

(4) FS provides SME-support for SRM panels, mitigation communication, monitoring plan activity, etc., for any SRM activities across LOBs and S/Os.

#### 3. Responsibilities.

- a. AFB-400. Responsibilities include:
  - (1) OPR for the FS SRM process requirements;
- (2) Assisting the FS organizations with SRM facilitation and identifying when SRM must be applied, when applicable;
- (3) Ensuring the coordination and communication of ASL safety issues are accomplished in accordance with AVS SMS policy; and
- (4) Coordinating identified safety issues for entry and tracking via the Hazard Identification, Risk Management, and Tracking (HIRMT) tool, as applicable.
- **b. OPR for the Issue or Change Under Consideration.** The OPR coordinates and communicates issue or change considerations with the SRM division on all identified ASL issues as required by FAA SMS policy.
- **4. Relationship Between SRM and SA.** While the focus of this chapter is on SRM, it is important to understand how SRM and SA functions work together within the SMS. The SRM process provides a system analysis, the identification of hazards, and the analysis and assessment of safety risk. When appropriate, safety risk controls are developed and/or modified and applied. Through SPM, FS ensures that these safety risk controls achieve their intended level of safety performance. This is one way SRM and SA are integrated. Another way is through the identification of potential new hazards or ineffective controls (SRM trigger) using SA functions, which are then analyzed and assessed using SRM.
- **5. SRM Panel Team Composition.** Depending upon the hazard under consideration, an individual or team within a single organization may conduct the SRM. At other times, a cross-organizational team of stakeholders may be required to address the scope and complexity of an issue. The OPR determines the team's composition, which:
  - Should represent relevant disciplines, including persons with expertise in the system being analyzed, as well as technical, engineering, and safety areas; and
  - Must include representatives from all the organizations affected by the issue or change under consideration.

#### 6. SRM Panel Team Roles and Responsibilities.

**a. OPR/Change Proponent.** An individual, program office, or organization within FS that identified the need for SRM, or has proposed or sponsored an NAS change or means to address an existing safety issue. The OPR is the organization responsible for:

- (1) Managing and tracking the issue or change through closure;
- (2) Working with the facilitator to scope, lead, and manage the risk assessment;
- (3) Coordinating with all applicable stakeholders;
- (4) Identifying the appropriate management officials to accept safety risk and approve mitigations;
- (5) Documenting the results of the safety risk assessment and presenting findings and recommendations to decisionmakers;
- (6) Providing SRM results and decisions documentation for entry into the HIRMT tool as required; and
- (7) Confirming implementation of safety risk controls and monitoring to ensure that SPTs are being met.
- **b.** Facilitator/Co-Facilitator. An individual trained on the SRM process who moderates the deliberations of the SRM panel members from an impartial position. The Facilitator:
- (1) Involves and guides the SRM Team in developing a thorough safety risk assessment and moderates deliberations;
  - (2) Ensures the SRM Team complies with the SRM process; and
  - (3) Limits influence on the safety risk assessment and remains neutral to the outcome.
- **c. Panel Member.** An FAA employee or stakeholder representative who objectively performs the SRM process. Each SRM panel member is expected to have technical knowledge in a subject area that would suggest their participation in the panel meeting is appropriate, and:
  - (1) Participates and contributes to the SRM;
- (2) Objectively examines and assesses potential safety risk of the issue or change and the causes of the hazard;
- (3) Reviews the team's safety findings as documented in the Risk Assessment Report for accuracy, completeness, and concurrence; and
- (4) Coordinates the results of the assessment with their management and the SRM division, as appropriate.

**d. Subject Matter Expert (SME).** A technical expert on the organizational change/issue undergoing assessment. A SME is typically an FAA employee; however, when the agency does not have the expertise in-house, they may invite a vendor or industry representative to serve as a SME. The SME:

- (1) Answers questions from the team members;
- (2) Does not participate in the assessment; and
- (3) Does not provide consensus on the implications.
- **e. Observer.** An FAA employee, external stakeholder, data expert, or an individual who is seeking to gain additional knowledge of the issue/change or the SRM process. An observer:
- (1) Attends meetings, but does not participate in team discussions or decisions unless specifically called upon by the SRM Team to contribute; and
  - (2) Does not participate in Risk Assessment Report reviews or provide comments.

#### 7. SRM Process.

- **a. SRM Purpose.** SRM is a five-step process of describing the system; identifying the hazards; and analyzing, assessing, and controlling safety risk. SRM requirements do not preclude S/Os from taking immediate interim action to mitigate existing safety risk prior to conducting SRM and identifying permanent mitigations.
- (1) System Analysis. The system analysis must create a detailed description of the current system in which the issue or change needs to be assessed. A complete and accurate system description is a critical foundation for conducting a thorough, unbiased system analysis. The system analysis or system description provides information that serves as the basis for identifying and understanding hazards, as well as their causes and associated safety risks. A system description may be a full report or a paragraph; length is not important, as long as the description covers the essential elements. The system analysis should allow the team to understand the system well enough to identify hazards and the impact the issue or change will have on those hazards by considering, at a minimum, the following questions:
  - What is the purpose of the system?
  - How will the system be used?
  - What are the system functions?
  - What are the system boundaries and external interfaces?
  - What is the environment in which the system will operate?
  - What is the interconnectivity or interdependency between systems?
  - What impact or effect will the issue have on system user(s)?
- (2) Identify Hazards. Identify and document hazards, the system state in which the hazards are exposed, and corresponding effects. During the hazard identification step, the SRM Team shall identify and document hazards and corresponding effects. The level of detail required

in the hazard identification process depends on the complexity of the issue or change under consideration. Identify the system state(s) in which the hazard exists because the risk of the outcome and required mitigations may be different based on the system state. Use your experience, FAA requirements, and knowledge of the system or subsystem to identify hazards.

- (3) Analyze Safety Risk. The SRM Team will determine the severity and likelihood of each hazard's consequence(s). The objective of this step is to determine the initial or current safety risk associated with the effects of each identified hazard.
- (a) The safety risk associated with a hazard is the combination of the severity and the likelihood of the potential outcome(s) of the hazard. Where appropriate, existing controls are taken into account prior to safety risk determination.
- (b) Evaluating each hazard, and the system state in which it potentially exists, to determine:
  - 1. What controls exist to prevent or reduce the hazard's consequence or effect(s).
- 2. What controls, if any, address the cause(s) for the increased risk level of the hazard(s).
- (4) Assess Safety Risk. In this step, the team assesses the risk levels of each hazard against the risk acceptance criteria identified in the safety risk acceptance plan. The risk is plotted on a risk matrix based on the severity and likelihood of the outcome. The objective of this step is to determine the safety risk level acceptability. Safety risk acceptance responsibility for FS is identified in Table 5-1.

Risk Level Risk Acceptance Responsibility\*

High [Red] Associate Administrator for AFX (AFX-1)

Medium [Yellow] Director, Functional Organization (Organizational dash-1)\*\*

Low [Green] Division manager of the OPR for the issue or change\*\*

Table 5-1. Risk Acceptance Responsibility

- \* By accepting risk, the management official is deciding to authorize the operation without additional mitigation at the present time. Accepting risk is a management decision. This policy does not compel a management official to accept risk, nor does it require FAA organizations to circumvent their existing risk acceptance criteria or safety standards.
- \*\* In general, risk acceptance decisions should be made at the lowest level possible in which the management officials accepting the risk have the responsibility and authority for the issue or change being assessed.
- (5) Control Safety Risk. Evaluate the proposed risk controls to ensure risk levels are reduced to an acceptable level, as defined by the appropriate management official. Once the risk controls are developed, repeat the SRM process steps to ensure that the safety risk is sufficiently reduced and that the proposed safety risk controls did not introduce new hazards or compromise the existing safety risk controls. If the residual risk is not acceptable, redesign the proposed

safety risk controls or develop new safety risk controls, as necessary, and conduct the analysis once again. If safety risk is acceptable, document your risk control strategy and submit to the appropriate management official identified in the risk acceptance criteria for concurrence.

**Note:** When it is not possible to reduce the associated risk to an acceptable level after attempting all possible mitigation measures, then the safety requirements have not been satisfied. Revisit the original objectives or abandon the proposal when this occurs. If the proposal is unacceptable, it is not possible to implement the system or change. This conclusion must be included in the SRM documentation.

#### b. Documenting Assessments and Decisions.

- (1) The SRM documentation thoroughly describes the assessment of an issue or change. It documents the evidence to support whether the resolution of an issue or proposed change to the system is acceptable from a safety risk perspective.
- (2) Safety risk acceptance decisions made as a result of the safety risk analysis must be recorded with the safety analysis documentation. The documentation should bring together the relevant information to enable the management official to understand the issue or system, its associated safety risk, and safety risk controls implemented (or proposed) to reduce the safety risk such that the residual safety risk is acceptable. The document should contain sufficient detail to enable the reader to comprehend what steps have been taken to identify safety issues and the corrective steps taken or proposed.

## **Chapter 6. Administrative Information**

- **1. Distribution.** This order is distributed to FS' OSS and the Office of Foundational Business, and AVS.
- **2. Authority to Change This Order.** The issuance, revision, or cancellation of the material in this order is the responsibility of AFB-400.
- **3. Definitions.** For terms and definitions, see Appendix A.
- 4. Related Publications.
  - FAA Order VS 8000.367, AVS Safety Management System (AVSSMS) Requirements.
  - FAA Order VS 8000.370, Aviation Safety (AVS) Safety Policy.
  - FAA Order VS 8000.375, Aviation Safety Voluntary Safety Reporting Program.
  - FAA Order 8000.369, Safety Management System.
  - FAA Order 8040.4, Safety Risk Management Policy.
  - FAA Safety Risk Management Guidance.

#### 5. Records Management.

- **a.** File and Maintain Documentation. The FS organization with oversight responsibility for the systems and components of the aerospace systems within its purview is responsible for filing and maintaining SMS risk assessment-related documentation, as follows:
  - File Code: 1310.1.
  - Official Description: Management Project Files.
  - Cutoff: FY.
  - Disposition Instructions: Permanent. Transfer closed case files to the Federal Records Center (FRC) when 4 years old or earlier.
  - Major Subject Class: 1310.
  - Disposition Authority: NC-174-227, Item 8.
  - Record Title: Management Analysis, Surveys and Evaluations.
- **b. Requests.** Route all requests for SMS risk assessment documentation to the FS organization with oversight responsibility.
- **6. Directive Feedback Information.** Direct questions or comments to AFB-400 at 9-AVS-AFB400SMSINBOX@faa.gov. For your convenience, FAA Form 1320-19, Directive Feedback Information, is the last page of this order. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order on FAA Form 1320-19.

#### Appendix A. Definitions

- 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. Acceptance.** The quality or state of being accepted or acceptable.
- **3.** Accident. An unplanned event or series of events that results in death, injury, or damage to or loss of equipment or property.
- **4. Accountable Executive.** A person who has ultimate authority over the safe operation of the organization, and responsibility for the effective and efficient performance of the Flight Standards (FS) Safety Management System (SMS). The accountable executive establishes and promotes the Safety Policy and safety objectives that instill safety as a core organizational value.
- **5.** Accountable Manager. A single, identifiable person having responsibility for the effective and efficient performance of a process area within the organization, and has final authority to accept risks that may exist within the process area.
- **6. 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, and equipment; and all aviation-related industry.
- 7. Aerospace System Level (ASL). An issue that meets the following criteria:
- **a.** The safety issue is tracked and managed by the Federal Aviation Administration (FAA) SMS Committee;
- **b.** The safety issue is present in the National Airspace System (NAS), its safety risk has not been accepted, and it is expected to have high risk (e.g., it is identified as a result of an accident or incident, or it is assumed to have high risk but an assessment has not been completed); or
- **c.** The safety issue has high risk and has a potentially systemic outcome (e.g., the outcome crosses lines of business (LOB), or the outcome impacts an industry segment rather than an individual certificate holder (CH)).
- **8.** Aggregate Risk. The total or cumulative amount of exposure associated with a specified risk. Aggregate risk is comprised of two components: significance and likelihood. It does not include the effect of risk strategies, controls, or other measures in place designed to mitigate the effect or reduce exposure to the specified risk.
- **9. 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.

**10. Analysis.** The process of identifying a question or issue to be addressed, examining the issue, investigating the results, interpreting the results, and possibly making a recommendation. Analysis typically involves using scientific or mathematical methods for evaluation.

- 11. Assessment. Process of measuring or judging the value or level of something.
- **12. Avoidance.** Risk response in which action is taken to stop the operational process, or the part of the operational process, causing the risk.
- **13. Common Cause Failure.** A failure that occurs when a single fault results in the corresponding failure of multiple system components or functions.
- **14. Compliance Risk.** Risk of failing to comply with applicable laws and regulations and the risk of failing to detect and report activities that are not compliant with statutory, regulatory, or organizational requirements. Compliance risk can be caused by a lack of awareness or ignorance of the pertinence of applicable statutes and regulations to operations and practices.
- **15.** Controls. A means to reduce or eliminate the effects of hazards. Policies or procedures that are part of a system of internal control. See "Safety Risk Control." The terms "Control," "Mitigation," and "Safety Risk Control" are used synonymously.
- **16. Control Self-Assessment.** A process through which internal control effectiveness is examined and assessed. The objective is to provide reasonable assurance that all business objectives will be met.
- **17.** Corrective Action. Action to eliminate or mitigate the cause or reduce the effects of a detected nonconformity, noncompliance, or other undesirable situation.
- **18.** Current Risk. The predicted severity and likelihood at the current time.
- **19. Design Assurance.** The function of ensuring that the safety of a product/service provider's designs are in compliance with established requirements and standards, and the designs include the appropriate safety risk controls to meet safety objectives.
- **20. Effect.** The real outcome that has occurred, or the credible predicted outcome expected if the hazard exists in the defined system state.
- **21. Entity.** An organization established for a particular purpose (e.g., a corporation, government body, academic institution, etc.). Synonyms include organization and enterprise.
- **22. Hazard.** A condition or an object with the potential to cause or contribute to an incident or aircraft accident, as defined in Title 49 of the Code of Federal Regulations (49 CFR) § 830.2.
- **23. Impact.** The effect of an event on strategic goals and objectives. Impact can be positive or negative related to the organization's objectives.
- **24. Incident.** An occurrence other than an accident that affects or could affect the safety of operations.

**25. Initial Risk.** The predicted severity and likelihood of a hazard's effects or outcomes when it is first identified and assessed; it includes the effects of preexisting risk controls in the current environment.

- **26. Internal Control.** A process, affected by an organization's management or other personnel, designed to provide reasonable assurance regarding the achievement of objectives.
- 27. Issue. An important topic or problem for debate or discussion.
- **28.** Likelihood. The estimated probability or frequency, in quantitative or qualitative terms, of a hazard's effect or outcome.
- **29. Mitigation.** A means to reduce or eliminate the effects of hazards. See "Safety Risk Control." The terms "Control," "Mitigation," and "Safety Risk Control" are used synonymously.
- **30. Monitoring.** Tracking and keeping information under systematic review.
- **31. Noncompliance.** Conduct that is contrary to a statute, regulation, or order issued under a statute or regulation.
- **32. Nonconformance.** Nonfulfillment of an organization's requirements, policies, and procedures, as well as requirements of safety risk controls developed by the organization.
- **33. Objective.** Brief, high-level statements of achievements or desired conformity to be accomplished within a specified period. Objectives set at the strategic level help establish a basis for operations, reporting, and compliance.
- **34. Office of Primary Responsibility (OPR).** The organization that manages and tracks the issue or change through closure. Responsibilities include leading and managing the safety risk assessment, identifying the appropriate management officials to accept safety risk and approve mitigations, coordinating any necessary approvals and safety risk acceptance decisions, and entering results and decisions into the Hazard Identification, Risk Management, and Tracking (HIRMT) tool, as required.
- **35.** Opportunity. A favorable or positive event. In the context of risk management, it refers to the possibility that an event will occur and positively affect the achievement of objectives.
- **36. Performance Assurance.** The function of ensuring that a product/service provider's performance meets safety objectives and that its risk controls are effective.
- **37. Performance Indicator.** Metrics used to monitor changes in business performance in relation to specific business objectives.
- **38. Probability.** A quantitative measure indicating the possibility that a given event will occur. Probability is usually indicated in terms of a percentage, frequency of occurrence, or other numerical metric.

**39. Product/Service Provider.** An organization engaged in the delivery of aviation products or services.

- **40. Reduction.** Risk response where action is taken to reduce the likelihood or impact of the risk.
- **41. Regulatory Risk.** The risk of problems arising from new or existing regulations. Such problems may include: changes in laws or regulations having significant impact on the organization, an inability for an organization to establish the right policies and procedures to be in compliance with regulations, or an increase in the cost and complexity to ensure compliance with new and existing regulations.
- **42. Residual Risk.** The remaining predicted severity and likelihood that exists after implementation of all selected risk control techniques.
- **43. Review (Verification and Validation).** The process by which assessment of risks is evaluated.
- **44. Risk.** See "Safety Risk." The terms "Risk" and "Safety Risk" are used synonymously.
- **45. Risk Acceptance.** See "Safety Risk Acceptance." The terms "Risk Acceptance" and "Safety Risk Acceptance" are used synonymously.
- **46. Risk Action Plan.** A set of actions designed to mitigate or exploit identified risks. The plan may include intended outcomes and timetables and any other followup work necessary.
- **47. Risk Assessment.** The identification and analysis of risks to the achievement of business objectives. It forms a basis for determining how risks should be managed. Risk assessment involves evaluating the significance and likelihood of a risk, as well as any controls or other measures that mitigate or eliminate that risk.
- **48. Risk Assessment Score.** A weighting of a potential outcome (positive or negative) multiplied by the probability of its occurrence. Used to prioritize choices.
- **49. Risk Impact/Severity.** A measurement of the effect that could result from the occurrence of a particular identified risk.
- **50. Risk Indicator.** Relate to a specific risk and demonstrate a change in the likelihood or impact of the risk event occurring.
- **51. Risk Management.** A coordinated activity to direct and control challenges or threats to achieving an organization's goals and objectives.
- **52. Risk Mitigation.** Strategy for managing risk that seeks to lower or reduce the significance and/or likelihood of a given risk.
- **53. Risk Profile.** A prioritized inventory of an organization's most significant risks.

**54. Risk Response.** Management's strategy for managing (or responding to) a given risk. Risk response strategies include: avoidance, sharing, reduction, transfer, and acceptance.

- 55. Risk Strategy. Synonymous with "Risk Response."
- **56. Risk Tolerance.** The acceptable level of variance in performance relative to the achievement of objectives.
- 57. Safety. The state in which the risk of harm to persons or property damage is acceptable.
- **58.** Safety Assurance (SA). 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.
- **59. Safety Culture.** The shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands.
- **60. Safety Data.** A defined set of facts or set of safety values collected from various aviation-related sources used to maintain or improve safety.
- **61. Safety Information.** Safety data processed, organized, or analyzed in a given context to make it useful for safety management purposes.
- **62. Safety Issue.** Any information (e.g., event, report, or data) suggesting: (1) an emerging safety concern (including novel features and technologies being introduced into the aerospace system) that has not been thoroughly analyzed and requires further evaluation; or (2) a concern that was identified in the past, but circumstances have changed since the concern was initially identified, possibly requiring reevaluation. Some safety issues may need to be elevated to an appropriate level of management to be adequately addressed.
- **63. 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.
- 64. Safety Objective. A measurable goal or desirable outcome related to safety.
- **65. Safety Oversight.** A function by means of which the FAA ensures effective implementation of the safety-related laws, regulations, policies, and procedures. Safety oversight also ensures the national aviation industry provides a safety level equal to or better than the acceptable level defined by the FAA.
- **66. Safety Performance.** Realized or actual safety accomplishment relative to the organization's safety objectives as defined by its safety performance targets (SPT) and safety performance indicators (SPI).
- **67. Safety Performance Indicator (SPI).** A data-based parameter used for monitoring and assessing safety performance.

**68. Safety Performance Target (SPT).** A measurable goal used to verify the predicted residual safety risk of a hazard's effect.

- **69. Safety Performance Trigger.** An established level or criteria value for a given SPI that serves to initiate a required action (e.g., an evaluation, adjustment, or remedial action).
- **70. Safety Policy.** The documented commitment to safety of an FAA LOB or staff office (SO), or an aviation service/product provider, organization, or CH, which defines its safety objectives and the accountabilities and responsibilities of its employees with regard to safety.
- 71. Safety Promotion. A combination of training and communication of safety information to support the implementation and operation of an SMS in an organization.
- **72. Safety Risk.** The predicted probability and severity of the consequences or outcomes of a hazard.

## a. Types of Safety Risk.

- (1) Initial Risk. The predicted severity and likelihood of a hazard's effects or outcomes when it is first identified and assessed; includes the effects of preexisting safety risk controls in the current environment.
- (2) Residual Risk. The remaining predicted severity and likelihood that exists after all selected safety risk control techniques have been implemented.

## b. Levels of Safety Risk.

- (1) High Risk. Severity and likelihood map to the red cells in the risk matrix. This safety risk requires mitigation, tracking, and monitoring, and it can only be accepted at the highest level of management within LOBs and SOs.
- (2) Medium Risk. Severity and likelihood map to the yellow cells in the risk matrix. This safety risk is acceptable without additional mitigation; however, tracking and monitoring are required.
- (3) Low Risk. Severity and likelihood map to the green cells in the risk matrix. This safety risk is acceptable without restriction or limitation; hazards are not required to be actively managed, but they must be documented and reported if a safety risk assessment has been performed.
- 73. Safety Risk Acceptance. The decision by the appropriate management official to authorize the operation without additional safety risk mitigation.
- **74. Safety Risk Analysis.** The first three steps of the SRM process (analyze the system, identify hazards, and analyze safety risk).
- **75. Safety Risk Assessment.** The first four steps of the SRM process (analyze the system, identify hazards, analyze safety risk, and assess safety risk).

**76. Safety Risk Control.** A means to reduce or eliminate the effects of hazards. The terms "Control," "Mitigation," and "Safety Risk Control" are used synonymously.

- 77. Safety Risk Management (SRM). A process within the SMS composed of describing the system; identifying the hazards; and analyzing, assessing, and controlling risk.
- **78.** Severity. The consequence or impact of a hazard's effect or outcome in terms of degree of loss or harm.
- **79. Sharing.** Risk response in which action is taken to transfer or share risks across the organization or with external parties, such as insuring against losses.
- **80. Significance.** Magnitude or potential impact of a specified risk.
- **81. Single Point Failure.** An element of a system or operation for which no backup (i.e., redundancy) exists. Single-pilot operations are an exception.
- 82. Substitute Risk. Risk resulting from an action designed to reduce some other risk.
- **83. 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.
- **84.** System State. The expression of the various conditions in which a system can exist, characterized by quantities or qualities. For example, an event may lead to an adverse outcome in the landing phase of flight but not while in cruise.
- **85.** Uncertainty. The inability to know in advance the exact likelihood or impact of future events.

#### **Directive Feedback Information**

Please submit any written comments or recommendations for improving this directive or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order 8000.377A, Flight Standards Safety Management System (FSSMS) Requirements To: Directive Management Officer, AFB-120 Directives Mailbox (9-AWA-AFB-120-Directives@faa.gov) (Please mark all appropriate line items) An error (procedural or typographical) has been noted in paragraph \_\_\_\_\_\_on Recommend paragraph \_\_\_\_\_\_ on page \_\_\_\_\_ be changed as follows: (attached separate sheet if necessary) In a future change to this order, please include coverage on the following subject: (briefly describe what you want added) Other comments: I would like to discuss the above. Please contact me. Submitted by: Date: Telephone Number:\_\_\_\_\_ Routing Symbol:\_\_\_\_\_