

Faa It Is About Safety

To improve aviation safety, the Federal Aviation Administration (FAA) plans to have in place the initial capabilities of a risk-based approach to safety oversight, known as a safety management system (SMS), by the end of fiscal year 2010. FAA is also implementing new procedures and technologies to enhance the safety, capacity, and efficiency of the national airspace system. Data are central to SMS and FAA's ability to test the impact of these changes on safety. This report addresses FAA's: (1) current and planned use of data to oversee aviation safety; (2) access to data for monitoring aviation safety and the safety performance of various industry sectors; and (3) efforts to help ensure data quality. Charts and tables.

The FAA runway safety report reflects the trends for fiscal years 1999 through 2002 and expands the understanding of runway safety trends, clarify runway safety issues, and heighten the awareness of runway safety risk management across the aviation community. FAA runway safety data contains runway incursion data for all U.S. towered airports from FY 1999 through FY 2002 and includes the following for each airport: yearly number and rate of runway incursions, yearly severity trends of runway incursions, number of surface incidents.

On Jan. 16, 2006, a contract mechanic in El Paso, TX, was killed while troubleshooting an engine oil leak as two pilots performed an engine run-up procedure. Within 24 hours, the pilots submitted a request for the accident to be accepted into the air carrier's ASAP. ASAP is a joint FAA and industry program intended to generate safety info. through voluntary disclosure that may not be otherwise obtainable to identify potential precursors to accidents. The program allows aviation employees to self-report safety violations to air carriers and FAA, without fear of reprisal through legal or disciplinary actions. This report assesses FAA's implementation of ASAP and identifies improvements necessary for FAA to obtain maximum safety benefits from the program.

The air cargo industry contributed over \$37 billion to the U.S. economy in 2008 and provides government, businesses, and individuals with quick delivery of goods. Although part of an aviation system with an extraordinary safety record, there have been over 400 air cargo accidents and over 900 incidents since 1997, raising concerns about cargo safety. This study addresses: (1) recent trends in air cargo safety; (2) factors that have contributed to air cargo accidents; (3) federal government and industry efforts to improve air cargo safety and experts' views on the effectiveness of these efforts; and (4) experts' views on further improving air cargo safety. Includes recommendations. Charts and tables.

Every day in the United States, over two million men, women, and children step onto an aircraft and place their lives in the hands of strangers. As anyone who has ever flown knows, modern flight offers unparalleled advantages in travel and freedom, but it also comes with grave responsibility and risk. For the first time in its history, the Federal Aviation Administration has put together a set of easy-to-understand guidelines and principles that will help pilots of any skill level minimize risk and maximize safety while in the air. The Risk Management Handbook offers full-color diagrams and illustrations to help students and pilots visualize the science of flight, while providing straightforward information on decision-making and the risk-management process.

RCED-96-193 Aviation Safety: FAA Generally Agrees With but Is Slow in Implementing Safety Recommendations

Pursuant to a congressional request, GAO reviewed the safety performance of new airlines having 5 or fewer years of operating experience, focusing on: (1) the frequency with which the Federal Aviation Administration (FAA) inspects new airlines compared with its inspections of established airlines; and (2) FAA efforts to correct long-standing problems that limit the effectiveness of its safety inspection program. GAO found that: (1) although data regarding airline accidents and FAA incident and enforcement actions require cautious interpretation, it appeared that, for the review period of 1990 through 1994, new airlines had higher rates of accidents, incidents, and FAA enforcement actions than established airlines during their early years of operations; (2) FAA officials theorized that new airlines may experience more incidents because their fleets expand faster than their ability to absorb growth, train staff, and maintain fleets; (3) FAA national inspection guidelines that were in effect during the review period did not target new airlines for increased surveillance; (4) no clear pattern in the inspection rates distinguished airlines with relatively high rates of incidents and enforcement actions from those that had few or no problems; (5) FAA aviation safety inspection program shortcomings include insufficient inspector training, inadequate aviation safety databases, and the need to improve the oversight of aging aircraft; (6) FAA actions to better target its inspection resources to areas with the greatest safety risks remain incomplete; and (7) initiatives to accelerate the hiring of safety inspectors, strengthen FAA data collection and tracking systems, review FAA inspection operations, and conduct a safety review have the potential to significantly improve the efficiency and effectiveness of the FAA safety inspection program.

Overall, the Federal Aviation Administration (FAA) has done a credible job analyzing and defining the requirements of the Safety Performance Analysis System, an automated decision support system that FAA is acquiring to help it target its limited inspection and certification resources. However, FAA's current estimates for system software are subjective, not supported by verifiable analysis, and therefore may be unreliable. To identify aviation safety risk precursors, the system depends on information from many databases, including those compromising FAA's Aviation Safety Analysis System. As previously reported by GAO, FAA, and others, these Aviation Safety Analysis System databases contain incomplete, inconsistent, and inaccurate data. If the data quality is poor, the system's input into safety decisions will not be reliable and will not effectively support FAA's inspection and certification system.

Improving Aircraft SafetyNational Academies PressFAA System Safety HandbookIndependently Published

The System Safety Handbook (SSH) was developed for the use of Federal Aviation Administration (FAA) employees, supporting contractors and any other entities that are involved in applying system safety policies and procedures throughout FAA. As the Federal agency with primary responsibility for civil aviation safety, the FAA develops and applies safety techniques and

procedures in a wide range of activities from NAS modernization, to air traffic control, and aircraft certification. We publish this because as far as we know, a print copy is not available anywhere. Why buy a book you can download for free? We print this book so you don't have to. First you gotta find a good clean (legible) copy and make sure it's the latest version (not always easy). Some documents found on the web are missing some pages or the image quality is so poor, they are difficult to read. We look over each document carefully and replace poor quality images by going back to the original source document. We proof each document to make sure it's all there - including all changes. If you find a good copy, you could print it using a network printer you share with 100 other people (typically its either out of paper or toner). If it's just a 10-page document, no problem, but if it's 250-pages, you will need to punch 3 holes in all those pages and put it in a 3-ring binder. Takes at least an hour. It's much more cost-effective to just order the latest version from Amazon.com This book includes original commentary which is copyright material. Note that government documents are in the public domain. We print these large documents as a service so you don't have to. The books are compact, tightly-bound, full-size (8 1/2 by 11 inches), with large text and glossy covers. 4th Watch Publishing Co. is a HUBZONE SDVOSB. <https://usgovpub.com>

Pursuant to a congressional request, GAO reviewed the Federal Aviation Administration's (FAA) Safety Performance Analysis System (SPAS), focusing on: (1) whether FAA is effectively managing the SPAS acquisition; (2) the extent to which SPAS will rely on Aviation Safety Analysis System (ASAS) databases; and (3) whether FAA is effectively addressing known data quality problems with the ASAS databases. GAO found that: (1) FAA has generally implemented good development and acquisition procedures for SPAS; (2) FAA has maximized user involvement and system prototyping in developing and evaluating SPAS; (3) FAA has reduced SPAS development risks by using an independent verification and validation agent; (4) FAA is exploring the potential of its proposed corporate-wide area network to accommodate SPAS in order to avoid the acquisition of duplicate communication networks; (5) FAA cost estimates for SPAS software may not be reliable, since they are subjective; (6) FAA lacks a strategy for improving SPAS data sources, particularly ASAS, which jeopardizes the system's utility; (7) ASAS databases contain incomplete, inaccurate, and inconsistent data on airline inspections; (8) FAA has not yet defined its long-term data quality goals; and (9) if FAA fails to improve ASAS data, it could improperly target its limited inspection and certification resources on less important problems.

Although aviation is among the safest modes of transportation in the world today, accidents still happen. In order to further reduce accidents and improve safety, proactive approaches must be adopted by the aviation community. The International Civil Aviation Organization (ICAO) has mandated that all of its member states implement Safety Management System (SMS) programs in their aviation industries. While some countries (the United States, Australia, Canada, members of the European Union and New Zealand, for example) have been engaged in SMS for a few years, it is still non-existent in many other countries. This unique and comprehensive book has been designed as a textbook for the student of aviation safety, and as an invaluable reference tool for the SMS practitioner in any segment of aviation. It discusses the quality management underpinnings of SMS, the four components, risk management, reliability engineering, SMS implementation, and the scientific rigor that must be designed into proactive safety. The authors introduce a hypothetical airline-oriented safety scenario at the beginning of the book and conclude it at the end, engaging the reader and adding interest to the text. To enhance the practical application of the material, the book also features numerous SMS in Practice commentaries by some of the most respected names in aviation safety. In this second edition of Safety Management Systems in Aviation, the authors have extensively updated relevant sections to reflect developments since the original book of 2008. New sections include: a brief history of FAA initiatives to establish SMS, data-driven safety studies, developing a system description, SMS in a flight school, and measuring SMS effectiveness.

"The nation's aviation system is one of the safest in the world, but with air travel projected to increase over the next 20 years, efforts to ensure the continued safety of aviation are increasingly important. The FAA is seeking to further enhance safety by shifting to a data-driven, risk-based safety oversight approach referred to as SMS. SMS implementation is required for FAA and several of its business lines and the agency is taking steps to require industry implementation. As requested, this report addresses (1) the status of FAA's implementation of SMS, (2) the extent to which FAA's SMS efforts have been consistent with key practices for successful planning and implementation of a new program, and (3) challenges FAA faces in implementing SMS. To address these issues, GAO reviewed FAA SMS documents, compared FAA efforts to key practices, and interviewed agency and industry officials."

Ice formation on aircraft can disrupt the smooth flow of air over the wings and prevent the aircraft from taking off or decrease the pilot's ability to maintain control of the aircraft. Takeoff and landing operations can also be risky in winter weather. Despite persistent efforts by the Federal Aviation Administration (FAA) and others to mitigate icing risks, icing remains a serious concern. This report reviewed: (1) the extent to which commercial airplanes have experienced accidents and incidents related to icing; (2) FAA's inspection and enforcement activities related to icing; (3) the efforts of FAA and others to improve safety in winter weather; and (4) the challenges that continue to affect aviation safety in winter weather. Includes recommendations. Tables.

Examines the outcomes of the Federal Aviation Administration's inspection process in FY 1990 through 1996 and how this process could be strengthened to better assess and encourage compliance with aviation safety and security regulations. Also examines the outcome of FAA's enforcement process during this period and how this process could be strengthened to better address potential violations of aviation safety and security regulations. Contains recommendations to the Secretary of Transportation for improving FAA's enforcement of aviation safety and security regulations. Charts and tables.

The U.S. aviation system is one of the safest in the world, reflecting the work of the Federal Aviation Administration (FAA), industry, and others to continually improve safety. To further enhance safety, in 2005, FAA began adopting a proactive, data-driven, risk-based approach to managing safety, referred to as a safety management system (SMS), and has proposed rules that would require SMS implementation for certain segments of the aviation industry. This report addresses: (1) the status of SMS implementation at FAA and in the aviation industry; (2) key challenges that FAA and industry face in implementing SMS; and (3) actions aviation stakeholders believe FAA could take to improve SMS implementation. Tables and figures. This is a print on demand report.

A vital resource for pilots, instructors, and students, from the most trusted source of aeronautic information.

AVIATION SAFETY: FAA Efforts Have Improved Safety, but Challenges Remain in Key Areas

The Safety Management System (SMS) is a formalized and proactive approach to system safety. It directly supports the mission of the Federal Aviation Administration (FAA), which is "to provide the safest, most efficient aerospace system in the world." The Air Traffic Organization (ATO) SMS is an integrated collection of principles, policies, processes, procedures, and programs used to identify, analyze, assess, manage, and monitor safety risk in the provision of air traffic management and communication, navigation, and

surveillance services. This SMS Manual informs ATO employees and contractors about the goal of the ATO SMS, describes the interrelationship among the four components of the SMS, and instructs readers on the process of identifying safety hazards and mitigating risk in the National Airspace System (NAS). Use this document and its complements, such as the Safety Risk Management Guidance for System Acquisitions, ATO Safety Guidance documents, and other FAA safety documents, to carry out the safety mission of the FAA and requirements of the SMS.

Pursuant to a congressional request, GAO reviewed the Federal Aviation Administration's (FAA) regulation prohibiting individuals 60 years or older from piloting large commercial aircraft. GAO found that: (1) FAA has not changed the rule since its adoption in 1959; (2) since 1959, 418 pilots have submitted 67 petitions requesting exemptions, of which FAA has granted none; (3) from 1960 through 1988, FAA issued 1,301 medical certificates to pilots with physical and psychological conditions that would normally be disqualifying; (4) according to FAA, various studies have not identified an alternative that would ensure the same safety level as the 1959 regulation; and (5) FAA planned to fund a study of the relationship between age and accident rates in fiscal year 1991.

As part of the national effort to improve aviation safety, the Federal Aviation Administration (FAA) chartered the National Research Council to examine and recommend improvements in the aircraft certification process currently used by the FAA, manufacturers, and operators.

The National Research Council of the National Academies was requested by the National Aeronautics and Space Administration (NASA) to perform an independent assessment of NASA's National Aviation Operations Monitoring Service (NAOMS) project, which was a survey administered to pilots from April 2001 through December 2004. The NRC reviewed various aspects of the NAOMS project, including the survey methodology, and conducted a limited analysis of the publicly available survey data. An Assessment of NASA's National Aviation Operations Monitoring Service presents the resulting analyses and findings.

The Federal Aviation Administration (FAA) is responsible for promoting safety in civil air transportation. This report focuses on two questions: what has the FAA's overall record been in responding to, agreeing with, and implementing significant recommendations concerning aviation safety from 1990 through 1994? To what extent have specific recommendations in the areas of aircraft certification, airline inspections, oversight of foreign carriers, and safety on runways been fully implemented? Charts and tables.

Pursuant to a congressional request, GAO reviewed the Federal Aviation Administration's (FAA) Safety Indicators Program, focusing on: (1) the status and progress of the program; and (2) barriers to its implementation. GAO has found that: (1) FAA has accomplished little towards its program goals; (2) development of the indicators has been delayed due to ineffective user involvement and unclear management commitment, which have also delayed development of a necessary decision support system that would integrate data from multiple sources; (3) FAA has recently redirected the program in an attempt to accelerate the identification of indicators, but less detailed indicators are being developed, which may defeat the program's goals; (4) the safety-related databases that could supply source data to the program are inaccurate, inconsistent, and often incompatible; and (5) FAA has not responded to earlier GAO recommendations that it develop a program plan that provides for effective user involvement, requisite funding, and source data integrity.

The FAA uses the Air Transport Oversight System (ATOS) to oversee 7 legacy airlines & 9 other airlines. This report refers to airlines that are not in ATOS as non-legacy airlines. Two other processes are used to oversee 99 non-legacy passenger airlines (NLPA), which represent a fast-growing segment of the commercial aviation passenger industry & carried 200 million passengers in 2004. These establish a set of inspection activities for NLPA, & use principles of system safety to identify additional risk-based inspections for those airlines. This report assesses the processes used by FAA to ensure the safety of NLPA. Reviewed the strengths of FAA's inspection oversight for NLPA & the issues that hinder its effectiveness. Charts & tables.

Aviation safety : FAA's progress on key safety initiatives : hearing before the Committee on Commerce, Science, and Transportation, United States Senate, One Hundred Thirteenth Congress, first session, April 16, 2013.

Aviation Safety: FAA Is Taking Steps to Improve Data, but Challenges for Managing Safety Risks Remain

Airworthiness: An Introduction to Aircraft Certification, Second Edition, offers a practical guide to the regulations of the International Civil Aviation Organization (ICAO), the U.S. Federal Aviation Administration (FAA), and the European Aviation Safety Agency (EASA). The discussions include the concepts of flight safety and airworthiness; the ICAO and civil aviation authorities; airworthiness requirements; type certifications and the type-certification process; production of products, parts, and appliances; certifications of airworthiness; and rules for "spaceworthiness. The book will be a valuable resource for certification engineers engaged in professional training and practical work in regulatory agencies and aircraft engineering companies. The only airworthiness guide available—a unique single reference covering the requirements of the ICAO (International Civil Aviation Organisation), FAA (the US Federal Aviation Administration) and EASA (European Aviation Safety Agency) Demystifies the relevant European and US regulations and helps anyone involved in the manufacture, flying and maintenance of aircraft to understand this complex yet essential topic

A primary mission of the Federal Aviation Administration (FAA) is the assurance of safety in civil aviation, both private and commercial. To accomplish this mission, the FAA has promulgated a large number of regulations and has established a major division, the Office of Aviation Safety, to enforce and maintain the regulations and effectively promote safety in aviation. Within the office there are several subordinate organizations. Staffing Standards for Aviation Safety Inspectors is concerned with two of them: the Flight Standards Service (called AFS), charged with overseeing aviation operations and maintenance, as well as other programs, and the Aircraft Certification Service (AIR), charged with ensuring the safety of aircraft through regulation and oversight of their design and manufacture. The objective of the study is to determine the strengths and weaknesses of the methods and models that the FAA now uses in developing staffing

standards and projections of staffing needs for ASIs and to advise the FAA on potential improvements. Staffing Standards for Aviation Safety Inspectors is organized in an Executive Summary and five chapters. This first chapter provides the background of the study and explains the committee's approach to its task. Chapter 2 discusses modeling and its applicability to the development of staffing standards for such organizations as the Flight Standards Service and the Aircraft Certification Service. Chapter 3 traces the recent history of staffing standards in these organizations and considers manpower and staffing models and methods used by other organizations. Chapter 4 examines factors to be considered in the development of ASI staffing standards and the challenges faced by any methodology applied to this task. Chapter 5 presents the committee's findings and recommendations, including a discussion of issues and constraints that must be considered in weighing the implementation of alternative approaches.

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