



AIRPORT SMS



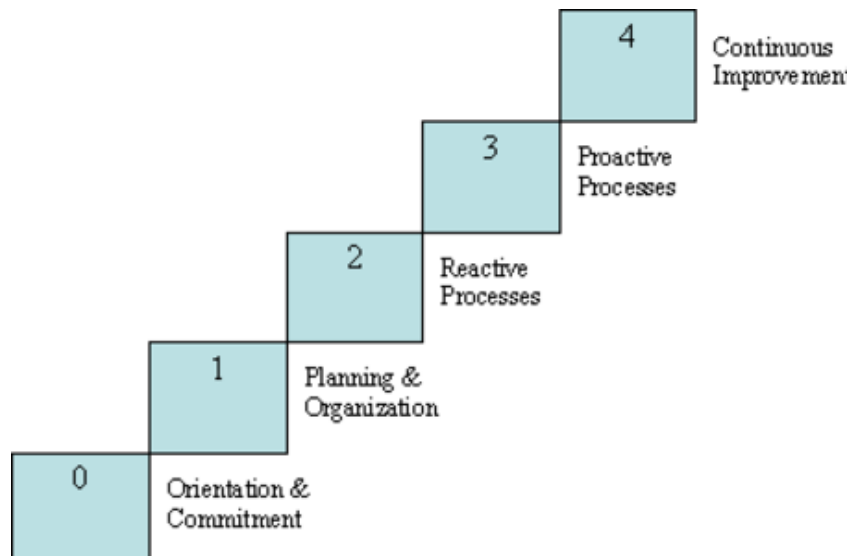
John Davisson

Summary

The ICAO airport standard has been in effect since 2005 (annex 14, volume 1) and has mandated all certificated airports to implement safety management systems. Within the United States, the FAA continues to delay, but many sources are pointing to April, 2022 as the date of issuance of the regulation for an estimated 268 airports out of the 521 certificated airports in the system. For the other 5,000 public airports within the U.S., adopting and implementing SMS will likely be voluntary with industry expectations that will require it over time as a best practice.

Small general aviation airport managers are facing a potentially large project management task with regard to SMS implementation at a time when many airports are facing resource and personnel shortages as a result of the external pressures. While the SMS provides multiple safety and business benefits, it is a complex tool that must be understood and thoroughly planned to be implemented correctly. Airport managers will need to decide if they have the skill set, expertise, and personnel to successfully self-implement SMS, or the resources to contract out the project. There is another option.

Most flight departments found that was more efficient to contract the initial planning, training and manual construction to professionals who have SMS experience. Our company has the enviable position of having implemented hundreds of SMS programs into flight departments of all shapes and sizes using the identical standard as the airport standard. We provide you initial SMS training, implementation plans, the manuals and the project management tools to get your organization to phase 2 of the maturity ladder. At that point, the project is handed over to your team to complete over the next 3-years with our team always available to provide support if you need it. By far this method is the most cost effective and time saving program available.



Overview

The airport cooperative research program (ACRP) was tasked by the FAA in 2007 to explore the subject of airport safety management systems (SMS) and develop an airport guidebook to assist airport managers in developing an implementation plan. That study provides the background and general information that describes the purposes and goals of the SMS. While SMS is not new, it is relatively new to aviation. The SMS is, in its simplest form, a top-down businesslike approach to managing risk factors and hazards. Top management must “buy-in” to the idea and goals of the SMS or the system will fail to achieve any benefit to the operator.

The SMS goals are simple: build on the culture of safety that must exist within any endeavor relating to aviation, and strive for continuous improvement. The purposes of the SMS can be further simplified as: the identification of hazards and the mitigation of hazards. SMS is a proactive approach to managing safety that concentrates on the control processes rather than on inspection and regulatory oversight.

Airports may implement early and start the training of personnel to meet the regulations once they are issued. For many operators with limited personnel and resources, getting an early start will be essential to keep costs down.

However, for many airports, the SMS will require the adoption of a mindset that moves operators towards early intervention and taking a proactive attitude towards risk analysis. Becoming predictive and proactive often requires taking action before a safety violation occurs, which could be viewed as an unnecessary expense.

The ICAO and FAA have adopted a four-pillar model outlined in AC 150/5200-37a which includes four components:

1. Safety policy
2. Safety risk management
3. Safety assurance
4. Safety promotion

Benefits of SMS

The program can provide multiple business benefits that lead to reduced cost and higher productivity. Additionally, safety and efficiency are positively correlated which can actually provide a return on investment over time. With the move towards mandatory SMS, operators will need to accept the premise that safety can be improved while providing positive business benefit.

1. Reduced likelihood of accidents
2. Reduced cost relating to accidents and incidents
3. Assurance that a system is in place to monitor and address safety issues
4. The potential for reduced insurance premiums
5. Competitive advantage and possibility of more business opportunities

6. Improved regulatory compliance
7. Improved employee morale
8. Identification of the best use of limited resources available
9. Reduced reliance on a few key personnel
10. Improved control
11. Consistency
12. Improved productivity

SMS programs have been used outside of aviation for more than two decades , primarily in the manufacturing industry where there is significant data to support the long-term advantages of SMS implementation, well beyond simply meeting regulatory mandates. Once the SMS is implemented and embraced by operators, improvements in processes ultimately leads to reduced operating cost, which is good for business.

Operators need not spend tens of thousands of dollars to achieve the goals and purposes of the SMS, in fact, once the airport receives a concise implementation plan and some basic training of what SMS does and just as important, what it doesn't do, costly mistakes and unnecessary activities can largely be prevented. SMS is particularly vulnerable to inappropriate and ineffective implementation when carried out by inexperienced managers. A simple reading of the framework often leads the implementation team to spend excessive amounts of time on projects that will not provide improvements but will increase documentation and wasted time. Once personnel are trained and committed and implementation is accomplished, a change in key personnel will not derail or alter the effectiveness of the SMS. Proper implementation ensures that the SMS is not dependent on any single individual to function correctly.

Initial steps towards SMS implementation

There is no reason for airport managers to defer or wait to start the SMS implementation. Regardless of regulations, SMS makes senses from a strictly business perspective. The advantages of SMS implementation will result in cost savings over time, and improve employee morale and satisfaction. Once top management decides to move forward, there are generally a few steps that have consistently resulted in successful programs. Some of those initial steps are:

1. Appoint an SMS champion and build an SMS team
2. Review and study what safety programs you currently have
3. Select the standard that you will follow- (there are several, and at this time no one standard has been required. The ICAO and FAA have published a "framework" which they recommend)
4. Consider bringing in a third-party experienced consultant that can assist you in the planning, development, and implementation of the SMS. Most operators who delay or avoid this step are vulnerable to costly mistakes, excessive man-hours, poor implementation, and an inferior SMS
5. Assign roles and responsibilities to the team and train all personnel

Airport SMS

The SMS implementation process takes time. Once operators have developed their implementation plan, it is essential to assign roles and responsibilities and conduct weekly and monthly meetings to ensure the program is on track. If at all possible, it is highly desirable to have a dedicated team during the initial implementation period to ensure the SMS is following the standard. Plan the work and work the plan is especially applicable to an SMS implementation. If the project is not given priority and dedicated resources, chances are it will result in an inferior program.

Leadership is essential in the initial stages and while it is unlikely that most airports will have the luxury of a dedicated team indefinitely, it is critical to maintain the team's objective and cohesion. SMS, once implemented will not be "individual dependent", and when implemented correctly, will continue to operate effectively during personnel changes. A mature SMS can typically endure management and personnel changes without much of a distraction.

Estimating cost of SMS implementation

The safety management system implementation must be viewed as a large "Project Management" task requiring the expertise of outside experts and internal managers. The size of the airport facility, the number of employees who will be directly involved with implementation, the resources available, and management's commitment will largely determine how expensive the SMS will ultimately cost.

Airports will not be required, at least initially, to implement the SMS to the "land" side of the airport though operators should consider it early in their planning.

Once the SMS team has been trained, they will typically perform the job hazard analysis, work instructions, job description, establishing documentation and records, and the continued training of all personnel on the airport.

For airport managers, the decision to utilize outside expertise is key to keeping cost down, while implementing the SMS correctly. The FAA estimated 1396 hours to perform the following: Gap analysis, implementation planning, manual construction, Initial training. Having been down that road more than 200 times has taught us there is a better way. Let our team get you to phase 2 and then you use your team to finish the project over time. The cost differences are substantial as you can see:

Option	Time frame	Estimated cost
Self-implementation f/t	8-mo	\$19,200
A&E Contractor	6-mo	\$130,000
SMS4AV	1-week onsite	\$6,900*

*Does not include travel/accommodations

Concluding Remarks

Commercial and non-commercial flight departments have been mandated to implement SMS since January, 2009 and November, 2010 respectively. Operators were tasked to design, plan, and implement a safety management system that met the ICAO SMS requirements. For the most part, most 121 operators have complied with that mandate without undue hardships. The non-commercial or part 91 flight departments have had a more challenging experience however. There, resource limitations, along with minimum staffing constraints, made implementing a robust SMS especially challenging.

For domestic airports, the FAA has announced that they intend to inspect an airports' SMS to ensure compliance with the minimum standards, but the majority of public airports will adopt SMS without regulatory oversight.

In an attempt to improve an enviable safety record, all aviation service providers must now embrace the movement towards the new paradigm of being proactive and predictive. The tool that has been chosen by regulatory authorities is the Safety Management System, which has an established record of success outside of aviation. While the SMS is indeed an effective tool, it must be remembered, that it is just that, a tool. A tool that can improve safety by raising awareness, through establishing policies and procedures that must be followed without exception, by chipping away at complacency that is always a contributing factor in accidents. But make no mistake about SMS, it is not a panacea, nor is it a failsafe mechanism. In the right hands, it will provide benefit. In the wrong hands, it will make a nice door stop

Reference Documentation

Annex 14, aerodromes, Volume I, Aerodrome Design and Operations, July 2004 section 1.4, certification of Aerodromes; section 1.5, Safety Management

Document 9774, Manual on Certification of Aerodromes, First Edition, 2001

Safety Management Manual (SMM) 9859

AC 150/5200-37 Introduction to Safety Management Systems for Airport Operators

FAA Order 5200.11, FAA Airports Safety Management Systems

ACRP report 1, Safety Management Systems for Airports: Volume 1 Overview

ACRP report 2, Safety Management Systems for Airports: Volume 2 Guidebook

FAA SMS website- <http://www.faa.gov/about/initiatives/sms/>

ICAO SMS manual- <http://www.faa.gov/exit/?>