

J Dickstein, Legal Matters: Safety Management Systems: Learn, Implement, Succeed!, MRO MANAGEMENT MAGAZINE, March 2022 at 18.

Safety Management Systems: Learn. Implement. Succeed!

It is an exciting time for Safety Management Systems (SMS) experts. The new repair station SMS rules have been issued in Europe and they will soon be issued as a proposal in the United States. But this is also a frightening time for anyone who hasn't been immersed in SMS for the past decade.

Safety Management Systems is a new paradigm for managing safety issues in aviation businesses. The basic concept has been used in some workplaces for decades, and ICAO has been encouraging aviation authorities to adopt this as the default approach to civil aviation safety for nearly two decades.

European repair stations are now in the transition period for implementing Safety Management Systems (SMS). US repair stations will reach this point soon, after the U.S. SMS rule is promulgated.

Timeline

The EU repair station SMS requirements have been published, and they will go into effect later this year, on December 2, 2022. After the new rule goes into effect, regulatory authorities will be responsible for assessing compliance and issuing findings. Because this is a new regulation, EASA anticipates significant findings. The European Commission has established a final drop-dead date of 2 December 2024 (two years after the effective date). By this date, all government SMS findings must be closed.

We are recommending that repair stations get started immediately, to have a program ready-to-go by the time the rule becomes effective. This will give you more time to tinker with the program and make it effective for your business.

What if you are outside the EU? It is currently unclear how EASA will handle non-EU SMS requirements. The United States is planning on issuing an SMS Notice of Proposed Rulemaking later this year (probably in the Fall). There is a strong likelihood that EASA will defer to its bilateral partners who have SMS regulations of their own.

SMS Basics

First, if you need to understand the basics of SMS, a good place to start is with December 2020 issue of MRO Management [<https://www.aviationbusinessnews.com/digital-issue/mro-management-december-2020>]. In that issue you will find an article on page 14 that outlines what SMS is all about. You should walk away from that article with a basic understanding of the components of SMS.

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There are four components to SMS:

- Safety Policy
- Safety Risk Management
- Safety Assurance
- Safety Promotion

When I am first introducing a class to SMS, I like to start with the second element - safety risk management – so that the students are clear on the concept. After they understand this, then I can go back to the foundational elements found in the first component (Safety Policy). If you try to build a safety policy without really understanding what SMS is, and how it can help your organization, then you run the risk that you will build an SMS program that checks the boxes, but that doesn't function as it is really intended.

How Do I Get Started?

Even though I like to start with safety risk management when I am teaching SMS, I understand that a well-developed SMS needs to start with the Safety Policy found in the first component. The Safety Policy, as well as the safety procedures, are all tools that you will use to implement your SMS program.

In order to get started with SMS, you need to build the tools of SMS. These include SMS procedures, but they also include other related tools like your hazard log. It is important to understand that SMS is a tool to help the company manage safety. Like any tool, it is only useful if it is properly configured and it is also only useful if you use it correctly.

What do I mean when I say that it must be properly configured? The SMS must be constructed correctly, so that it will provide the company with safety value. A poorly built SMS will be as useless as an improperly calibrated tool. The measurements may be inaccurate, and it may yield incorrect data. Incorrect data can be more dangerous than no data. If you act in reliance on the incorrect data, then this may divert resources that could have been better used to mitigate other safety risks. If you fail to act because the data suggests that the risks are acceptable, when in fact they were unacceptable, then you may complacently fail to apply corrections to a system element that required correction.

Why do I say that an SMS must be used correctly? You can use tools incorrectly and they will fail to achieve the desired results. The most expensive hammer in the world is not the ideal tools for turning a bolt; and it is no substitute for a torque wrench. For an SMS program, you have to use it in a manner that is consistent with management expectations. If management expects it to be used to identify and mitigate human factors-related hazards, then it better include a mechanism for identifying human factors-related hazards. I've seen SMS implementations that purport to be focused on correcting certain types of hazards, but as-implemented they are focused on collecting the wrong sort of data. For example, I saw a company with an SMS that was focused solely on non-conformances (and that ignored other forms of hazards). But their SMS data collection was primarily focused on collecting information from employees, and the employees' data was mostly focused on intra-personal issues. On paper, it

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looked like the company had very few hazards to mitigate, but this was because the employees had a misunderstanding of the sorts of information that management wanted communicated. This system would have also been better focused on customer identification of issues (such as through warranty returns), which was not always fed into the SMS.

Using a Top-Down Approach

Once you feel that you understand SMS, one way to start is by writing down your first-draft safety policy and safety objectives.

The safety policy is meant to be a visible endorsement of the company's management commitment to safety.

Don't be afraid to write down a sample, with the idea that you can replace it with a better-worded policy once you've examined it. This is just a sample of a very simple safety policy:

The company is committed to providing services that support high levels of safety performance and that meet national and international standards.

More complex safety policies can identify additional features of the company's commitment to safety, such as:

- The company's commitment to continuous improvement;
- The company's commitment to a positive safety culture;
- The company's commitment to regulatory compliance;
- The company's commitment to ensuring that personnel get the resources they need to be able to deliver a safe product or service;
- The company's commitment to ensuring that managers treat safety as a primary responsibility; and
- The company's commitment to ensuring that the SMS is understood, implemented and maintained at all levels.

The next step is to identify safety objectives that help to support the safety policy. This invites you to think about what goals are related to the stated policy. One factor that can influence safety might be formal compliance to the aviation authority's regulations. So, if the safety policy states a commitment to regulatory compliance, then one safety objective might be:

- Safety Objective: 100% compliance with all applicable aviation safety regulations.

Speed in implementing corrective action can be important to preventing recurrence, so your system could include an objective that related to the lag-time between identification of a hazard and successful mitigation of the hazard, like this:

- Safety Objective: from the date on which a hazard is identified in our system, the initial risk mitigation will be identified, assessed, and implemented within seven working days, unless it the

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mitigation requires government acceptance or approval, in which case it will be submitted to the government for acceptance or approval within seven days.

If the safety policy includes a commitment to a positive safety culture, then you might establish one or more safety objectives that permit you to measure this safety culture. Safety culture is difficult to measure directly, but employee comfort with the system and participation in the system are useful ways to help judge the safety culture relative to the SMS. Here are some sample ways to examine the safety culture relative to the SMS program:

- Safety Objective: each employee will be tested annually on their understanding of the SMS and the company will achieve a 100% pass rate.
- Safety Objective: through anonymous assessment, the company will assess the employee's comfort with the company hazard reporting system with the objective to meet a 100% comfort level.
- Safety Objective: the company will encourage employee use of the hazard reporting system and will seek to identify at least 10 substantive hazards in each month through this mechanism.

Part of your effective SMS program will include tracking how well you meet your safety objectives. In the next issue, we will examine ways to develop safety performance indicators (SPIs) to demonstrate compliance to the safety objectives.