

**A Culture of Safety: The Key to Successful Safety Management System (SMS)
Implementation and Operation**
By Tom Garcia and Rick Boyer

So, you want to establish a safety management system (SMS) in your corporate flight department. That's good because, according to the FAA, it will be required for all Part 135 corporate flight departments after January 1, 2009. SMS already is required in Canada, throughout Europe, and in many other countries throughout the world. If you are going to implement SMS, you might as well do it right. But what is exactly the right way to implement this "new" management system? Which guidance material and which program should you use? If you simply want to comply with the FAA, here is what they have to say about SMS in their advisory circular AC 120-92: "This Standard (meaning SMS) is in accordance with the following documents:
International Civil Aviation Organization (ICAO) Document 9859, *ICAO Safety Management Manual*"¹

Consequently, the FAA is telling us that they are basing their guidance on the ICAO standard. Yet there are other standards, such as IS-BAO, that are not only compliant with ICAO, but go well beyond it in terms of quality assurance and compliance. So once again, what is the right way for your flight department to implement SMS?

Before we continue, let's for a moment, consider just what an SMS is supposed to really do for your organization. Basically, an SMS is a tool to help flight departments achieve operational excellence by proactively controlling hazards before they become incidents or accidents. Understanding the purpose of the SMS will help your department make a better choice as to which standard to use in launching your SMS. If you already have an established SMS, each member of your team must understand its purpose for the SMS to be effective.

Keep the basic premise of an SMS in mind as you read this article – there is an important step that must be taken prior to establishing an SMS in your flight department. This first step is the sole focus of this article and the key to successful SMS implementation.

SMS Basics

The FAA says SMS will do the following:

"An SMS is essentially a quality management approach to controlling risk. It also provides the organizational framework to support a sound safety culture."²

Notice that the FAA uses the term support, and not create, with respect to a sound safety culture.

The ICAO Safety Management Manual states this about a safety culture:

"Before an organization can implement an effective SMS, it needs to possess an appropriate safety culture."³

The FAA and the ICAO both infer that establishing an SMS won't create a "sound" or "appropriate" safety culture if one doesn't already exist. Edgar Schein, the founder of modern organizational culture says, "If you have been trying to make changes in how your organization

works, you need to find out how the existing culture aids or hinders you.”⁴ Trying to establish an SMS without first understanding your existing safety culture would be an unnecessary exercise in trial and error with no assurance of success.

Culture’s Role in SMS

Let’s look at a classic example of failing to define the existing safety culture in the face of mandated and necessary program change. The director of NASA was highly confident in his safety programs prior to the Columbia Space Shuttle mishap. Unfortunately, he was not aware of the dysfunctional cultures that were limiting the effectiveness of these good programs. Frederick D. Gregory, Associate Administrator, NASA Office of Space Flight, before the House Subcommittee on Space & Aeronautics on April 18, 2002 said, “NASA continues to maintain a strong interaction with the Aerospace Safety Advisory Panel (ASAP), the Space Flight Advisory Committee (SFAC), a subcommittee of the NASA Advisory Council, and other external groups that will provide valuable assessments on improving the Space Shuttle system.” Further, “...safety continues to be our top priority at NASA.” The Columbia accident occurred in February, 2003. The final investigation report conducted by the military concluded that NASA had a broken safety culture. NASA implemented many program changes and management reforms following the Challenger mishap, yet the Columbia mishap report revealed that NASA’s culture had “blind spots” which impeded the detection of danger and, “...acted over time to resist externally imposed change.” NASA’s big mistake was not clearly defining the existing culture. Almost 16 years of program changes and new implementation were undermined by a flawed self diagnosis of their existing culture.

The military has many classic examples of this same failure to detect dysfunctional culture. It is the reason that the Navy, Marine Corps, and Air Force now require all squadrons to have a formal culture assessment done every two years. The nuclear power industry requires the same. And now, NASA is in the process of establishing a Navy style culture assessment of their own.

Transport Canada has given the CBAA authority to establish SMS standards within the business aviation industry. Recent SMS audits have shown that some business aviation operators can’t answer even the most basic questions regarding their SMS programs.

In a recent AeroSafety World article, Mark Lacagnina wrote that “...some operators are just trying to take their old way of doing business and Scotch-taping the SMS on top of it.”⁵

And finally, there is an informal saying at the U.S. Naval Safety Center regarding safety culture: “A dysfunctional safety culture can undermine the best safety programs in the world.”

Complicated? Not really. Here is the bottom line. SMS was not designed to *create* a “culture of safety.” SMS was designed to build upon and improve an *existing* “culture of safety.”

Once you understand this concept, you will understand that you must actively and continually define and manage your unique safety culture in order to optimize SMS and any safety program that falls under its umbrella. So how do you do this? You do this by understanding what a safety culture is and by defining *your* existing safety culture.

Understanding a Safety Culture

It's important to understand what culture is based on. Culture is the learned and shared assumptions, values, and beliefs that result in the behavior of an organization. These are the assumptions, values and beliefs that have worked well enough to be considered valid and which are then taught to new members and become the expected way to perceive, think, act and feel. The most controlling aspects of culture are often hidden because assumptions occur largely at the unconscious level.

Do you think you have a culture of safety? How do you know? You are a part of the very culture you want to define. Below are some of the red flags that could indicate dysfunction within your safety culture.

Red Flags

1. Tolerance of ... poor communication, cutting corners, poor performance.
2. Acceptance of improper procedures, complacency, inefficiency.
3. Lack of trust.
4. Sacrificing safety to save money or time.
5. Reactive versus proactive organizational tendencies.

Have you ever heard comment like these?

1. Nobody ever listens to me.
2. Nobody really cares.
3. I hope
4. This is the way we do things around here.

Maybe you don't see any of these red flags in your organization. Good. But remember, NASA didn't either.

Here is a specific red flag example using FOQA. A major commercial carrier has had a rash of reoccurring flap over speeds in a couple of fleet aircraft. Messages to the pilots detail the incidents and reiterate the proper flight parameters for stabilized approaches. Is there a possible red flag masked in this example?

In this case there is definitely a red flag. The carrier is using FOQA data in a reactive manner when it could be used proactively. What problem is the airline attempting to fix with their message to pilots? Do they really believe that their pilots need to be told the correct parameters for a stabilized approach? Does the carrier really think their own pilots can't fly these approaches within acceptable standards? Absolutely not! However they completely miss the proactive question which is, "Why are they not flying the approaches in accordance with the standards?" Answer this question and you will be treating numerous symptoms that are plaguing the company.

When you try to solve each problem as an individual issue, you are reactive. Look for the underlying cause in any one issue, and you are looking at culture and the true reason for most of the problems. Define the existing culture and then manage the culture to improve it to an appropriate level, and now you are ready to establish an SMS.

Defining Your Culture

The flight department's culture is based your entire team. This includes the pilot group, maintenance team, and all support staff. Furthermore, the department's culture is directly impacted and most likely a subset of your parent company's organizational culture. You need to gain a better understanding of each functional area before establishing an SMS, because all of these areas have a direct impact on your organizational culture and ultimately your safety culture. The first step is to get someone in your organization trained in an accredited SMS program. Next, you need to define your existing safety culture. There are three commonly used techniques to help define culture. We will discuss each with their benefits and limits.

1. Surveys. For smaller organizations surveys are easy to accomplish. Although, the bigger the organization, the harder they are to complete. In the end, the surveys biggest limitation is that they don't actually give you culture information, but rather climate information. Climate is surface information, while culture is much deeper. Climate is comparable to measuring your temperature. A fever indicates there may be something wrong, but you don't know exactly what. Climate surveys are a good tool to let you know there may be a problem, but doesn't give you definitive answers. Additionally, the results may take an extended time to compile, and then you will still have to search carefully for the answers.
2. Cooperative assessment. If you can find another similar flight department and swap safety advisors for a day or two, you will get a fresh look at your programs by someone who understands your mission and objective but is not a part of your culture. This is the least expensive option, but depending on the ability and experience individual, may yield varying results. Combine the assessment with a survey and your team will begin to understand the underlying issues that affect each answer to the questions on the survey.
3. Contracted specialist. A trained facilitator or consultant will use proven techniques to help you define your existing safety culture. This may be the most expensive option, but will get you quality results in as little as a week. Combine this option with a survey, and you will have the best results possible.

Culture is the Key

Have you figured out what the first and most important step to establishing an SMS is in your flight department? It is an accurate evaluation of your existing safety culture. This seemingly simple process has been the single biggest mishap reduction tool in the history of Naval Aviation aside from technological advances. An accurate evaluation of your existing safety culture will not only improve your flight department's operations, but will better prepare you to establish an SMS.

New safety programs and systems don't magically create a new culture of safety. However, on the other hand your existing culture will absolutely define any new program or system. The military and NASA have learned this lesson the hard way. The nuclear power industry wisely avoided this mistake by aggressively adopting culture initiatives. If you want to have a successful SMS, identify your culture's strengths and then build upon them to achieve an appropriate and functional safety culture. Do not assume that you already know and understand the strengths and weaknesses of your culture. You may be surprised. If you already have an established SMS, completing this process will make it even more effective.

Remember that SMS is a system, not a program, and is based on a "culture of safety." It was not designed to create a "culture of safety." It was designed to build upon and improve an existing "culture of safety." By defining your existing safety culture first and then nurturing that culture to an appropriate level, your department will reap the rewards of operational excellence and effectively and proactively control your hazards through a successfully implemented SMS.

REFERENCES

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