APPROPRIATE
Management

I have been in a few international meetings lately where there seemed to be an emerging sense of confusion, and even despair, over the widespread implementation of safety management systems (SMS). I worry that we might be trying to make SMS all things to all people.

SMSs are most powerful when used by an accountable safety executive who has the ability to allocate resources to mitigate risk. That is why the International Civil Aviation Organization chose to target the front-line safety managers in airlines, airports and air navigation service providers (ANSP) with its initial SMS requirement.

Those operational executives manage hundreds of variables that can affect safety, and it was obvious an SMS would help them by providing the data and the processes needed to manage risk. Many organizations felt a bit left out by that decision. They asked, "How can you talk about safety if you do not address flight schools, repair organizations and manufacturers?" Clearly these suppliers play a vital role in aviation safety. If they don't deliver a quality product the results can be catastrophic. In this case, quality is so important that it deserves to be managed by systems designed to ensure quality, not an SMS designed to manage risk. There is a difference.

Let's look at a simple example: Bad fuel can take down an airplane. If an airline's SMS sees reports of contamination, that risk will be flagged, and an array of mitigations will be considered. The airline might put in place testing procedures, change suppliers, or even avoid taking on fuel at a location. The airline uses the *SMS* to manage *risk*. The fuel supplier's job in this case is different. When they detect a problem with the quality of their product, they will engage their processes to determine how to correct it. They will use *quality systems* to correct *defects* and meet specifications.

I used a fuel example, but it doesn't take much imagination to apply the same principles to a maintenance and repair organization, an engine manufacturer or a radar supplier. In these cases, it is important to ask ourselves whether we are trying to achieve a quality target or mitigate safety risks.

There also is a practical regulatory limit to how far into the supply chain we should push SMS. Airlines, ANSPs and airports are certified by a single state with a single state safety system and a single SMS standard. On the other hand, if you go to an engine repair station or a major manufacturer, you will often find more than a dozen certificates on the wall, each issued by a different state, and each of these states ultimately will produce SMS standards that will be a little bit different. Meeting requirements for multiple SMSs will produce a lot more paper but probably not a lot more safety. While an SMS might be appropriate to reduce the risk of workplace hazards, the proper tool to enhance aviation system safety would seem to be a quality management system.

Many of my friends and colleagues may disagree with some of the points I have made, and I must admit that there is room for debate. But let's agree that the problem of where and when to implement SMS deserves thoughtful debate. If we try to make SMS all things to all people it will fail, threatening one of the most effective tools we have ever held.

William R. Voss
President and CEO
Flight Safety Foundation