

Safety Management Systems (SMS) – Simplifying the Business (StB)

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Safety Management Systems (SMS) are becoming a mandated requirement. ICAO has stated that airlines and MROs should have an SMS in place by 1st January 2009, just two months from this conference. Yet comments made at recent meetings by the very government and industry organizations that champion and support SMS, suggest a very long, difficult, complex and expensive road ahead:

- “...relatively few of the world’s airlines have assembled one of the most significant developments in safety – the safety management system” (FSF, 2008)
- “...developing and implementing an SMS takes time and effort – and money” (FSF, 2008)
- “SMS development has been slow, and some international aviation specialists say that many operators are unsure exactly how to proceed” (FSF, 2008)
- “Full-scale implementation of SMS around the world is going to take some time” (ICAO, 2007)
- “Coordinating the building blocks to craft an SMS will be a time-consuming process” (ICAO, 2007)
- “About 10% of all airlines worldwide have a reasonably implemented SMS” (ICAO, 2007)
- “It’s pretty intensive in time, effort and money ... and it’s going to be years before it’s in place everywhere” (ALPA, 2007)
- “...there is no widespread agreement on exactly what constitutes an SMS” (FAA, 2007)
- “If I talk to 10 people, I get 10 different answers about what an SMS is” (FAA, 2007)
- “It is unlikely and probably undesirable that an organisation should attempt to introduce a complete SMS in a short time scale” (UK CAA, 2003)

If your SMS is complex, expensive and has a project timeline of many years, you’ve got it wrong. ‘Simplifying the Business’ (StB) has become one of the goals of IATA. It is time for the same principle to be applied to SMS. Implementing an SMS need not be difficult, time consuming or expensive; although listening to many industry and regulatory ‘experts’ would suggest that it is all of these negative things. A Safety Management System is simply a system for managing safety, and managing safety is ultimately about managing risk. Most airlines already effectively manage their safety risks and therefore most airlines already have an SMS or at least the major components. But this simple concept has been lost in a world of academic models and theory, 300 page safety management manuals, rigid regulatory requirements, and the drive to integrate systems within the airline. The situation is akin to the ‘quality frenzy’ of the 1990s, where organizations blindly implemented academic business school theories and models, and every manager used quality buzzwords like TQM, but the quality of the products or services didn’t really change.

Many airlines and regulators talk of SMS as if it is a new thing, the new buzzword. It is true that the term ‘safety management system’ is new, appearing in the late 1990’s. However, the concept of managing safety is obviously not new. Several airline safety managers have noted that “their airline is about to implement stage 2 SMS”, or have asked “when did your airline start SMS?”. Does this imply that safety was not being managed prior to this? These comments suggest that many have forgotten the simple fact that a safety management system is a system for managing safety, and airlines have always been doing this.

If an airline has passed the IOSA (IATA Operational Safety Audit), that airline has the components of an SMS, if not the entire system. If an airline has not conducted an IOSA, then a very practical way of assisting the SMS implementation is to use the IOSA guidelines and standards as a checklist (available from IATA website). The IOSA guidelines are highly practical and offer extensive 'guidance material' to help with the understanding of what is required and how to implement it.

The challenge of an SMS is making it effective. An SMS that ticks all the regulatory boxes may not effectively manage safety and risk. If a CEO has recently signed a safety policy only because it was a requirement of an SMS, then that airline will be no safer than it was the day before the signature. Simply having an SMS does not make an airline safe, but an airline cannot be a safe without an SMS. In the same way, having a revenue management system does not give you a lot of revenue, but you'll never gain a lot of revenue without a revenue management system.

It has been stated that passing IOSA indicates an airline has an SMS, and that having an SMS does not automatically make an airline safe. Thus, having an IOSA does not make an airline safe. What makes the SMS effective and makes the operation safe is the attitude and behaviour (ie, the 'safety culture') of the CEO and the staff towards managing safety.

As long as the appropriate safety culture exists within both the organization and the regulatory authority, then implementing a successful SMS is achievable by any airline or MRO. Thus, the first and greatest hurdle is the safety culture, and this is heavily influenced by the senior management. Without senior management's wholehearted and complete commitment to safety, the SMS will be ineffective, therefore the safety risk management will be ineffective. [Actually, the first and greatest hurdle is the safety culture of the regulatory authority – if they are your greatest threat to safety, then it will be virtually impossible to implement an effective SMS, and therefore effectively identify and manage risks.]

Simplifying the Business

IATA's Simplifying the Business (StB) program leverages technology and automates and streamlines processes to reduce complexity and cost to make the transportation of passengers and freight more convenient. The industry is doing all it can to simplify ticketing, reservation, check-in, boarding, and cargo and freight handling, yet safety, which is of greater concern to the consumer, is becoming more complex. The end result is that the industry may not be getting any safer. Global safety performance indicators (hull loss rate & fatality rate) have begun to stagnate or even gotten worse, ironically around the same time that SMS began penetrating all areas of the industry. Have airlines and operators become focussed on implementing and managing their safety systems rather than managing safety itself? Has the complexity of the SMS detracted from the simplicity of safety and risk management? Has the gap analysis of implementing the SMS taken the focus away from the gap analysis of safety?

There are many practical ways in which SMS implementation and management can be simplified. There are many sources of information, ideas, tools and solutions to assist with managing safety and implementing an SMS. Many of these have been developed by highly regarded and trusted organisations (Airbus, IATA, ICAO, Eurocontrol, etc) and are available over the internet for free.

Going back to basics; managing safety is about managing risk, and only known risks can be managed. Therefore, the risks (threats, hazards, incidents, etc) must be known and then understood. There are a variety of safety programs and tools to monitor events and activities, incidents and accidents. Safety reporting schemes, databases and investigations are the staples of safety departments. In order to increase the quantity and quality of safety issues and hazards being report, an airline needs a 'just culture' approach to reporting (sometimes called 'no blame', 'non-punitive', or 'open reporting' culture) where it is recognised and accepted that people make errors and mistakes, and they should not be punished or disciplined for reporting those errors and mistakes. When staff are confident that they can report on safety issues without fear of retribution, then a larger number of hazards and near-miss events will be reported. There are practical tools and guidance to assist with the move to a 'just culture', such as those available from the 'Just Culture Community' website.

The incidents do not need to be the organisation's own, but can be gained by reading investigation reports and summaries. The IATA annual safety report details the most common types of incidents and accidents, as well as describing the most pertinent areas of risk and concern to all operators.

There is an emerging emphasis on 'proactive safety', examining ways of preventing incidents before they occur. Safety management in this sense means conducting risk assessments on what an operation is currently doing and then developing mitigation strategies to prevent potential accidents or incidents from occurring. The difficulty with this approach is easily summarised by most people's first reaction; 'where do we begin!?' And unless there is an unusual or extreme aspect of the operation, the question is difficult to answer. Proactive safety can be a daunting and difficult task.

However, the reality is, that many operators may not need to go this far, yet. It will take many operators a long time before the more traditional 'reactive' sources are exhausted and resources become available to put into safety issues that have not yet become issues. Most airlines barely have enough resources to react to all their current incidents, let alone trying to identify those that have not happened yet. At a more generic level, the incidents that have happened to other operators can be considered to have happened to your operation as well. This is mixing proactive with reactive safety. Proactive as the event may not have happened to your operation, but reactive in that it has happened. Once the investigation report is released, an operator can review their own procedures, training and systems against the relevant findings in the investigation report. These reports are available from the various investigative authorities websites, as well as in summary form in FSF's Aerosafety World.

Once the risks are identified, they must be assessed. The risk assessment stage is one of the most misunderstood and over-complicated aspects of the SMS. There are many online resources that provide practical information and guidance in conducting risk assessments (eg., UK HSE website). If risk assessments are becoming too complex and consuming, then they are probably being done incorrectly. Arguments over minor details or ratings rarely have any bearing on the overall outcome; go back to basics. Most aviation professionals have a reasonable understanding of the risk levels associated with various incidents, threats and hazards, and a formal risk assessment is not required in every situation. It is more important to develop the defences and strategies to reduce the risk, than to develop the risk management infrastructure.

Once identified and assessed the risks must be managed. There is no need for an operator to work out for themselves how to manage many of the common risks, as most of the information already exists. Organisations such as FSF, IATA, Eurocontrol, Airbus, ICAO, IBAC and others produce a wealth of material on the main safety problems facing the industry and provide many practical strategies for mitigating the risks. A starting point is www.skybrary.aero, an online network of safety knowledge set up by FSF, ICAO and Eurocontrol.

‘Integrated’ SMS

An airline may not need a “Safety, Security, Quality, Risk, Emergency Response and Environment Department” to have an integrated safety system. An integrated system does not need to be a single system or single department. These Departments may remain separate, but they cannot be isolated silos and they must constantly interrelate and intermix with each other. Those managing safety, security, risk, quality and related areas must meet regularly to discuss incidents and hazards, and identify and manage risks. Regular may mean meeting daily, weekly, or at least monthly.

‘Integrate’ is defined as “combine the parts into a whole” (Oxford Dictionary, 2000). All the parts that compose operational safety must be combined into a whole, a single source, such as a safety committee must be aware of all the operational risks that need to be managed across the airline. Decisions about how to spend the organisation’s resources to best manage the risk can only be made effectively when all the operational risks are integrated; tabulated in a single document. Integrated also means having a common language, procedure and metric of risk assessment so that the risks can be easily compared and understood across the airline.

In summary, Simplifying the Business (StB) need to be extended to SMS, if the SMS is to be successful and have credibility, it must be simple. If it is not understandable and transparent to the CEO or to your staff, then it will fail. The ultimate aim is to develop a safety culture that is positive about managing safety.