Title: Safety Management Systems: just another rendition of "The Emperor's New Clothes?"

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Abstract

Safety Management Systems are an emerging trend in the aviation industry, especially in the safety and health field. They reflect the guiding principles of quality assurance, due diligence, and continual improvement. And in doing so, provide the industry with a set of tools for the creation of prevention programs that can be implemented, maintained, documented, and verified. Based on risk assessment and organizational capabilities, safety management systems must focus largely upon need and organizational culture and less on prescriptive requirements. In this paper, the author questions the focus of the safety management movement, speculating that safety management systems are being allowed to become just another "bandwagon" that some safety practitioners and industry executives are eager to jump on to.

Remake of The Emporer's New Clothes

The following story was adapted from a paper presented by Dr. John Wise, at The Third Global Flight Safety and Human Factors Symposium, Auckland, New Zealand, 9-12 April 1996.

So clear your minds, if you will, and peruse the author's self-serving modifications to an old and well-known children's fairy tale, "The Emperor's New Clothes" (Ashliman, 1999).

Once upon a time there was an aviation executive who was ectremely vain. As I'm sure you can imagine, his staff and fellow executives had been telling him how great he really was for years. After a time, and it will come as no surprise to many, that he really began to believe it all himself. The more convinced the aviation executive became of his superior performance and intellect, one of the cleverest executive minds in the industry, the less he liked to hear criticism, or would even tolerate it at all.

One day, after considerable pondering, the aviation executive decided that he needed a systematic way to control risk and assure continued improvement. A method that would provide him with a "warm and fuzzy" feeling that those risk controls and improvement were in fact effective. A worthy challenge you might say! I need a program he mused, something befitting a stellar organization like ours. "A program that is more comprehensive and far reaching than anything we've ever used," he exclaimed with gritted determination. And because he wanted this program to be so innovative and cutting edge, the aviation executive did not believe that there was any other safety program in use that was capable of doing the job.

It just so happened that on that very same day, two aviation safety consultants who were looking to become rich were visiting the organization. They hurried in to introduce

themselves to the aviation executive, and announced that they could provide him with the most unique and sophisticated safety management system plan that had ever been developed. "We will design your safety management system with state-of-the-art information," proclaimed one, "so advanced that only the most highly trained and truly intelligent can understand it. Most ordinary people are just too stupid to even begin such a plan without a multi-purpose designer template developed and implemented by us." This sounded exactly what the aviation executive wanted to hear and he asked them to set to work as soon as they possible could. And so the development of the safety management system program began.

The two aviation safety consultants were given an office each to work from at corporate headquarters. Not a day went by that they didn't ask for more money for computers, software, equipment, training programs, and further evaluations. As you might have guessed already, they did not purchase anything high-tech or necessary for the program at all, instead, choosing to distribute the profits discretely between themselves.

The organization's present-day safety initiatives were evaluated using complicated questionnaires, mandatory meetings, and safety drills. "This is not the way our safety programs have been evaluated before," the executive said doubtfully. "But, Sir," the two aviation safety consultants replied smoothly, "to implement a new state-of-the-art safety program such as yours, requires improved methods and different techniques, as a man of your experience and intelligence will appreciate." "Oh yes, of course," said the aviation executive rather hastily in an effort to hide his obvious embarressment.

At last the day came for the initial briefing of the new safety management system plan. The two aviation safety consultants pretended to hold something up before the aviation executive. "Isn't it the most amazing safety management system plan flowchart that you've ever seen?" they gushed. "We are particularly pleased with the computer-based safety training indicated by this triangle here. A real triumph, I'm sure you will agree." The aviation executive hesitated, and blinked several times. He could not see anything that made any sense on the document at all. So he quickly asked his staff what their opinions of the flowchart were. The staff were very scared and did not want to appear stupid in front of their boss, but they too failed to see anything meaningful on the chart. "It is quite beyond words," one said hesitantly. "I can't find an expression that will truly do it justice," said another. These comments made the aviation executive even more uneasy. "I can't possibly appear more stupid than my staff," he thought to himself. So rather loudly he exclaimed, "Well isn't this just so extraordinary. I can truthfully say that I can not remember ever seeing anything quite like it over the span of my career!" "Do you feel that the safety database will allow for the most accurate assessment of each risk?" one of the staffers asked. "From what I see, I'm convinced that it will," retorted the aviation executive. "And I wonder if the system template will need further customizing and tweaking so that it captures ongoing improvements and our way of doing business," chimed yet another staff member. As the conversations went on, the aviation executive found it easier and easier to come up with meaningful comments to add even though they were about something he could neither see, nor understand.

Several more meetings took place before the safety management system plan was finally declared to be complete. The safety consultants provided the aviation executive with a

comprehensive overhead presentation a number of days before he was supposed to brief his government's aviation regulatory authority. When they had finished, the two aviation safety consultants stood back and admired their work. "Stunning!" they cried. "Quite, quite remarkable. We only wish that we could stay for the briefing but, alas, we must fly out this very morning to our next assignment." It goes without saying, that the aviation executive rewarded the two men handsomely, and even gave them a bonus for on-time delivery before they left the building on their airport.

At last, with all the fanfare that a multimedia presentation complete with visual effects and music can muster, the aviation executive made his presentation. As the aviation executive began, there was a deep silence. But no one wanted to appear more stupid than any of the others. "I've never seen anything like it," cried one inspector. "Quite unique," said another. Soon everyone was cheering the aviation executive's safety management system plan. But one young student intern had not heard about the new safety program initiative. In a loud, clear voice, he shouted, "Why hasn't the aviation executive's presentation made any sense, why are the flowcharts meaningless?" An awful silence filled the room. Then everyone began to laugh. "It's taken a student intern to show us up for the idiots we are," chuckled someone in the crowd. Soon everone in the room was completely overcome with fits of laughter. Even the aviation organization's staff were beginning to chuckle sheepishly from behind the handouts passed out earlier for the briefing. Only one person in the room was not laughing. The poor aviation executive was so embarrassed, he ran straight out of the conference room to his waiting car, with neither a customized cutting-edge safety management sytem plan, nor his dignity.

Safety Management Systems Work, Don't They?

The purpose of this paper is not to suggest that aviation safety practitioners are dishonest or dishonorable people. Nor is it the writer's intention to suggest that aviation safety consultants have conducted themselves improperly as a result of greed or other personal gain. But it is necessary for someone to play the role of the inexperienced student intern, and force the aviation safety community to look inward, and ask the tough questions that need to be asked about overall safety management system effectiveness.

Do holistic safety management approaches, such as safety management systems, really work? Do they improve overall organizational safety performance? Is an independent evaluation by a safety consulting organization or a government agency equivalent to improved or effective safety performance?

Conventional wisdom tells us that the answer is "yes" to the first two of these questions. Few would argue that safety management systems are not valuable. The third question regarding the value of independent evaluation by a third-party consultant or government agency is more controversial, yet the answer is still likely to be "yes" for most people. Even the aviation industry is showing growing acceptance. The International Air Transport Association (IATA), for example, is using a third-party evaluation mechanism for its IATA Operational Safety Audit (IOSA) assessments of member airline operational management and control systems (*Operational Safety Audit Programme Manual, 3rd edition*, 2008). Also, the International Business Aviation Council (IBAC) recently adopted a third-party auditing

approach for its International Standard for Business Aircraft Operations (IS-BAO) code of best practices designed to aid flight departments world-wide in achieving a high level of safety performance and professionalism (*Business Aviation Strategy: a blueprint for making a safe system safer*, 2007).

Is it Simply a Passing Fad?

These are not trivial questions for safety professionals, because safety management systems are a very fundamental shift in the way that the safety job is done. The move by many International Civil Aviation Organization (ICAO) member states to implement safety management systems shows that this is not just another passing fad (*Safety Management Manual SMM, 2nd edition*, 2009). In the air transport arena, for example, the number of carriers developing and implementing safety management systems as an integral way of doing business is growing very rapidly.

Similar momentum is evident in the growth and acceptance of safety management systems within the IBAC and its member associations. IBACS Code of Practices formally recognizes that safety management systems form the "corner stone" of IS-BAO by providing a method of continually improving safety (*Business Aviation Strategy: a blueprint for making a safe system safer*, 2007).

What's Behind All the hype?

The increasing momentum in the acceptance and use of safety management systems, also serves to highlight the urgency of establishing whether or not these programs really reduce risk and deliver effective ongoing safety performance and improvement. This sense of urgency increases as government dictate and the ensuing flow-through into industry continues to grow at such a significant rate. Therefore, the overwhelming message to the aviation industry, government, and safety practitioners is clear. Safety management systems, and their associated evaluation mechanisms, must consistently demonstrate improved safety performance and continued improvement, or they are surely doomed to fail.

Unfortunately, the most that can be said right now, is that the jury is still out on whether or not safety management systems really do enhance safety performance and provide ongoing improvement. The empirical or hard evidence is just not available in the public literature at this time. So the answers, when they finally come, will most likely be neither simple, nor straightforward.

The Bandwagon Rolls Along

Why is there such a rush to embrace and promote safety management systems when we do not know if they really improve safety performance?

A simple guess is that there are many factors at work.

First, it is extremely difficult to conduct research, because it's still not clear how to effectively measure performance. Therefore, it is even more difficult to measure or evaluate

changes in performance, because many factors change within organizations over the time period necessary for systems to show results. This is further complicated by the fact that their effects are generally difficult to disentangle.

Second, it might be that regulatory compliance, the primary endpoint of safety management systems for some, is not equivalent to safety performance. Again, it is a matter of using the appropriate measures of performance to look effectively into the issue.

Third, it might also be that there is also a growing tendency to mix the question of the impact of safety management systems with the value of independent verification or certification. These are related issues, but they are most definitely not the same.

Finally, it might just be that some safety practitioners really do have the hard evidence, but that this evidence is simply not being made available.

Still, it appears to be abundantly clear that the absence of empirical evidence relating to the effectiveness of safety management systems is not slowing the global charge to embrace it. The initiative will remain at the center of the safety management arena because of its increased acceptance, the ensuing development of accepted industry standards and practices, and the ongoing desire of regulatory agencies to use them as adjuncts to regulatory compliance.

But in our eagerness to seize upon a safety "cure-all" or "magic bullet," have we unwittingly destined ourselves to be walking around without any clothes on?

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