Safety Culture - SMS

Many small aviation businesses have been safely operating in the MRO industry for many years without a formal documented Safety Management System (SMS) but are now being regulated to have a documented SMS. Why? To comply with an ICAO Standard.

Ask the Engineering Manager/Chief Engineer (EM/CE) why their small organisation has had a highly successful safety performance for many years and they will tell you about how **skilled** the staff are and how they all work together to release every product in a safe and compliant condition. They even admit that on occasion small mistakes are made but never covered up – the mistakes are rectified prior to release. These small organisations' reputation depends on the reliability of their product.

The aviation industry we work in is populated by what the public see as high hazard organisations, where the risk of error involves dire consequences and expert leaders manage for safe, reliable performance. As a result, the term "High Reliability Organisation" has been coined to describe organisations with exemplary track records of safety. This concept is rooted in the analyses of errors that reveal organisational failures, along with technical failures (related to system performance) and human limitations (related to human behaviour).

However, there is still a question to be answered regarding implementation of a documented SMS and whether the SMS will improve the culture or safety performance of an organisation. The same could have been said about quality assurance, total quality systems and other concepts adopted in the past. All systems are trying to impose a proactive process to remove failures from a system. Many of these systems fail culturally but meet regulatory compliance. Are regulators preoccupied with SMS regulatory compliance or are they or should they be concerned with the safety culture?

The systematic application of safety management principles, culminating in some form of formal assurance that the goals set can and are being achieved, can help significantly. This approach should also do much to improve the lot of the employees as well as the passengers as all the hazards have to be identified and managed, not just those that contribute to hull losses. However, such systems are, by their very nature, paper-based and bureaucratic. They tend to require minimum standards and can result in the achievement of such standards.

Systems can achieve improvement, especially as they go naturally hand in hand with the improvements in technology that the latest generations of aircraft bring. But such an approach will throw the human contribution to a disaster into an even more stark light, and it is here that safety cultures can provide genuine improvement. Does regulatory SMS assist the organisation's "safety culture"?

Some quotes from research papers into aviation safety by those that normally look at other critical industries demonstrates that aviation 'safety culture' may not be as good as we think.

> "*The management of safety in the aviation industry appears to be near perfect. Airplanes hardly ever crash and a common statement made about the safety of flying is that the most dangerous part of a trip is the drive to the airport. In many ways this is true.*"

> "*Aviation has traditionally been interested in safety. Flying is inherently dangerous and it has taken us some time to achieve the levels of passenger safety we nowadays take for granted. But the way this is done is quite old fashioned. Essentially the world of civil aviation is regulated from 'on high', with ICAO at the top in Montreal, handing down SARPs, Standards and Recommended Practices, to be implemented by national aviation regulators. SARPs traditionally define what to do and how to do it, leaving little room for alternatives.*"

"One of the major recent developments in industrial safety has been the application, enforced by law in many cases, of safety management systems and safety cases. These are simply the systematic application of management processes to the problem of the hazards an organisation faces and the proof that the management system is in operation."

The approach to safety management is haphazard and driven typically by responses to specific incidents in the past. There is no systematic analysis and it is unclear whether the effort expended to achieve the goal is sometimes either too much or too little. Surprisingly the top-down regulatory approach has led to a plethora of uncoordinated bottom-up solutions, often relying on the personal abilities of specific individuals, pilots and licensed engineers, to ensure that all goes well.

Safety Management Systems define sound systems, practices and procedures, but those are never enough if they are practiced mechanically; they require an effective safety culture to flourish. This is where the Safety Culture comes in.

One way of looking at how both organisations and individuals manage safety is to regard safety management as a 'skill'. Therefore, the challenge for any organisation implementing or nurturing a 'safety culture' relies not only on the 'skills' of management but also the 'skills' of every employee of the organisation. In many ways these 'skills' cannot be measured individually but are essential to the safety performance of an organisation.

{Safety} Skills have to be developed, and require practice; they do not suddenly appear just because you read the "safety" manual. Furthermore applying the 'skill' attitude suggests that safety management has to be kept up, it is not enough to succeed once. Most skills have to be maintained otherwise the practitioner becomes rusty.

Compare the skills of elite sportsperson against sportspersons that just compete in the same sport but not at the same elite level; is this the same as looking at an organisation that does not have a well developed 'safety culture' because they have not attained the skills of the elite. Safety culture is an elite skill. Those that are regulatory compliant do not necessarily have a 'safety culture'.

Highly skilled individuals or teams do difficult things well, they know automatically what is and what is not important and they have the correct repertoire of responses available. They look to discover what they do less well and practice in order to improve. The same applies to safety and to safety in particular. Individuals need to acquire abilities to recognize hazards, to know when to be careful, to know what is worth reporting etc. The EM/CE can learn how to demonstrate their commitment, not just by saying they are committed, but also by acting in ways that show that commitment in practice. For example, making regular unstructured visits to operational sites, such as hangar floor and workshops, no matter how other matters seem to be more pressing.

If being a safety culture is so advantageous, how can you become one? The answer is, unfortunately, not so simple. Just wanting to become one, no matter how great the desire, is not enough. The first lesson that has to be learned is that the steps that need to be taken will depend upon the current culture.

The skills approach to safety culture also places constraints on how quickly an organisation can progress. The skills have to be acquired and then practiced before they become automatic. Two particular skills that have to be acquired are **Informedness and Trust**. It is not easy to become informed – the news that one is likely to hear is all too often uncomfortable and the messengers can lead a precarious existence.

> Being **informed** involves promoting a desire to hear to possibility of bad news before it turns into the unavoidable, it involves actively seeking for the information that allows one to combat the unexpected and survive bad luck.

An EM/CE in an **informed** organisation has to feel comfortable when hearing news that might be unwelcome, but has to feel uncomfortable when not hearing any such news, because life is not that fair and no news is bad news.

But **Informedness** is a two way street; those with access to the information, typically the workforce, have to realise that what they can tell is worth telling and, by telling, they will be rewarded rather than punished. Described this way, it is clear that **Informedness** is not a skill that will be acquired by some EM/CE decree, or even by the actions of one person or a small and committed group. **Informedness** is an uncomfortable state that has to involve everyone and it takes time, and patience, to learn to live with it.

Organisations that are informed, however, have considerable advantages, not just in the area of safety, over those that do not know what is going on!

The second skill that has to be acquired is **Trust**. This means that EM/CEs have to trust their workforce. But it also means that the workforce have to **trust** their EM/EC. **Trust** has to be earned. EM/ECs have to show by their deeds rather than their words, that they do not have to double-check their workforce and do their work for them because they do not **trust** them to do it.

One of the advantages of promoting the processes that underlie a safety culture, the development of **trust** and **Informedness**, is that the organisation as a whole is easier to run. Less work has to be done to acquire the information needed and there will be far fewer surprises under normal circumstances. Small organisations may still argue that this will be too hard for them to do, even if the final advantages are clear. This is not true. The smaller organisations can proceed faster and more easily than larger ones. They can get everyone together in the hangar and have basic agreements before lunchtime; larger organisations have to do much more to reach the same level of agreement, and require more effort to maintain progress and ensure there is no backsliding.

What characterises the descriptions of the different parts of the system in an aviation organisation is a high degree of common care. While reporting of incidents may be confidential, this is not felt to be a major issue in a just culture. An advanced safety culture will be supported by a sensitive regulator. A regulator recognises that failures can occur to the best, but who is most sensitive to signs that complacency might be setting in.

In conclusion, a safe organisation is one that can make money. The fear of incurring extra costs need form no basis for not acquiring the skills required for a safety culture. Most people in aviation are inherently safety-minded, but this is only a necessary and not a sufficient precondition for the development of a safety culture. As has been stated above, the emphasis on extreme outcomes can paint a more positive picture than the wider picture would show and one of the crucial requirements.

Business First – Safety Always

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