

ASSESSING SAFETY CULTURE MATURITY



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Safety Culture Maturity

While SMS is a managerial technique to manage risks for the purpose of generating safety, safety culture is much more difficult to define. In light of future rulemaking by EASA/European Commission, the European Commercial Aviation Safety Team (ECAST) has studied various aspects of SMS and Safety Culture. One of the conclusions suggests that SMS increases individual and organizational competences for dealing with risks, while Safety Culture strengthens the commitment and motivation to apply the competences acquired through SMS.

CULTURE
While SMS may increase competences, a Safety Culture strengthens commitment and motivation.

For technical people, as most aviation professionals are, it is not easy to discuss cultural issues. We simply often lack the proper terminology to address non-technical issues. When it comes to describing safety culture, we often struggle to really see what the

abstract term only suggests. James Reason has proposed a typology to describe various types or levels of maturity of safety culture: the lowest level being a pathological safety culture, maturing into a reactive, calculative, pro-active and finally a generative safety culture.

Safety Management Systems vs. Safety Culture

Operators engaged in commercial air transport are required by National Aviation Authorities to establish a Safety Management System. This national legislation will be replaced in the near future by European Community Law, which is currently being prepared on behalf of the European Commission by the European Aviation Safety Agency (EASA). The corresponding proposed requirement is located in NPA 2008 22.

While the proposed regulation strengthens the basis for Safety Management Systems and defines it in more detail, experienced users of

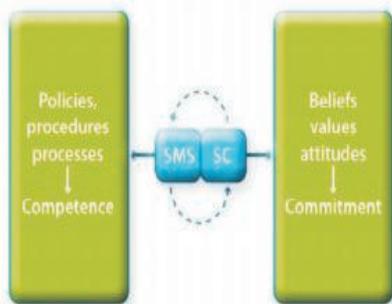
Safety Management Systems recognize that an SMS alone will not lead to the achievements in safety performance we all strive for.

It is generally agreed that the will must be present to actually use the SMS and to use it beyond compliance. We therefore need to also have a sufficiently mature Safety Culture (SC) in place. Safety culture is part of the organizational culture and is defined as “the set of enduring values and attitudes regarding safety, shared by every member of every level of an organization”. Safety Culture refers to the extent to which every individual and every group of the organization is aware of the risks and hazards induced by its activities; is continuously behaving so as to preserve and enhance safety; is willing and able to adapt itself when facing safety issues; is willing to communicate safety issues; and finally consistently evaluates safety-related behavior.

SMS puts the organizational structure, policies, procedures and processes in place, which gives the organiza-

tion the competence to ensure safe operations. Safety Culture fosters the necessary positive attitudes towards safety management so the processes may be effective. SMS without a positive commitment by all members at all levels of the organization will be a hollow mechanical process that provides no further benefit than to make the organization legally compliant. Likewise, the most motivated and foresighted company leader or staff cannot have a significant impact on the safety performance without an effective management system in place.

Safety Culture Framework



A new, component-based framework has been developed in the context of ECAST from different reference frameworks. This new framework features the following generic components or characteristics:

Commitment to safety reflects the extent to which every level of the organization has a positive attitude towards safety and recognizes its importance. Top management should be genuinely committed to keeping a high level of safety and give employees motivation and means to do so as well.

Behavior with respect to safety reflects the extent to which every level of the organization behaves to maintain and improve the level of safety. From the management side, the importance of safety should be recognized and everything needed to maintain and enhance safety records should be put in place.

Awareness reflects the extent to which employees and management are aware of the risks for themselves and for others implied by the organization's operations. Employees and management should be constantly maintaining a high degree of vigilance with respect to safety issues.

Adaptability reflects the extent to which employees and management are willing to learn from past experiences and are able to take whatever action is necessary in order to enhance the level of safety within the organization.

Information reflects the extent information is distributed to the right people in the organization. Employees should be encouraged to report safety concerns. Work related information has to be communicated in the right way to the right people in order to avoid miscommunication that could lead to hazardous situations.

Justness reflects the extent to which safe behavior and reporting of safety issues are encouraged or even rewarded and unsafe behavior is discouraged.

Source: ECAST NLR: C. Montijn and H. de Jong, A synthesis of the literature on safety culture: definitions, characteristics, indicators and classification scheme. Proceedings of the Eurocontrol annual Safety R&D seminar, Rome, Italy, 24-26 October 2007.

Assessing Safety Culture

Safety and Risk Management, in the traditional sense, is based on facts and figures. Commitment to safety, though, is generated by inspiration and leadership. Let's explore these statements a little further.

Today's business is driven by targets and goals. Key Performance Indicators (KPI) quantify goals to be achieved in clear and measurable terms. If a good and mature Safety Culture is considered to be a worthwhile goal to achieve, then there must be an objective means to measure it in order to

- determine the level of maturity (see above) where the company currently is,
- define intermediate steps of increasing the SC maturity level, and
- define the long term target level of maturity that is intended to be achieved.

Measuring soft issues like "culture" or attitudes requires new assessment techniques. They must apply recent research results of behavioral and organizational psychology. It follows that Safety Culture is a company specific management objective, just like managing a SMS program. A new and innovative post of "Safety Culture

Manager" has been proposed. Even more so than in regular management positions, a Safety Culture Manager and all top level managers must be aware that their personal commitment and example is influencing values and behavior of the work force. Stable and co-operative management teams will be more successful in changing organizational culture, including safety culture.

"Good safety also drives good business outcomes." (McMillan)

It is becoming increasingly obvious that Safety Culture is the (or a?) bottom line of safe operations. Although this is not the case yet, it has to be expected that eventually the regulators will define a certain minimum acceptable level of Safety Culture maturity that must be achieved by an organization. The inherent problem is obvious. Safety Culture is a soft issue which, in spite of hopefully objective and measurable criteria, is difficult to express in figures and numbers.

Consequently, defining minimum acceptable levels of compliance is ambiguous with a certain room for interpretation. On a critical note, it must be stated that the legislature and the regulator often align their actions to the letter, and not to the spirit of regulations. A truly effective regulator must allow the organization to make a case of how it intends to meet the legal requirement and not impose on the operator a particular way to be compliant.

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INSPIRATION

Inspiration and leadership generate commitment to safety.

