

# TWO SIDES OF THE SAME COIN

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## What We Already Know

Quality and Safety: two often used and abused terms in our industry. But what do they really mean? Are they the same thing or two different things, or indeed two sides of the same coin?



## Quality Systems

Nonetheless, by now the concept of Quality Systems (QS) is firmly embedded in the industry. Accountable managers generally understand the responsibility associated with their accountability for the QS processes. The value of the QS is also seen and understood down through the various organizational levels. Auditors from the internal QS or from external organizations (including aviation authorities) are generally met by open minded personnel who appreciate the importance of audits and see them as an opportunity to prove the high standards of their work and to identify any areas where there may still be room for further improvement.

Although there are numerous definitions of quality – depending on your point of view – quality is generally understood to mean “fulfilling customer requirements and expectations”. You achieve “quality” when you get what you want. This is immediately obvious as far as your customers are concerned. You strive to meet (and exceed) their expectations. Companies that do this successfully will be successful in business.

But this is not the reason why aviation authorities require operators to implement a Quality (Assurance) system. As discussed in previous editions of “Safety Sense”, aviation authorities impose regulatory requirements as one means to ensure safe operations and expect operators to implement and observe these requirements. In

For years, air operators around the world have been satisfied with the level of safety they were achieving. To buy good airplanes, train good pilots and respect the aircraft limitations was considered enough to reach the desired level of safety – hoping nothing beyond the capabilities of the aircraft/pilot team would occur. In other words, fail-safe design, airmanship and some good luck was all that was needed.

But to pray for luck is to admit there are risks out there. Although they may have changed, they endure despite the fact that airplanes and engines are more reliable now than in the past.

Over the years we have been able to improve our technical and training standards. Today, we need to improve safety by identifying and managing operational and technical risks. Forced by recent regulations, European operators have been busy implementing quality management systems to ensure compliance with the regulations. For some people involved in aviation operations, the term “quality” and all that is linked to it was something relatively new, which was brought by the introduction of the Joint Aviation Requirements (JARs), and moreover not in a clear and extensive way.

**RISK**  
*Despite airplanes and engines being more reliable now than in the past, risks still persist.*

this context, aviation authorities may be regarded as “customers” and the Quality System as the operator’s tool for fulfilling customer expectations.

Whereas the regulations define the expected outcome, the detailed and concrete description of how to get there must be defined by the operator himself. We are all used to the established business plan, where profitability is the goal and the business model the engine to getting there. The same applies to quality. If regulatory compliance is the goal, and safe operational practices and airworthy aircraft the engine to getting there, an Operations Manual and a Continuing Airworthiness Management Exposition (CAME) must be established.

The processes defined in Manual and Exposition may be based on ‘Acceptable Means of Compliance’ as published by the Authorities. A company may also define its own processes that satisfy the Authorities. The Exposition is therefore a statement of intent on how a company will meet regulatory requirements and approval of such documents by the authorities constitutes the initial confirmation by the NAA that the processes are compliant if performed as described. The purpose of the Quality System is to ensure the processes are implemented (and amended in time if necessary) so they will continue to be compliant. In short, what we are talking about is self-regulating compliance to existing regulations.

#### **Accountability for Resources, Organization, Management and Supervision**

One of the main principles of a Quality System is Accountability. The Accountable Manager must clearly allocate responsibilities and then allocate adequate resources to match them. Three additional key areas of attention are to be considered: organization, management and supervision.

Everybody must know exactly who is responsible and what he or she needs to do. When this is true, he will do the task(s) in a better and safer way. This is particularly true in large companies where the need for precise job description and written allocation of responsibilities is required to retain control of the companies’ various processes.

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#### **Integrating Collective and Individual Experience**

Although very powerful, the limitations of Quality Systems have already been identified. Quality Systems ensure (self regulatory) compliance with legal requirements. The regulations are written to cover and control evident and known problems that have been identified through decades of aviation. Quality Systems are linear compliance monitoring and thus managing tools. Reality is more than just regulations.

In fact, many problems the regulator has not thought about (yet) appear as unexpected side effects of development in the industry or, most importantly, issues that are an effect of particular environments of operation or within an operator itself. Aviation is a highly complex system in which not all causes and effects can be anticipated and controlled by the regulator.

This is where Safety Management comes to our aid. If the goal is safety, and not merely regulatory compliance, a dedicated monitoring and management tool must be created. By systematically managing the risks associated with all operations, Safety Management should lead to enhanced safety performance aiming at best practice and moving beyond mere compliance with regulatory requirements. Safety Management will build on existing Quality practices, but with a much broader and more dynamic and adaptive scope.

Of course safety has a cost, and for the first time here we have a regulation that requires management to provide the necessary finances. Even more, safety has a benefit.

Indeed both quality and safety are two sides of the same coin. Aviation law requires quality management to monitor regulatory compliance, while safety management identifies those operational risks not covered by regulations. Both systems integrate the collective memory of the industry and the individual experience and expertise of the professional.

#### **Exploring New Areas: Soft Factors**

The real key to success in a company’s safety performance is the existence of a generative safety culture. Safety culture in an organization can be described as all the



ways in which individuals conduct business and, particularly, how they control safety.

It is a non-technical issue. Culture relates to a set of topics, such as communication, human factors, knowledge base, skills and language. Such topics are rather new for the technically minded personnel in aviation. Suddenly, it is not enough to be the best pilot or engineer to operate safely, we must also learn about the symbolic universe of a new language. It is the language of psychology and sociology, addressing the problems involved when people work together.

In the next issue, we’ll delve into the issue of non-technical aspects of safety culture.



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**Language**  
Suddenly, it isn’t enough to be the best pilot to operate safely. We must also learn the language of working together.