POSITION PAPER

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Positive Safety Culture

NOTE

This paper supersedes 14AAPBL01.

INTRODUCTION

Commercial aviation is generally perceived as being safe. However, it must be understood and accepted that aviation is a complex safety-sensitive system. When an aviation system, or subsystem, loses the ability to manage change or unexpected events in a timely manner, serious incidents or accidents can occur. It is only by continuously and meticulously identifying hazards and managing risk correctly that the current safety statistics have been achieved and will continue to improve.

Any degree of complacency will have negative consequences. Poor safety records usually occur where SARPs are not fully implemented or adhered to, or risk is not recognized and managed in a timely manner.

To be managed competently, risk first needs to be identified and studied. A key proactive method of recognizing potential system failures and predicting possible undesirable outcomes is to establish non-punitive reporting systems which is only possible in a positive safety culture. Not all errors or omissions become accidents and may therefore remain hidden; however, uninhibited employee safety reporting can expose unexpected combinations of the functionalities within a system as accident or incident precursors.

These precursors, once defined and identified, must be acted upon in time to mitigate the related risk and reduce the chance of an accident or incident. It must also be understood that an error is an act, assertion, or belief, typically discovered in hindsight, that unintentionally fails to properly address a threat in time.

This does not necessarily invalidate individual actions but rather sheds light on the circumstances of the decision-making process when an error took place. The identification of errors, hazards, and activities that have the potential to contribute to serious incidents and accidents is a fundamental element of any Safety Management System (SMS).

International surveys and many expert academic papers have revealed that many incidents go unreported because those involved are fearful of management or regulatory authority penalties. Safety reporting systems, as well as other safety programs such as Flight Data Analysis (FDA) and Line Operations Safety Audit (LOSA), can only be effective within a positive safety culture environment that wholly adopts a non-punitive safety reporting and data collection culture.

People remain accountable for their actions and inactions. But actions and inactions must be viewed in the context in which they occurred. A positive safety culture finds its limits when deliberate misconduct, criminal activity, or intentional recklessness is clearly established by the appropriate expert authority.

A positive safety culture does not seek immunity from consequences in every case, but it does clearly endorse the fair treatment of individuals. It decriminalises unintentional errors, poor decisions, and mistakes. It mandates that all safety events be reported into a functioning SMS and that those reports are expertly analysed in an unbiased context that includes full consideration of complete nature of interactive systems, while avoiding hindsight bias.

Non-punitive voluntary and mandatory reporting systems are supported and promoted by all successful international aviation safety organisations. An uninhibited flow and exchange of information is vital to improving safety. Criminalisation of human error obstructs this flow.

Legal repercussions have a place in our society; for example, where an appropriate authority determines that there is clearly wilful or intentional reckless behaviour. However, the criminalisation of human error obstructs the flow of valuable, essential safety information that is absolutely critical to a successful SMS. Therefore, for safety reporting systems to be effective, a positive safety culture must exist. From this foundation a resilient system can be created and maintained in the dynamic world of aviation.

CULTURE

A positive safety culture begins at the legislative, regulatory, and judicial level. It must subsequently be embraced by all levels of management within related organisations. It is therefore a function of the organisational culture at large. Every employee, not just those involved in safety, can influence the establishment of the desired culture and should be engaged in this process.

IFALPA strongly endorses the development of uninhibited, transparent, non-punitive, voluntary reporting policies and procedures as the bedrock to establishing and maintaining a positive safety culture.

Human performance studies show that people make errors - it is inherently human. Human errors or omissions become visible because humans are an integral part of a complex high-demand system. Their performance is difficult to predict because system failures emerge as a consequence of dynamic interrelated functionalities.

Humans are often in situations where decisions must be made quickly, in real time, with the information as it is perceived at that exact moment; information often presented in a confusing or incomplete manner. These decisions, almost per definition, may be judged as less than optimal at a later time with hindsight bias. This occurs even despite an actor's high level of professionalism, training, or experience.

A cornerstone in the creation of a positive safety culture is the establishment of voluntary, open, non-punitive reporting systems. A culture must exist in which personnel have sufficient trust in the reporting system that they are willing to report their own errors, including errors in judgment. Contributors to these safety reporting systems must have confidence that they will not face retribution as a result of disclosure.

The reporting system must be supported by clear, well-known guidance setting the policies and processes of the reporting system. This guidance must be consistently followed by management. Punishment might prevent future individual wilful intent but will not prevent mistakes or errors from occurring, as they are, by definition, unintentional.

Overreaching punishment will, however, prevent personnel from participation in the safety reporting system and add to a partisan culture where the front-line and management are not working together. Personnel need to be engaged in the safety reporting culture and know that they are listened to and regarded as a valuable safety resource. A culture that only sees the individual human as the failure point is doomed to inadequate safety risk mitigation.

Annex 19 Appendix 3 clearly expresses,

> States shall ensure that safety data or safety information is not used for:
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> a) disciplinary, civil, administrative, and criminal proceedings against employees, operational personnel, or organizations;

b) disclosure to the public; or
c) any purposes other than maintaining or improving safety;
And additionally, compels the State to ensure that a formal procedure to provide protection to safety data, safety information and related sources is established.

Along with Annex 19, the ICAO Safety Management Manual (Doc 9859) contains guidelines for the establishment of both mandatory and voluntary safety reporting systems.
Properly collected and expertly analysed aviation safety information is a powerful and necessary resource for any organisation. It is intended to be used solely for safety improvement and can cause extensive harm if used improperly, as in these examples:

- Job sanctions or penalties by employers
- Penalties imposed by Government regulators or judiciaries based upon the safety information
- Public disclosure of the information
- Criminal sanctions based on the safety information
- Misuse of the safety information in civil litigation

DEALING WITH CULPABILITY

Pilots inherit defects in the system. Human actions and decision-making are almost always influenced by circumstances outside a person's control. It must be understood that errors or mistakes are the consequence of other factors and in some cases, these factors may seem far removed from the error or mistake. Proper expert investigation reveals that errors are often not stand-alone events.

Aviation occurrences rarely happen for a single reason; they are more often the consequence of complex failures within a multi-linked dynamic system. These consequences cannot easily be avoided since they were not known or intended in the first place. If the latent, (emerging), factors of safety occurrences are to be identified and addressed, errors need to be seen as the beginning of investigations and not the end.

Describing an error as a "cause" of an accident or incident tends to add disproportionate weight and blame to that single aspect. There is a need to change the mind-set that fault, blame, and punishment are useful concepts in safety management. This is difficult in some cultures where social or legal systems have created a culture that demands blame and retribution, even for mistakes.

Instead, contributing factors should be identified and their interconnectivity analysed. Addressing latent, often complex systemic weaknesses is far more effective in improving safety than simply addressing individual errors in a simplistic, linear manner.

POSITION

The establishment and maintenance of a positive safety culture will enhance safety and accident prevention. Understanding and managing emerging risks and potential failures as a function of the systems themselves is paramount for a safety management system to be effective.

The benefits to the public, when the focus is on safety instead of blame and punishment, far outweigh the perceived civil or legal benefits to society. Although those institutional demands may persist for some time to satisfy political or perceived public interests for punishment, States and companies cannot allow this sentiment to override the fundamental fact that punishment does not improve aviation safety.

A positive safety culture must run throughout airline company structures to develop a corporate philosophy of fairness. Establishing a learning culture and a non-punitive safety reporting system that is embraced by employees is an essential part of an effective risk management system. It should form the basis of all safety initiatives, such as:

- Training, including Crew Resource Management (CRM) and human factors training
- Threat and error management (TEM)
- Flight Data Analysis (FDA)
- Line Operations Safety Audit (LOSA)
- Safety Reporting Systems (Mandatory and Voluntary)
- Hazard reporting and Safety Risk Management
- Incident, serious incident, and accident investigations
- Safety philosophy, policies, and procedures
- Disciplinary policy

ICAO has committed to the concept of a positive safety culture as part of a robust safety culture and incorporated it into ICAO Annex 19 and the ICAO Safety Management Manual. States should ensure that legislation is passed that enforces the non-punitive philosophy. Companies and operators should ensure that policies promoting a positive safety culture are endorsed by their executive officers, and that those polices are honoured with documented agreements and procedures for front-line employees.

CONCLUSION

A genuine positive safety culture, including the associated non-punitive safety reporting and data collection systems, along with unbiased safety investigations, is an essential component of a Safety Management System. It values the philosophy that errors, mistakes, or unintentional actions, when reported, and used only for safety improvements, is the key to identifying and managing emerging hazards within an airline.