



# Advisory Circular

TCAA-AC-GEN018A

February 2020

## ORGANIZATION SAFETY CULTURE

### 1.0 PURPOSE

This Advisory Circular provides guidelines to the Service Provider Organizations on how to behave in safety management environment. The document illustrates how safety performance is possible when safety becomes of value within an organization.

### 2.0 REFERENCE.

The Civil Aviation (Safety Management) Regulations

### 3.0 BACKGROUND

#### 3.1 Culture characteristics

Culture is characterized by the beliefs, values, biases and their behaviour that are shared by members of a society, group or organization. Service providers may establish a reporting culture considering the organizational, professional and national cultures.

#### 3.2 A healthy safety culture and its characteristics.

The safety culture may rely on a high degree of trust and respect between personnel and management and may be created and supported at the senior management level.

The healthy safety culture is characterized as follow:

- a. An active desire for improvement;
- b. Vigilance on hazards;
- c. A continuous monitoring, analysis and investigation;
- d. Existence of a shared commitment by personnel and management to personal safety responsibilities;
- e. Confidence in the safety system;
- f. A set of documented rules and policies; and
- g. An effective safety culture. (The culture cannot be effective unless it is embedded within an organization's own culture).

#### 3.3. Organizational culture

The organizational culture refers to the characteristics and safety perceptions among members interacting within a particular entity. The Service Provider organizational value systems include prioritization or balancing policies covering areas such as productivity versus quality, safety versus efficiency, financial versus technical, professional versus academic, and enforcement versus corrective action.

The greatest potential for the creation and maintenance of an effective, self-sustaining culture for the management of safety is at the organizational level. The organization is a

major determinant of the behaviour in which persons will engage while performing management or operational activities during the delivery or oversight of aviation activities. Organizational culture sets the boundaries for accepted executive and operational performance by establishing the norms and limits. Thus, organizational culture provides a cornerstone for managerial and employee decision making.

Organizational culture has the potential to affect the following:

- a. interactions between senior and junior members of a group;
- b. interactions between industry and regulatory authority personnel;
- c. the degree to which information is shared internally and with the regulatory authorities;
- d. the prevalence of teamwork in the regulatory authority or industry organization;
- e. reactions of personnel under demanding operational conditions;
- f. the acceptance and utilization of particular technologies; and
- g. the tendency to take punitive measures in reaction to operational errors within a product or service provider or by the regulatory authorities.

Organizational culture is also affected by factors such as:

- a. business policies and procedures;
- b. supervisory behaviour and practices;
- c. safety improvement goals as well as minimum tolerance levels;
- d. management's attitude toward quality or safety issues;
- e. employee training and motivation;
- f. the relationship between the regulatory authorities and product and service providers; and
- g. Policies on work/life balance.

The way in which management deals with day-to-day safety issues is also fundamental to improving organizational culture. Collaborative interaction between front-line personnel and their safety and quality counterparts, as well as the representatives of the regulatory authority, is indicative of a positive organizational culture. This relationship should be characterized by professional courtesy, while maintaining respective roles as necessary to ensure objectivity or accountability.

An effective way to promote safe operations is to ensure that an organization has developed an environment where all staff feel responsible for safety. This becomes evident when staff consider the impact on safety in everything they do, report all hazards, errors and threats and support the identification and management of all their associated risks. In addition, management must create an environment in which personnel are aware of safety risks, are given sufficient systems to protect themselves and are assured protection when they divulge safety information through the safety reporting system. An effective safety culture serves as a method to synchronize diverse national and professional cultures within the context of the organization.

#### 3.4 Typical culture for a particular nation



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Organizations should understand that national culture differentiates the characteristics of particular nations, including the role of the individual within society, the manner in which authority is distributed, and national priorities with respect to resources, accountabilities, morality, objectives and different legal systems. Therefore, a safety management perspective, national culture plays a large part in determining the nature and scope of regulatory enforcement policies, including the relationship between regulatory authority personnel and industry personnel, and the extent to which safety-related information is protected. Also, organizational culture may therefore be significantly affected by the national cultures present among the members of its workforce.

When applying a safety management programme, managers might closely assess and consider the differences in the national cultures of their personnel. For instance, safety risk perceptions can differ greatly between different national cultures. Safety-related aspects, including communication and leadership styles as well as the interaction between supervisors and subordinates, may need to accommodate a multicultural workforce.

### 3.5 Reporting Culture

Reporting culture emerges from personnel beliefs about and attitudes toward the benefits and potential detriments associated with reporting systems and the ultimate effect on their acceptance or utilization of such systems. It is greatly influenced by organizational, professional and national cultures and is one criterion for judging the effectiveness of a safety system. A healthy reporting culture aims to differentiate between intentional and unintentional deviations and determine the best course of action for both the organization as a whole and the individuals directly involved.

The success of a reporting system depends upon the continuous flow of information from front-line personnel. Policies that distinguish wilful acts of misconduct from inadvertent errors, providing for an appropriate punitive or non-punitive response, are essential to assure the effective reporting of systemic safety deficiencies. While management gains safety information, the system will be ineffective if it interferes with appropriate punitive actions. Conversely, a culture that fails to distinguish unintentional errors/mistakes from acts of wilful misconduct will inhibit the reporting process. If personnel avoid reporting for fear of punishment, management does not gain important safety information.

Overall, personnel must believe that they will be supported in any decisions made in the interest of safety but must also understand that intentional breaches of safety policy will not be tolerated. Therefore, a voluntary reporting system should be confidential and operated in accordance with appropriate non-punitive policies. The system should also provide feedback to personnel on safety improvements achieved as a result of the reports received. This objective requires secure and easy access to safety reporting systems, active safety data collection and management's proactive treatment of the data.

Safety information should be collected solely for the improvement of aviation safety, and information protection is essential in ensuring the continued availability of information. This may be realized through a safety reporting system that is confidential, voluntary and



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non-punitive. The benefits are twofold. Often personnel are the closest to safety hazards, so the reporting system enables them to actively identify these hazards. At the same time, management is able to gather pertinent safety hazard information and also build trust with personnel.

Once the data have been collected and stored, that information must be processed in order to substantiate the implementation of appropriate actions that should be communicated to front-line personnel in a timely manner.

### 3.6 Promotion and assessment of a safety culture

The effectiveness of a safety culture can indeed be measured and monitored through the use of tangible metrics. In a mature safety culture environment, it can be anticipated that organizations may be in a position to introduce a mechanism to conduct an internal organization safety culture (OSC) assessment. Such an assessment may be further enhanced using the more technically involved and sector-specific organization risk profile (ORP) assessment. Concurrently, industry organizations and/or regulators may consider developing promotional schemes (e.g. a safety culture award) to encourage product and service providers to participate in a voluntary OSC/ORP assessment of their organizations. The parameters to be assessed in an OSC/ORP assessment should include organizational factors and outcomes that are beyond conventional regulatory requirements, but which are nevertheless pertinent to an organization's safety culture, and therefore have an impact on its safety performance. This is the main purpose of an OSC/ORP assessment. It serves to supplement traditional regulatory oversight by addressing organizational factors (latent conditions) that are otherwise beyond regulatory purview. An OSC assessment checklist would tend to be more generic in content while an ORP checklist would be more customized to the nature of the organization's operations. An illustration of a possible sector-specific OSC/ORP assessment checklist is provided in Appendix 1.

A handwritten signature in black ink, appearing to read 'P. Bruneau', is written over a light grey rectangular background.

**Director Safety Regulation**



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## APPENDIX 1

### RISK ASSESSMENT CHECKLIST

Note-This OSC/ORP assessment checklist is a conceptual illustration only. The illustrated thirty-seven parameters are not comprehensive and are applicable for a service provider organization. Customization of these parameters for assessment of other service provider types would be necessary. The annotated result scores are purely illustrative. This OSC/ORP assessment should be conducted on a voluntary basis in view of organization culture/profile parameters which are beyond normal regulatory purview.

Organization name:		Assessed by/date:			
Organization risk parameter	Risk level/profile			Result (Level #)	
	Level 3 (least desirable)	Level 2 (average)	Level 1 (most desirable)		
1 Accountable manager — ownership of safety/quality functions	Safety/quality functions non-existent in accountable manager's TOR	Accountable manager's TOR have negligible or indistinct mention of safety/quality functions	Final accountability for safety and quality matters clearly addressed in the accountable manager's TOR.	3	
2 Financial state of the organization	TBD	TBD	TBD	2	
3 Average age of fleet	More than 12 years	8 to less than 12 years	Less than 8 years	2	
4 SMS performance score	Year 2011: 65% to 75%	76% to 90%	More than 90%	3	
5 Active hazard identification and risk assessment (HIRA) programme	No active HIRA programme in place	HIRA programme in place. Completion or review of 1 to 3 risk assessment projects (per 100 operational employees) within the last 12 months.	Have HIRA programme in place for all major operational areas. Completion or review of more than 3 risk assessment projects (per 100 operational employees) for all operational areas within the last 12 months.	2	
6 Demanding flight crew schedules or timetables (number of flight time limitation incidents?)	TBD	TBD	TBD	2	
7 Ratio of internal safety plus quality control staff to all operational staff	1: more than 20	1:15 to 20	1: less than 15	3	
8 Mixed fleet flying (MFF) (percentage of pilots involved in MFF — higher percentage is less desirable)	TBD	TBD	TBD	1	



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	Organization risk parameter	Risk level/profile			Result (Level #)
		Level 3 (least desirable)	Level 2 (average)	Level 1 (most desirable)	
9	EDTO routes (percentage of EDTO sectors operated) (higher percentage is less desirable)	TBD	TBD	TBD	2
10	EDTO duration (higher duration is less desirable)	TBD	TBD	TBD	2
11	Company experience (years of operation)	Less than 5 years	5 to 10 years	More than 10 years	3
12	Combined turnover of the accountable executive, the safety manager and the quality manager over the last 36 months	3 or more	2	1 or nil	2
13	Experience and qualifications of the accountable executive (as of the assessment date)	Has less than 3 years of aviation experience and no technical qualification	Has more than 3 years of aviation experience or technical qualifications	Has more than 3 years of aviation experience and aviation technical qualifications	3
14	Experience and qualification of the safety manager (SM)	Has less than 5 years of civil aviation safety/quality experience or no aviation technical qualification	Has more than 5 years of civil aviation safety/quality experience and aviation technical qualifications	Has more than 15 years of civil aviation safety/quality experience and aviation technical qualifications	2
15	Experience and qualifications of the quality manager	Has less than 5 years of civil aviation QC/QA experience or no civil aviation technical qualifications	Has more than 5 years of civil aviation QC/QA experience and civil aviation technical qualifications	Has more than 15 years of civil aviation QC/QA experience and civil aviation technical qualifications	1
16	Multiple portfolio safety/quality management staff (QM/SM)	SM or QM holds other simultaneous executive positions within or outside of the organization	SM or QM TOR include other non-direct safety/quality functions, e.g. IT, administration, training	SM or QM does not hold any other simultaneous executive positions within or outside of the organization and their TOR do not include other non-direct quality/safety functions	2
17	Multiplicity of aircraft types	More than 4 aircraft types	3 to 4 aircraft types	Less than 3 aircraft types	1
18	Combined fleet reportable/mandatory incident rate (per 1 000 FH) for the last 24 months	TBD	TBD	TBD	2
19	Reserved				
20	Combined fleet engine IFSD rate per 1 000 FH	TBD	TBD	TBD	2
21	Average fleet MEL application rate (per 1 000 FH)	More than 30 MEL applications per 1 000 FH	10 to 30 MEL applications per 1 000 FH	Less than 10 MEL applications per 1 000 FH	2
22	Internal technical concession application rate	3 concessions per aircraft per year	More than 1 concession per aircraft per year	Less than 1 concession per aircraft per year	2
23	CAA technical concession application rate.	More than 1 concession per aircraft per year	More than 0.5 concessions per aircraft per year	Less than 0.5 concessions per aircraft per year	2



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	Organization risk parameter	Risk level/profile			Result (Level #)
		Level 3 (least desirable)	Level 2 (average)	Level 1 (most desirable)	
24	Safety accountability structure	Safety management function/ office/manager is accountable or subservient to some operational functions	Safety management function/ office/manager is accountable to senior management and is independent of all operational functions	Safety management function/ office/manager has direct accountability and reporting to the CEO	3
25	Quality accountability structure	Quality management function/office/ manager is accountable or subservient to non-quality/safety-related functions	Quality management function/office/ manager is accountable to senior management and is independent of all operational functions	Quality management function/office/ manager has direct accountability and reporting to the CEO	3
26	CAA AOC organization audit findings rate (Levels 1 and 2 findings only, observations excluded) for the last 24 months	Any Level 1 finding or more than 5 findings per audit per aircraft	More than 1 finding per audit per aircraft	Less than 1 finding per audit per aircraft	2
27	CAA LSI findings rate (Levels 1 and 2 findings only, observations excluded) for the last 24 months	Any Level 1 finding or more than 3 per audit per line station	More than 0.5 findings per audit per line station	Less than 0.5 findings per audit per line station	2
28	Component (rotables/LRUs) soft/CM/hard life policy beyond mandatory or MPD requirements	No component life control policy (hard/soft) beyond mandatory or MPD requirements	Active component hard life control policy and procedures. At least 5 to 10% of all (MPD/AMS listed) flight and engine control rotables (beyond mandatory and MPD requirements) have been soft or hard lifed.	Active component hard life control policy and procedures. More than 10% of all (MPD/AMS listed) flight and engine control rotables (beyond mandatory and MPD requirements) have been soft or hard lifed.	3
29	Scope of QA investigation and MEDA process	Internal QA investigation process applied to mandatory incidents only	Internal QA investigation process for all reported incidents	Internal QA investigation process for all reported incidents + MEDA (or equivalent) process	
30	Availability of environmental protection programme	Non-existent	Isolated participation in an aviation environmental protection programme	Routine programme and regular engagement and participation in an aviation environmental protection programme	3
31	Availability of special inspection programme based on non-mandatory OEM service publications	Special inspection programme for AD-related SBs only	Special inspection programme for ADs as well as alert SBs only	Special inspection programme for ADs, alert SBs as well as routine OEM service publications	2
32	Control of fleet technical management	Fully contracts out to an external organization (FTM + ITM)	Partially contracts out to an external organization	Internal management by AOC organization	2
33	Use of contracted technical staff	More than 15% contracted staff (from another organization) for internal engineering/technical functions	5 to 15% contracted staff (from another organization) for internal engineering/technical functions	Less than 5% contracted staff (from another organization) for internal engineering/technical functions	2



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	Organization risk parameter	Risk level/profile			Result (Level #)
		Level 3 (least desirable)	Level 2 (average)	Level 1 (most desirable)	
34	Pilot, technician or AME transit inspection certification	Practises pilot transit inspection certification in lieu of qualified engineering technician/AME	Practises technician (limited rating) transit inspection certification in lieu of AME	Practises only AME (fully type-rated) transit inspection certification only	3
35	Hazard reporting system	None in place	Voluntary hazard reporting system in place	Voluntary hazard reporting system in place. Also procedure for identification of hazards in conjunction with incident investigation process.	2
36	Incident reporting, investigation and remedial action procedures	No documented incident reporting, investigation or remedial action procedures	Documented incident reporting, investigation and remedial action procedures	Documented incident reporting, investigation and remedial action procedures and accepted by the CAA	2
37	Technical records, technical stores and fleet planning management	Fully contracts out technical records, technical stores and fleet planning management to external organization	Contracts out technical records, technical stores or fleet planning management to external organization	Internal (in-house) technical records, technical stores and fleet planning management	3

	Subtotal
Level 3	11
Level 2	21
Level 1	3
N/A	0
Total number of questions	37

Assessment result	
Total points	ORP category
78	D

ORP categorization	
Total score	ORP category
35-49	A (desirable)
50-63	B
64-77	C
78-91	D
92-105	E (least desirable)

Notes—

- Risk level criteria descriptions/figures are illustrative only, subject to customization and validation of actual figures to be used.
- Checklist will need to be customized for AMOs, aerodrome and ATS service providers.
- Points to be allocated for each parameter assessed — namely 1, 2 or 3 for Levels 1, 2 and 3 respectively.
- This OSC/ORP checklist assessment may be completed by the assigned inspector/surveyor on a scheduled basis (such as during an organization audit). He may need to liaise with the service provider to obtain some of the data required.
- This OSC/ORP assessment process may not be mandatory in view of those parameters which are outside of normal regulatory purview, e.g. staff turnover rate. It may be administered on a supplementary/voluntary participation basis.
- Total points achieved and their corresponding ORP Category (Cat A to E) to be annotated. Results should be provided to the organization assessed.
- Results of this OSC/ORP assessment may be correlated with other regulatory inspection/audit programme findings to identify areas (organizations) with greater concern or need as per the requirements of SSP Element 3.3. Otherwise, notification of ORP results to each organization alone may suffice as a mechanism to encourage organizational behaviour (safety culture) towards the desirable category where applicable.