Safety Management System Implementation - Safety Division

Podgorica, 29 May 2014
Safety Culture

Safety culture is the ways in which safety is managed in the workplace, and often reflects "the attitudes, beliefs, perceptions and values that employees share in relation to safety“

(Cox and Cox, 1991)

Safety Culture is the way safety is perceived, valued and prioritised in an organisation. It reflects the real commitment to safety at all levels in the organisation. It has also been described as "how an organisation behaves when no one is watching"

(www.skybrary.aero)
Main components of SMS

Policy (Structure)

Safety Risk Management

Safety Assurance

Safety Promotion (Culture)
Main components and elements of SMS

Safety policy and objectives
1.1 Management commitment and responsibility
1.2 Safety accountabilities
1.3 Appointment of key safety personnel
1.4 Coordination of emergency response planning
1.5 SMS documentation

Safety risk management
2.1 Hazard identification
2.2 Safety risk assessment and mitigation

Safety assurance
3.1 Safety performance monitoring and measurement
3.2 The management of change
3.3 Continuous improvement of the SMS

Safety promotion
4.1 Training and education
4.2 Safety communication
Management commitment and responsibility

Element 1.1
Management commitment and responsibility

EASA Organisation Requirements
ORX.GEN.200 Management System & AMCs

200(a)(2) Safety Policy
200(a)(6) Compliance monitoring function

AMCs to 200(a)(2) and (a)(6) with details of what the safety policy should contain and how it should be promoted
Safety policy

The safety policy should:

(1) be endorsed by the accountable manager;
(2) reflect organisational commitments regarding safety and its proactive and systematic management;
(3) be communicated, with visible endorsement, throughout the operator; and
(4) include safety reporting principles.

(b) The safety policy should include a commitment:
(1) to improve towards the highest safety standards;
(2) to comply with all applicable legislation, meet all applicable standards and consider best practices;
(3) to provide appropriate resources;
(4) to enforce safety as one primary responsibility of all managers; and
(5) not to blame someone for reporting something which would not have been otherwise detected.

c) Senior management should:
(1) continually promote the safety policy to all personnel and demonstrate their commitment to it;
(2) provide necessary human and financial resources for its implementation; and
(3) establish safety objectives and performance standards.
Safety accountabilities

Element 1.2
Safety accountabilities

ORX.GEN.200 Management System & AMCs
ORX.GEN.210 Personnel Requirements

210(a) & (b) appoint an Accountable Manager and nominate “Post Holders”
200(a)(5) document all key processes and make staff aware

Related AMCs addressing responsibilities for SM key processes and specification of levels of management with authority to make decisions regarding the tolerability of safety risk
Safety accountabilities

The service provider shall:

a) identify the accountable executive who, irrespective of other functions, has ultimate responsibility and accountability, on behalf of the organization, for the implementation and maintenance of the SMS;
b) clearly define lines of safety accountability throughout the organization, including a direct accountability for safety on the part of senior management;
c) identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS;
d) document and communicate safety responsibilities, accountabilities and authorities throughout the organization; and
e) define the levels of management with authority to make decisions regarding safety risk tolerability.
Safety accountabilities

The accountable executive identified by the service provider is the single person having ultimate responsibility for the SMS, including responsibility to provide the resources essential to its implementation and maintenance. The accountable executive’s authorities and responsibilities include, but are not limited to:

a) provision and allocation of human, technical, financial or other resources necessary for the effective and efficient performance of SMS;
b) direct responsibility for the conduct of the organization’s affairs;
c) final authority over operations under the certificate/approval of the organization;
d) establishment and promotion of the safety policy;
e) establishment of the organization’s safety objectives and safety targets;
f) acting as the organization’s safety champion;
g) having final responsibility for the resolution of all safety issues; and
h) establishing and maintaining the organization’s competence to learn from the analysis of data collected through its safety reporting system.

Note.— The responsibilities outlined above should not be delegated.
Key safety personnel

Element 1.3
Appointment of key safety personnel

ORX.GEN.200 Management System & AMCs
ORX.GEN.210 Personnel Requirements

200(a) clearly define the lines of responsibility & accountability
210(b) nominate “Post Holders”

Related AMCs addressing the need to appoint a Safety Manager. For non-complex organisations, this can be the accountable manager or a person with an operational role in the organisation.
Key safety personnel

(1) The safety manager should act as the focal point and be responsible for the development, administration and maintenance of an effective safety management system.

(2) The functions of the safety manager should be to:
   (i) facilitate hazard identification, risk analysis and management;
   (ii) monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan;
   (iii) provide periodic reports on safety performance;
   (iv) ensure maintenance of safety management documentation;
   (v) ensure that there is safety management training available and that it meets acceptable standards;
   (vi) provide advice on safety matters; and
   (vii) ensure initiation and follow-up of internal occurrence / accident investigations.

GM1 ORO.GEN.200(a)(1)

(b) Regardless of the organisational set-up it is important that the safety manager remains the unique focal point as regards the development, administration and maintenance of the operator’s safety management system.
Key safety personnel

(1) The Safety review board should be a high level committee that considers matters of strategic safety in support of the accountable manager’s safety accountability.

(2) The board should be chaired by the accountable manager and be composed of heads of functional areas.

(3) The safety review board should monitor:
   - (i) safety performance against the safety policy and objectives;
     - (ii) that any safety action is taken in a timely manner; and
     - (iii) the effectiveness of the operator’s safety management processes.

(c) The safety review board should ensure that appropriate resources are allocated to achieve the established safety performance.

(d) The safety manager or any other relevant person may attend, as appropriate, safety review board meetings. He/she may communicate to the accountable manager all information, as necessary, to allow decision making based on safety data.
Key safety personnel

(a) A safety action group may be established as a standing group or as an ad-hoc group to assist or act on behalf of the safety review board.

(b) More than one safety action group may be established depending on the scope of the task and specific expertise required.

(c) The safety action group should report to and take strategic direction from the safety review board and should be comprised of managers, supervisors and personnel from operational areas.

(d) The safety action group should:
   (1) monitor operational safety;
   (2) resolve identified risks;
   (3) assess the impact on safety of operational changes; and
   (4) ensure that safety actions are implemented within agreed timescales.

(e) The safety action group should review the effectiveness of previous safety recommendations and safety promotion.
Emergency response planning

Element 1.4
Coordination of emergency response planning

ORX.GEN.200 Management System & AMCs

200(a)(3) identification of aviation safety hazards, evaluation, management of associated risks, taking actions to mitigate & verify effectiveness

Related AMCs: “An ERP should be established that provides the actions to be taken by the organisation or specified individuals in an emergency ... ensure co-ordination with the ERPs of other organisations.”
(g) The emergency response plan (ERP)

(1) An ERP should be established that provides the actions to be taken by the operator or specified individuals in an emergency. The ERP should reflect the size, nature and complexity of the activities performed by the operator.

(2) The ERP should ensure:

(i) an orderly and safe transition from normal to emergency operations;
(ii) safe continuation of operations or return to normal operations as soon as practicable; and
(iii) coordination with the emergency response plans of other organisations, where appropriate.
Element 1.5
SMS documentation

ORX.GEN.200 Management System & AMCs

200(a)(5) document all management system key processes

!No reference to SMS implementation plan!

Related AMCs define contents of the SMM for complex organisations
a) a consolidated description of the SMS components and elements such as:
1) document and records management;
2) regulatory SMS requirements;
3) framework, scope and integration;
4) safety policy and safety objectives;
5) safety accountabilities and key personnel;
6) voluntary hazard reporting system;
7) incident reporting and investigation procedures;
8) hazard identification and risk assessment processes;
9) safety performance indicators;
10) safety training and communication;
11) continuous improvement and SMS audit;
12) management of change; and
13) emergency or operations contingency planning;
b) a compilation of current SMS related records and documents such as:
1) hazards report register and samples of actual reports;
2) safety performance indicators and related charts;
3) record of completed or in-progress safety assessments;
4) SMS internal review or audit records;
5) safety promotion records;
6) personnel SMS/safety training records;
7) SMS/safety committee meeting minutes; and
8) SMS implementation plan (during implementation process).
SMS documentation

• **SMS Manual Aerodrome**

• **SMS Manual Operators**
Hazard identification

Element 2.1
Hazard identification

ORX.GEN.200 Management System & AMCs

200(a)(3) “the identification of aviation safety hazards entailed by the activities of the organisation....”

Related AMCs: to 200(a)(3) foresee reactive and proactive schemes for hazard identification.

NB: Predictive schemes are considered part of proactive schemes.
Hazard identification

SM ICG:
A condition that could cause or contribute to an aircraft incident or accident,

ICAO:
Condition or object with the potential of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function

SM ICG Hazard taxonomy examples.
MED Hazard Log
Hazard Log Template
Hazard identification

A

State the generic hazard

(Hazard statement)
- Airport construction

B

Identify specific components of the hazard
- Construction equipment
- Closed taxiways
...

C

Naturally leading to specific consequence(s)
- Aircraft colliding with construction equipment
- Aircraft taking wrong taxiway
- ...

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Hazard identification

Examples of hazards

• Lack of or ineffective organizational structure
• Poor organizational safety culture
• Lack of, incorrect or incomplete employee duty descriptions
• Lack of, incorrect, incomplete or complicated document update processes
• Ash (including volcanic or forest fire)
• Mountains or bodies of water
• Fatigue (lack of sleep), Alcohol and substance abuse, Medications, Complacency
• Lack of coordination with Air Traffic Control (ATC)
• Improper, inadequate, or lack of Notices to Airmen (NOTAMs) issuance
• Poor radio or communication equipment condition
• Pedestrians on apron areas
• Use of cell phone within 15 meters of a refueling operation
• Faulty, incorrect, or incomplete airfield lighting (especially in movement areas)
• Ineffective design and flow of traffic pattern
• Airspace combined during excessive traffic, etc.
Hazard identification

Sources of Hazard identification

• **Internal**
  - Flight Data Analysis
  - Company voluntary reporting system
  - Audits and surveys
  - Moderated sessions with groups of internal experts
  - Cabin, Air, Maintenance, Ground safety reports

• **External**
  - Accident reports
  - State mandatory occurrence system
  - Conferences, Safety publications Other organizations and more..
Hazard identification tools and techniques:

- Brainstorming
- Hazard and Operability Studies (HAZOPS)
- Checklists
- Failure Modes and Effects Analysis (FMEA)
- Structured What-if (SWIFT)
- Dynamic Models
- Future Hazards Identification through FAST method

HAZARD IDENTIFICATION PROCESS is the formal means of collecting, recording, analysing, acting on and generating feedback about hazards that affect the safety of operational activities.
Element 2.2
Safety risk assessment and mitigation

ORX.GEN.200 Management System & AMCs

200(a)(3) "the evaluation and the management of associated risks ...including taking effective actions to mitigate the risk...."

Related AMC to 200(a)(3):
“a formal risk management process should be developed and maintained that ensures analysis (in terms of likelihood and severity), assessment (in terms of tolerability) and control (in terms of mitigation) of risks to an acceptable level.”
RISK: The assessed predicted likelihood and severity of the consequence(s) or outcome(s) of a hazard.

RISK MANAGEMENT: identification, analysis (in terms of likelihood and severity of occurrence), assessment (in terms of tolerability) and control (in terms of mitigation) of risks to an acceptable level.

RISK ANALYSIS: Process whereby possible consequences of hazards are objectively characterized for their probability (likelihood) and severity. The process can be qualitative and/or quantitative.

<table>
<thead>
<tr>
<th>Severity of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation definition</td>
</tr>
<tr>
<td>---</td>
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</tbody>
</table>
| Catastrophic | ➢ Equipment destroyed.  
               ➢ Multiple deaths. | A |
| Hazardous | ➢ A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely.  
               ➢ Serious injury.  
               ➢ Major equipment damage. | B |
| Major | ➢ A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency.  
               ➢ Serious incident.  
               ➢ Injury to persons. | C |
| Minor | ➢ Nuisance.  
       ➢ Operating limitations.  
       ➢ Use of emergency procedures.  
       ➢ Minor incident. | D |
| Negligible | ➢ Little consequences | E |
## Probability of occurrence

<table>
<thead>
<tr>
<th>Qualitative definition</th>
<th>Meaning</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>Likely to occur many times (<em>has occurred frequently</em>)</td>
<td>5</td>
</tr>
<tr>
<td>Occasional</td>
<td>Likely to occur some times (<em>has occurred infrequently</em>)</td>
<td>4</td>
</tr>
<tr>
<td>Remote</td>
<td>Unlikely, but possible to occur (<em>has occurred rarely</em>)</td>
<td>3</td>
</tr>
<tr>
<td>Improbable</td>
<td>Very unlikely to occur (<em>not known to have occurred</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Extremely improbable</td>
<td>Almost inconceivable that the event will occur</td>
<td>1</td>
</tr>
</tbody>
</table>
Safety risk assessment and mitigation

RISK ASSESSMENT: The identification, evaluation, and estimation of the level of risk.

<table>
<thead>
<tr>
<th>Risk probability</th>
<th>Risk severity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Catastrophic</td>
</tr>
<tr>
<td>Frequent 5</td>
<td>5A</td>
</tr>
<tr>
<td>Occasional 4</td>
<td>4A</td>
</tr>
<tr>
<td>Remote 3</td>
<td>3A</td>
</tr>
<tr>
<td>Improbable 2</td>
<td>2A</td>
</tr>
<tr>
<td>Extremely improbable 1</td>
<td>1A</td>
</tr>
</tbody>
</table>
Safety risks assessment and mitigation

<table>
<thead>
<tr>
<th>Risk management</th>
<th>Assessment risk index</th>
<th>Suggested criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intolerable region</td>
<td>5A, 5B, 5C, 4A, 4B, 3A</td>
<td>Unacceptable under the existing circumstances</td>
</tr>
<tr>
<td>Tolerable region</td>
<td>5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C</td>
<td>Acceptable based on risk mitigation. It might require management decision</td>
</tr>
<tr>
<td>Acceptable region</td>
<td>3E, 2D, 2E, 1A, 1B, 1C, 1D, 1E</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>
Safety risks assessment and mitigation

**Pitfalls**

Too few samples to guarantee credible statistics;
Comparison of the future situation and the current situation without demonstrating that the current situation is acceptable;
Insufficient analysis of human factors;
No assessment of the global consistency of the system;
Bad identification or even no identification of the interfaces of the subsystem considered in the safety argument;
Developing a safety argument to attempt to justify a decision that has already been made;
Using a generic assessment when a site-specific assessment is needed;
Carrying out a detailed quantified risk assessment without first considering whether any relevant good practice was applicable, or when relevant good practice exists;
Safety risks assessment and mitigation

Carrying out a risk assessment using inappropriate good practice;
Only considering the risk from one activity;
Not involving in the assessment a team of people with practical knowledge of the process/activity being assessed;
Ineffective use of consultants;
Failure to identify all hazards;
Failure to fully consider all possible outcomes;
Inappropriate use of data;
Inappropriate definition of a representative sample of events;
Inappropriate use of risk criteria;
Inappropriate use of cost benefit analysis;
Not doing anything with the results of the assessment.

Source: EAM 1 / GUI 4 GUIDELINES FOR THE SAFETY OVERSIGHT OF CHANGES TO ATM
Safety performance monitoring and measurement

Element 3.1
Safety performance monitoring and measurement

ORX.GEN.200 Management System & AMCs

200(a)(3) “the evaluation and the management of associated risks ... including taking actions to mitigate the risk and verify their effectiveness.”

Related AMC to 200(a)(3):
“Safety performance monitoring and measurement so that safety performance is verified in comparison to the safety policy and objectives...”
AMC further defines elements of this process.
Safety performance monitoring and measurement

Verification in comparison to safety policy and safety objectives.

ICAO:
Safety performance indicator as ‘a data-based safety parameter used for monitoring and assessing performance’.
Safety performance target as ‘the planned or intended objective for safety performance indicator(s) over a given period.

Lagging indicators: Metrics that measure safety events that have already occurred including those unwanted safety events you are trying to prevent’ (SM ICG).

Leading indicators: Metrics that provide information on the current situation that may affect future performance’ (SM ICG).’
Safety performance monitoring and measurement

**Leading indicators**

1. Metrics that measure inputs to the safety system (either within an organisation, a sector or across the total aviation system) to manage and improve safety performance.

2. Leading indicators indicate good safety practices being introduced, developed, and adapted, which by their inclusion seek to establish a proactive safety environment that engenders continuous improvement. They provide useful information when accident and incident rates are low to identify latent hazards and potential threats, and consequent opportunities for improvement.

**Lagging indicators**

3. Metrics that measure events that have already occurred and that impact on safety performance.

4. As lagging indicators only reflect system failures their use can only result in determining a reactive response. Although they do measure failure to control hazards, they do not normally reveal why the system failed or if there are any latent hazards.

Source- EASA NPA 2013-08
Safety performance monitoring and measurement

For any performance indicator to be effective, it is important that it is:
(1) objective and easy to measure and collect;
(2) relevant to the ATS provider whose performance is being measured;
(3) capable of providing immediate and reliable indications of the level of performance;
(4) cost efficient in terms of the equipment, personnel, and additional technology required to gather the information;
(5) understood and owned by the ATS provider whose performance is being measured;
(6) related to activities considered to be important for future performance;
(7) amenable to intervention/influence by the ATS provider whose performance is being measured;
(8) related to something where there is scope to improve; and
(9) a clear indication of a means to improve performance.
Safety performance monitoring and measurement
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety performance monitoring and measurement [3.1]</strong></td>
<td><strong>1</strong> The organization’s SMS safety performance indicators have been agreed with the relevant national aviation authority.</td>
</tr>
<tr>
<td></td>
<td><strong>2</strong> There are high-consequence data-based safety performance indicators (e.g. accident and serious incident rates).</td>
</tr>
<tr>
<td></td>
<td><strong>3</strong> There are lower-consequence safety performance indicators (e.g. non-compliance, deviation events).</td>
</tr>
<tr>
<td></td>
<td><strong>4</strong> There are alert and/or target level settings within the safety performance indicators where appropriate.</td>
</tr>
<tr>
<td></td>
<td><strong>5</strong> The organization’s management of change procedure includes the requirement for a safety risk assessment to be conducted whenever applicable.</td>
</tr>
<tr>
<td></td>
<td><strong>6</strong> There is evidence of corrective or follow-up action taken when targets are not achieved and/or alert levels are breached.</td>
</tr>
</tbody>
</table>
## Performance Guidelines for Service Providers

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Objectives</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Number of major risk incidents (as defined in SMM)</td>
<td>1 or less</td>
<td></td>
</tr>
<tr>
<td>Number of MORs</td>
<td>3 or less</td>
<td></td>
</tr>
<tr>
<td>Number of internal audits</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Number of audit findings per audit</td>
<td>2 or less</td>
<td></td>
</tr>
<tr>
<td>Number of safety committee meetings</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Safety committee attendance of key personnel</td>
<td>Minimum 80%</td>
<td></td>
</tr>
<tr>
<td>Number of ERP drills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Number of hazard / safety reports</td>
<td>20 or more</td>
<td></td>
</tr>
<tr>
<td>Number of safety newsletters issued</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Number of formal risk assessments</td>
<td>5 or more</td>
<td></td>
</tr>
<tr>
<td>Number of safety surveys</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Number of airworthiness incidents (as defined in SMM)*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Number of flights flown with operational MEL restrictions*</td>
<td>3 or less</td>
<td></td>
</tr>
</tbody>
</table>
Management of change

Element 3.2
The management of change

ORX.GEN.200 Management System & AMCs

200(a)(3) “the evaluation and the management of associated risks ... including taking actions to mitigate the risk and verify their effectiveness.”

Related AMC to 200(a)(3): “The organisation should manage safety risks related to a change through a documented process to identify external and internal change that may have an adverse effect on safety. It should make use of existing hazard identification, risk assessment and mitigation processes.”
Management of change

Aviation service providers experience change due to a number of factors including, but not limited to:

a) organizational expansion or contraction;
b) changes to internal systems, processes or procedures that support delivery of the products and services; and
c) changes to the organization’s operating environment.
a) Implementation of new, or changes to, communications, surveillance or other safety-significant systems and equipment, including those providing new functionality and/or capabilities.
b) Physical changes to the layout of runways and/or taxiways at an aerodrome.
c) Physical changes to apron road schemes.
d) Introduction of a new aircraft type or class to an aerodrome.
e) Development or modifications of aerodrome procedures, including new procedures to operate at the aerodrome premises, changes to fire and rescue procedures etc.
f) Changes/Establishment of training or re-training of operational and technical staff.
Management of change

g) A change to separation minimum to be applied within an airspace or at an aerodrome.

h) New operating procedures, including departure and arrival procedures, to be applied within an airspace or at an aerodrome.

i) A reorganisation of the ATS route structure.

j) A resectorisation of the airspace.
Continuous improvement of the SMS

Element 3.3
Continuous improvement of the SMS

Essential Requirements (ERs) of the Basic Regulation
ORX.GEN.200 AMCs

ERs: « The organisation must implement and maintain a management system to ensure compliance and aim for continuous improvement of this system. »

Related AMC to 200(a)(3): “The organisation should continuously seek to improve its safety performance.”
Continuous improvement of the SMS

The internal evaluation function includes evaluation of safety management functions, policymaking, safety risk management, safety assurance and safety promotion throughout the organization. **Internal audits** involve the systematic and scheduled examination of the service provider’s aviation activities, including those specific to implementation of the SMS. To be most effective, internal audits are conducted by persons or departments that are independent of the functions being evaluated. Such audits provide the accountable executive, as well as senior management officials responsible for the SMS, the ability to track the implementation and effectiveness of the SMS as well as its supporting systems. **External audits** of the SMS may be conducted by relevant authorities responsible for acceptance of the service provider’s SMS. Additionally, audits may be conducted by industry associations or other third parties selected by the service provider. These external audits enhance the internal audit system as well as provide independent oversight.
Continuous improvement of the SMS

• Mature safety assurance process
  – Analysis of data
  – System performance assessment
  – Corrective/Preventive action: Maintaining the controls
  – Identifying new and emerging hazards
• Management Reviews: Formal involvement
• Documentation & Training as required

Continuous improvement is based on:
  – Continuous risk management, and
  – Continuous safety assurance
Continuous improvement of the SMS

CONTINUOUS IMPROVEMENT OF THE SMS — COMPLEX ATS PROVIDERS

ATS providers should continuously improve the effectiveness of their SMS by:
(a) developing and maintaining a formal process to identify the causes of substandard performance of the SMS;
(b) establishing a mechanism(s) to determine the implications of substandard performance of the SMS in operations;
(c) establishing one or more mechanisms to eliminate or mitigate the causes of substandard performance of the SMS;
(d) developing and maintaining a process for the proactive evaluation of facilities, equipment, documentation, processes and procedures (through audits and surveys, etc.); and
(e) developing and maintaining a process for the proactive evaluation of the individual’s performance, to verify the fulfilment of their safety responsibilities.
Training and education

Element 4.1
Training and education

ORX.GEN.200 Management System & AMCs

200(a)(4) “...maintain personnel trained and competent to perform their tasks.”

Related AMCs to 200(a)(4): all personnel to receive safety training as appropriate for their safety responsibilities.”
Training and education

The service provider shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their SMS duties.

The scope of the safety training programme shall be appropriate to each individual’s involvement in the SMS.

Training requirements consistent with the needs and complexity of the organization should be documented for each area of activity. A training file should be developed for each employee, including management.
Training and education

Training procedures should specify initial and recurrent safety training standards for operational personnel, managers and supervisors, senior managers and the accountable executive.

The amount of safety training should be appropriate to the individual’s responsibility and involvement in the SMS.

The SMS training documentation should also specify responsibilities for development of training content and scheduling as well as training records management.

The training should include the organization’s safety policy, safety roles and responsibilities, SMS principles related to safety risk management and safety assurance, as well as the use and benefits of the organization’s safety reporting system(s).
Element 4.2
Safety Communication

ORX.GEN.200 Management System & AMCs

200(a)(4) “...maintain personnel trained and competent to perform their tasks.” - 200(a)(5) »... process for making personnel aware of their responsibilities »

Related AMCs to 200(a)(4): “... establish communication about safety matters ....” - “.....all personnel to receive safety training as appropriate for their safety responsibilities.” – “...ensures that all personnel are aware of the SM activities as appropriate for their safety responsibilities.”
The service provider shall develop and maintain formal means for safety communication that:
a) ensures personnel are aware of the SMS to a degree commensurate with their positions;
b) conveys safety-critical information;
c) explains why particular safety actions are taken; and

d) explains why safety procedures are introduced or changed.

Examples of organizational communication initiatives include:
a) dissemination of the SMS manual;
b) safety processes and procedures;
c) safety newsletters, notices and bulletins; and
d) websites or email.

Safety posters
Lessons learnt from implementation

• Health and Safety / Flight Operations focused.
• The transition from the required reactive ‘Accident Prevention/Flight Safety Program’ to a proactive approach needs more focus.
• The role of the Safety Manager as the co-ordinator and not the ‘owner of risks’ needs more direction.
• The Post Holders need to ensure they have structure to identifying, owning and managing the risks.
• Unclear what SMS training is required and provided to staff.
• More staff communication required to achieve maturity with reporting hazards.
• Inconsistency with risk assessments (severity and probability).
• Safety Cases being written by the Safety Department alone, and not ‘joined up’ within the organisations.
• Weak or unrealistic mitigation controls.
• Third party risks and contracted and un-contracted organisations have not been considered.
Lessons learnt from implementation

- Safety and business risks use the same matrices and processes.
- Business Area Heads and the Board own the risks not the safety manager.
- Sharing of hazards, incidents and events with other organisations.
- Looking for hazards from external and future events.
- Contracted organisations participate in the primary organisation’s SMS.
- Using leading indicators to manage and measure your safety performance.
Thank you for your attention

Questions?