EXECUTIVE AVIATION

SMS **Safety Management System Manual**

SMS | SAFETY MANAGEMENT SYSTEM

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0   FOREWORD

This manual describes the functioning of Executive Aviation's (EA) Safety Management System (SMS). The SMS identifies, assesses, and mitigates risks to aviation and general safety by employing a comprehensive and interrelated series of processes including appropriate senior leadership oversight reflecting the organization's commitment to safety.

The SMS operates in parallel to the EA Health and Safety program, which focuses on the safety of employees of the company and compliance with Canada Labour Code (CLC) regulations. In contrast, the SMS focuses on risks to aviation safety (that is, hazards which may lead to aircraft incidents and accidents) and captures general safety matters that would not normally be captured by a Health and Safety Plan.

This manual is divided into the following sections which group the program elements, with each section building on previous processes to build the comprehensive system. The manual is supplemented by attached Policies, Standard Operating Procedures which provide additional detailed guidance on how the program is carried out. Broadly, the sections of this manual are:

1. **Organizational Commitment to Safety** which describes the organizational elements that support a culture of safety
2. **Safety Risk Management** which detail the core SMS processes upon which more specific complex processes are based
3. **Hazard Identification** which outline the ongoing way in which hazards are identified in both reactive and proactive conditions
4. **Safety Training and Communication** which describe the means through which critical safety information is transmitted to stakeholders, including front line employees, senior management, government agencies, and the airport community
5. **Integrated Safety Programs** which describe briefly other safety-related programs correspond to the SMS

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0.1   Document Control

A list of the Policies and Standard Operating Procedures associated with this Plan are listed at the beginning of the manual.

RECORD OF REVISIONS

Retain this record in the front of the Safety Management System Plan. The SMS is reviewed at minimum annually and revised as required.

Publication	EA SMS Manual
Assign to:	All Stations

REV #	REV Date	Owner	List of Affected Pages
01	09102018	Director, Ops	All
02	09142020	Vice President	All
03	09232022	Vice President	All
04			

Executive Aviation's Vice President is the official owner and maintains overall control of all content of the EA SMS manual This manual is reviewed annually by the Manager, Safety and Quality Assurance and is updated as required, and reissued with the current date.

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0.2   Titles, Personnel, and Contact Information

To facilitate accuracy of amendments following changes in personnel, references to individuals within this manual are restricted to job titles only. Where a job title is identified within this document, it shall be interpreted to refer to the corresponding individual and contact information listed in the table below. Following a change in personnel, this page shall be amended accordingly without further changes required elsewhere in this manual, unless the change corresponds to an amendment to process.

TITLE	PERSON HOLDING TITLE	CONTACT DETAILS
President & CEO	Nelson Bradshaw	nbradshaw@executiveaviation.ca
Vice President	Beau Cook	bcook@executiveaviation.ca
Head of People and Culture	Stephanie Hornby	shornby@executiveaviation.ca
Head of Safety and Standards	Aaron Clark	aclark@executiveaviation.ca
Manager, Safety and Quality Assurance	Graham Lindsay	glindsay@executiveaviation.ca
SMS Advisor	Stephen O'Grady	sogrady@executiveaviation.ca

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0.3   Abbreviations and Definitions

AA   Airport Authority

AE   Accountable Executive

ATB   Air Terminal Building

EA   Executive Aviation

HIRA   Hazard Identification Risk Assessment

PCAP   Preventive/Corrective Action Plan(s)

SLT   Senior Leadership Team

SMS   Safety Management System(s)

SOP   Standard Operating Procedure

TCCA   Transport Canada Civil Aviation

Accountable Executive – A single, identifiable person having responsibility for the effective and efficient performance of the service provider's SMS**.** The AE for EA is the Vice President

Hazard identification and risk assessment - A structured proactive process employed prior to implementing a change to facility, process, equipment, or organization

Hazard Identification - An identified condition that poses a direct threat to the safety of persons, property or equipment. This applies to situations when an incident or occurrence has not yet taken place, but has the potential of occurring at some time

Risk Assessment - A process, using Likelihood and Severity of outcomes (Risks) being generated by an identified Hazard, to estimate the threat level that the Hazard possess to the Operation or Organization.

Preventive/Corrective Action Plan - The steps to be taken to correct a deficiency to eliminate or reduce the reoccurrence. Preventive/Corrective Actions may be Long or Short Term and require monitoring for effectiveness and approval from the process/program owner prior to implementation

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Safety Management System - A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

Proactive Reports - Proactive reports identify potential Hazards to the organization which may pose a threat to the Safety of the operation, employees, customers, or equipment

Safety - Safety is the state in which the risk of harm to persons or property damage is reduced to, and maintained at or below an acceptable level through a continuing process of hazard identification and risk management

Proactive report - Reports identifying potential Hazards to the organization which may pose a threat to the Safety of the operation, employees, customers, or equipment

Investigation - In-depth analysis of an accident, incident or event which has had a wide-reaching effect on the Organization

Severity - The extent of harm that might reasonably occur as a consequence or outcome of the identified hazard

Probability - The likelihood or frequency that a safety consequence or outcome might occur

Root Cause - The most basic cause(s) that can reasonably be identified that management has control to fix and when fixed, will prevent or significantly reduce the problem's recurrence

1   ORGANIZATIONAL COMMITMENT TO SAFETY

Safety and Security are the top priority for Executive Aviation. EA recognizes its unique responsibility to provide a safe environment for our team members, our business partners, and the traveling public. To achieve safety excellence, a robust series of policies, procedures, and processes exist to identify hazards and manage risks. Together, these processes make up the Safety Management System.

In order for the SMS to function effectively, all persons in the organization must understand and accept the importance of operating safely. This must begin from the top of the organization, and all levels of employees must trust senior management's commitment to safety. This section outlines EA's organizational commitment to safety and the means by which that commitment is manifested and communicated.

1.1   Safety Policy

EA has adopted a formal Safety Policy that describes the organization's commitment to ensuring a safe operating environment for its team members, business partners, and the general public. The policy is endorsed by the CEO, and requires all employees, beginning with the CEO, to operate in a manner that considers safety as the top priority.

Related Document: *POL-SMS-01 Safety Policy*

The EA Safety Policy is communicated in various means throughout the organization to ensure that all employees are continually made aware of both management's commitment to, and the employee's responsibility for operating safely. Some of the means by which the Safety Policy is communicated include:

• Prominent visibility on the EA intranet and website

• Posting on or adjacent to employee message boards throughout the facility

• Inclusion in employee orientation training and reference material

The Safety Policy is reviewed annually in conjunction with the review of this Plan, with recommended changes forwarded to the CEO for consideration.

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1.2   Non-Punitive Reporting Policy

Effective safety management requires that incidents and hazards be reported promptly for review and analysis. This includes situations where an employee has made an error of procedure or judgement. Employee errors are rarely an isolated and non-repeatable scenario; rather, understanding these situations assists in identifying underlying root causes which must be addressed to prevent the incident from recurring.

Employees are often hesitant to report hazardous incidents or conditions, especially those resulting from errors of their own or of their colleagues. To ensure that all employees feel comfortable in reporting incidents and safety hazards, EA has implemented a Non-Punitive Reporting Policy that ensures all persons making such reports are free from reprisal or discipline for doing so.

**Related Document:** *POL-SMS-02 Non-Punitive Reporting Policy*

The Policy outlines management's commitment to avoid disciplinary action as a result of unsafe action, provided the employee self-reports the occurrence and all relevant details. It also states those situations in which the Policy does not apply; namely intentional acts, criminal acts, and egregious or gross negligence.

The Non-Punitive Reporting Policy is communicated to employees in the same manner as the Safety Policy.

When deciding if a behaviour causing a reportable occurrence is a culpable act the Culpability Decision Tree Evaluation Process shown below will be followed.

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Culpability Decision Tree
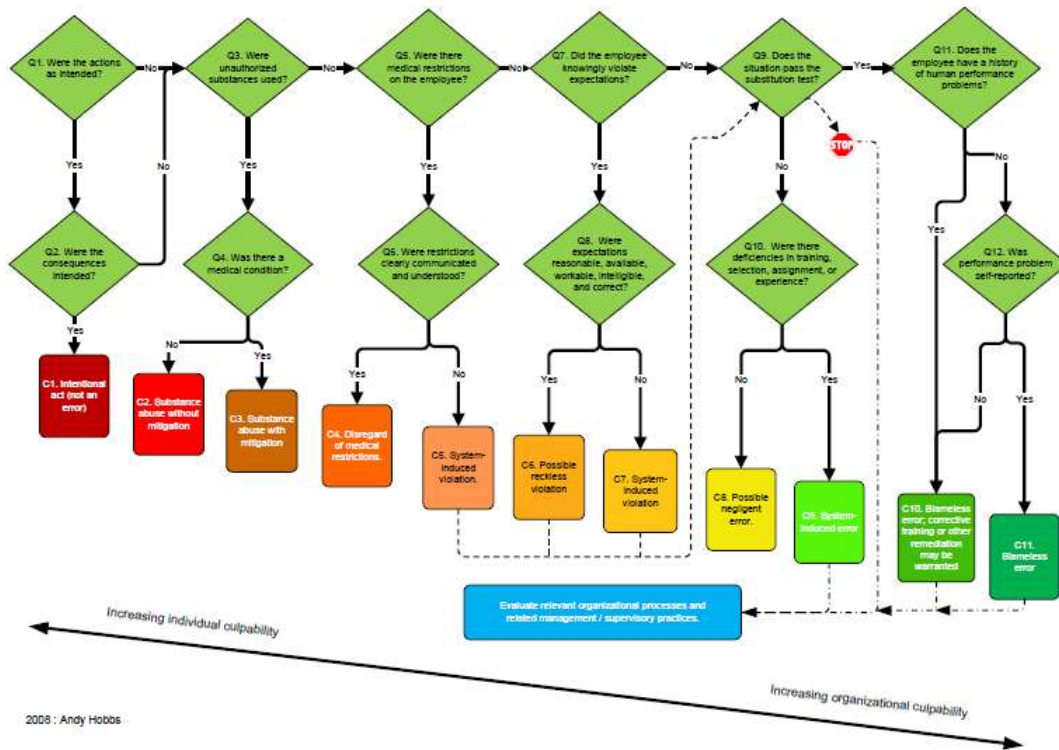
2006 : Andy Hobbs

Use this decision tree when analyzing an error or adverse event that has occurred, as it may help you identify how human factors and systems issues contributed to the event. This decision tree is particularly helpful in supporting a non-punitive approach.

Related Document: *SOP-SMS-XX Culpability Decision Tree Guidance*

1.3 Safety Goals and Objectives

EA will produce annual goals and objectives for safety and monitor performance against those goals. Goals shall be established for both employee safety and aviation safety matters. Goals must be specific, measurable, achievable, relevant, and timely (SMART). Goals and objectives will be reviewed annually by the EA Safety Representative and the EA Senior Leadership Team Safety Committee (see Section 1.4) with recommendations for changes made to the Vice President for approval, in conjunction with the annual business planning process.

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Goals and Objectives will be formalized as a Policy Document, reviewed and reissued annually.

Related Document: *POL-SMS-03 Safety Goals and Objectives (Current Year)*

Safety Goals and Objectives are communicated annually to employees and are posted alongside the Safety Policy.

1.4   Safety Committees

EA Management works in collaboration with all levels of internal team members as well as with business partners to ensure safety.

1.4.1   EA Senior Leadership Team (SLT) Safety Committee

The EA SLT Safety Committee is chaired by the **Vice President** and comprised of internal representation of EA senior leadership team members. The SLT Safety Committee may meet on a standalone basis or operate as an agenda item on existing meetings of EA SLT. Its mandate is to review high risk safety hazards identified and to approve and monitor their associated corrective action plans

1.5   Safety Roles and Responsibilities

All team members have a responsibility for ensuring safety. All jobs, regardless of department or position entail safety responsibilities and accountabilities. At minimum, all EA team members are expected to:

- Act in a safe manner
- Follow prescribed safety precautions while carrying out their duties
- Report incidents and potential safety hazards

Further, all EA management and SLT level staff are expected to promote safety awareness within their bases or departments. This includes monitoring for compliance with safe work practices. In addition, management personnel are required to develop appropriate and effective preventive and/or corrective action plans to safety hazards identified within their area of responsibility.

1.5.1   President & Accountable Executive

The President of Executive Aviation has been named the accountable executive and 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:

- Provision and allocation of human, technical, financial or other resources necessary for the effective and efficient performance of SMS
- Direct responsibility for the conduct of the organization's affairs
- Final authority over operations of the organization
- Establishment and promotion of the safety policy
- Establishment of the organization's safety objectives and safety targets
- Acting as the organization's safety champion
- Having final responsibility for the resolution of all safety issues; and
- Establishing and maintaining the organization's competence to learn from the analysis of data collected through its safety reporting system

1.5.2   Vice President

The Vice President is the chair of the EA Senior Leadership Team Safety Committee and has safety authorities and responsibilities that include, but are not limited to:

- Managing the SMS implementation plan on behalf of the accountable executive
- Coordinating and communicating (on behalf of the accountable executive) with the State's oversight authority and other State agencies as necessary on issues relating to safety; and
- Coordinating and communicating (on behalf of the accountable executive) with key stakeholders and international organizations on issues relating to safety
- Acting as the organization's safety champion

1.5.3   Head of Safety and Standards

The Head of Safety and Standards is responsible for the following:

- Maintain the SMS and safety related programs and documentation
- Implement and develop safety policies and procedures to support change and continuous improvement

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- Implement, develop, and manage quality assurance programs related to safety and operations
- Implement, develop, and manage safety related training programs
- Communicate, coordinate and consult with network leadership on hazards and risk assessments
- Guide accident and incident investigation processes
- Ensure standards of risk assessment activities are active and maintained across the network
- Monitor, analyze, and report trends in safety performance
- Participate in partner, stakeholder, and industry safety performance working groups • Support the development and Implementation of corrective actions in the context of organizational risk management strategies
- Ensure compliance with safety and operations regulatory requirements
- Support the ongoing performance management and development of members of the Safety tea

1.5.4 Quality Assurance and Safety Manager

The safety manager is responsible for the development and maintenance of the SMS. The safety manager also advises the accountable executive and frontline managers on safety management matters and is responsible for coordinating and communicating safety issues within the organization, as well as with external stakeholders. The safety manager's functions include, but are not necessarily limited to:

- Managing the delivery of the SMS plan requirements on behalf of the accountable executive
- Performing/facilitating hazard identification and safety risk analysis
- Monitoring corrective actions and evaluating their results
- Providing periodic reports on the organization's safety performance
- Maintaining records and safety documentation
- Planning and facilitating team member safety training
- Providing independent advice on safety matters
- Monitoring safety concerns in the aviation industry and their perceived impact on the organization's operations aimed at service delivery

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1.5.5   Station Manager (or designate)

EA appoints a **Station Manager (or designate)** at each Airport to oversee the Local Safety Management System, and who has additional responsibilities as they relate to safety. These additional responsibilities include, but are not limited to:

- Review and validate risk assessments for hazards
- Assign responsibility for preventive/corrective action plans to other Supervisors or Leads
- Ensure operational safety audits and inspections are conducted in accordance with established schedules
- Report to senior leadership on high risk hazards and the status of their preventive/corrective action plans, performance relative to established goals and objectives, and of safety performance in general
- Liaise with the AA, Airlines, and any other relevant outside agencies on matters relating to safety
- Develop safety communications to internal and external parties
- Ensure that all elements of the Safety Management System are being carried out as described

1.5.6   Operations Manager / Ramp Coordinator / Customer Service Coordinator

EA appoints a **designate** at each Airport to oversee the day of operational activities, who has additional responsibilities as they relate to safety. These additional responsibilities include, but are not limited to:

- Identify and report hazards to management
- Assign responsibility to complete tasks for preventive/corrective action plans to Leads or frontline team members
- Ensure operational safety audits and inspections are conducted in accordance with established schedules
- Liaise with the AA, Airlines, and any other relevant outside agencies on matters relating to safety
- Develop and/or communicate safety communications to internal and external parties

2   SAFETY RISK MANAGEMENT

This section describes the core elements of safety risk management including the assessment of risk, development and approval of mitigations, and monitoring of results. Principle methods of hazard identification are further developed in Section 3: Hazard Identification.

At its core, the SMS is an ongoing process of identifying hazards, determining the level of risk they pose, and applying appropriate mitigations to reduce risk if determined to be above acceptable levels. There are various, overlapping methods applied to identify potential hazards which are discussed in Section 3 of this manual. Regardless of the manner in which a hazard is identified, the associated risk is assessed and managed in the same manner. As a result, this manual is organized to introduce the means in which to assess the safety risk posed by hazards before introducing the means in which hazards are identified.

2.1   The Risk Management Cycle

Safety Risk Management begins with the identification of a real or potential hazard, which can be accomplished from a variety of means outlined in Section 3. Once a hazard has been identified, the risk management cycle will:

- Assess the safety risk that hazard poses, and whether it exceeds acceptable levels. This is accomplished using the **Risk Assessment** process, utilizing the risk assessment matrix.
- Determine appropriate corrections or mitigations to apply to reduce the risk to acceptable levels. The resulting decisions are documented on a **Corrective Action Plan**.
- Implement the planned corrective action plan, which is verified by way of **CAP Inspection**.
- Monitor the ongoing effectiveness of the corrective actions through the various continuous hazard identification processes. Monitoring identifies ineffectiveness of the CAP (continued hazard) or newly introduced hazards which begins the cycle again.

The risk management process forms a continuous cycle of review, assessment, and mitigation that leads to continuous safety improvement.
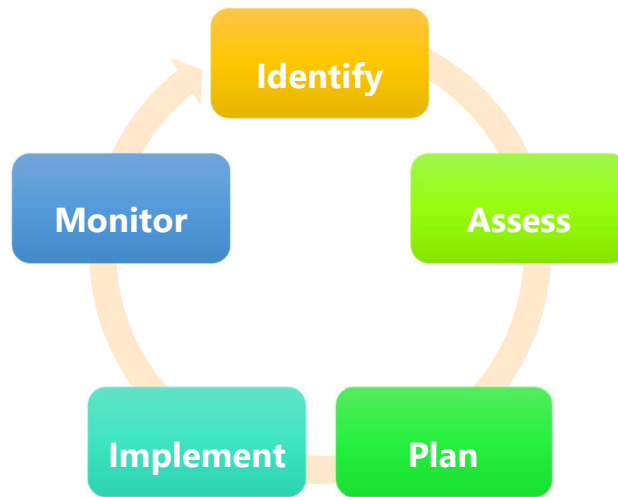
2.2   Risk Assessment

When a real or potential hazard has been identified, the Risk Assessment process is used to quantify the level of risk that hazard poses. The detailed risk assessment process is documented in an SOP.

Related Document: *SOP-SMS-01 Safety Risk Assessment*

It is not uncommon for the terms hazard and risk to be used interchangeably. In the context of risk management, it is essential to separate the two. A **hazard** is an act or condition that could lead to an accident or incident; **risk** is the consequence or loss (damage, injury, death) as a result of the hazard. In a simple example:

- A puddle of water on a tile floor is a *hazard*
- The *risk* associated with the puddle is that a person may slip, resulting in injury from a fall

The risk scenario associated with the hazard is then examined, estimating the *probability* that the risk will occur and the *severity* that the risk has. The probability and severity are matched to the **Risk Assessment Matrix** which defines the level of risk the hazard poses, and EA's risk tolerance.

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A summary of the EA Risk Assessment matrix is shown below; details on the criteria used to establish the determination of categories for severity and probability are provided in the associated SOP.

[1] RISK ASSESSMENT MATRIX

Note: Italicized text is a guideline to categorization considerations only.

PROBABILITY		SEVERITY				
		CATASTROPHIC *Equipment destroyed; death* **A**	**HAZARDOUS** *Large reduction in safety margins; serious injury; major equipment damage* **B**	**MAJOR** *Significant reduction in safety margins; serious incident; injuries* **C**	**MINOR** *Nuisance; operating limitations; use of ERP; minor incident* **D**	**NEGLIGIBLE** *Few consequences* **E**
FREQUENT *Likely to occur many times (has occurred frequently)*	**5**	RED	RED	RED	YELLOW	YELLOW
OCCASIONAL *Likely to occur sometimes (has occurred infrequently)*	**4**	RED	RED	YELLOW	YELLOW	YELLOW
REMOTE *Unlikely to occur, but possible (has occurred rarely)*	**3**	RED	YELLOW	YELLOW	YELLOW	GREEN
IMPROBABLE *Very unlikely to occur (not known to have occurred)*	**2**	YELLOW	YELLOW	YELLOW	GREEN	GREEN
EXTREMELY IMPROBABLE *Almost inconceivable that the event will occur*	**1**	YELLOW	GREEN	GREEN	GREEN	GREEN

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[1] Risk assessment matrix ICAO Doc 9859

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2.3 Risk Tolerance

Utilizing the risk assessment matrix will determine the level of risk associated with a given hazard, in color coded terms (Red, Yellow, Green). The resulting risk is then compared against EA's risk tolerance criteria, listed below.

Matrix Outcome	Risk Level	Tolerance
Red	High	Unacceptable under the existing circumstances
Yellow	Moderate	Acceptable based on risk mitigation. May require management decision.
Green	Low	Acceptable

An initial risk assessment may be performed by the person identifying the hazard. Once a hazard has been assigned to an accountable team member, the risk assessment is repeated and the accountable team member may confirm or re-assess the risk. The accountable team member assigned the hazard retains accountability for the risk assessment once it has been reviewed.

If the hazard is high (red) the activity must stop (when safe to do so), immediate additional mitigations are required and the hazard moves to the corrective action plan stage. Further, high risk hazards are communicated to senior levels of management who will monitor progress on mitigations and validate that the response is adequate.

If the hazard is moderate (yellow), the station manager or designate must review the hazard and its context and determine what additional mitigations can be applied to reduce the hazard further. If the station manager or designate determines that no feasible mitigations can reduce the risk to low (green), the station manager or designate may elect to accept the risk. A hazard identified as low risk (green) is acceptable and no further mitigations are required.

2.4 Corrective Action Plan

Where a risk has been identified above a low (green) level, a preventive/corrective action plan (PCAP) is required. The PCAP is completed by the station manager or designate who has responsibility over the hazard.

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Related Document: *SOP-SMS-02 Preventive and Corrective Action Plans*

Preventive and corrective actions must serve to either reduce the probability of the risk occurring, reduce the severity of the outcome, or both. In all cases the **residual risk** (being the revised risk assessment taking into account the new mitigations) must be brought to at least a moderate (yellow) risk, with an objective of reaching a low (green) risk level.

Where possible, the hazard should be completely eliminated (e.g. in the case of a broken or defective part, surface, etc.). Where the hazard cannot be fully eliminated, the risk should be controlled using (in decreasing order of effectiveness and preference):

- Engineering techniques, where feasible and appropriate
- Procedures for safe work which are understood and followed by all affective parties, as a result of training, positive reinforcement, correction of unsafe performance, and, if necessary, enforcement through a clearly communicated disciplinary system
- Provision of personal protective equipment
- Administrative controls, such as reducing duration of exposure

The actions to be implemented as documented in the PCAP must meet the following criteria:

- Actions must be **specific**. The station manager or designate must be able to determine unequivocally whether the actions have been completed in order to close the file
- Actions must be **assigned** to a specific person. That person must have the means and authority to carry out the action. The accountable team member (the one who completed the PCAP) remains responsible for ensuring others complete assigned tasks
- Actions must be **time based**. A date by which actions are to be completed must be listed to ensure compliance.

In rare cases, circumstances may dictate that operations must continue with an interim high (Red) residual risk level. In these cases, approval to continue **must** be obtained from senior leadership to document the organization's acceptance of the risk.

The person reporting the hazard is advised of the accountable team members risk assessment for the hazard and the corrective action, if any; the reporter has the

opportunity to comment on the planned actions with additional feedback or recommendations (however the final determination of action is made by management). Reporter feedback is not applicable in the case of anonymous hazard reporting.

2.5   Corrective Action Monitoring

Following the stated completion time of the PCAP, the Station Manager or designate will verify that all actions were completed as described before closing the hazard file.

Related Document: *SOP-SMS-03 PCAP Monitoring*

PCAPs related to high risk hazards are reviewed by the SLT Safety Committee as an additional safeguard to confirm they are appropriate and timely. The efficacy of corrective actions are confirmed through ongoing incident and hazard reporting and analysis; where there is indication that the PCAP has not been successful in sufficiently reducing the level of risk, the file is reopened and corrective actions reassessed.

2.6   The Hazard Register

All identified hazards that pose a threat to the safe operation of the companies' resources are recorded in the **Hazard Register** located in the Vortex Safety module. This is a computerized database that stores all hazards, their respective risk assessments, details of corrective actions planned or applied, and additional supporting documentation.

The register also records the current status of the hazard, being:

- **Pending**, where the hazard has been received and assigned to the accountable team member, but where the accountable team member has not yet accepted and validated the risk assessment
- **In Progress**, where the hazard has been accepted by the accountable team member and is either in the 'Open' phase, where a detailed corrective action plan has not yet been completed; or in the 'Monitor' phase, where a corrective action plan has been established and a follow-up date for compliance monitoring has been established
- **Closed**, where the corrective action plan has been verified and the residual risk has been validated to be at an acceptable level

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Where the accountable team member has determined that the initial risk level is acceptable and no corrective action plan is to be prepared, the hazard may move directly to the closed status.

Hazards are never removed from the hazard register (except in cases where it has been established that a hazard is in fact a duplicate of another associated hazard). This permits enhanced data analysis to identify trends in hazards which may be indicative of the need for additional proactive measures.

2.7   Safety Risk Profile

Annually, the SLT Safety Committee will review the data contained in the hazard register, in combination with audits, investigations, and other hazard identification means and identify those hazards which represent the greatest ongoing risk to safety. The safety risk profile is used by management to identify areas of the operation which may need additional attention to improve safety. The safety risk profile acts as an input to the annual business planning process, where the senior leadership team will use it as a tool to identify priorities for additional resources, capital projects, or organizational structural changes that may be required.

Related Documents: *POL-SMS-5 Safety Risk Profile (Current Year)*
                                    SOP-SMS-4 Safety Trend Analysis and Risk Profile

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The safety risk profile is communicated to staff to enhance awareness of high-risk issues so that front line staff area cognizant of areas requiring particular attention.

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3   HAZARD IDENTIFICATION

The previous section describes how hazards are assessed and managed to a safe level; these core processes are applied regardless of the manner in which a hazard has been identified. A robust SMS relies on a range of processes to identify real and potential hazards to be fed into the risk management cycle.

Hazard identification may be either proactive (identifying potential hazards before they have the opportunity to cause harm) or reactive (identifying existing hazards that need to be managed). The primary manners in which hazards are identified are:

- Employee or customer reports (including results from routine inspections)
- Accident and incident investigations
- Periodic audits
- Proactive Hazard Identification and Risk Assessment (HIRA) exercises
- Ongoing monitoring of industry trends and intelligence
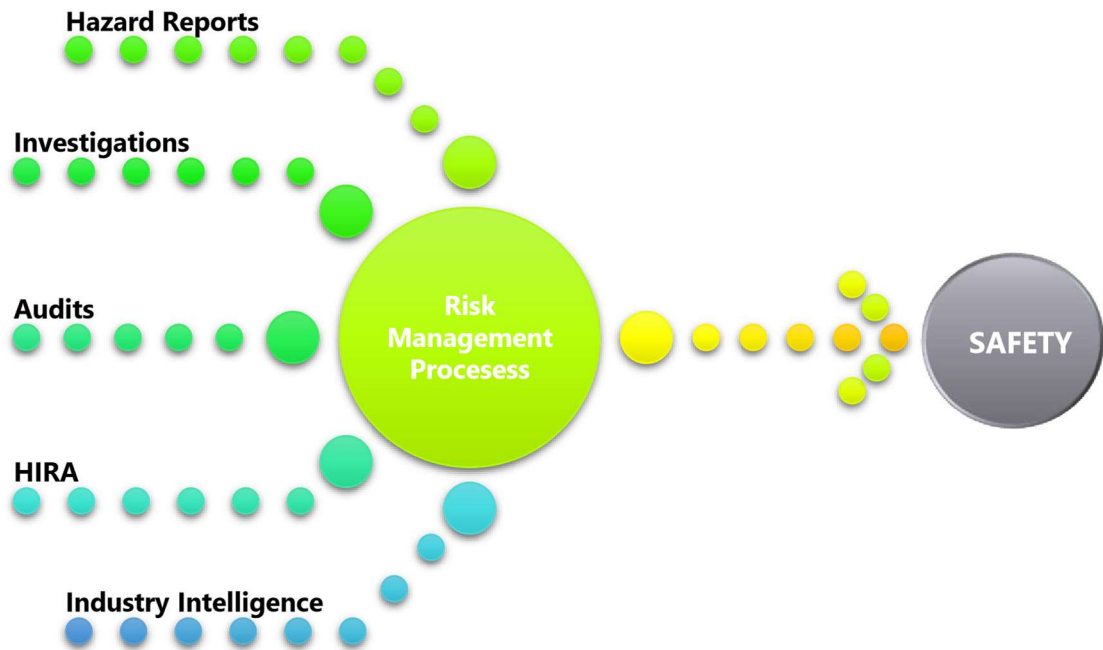
From the point of identification, the manner in which the hazard is assessed and managed is identical, following the processes described in section two. Each identification method is described in greater detail in the subsequent sections.

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3.1 Hazard Report

Any person may submit a hazard report where they have identified a real or potential hazard that must be addressed by management. Hazard reports may be submitted electronically into the SMS system, or by completing a form that is submitted to the Station Manager or designate to be entered into the system.

Related Document: *SOP-SMS-05 Hazard Reporting*

The hazard reporting form (electronic or paper) includes the details to be completed by the reporter. Hazards may be submitted anonymously where the reporter is concerned about the potential for repercussions as a result of the report.

SMS Hazard reports may be submitted in the following circumstances:

- Team member or customer identifies a potential safety hazard in the course of their work
- Routine inspections identify a hazard that cannot be immediately addressed through standard channels (e.g. rapid maintenance fix)
- Team member or customer experiences a near-miss or unsafe situation either through their error or omission or that of another person

3.2 Incident Investigations

When an accident or incident has occurred, an investigation is undertaken to identify the factors that caused or contributed to it. The purpose of an SMS Investigation is exclusively to uncover potential hazards which require assessment and mitigation. SMS investigations do not seek to apportion blame or to recommend punishments; however, they may occur concurrently with investigations conducted by management and/or HR for those purposes.

Related Documents: *SOP-SMS-06 Incident Reporting*
                                SOP-SMS-07 SMS Investigations

SMS Investigations are required to identify **root causes** of accidents and incidents, not just the proximate causes. For example, where an investigation determines that an employee was not following established protocol (proximate cause), the root cause(s) may be one or more of the following related issues:

- Insufficient training
- Improper task documentation
- Inadequate supervision
- Culture of improvisation or expediency
- Documented protocols are not effective or appropriate to the situation

While the proximate cause is failure to follow protocol, each of the potential root causes listed in the example presents a hazard which, if unaddressed, is likely to lead to a reoccurrence of the incident. Therefore, the highest-risk **root causes** resulting from an investigation should be entered in the Hazard Register and managed using standard risk management processes. Each station will be assigned a designated safety representative to lead these investigations and follow up with any Corrective Action items that may be a result of the investigation.

3.3   Hazard Identification and Risk Assessment (HIRA)

A HIRA is a structured proactive process employed prior to implementing a change to facility, process, equipment, or organization. The purpose of a HIRA is to collectively identify *potential* hazards that may be introduced by a change and to develop appropriate mitigations to reduce the risk before the change is implemented.

A HIRA is best accomplished by assembling a multi-functional team to walk through the details of the change and to collectively identify 'what could go wrong'. Following the identification of hazards, each should be assessed for risk and mitigations proposed where required. The accountable manager (or senior manager, where high risk hazards have been identified) must sign off on the HIRA and commit to the documented corrective actions before the change may be implemented.

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HIRAs may be highly complex, such as in the case of introducing a new aircraft model with new types of equipment and changed operating procedures. A HIRA in this case will likely produce a significant list of hazards and mitigations that will include detailed communication plans, training programs, trials, enhanced monitoring, etc. (essentially documenting the Operational Readiness processes.)

Conversely, a HIRA may be relatively simple, such as in the case of an organizational change where the responsibility for certain safety functions are being transferred to a new manager. In this instance, a short list of potential hazards (e.g. adequate training or familiarity, overloading of responsibilities) may be identified with a correspondingly simple list of mitigations (e.g. job-shadow, phased transition of responsibilities, additional training.)

HIRAs are recorded in the vortex hazard tracking system as a single entry, rather than each hazard being entered independently. This is due to the fact that hazards identified in a HIRA are typically *potential* and therefore may skew data analysis of high-risk or frequent hazards. However, they are tracked through to completion to ensure that all documented mitigations are enacted as planned.

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4 QUALITY ASSURANCE AUDITS

Audits are detailed, structured, checklist-based reviews of functional areas to verify that a program or process is functioning as it is intended to and in the manner in which it is documented.

Related Documents: *SOP-SMS-08 Audit Checklists*
SOP-SMS-09 Conducting SMS Audits

Audit checklists are based on reviewing all program documentation and industry guidance material. In each instance where a standard or recommended practice is identified, the element is listed as a checklist item. Each item may be found to be "Compliant" "Not Compliant" or "Not Applicable/Observed".

Audits should be conducted by a person or team not directly involved in the function being reviewed, but nonetheless the persons involved must have sufficient baseline knowledge to correctly adjudicate whether the checklist element is met. Audits will be carried out using a combination of direct observation, personnel interviews, and a review and examination of records and documentation.

Once the checklist is complete, all instances of "Not Compliant" are reviewed by the auditor(s) to determine whether the non-compliance represents a hazard (moderate/yellow level or higher). The complete checklist is provided to the responsible manager who will review their performance to identify methods to correct noncompliance. Items identified as moderate risk or higher are entered into the hazard register for formal tracking and management processes.

4.1 Audit Schedules

Each station will undergo a full station audit at a minimum once every three years, and a station deice audit every deice season. Further to this if a station has an incident that results in aircraft damage that falls into a moderate or major category will require a full station audit to take place at the beginning of the following audit season. The full audit schedule including the Deice audits will be posted at the end of the and available for review. Notifications will be sent to stations with a minimum of one month's notice.

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4.2   Quality Control Audits

Each station will be required to complete a set number of Quality Control Audits per month. The set number will be determined by the local regional manager and the quality assurance and safety manager and will take into account flight activity as well as the amount of external qc audits being conducted.

A finding is anything that is a not compliant to the IATA or partnered airline standard. However, the Quality Control Inspection, peer and self-audit have further expanded the definition of a finding to include specific actions based on the type of Procedural Risk Rating it carries.

Procedural Risk Rating:
Negligible: Insignificant safety impact as existing safety barriers come into play to avoid an accident or incident.

Minor: Existing safety barriers are intact or may have been compromised, but additional safety barriers remain to prevent or avoid an accident or incident.

Major: Safety barriers are limited or approaching none.

Hazardous: Catastrophic event – No safety barriers remaining.

A Hazardous Finding is a documented statement based on factual evidence that describes nonconformity with a current standard, regulation, or requirement. Any non-compliance which creates a serious safety / security hazard identified in the inspection and / or audit is considered a hazardous risk rating, which shall be reported through the Vortex Safety System. All non-hazardous findings shall be reported through the Vortex Incident Report.

5   SAFETY PROMOTION

Safety is only achieved when information on hazards and risk is shared quickly and broadly with those who may be affected. This can take several forms, including:

- Formal training in safety management
- Critical safety communication for changed conditions or new information
- Ongoing safety information and awareness

Details of each are provided in greater detail below.

5.1   Safety Training

This section defines training in elements of safety awareness and SMS process elements. EA has developed training in the following subject areas for its internal staff. In some cases where appropriate some training may be provided to business partners.

COURSE	TOPICS
SMS101 - Introduction to SMS	• Purpose of SMS • Safety Policy • Safety reporting/submissions • Non-Punitive Reporting • Safety Roles and Responsibilities • Safety Risk Management • Hazard Identification • Safety Performance Monitoring
SMS102 – SMS For Managers	• Reviewing hazards and accepting ownership • Accident/Incident Investigations • Developing corrective action plans
SMS103 – OH&S All Team Members	• Employer and Employee Responsibilities • Keeping the workplace safe • Back care and proper lifting • Adverse Weather • First Aid, Safety Board Inspections • Return to work program
SMS104 - OH&S Leadership	• What is a Safety Manager • OH&S Committees • Incident Reporting Procedures

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	• WSIB/WSBC Procedures for Workplace Injuries • Complaint Resolution & Investigations • Refusal to Work • Monthly Workplace Inspections • Safety Program Housekeeping • OH&S Program Requirements (Action List)
SMS105 – WHMIS	• WHMIS Old vs. New (1998/2015) • Pictograms and Definitions • Safety Data Sheets (SDS) • Hazard Classification • Hazard Categorization • WHMIS Example
SMS106 – Human Factors	• Understand the difference between human errors and human factors • Identify specific factors that contribute to accidents • Have good knowledge of the "dirty dozen" in a relation to human factors • Be able to utilize knowledge of human factors to develop strategies to assist in preventing human factors accidents

Training can be accomplished through a combination of on-line training, written materials, classroom sessions, and one-on-one review depending on the circumstances (number of persons to be trained, expected level of involvement, time available, etc.)

In addition to the learning methods identified above the courses include a written knowledge review component to validate that the individual being trained adequately understood the subject material.

The objective of the initial SMS Training is to provide an understanding of Executive Aviation's Safety Management System and to have new employees know their role within the SMS.

Annual recurrent safety training is indicated in the matrix below by an asterisk in the number column; training without the asterisk is completed once or as required as part of corrective actions.

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The matrix below indicates the SMS training to be received by each job function.

Job Title	101*	102	103*	104	105	106
Ramp and Counter Agents	O		O		O	O
Fueling Agents	O		O		O	O
Leads	O	O	O		O	O
Coordinators/Senior Leads	O	O	O	O	O	O
Technicians	O		O		O	O
Admin Personnel	O		O			O
Station Managers	O	O	O	O	O	O
Senior Leadership Team	O		O	O	O	O

5.2 Task or Hazard Specific Training

Where hazards have been identified specific to a certain job function and training has been identified as a mitigation to the risk posed, that training is arranged through local managers in coordination with Human Resources.

5.3 Safety Communication

Safety related information is communicated to internal staff and external stakeholders through a variety of means, including but not limited to:

- Safety awareness posters
- Mandatory compliance signage (e.g. PPE Required Beyond This Point)
- Departmental briefings
- Email and read and sign bulletins
- Formal training
- Committee discussion items
- Formal reporting requirements (e.g. incident reports)

5.3.1   **Read and Sign Bulletins**

Where a safety related matter is of particular importance that it is deemed critical that certain (or all) staff members are clearly advised of the issue, notification may be issued by way of read and sign bulletin.

Related Document: *SOP-SMS-10 Operations Bulletin Read and Sign*

Issuing information via read and sign bulletins ensures that a record is maintained to indicate that staff members have read and clearly understood the information.

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6   INTEGRATED SAFETY PROGRAMS

The safety management processes described in this manual are applicable to a broad range of safety hazards and mitigations. Certain elements of operations mandate additional or parallel programs to supplement the hazard identification, mitigation, and monitoring processes as described in this manual.

As part of an integrated approach to safety management, these programs fall under the guidelines described in this manual, but for organizational, legal, or regulatory reasons the immediate responsibility of safety management is assigned to other departments or third parties. Such integrated programs are described below.

6.1   Occupational Health and Safety

Occupational health and safety requirements mandated under CLC regulations are monitored and maintained by the **Manager, Human Resources** reporting to the **Vice President**.

EA's employee occupational health and safety program employs all of the hazard identification, risk assessment, mitigation, and monitoring processes described in this manual. This SMS manual serves as the Health and Safety Plan for EA, as supplemented by additional material found in EA Occupational Health and Safety Policy Manual and independent procedures which provide specific CLC information related to worker safety.

Related Document: Occupational Health and Safety Policies

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SMS SAFETY MANAGEMENT SYSTEM PLAN

7   Emergency Response

EA is committed to ensuring a safe operating environment and as part of our SMS and will actively strive to prevent emergency events from occurring. EA has established a corporate emergency response procedure for all Team Members to follow in the event of an emergency should it be necessary to respond to an aircraft incident, injury, fire, natural crisis or other types of operational incident as outlined in the EA Emergency Response Policy

Related Document: POL-OHS-EA-30

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