

2 SAFETY RISK MANAGEMENT

2.1 HAZARD IDENTIFICATION AND RISK MANAGEMENT

2.1.1 General

1. Safety Risk Management (SRM) is a formal process within SMS that identifies the hazards, assesses the risk, analyses the risk, and controls the risk. SRM is incorporated in all company activities across all its verticals, it is not a separate/distinct process.
2. The complete elimination of risk in aviation operations is an unachievable and impractical goal, as neither all risks can be removed nor are all possible risk mitigation measures economically practical. SRM plays a vital role in Safety Assurance (refer [section 3](#)), addressing risks in practical terms, it requires a consistent and objective analysis of operational risks. In general, SRM is a structured approach, to achieve a balance between the assessed risks, practicable risk mitigation, and resources involved.
3. Risk is defined as the composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. To control risk, either the potential loss (severity) or its likelihood (probability) is controlled.
4. Key elements of hazard identification and risk management programs shall include:
 - a. Hazards identified in the operations,
 - b. Proactive identification of existing and potential hazards including those hazards associated with organizational change, introducing new services, new equipment, or new personnel whose actions affect safety,
 - c. A process to prioritize risk management,
 - d. A method to track identified hazards and incorporate control measures.

2.1.2 Safety Risk Management Process

1. Safety risk management focuses on the following aspects:
 - a. Clear assignment of accountability and allocation of responsibilities.
 - b. Only one party is responsible for a specific aspect of the arrangement; no overlapping or conflicting responsibilities, to eliminate coordination errors.
 - c. Existence of clear reporting lines, both for occurrence reporting and progress reporting

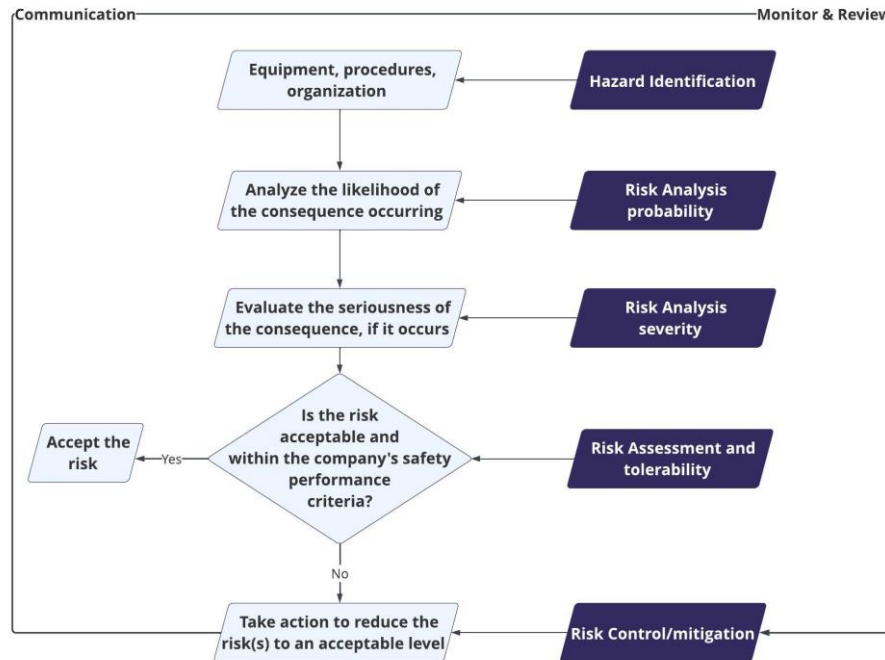


Figure 5 - SRM Process

2.1.3 Process Description

1. Initial or change in design of a system, organization, and/or product, generates a need for hazard identification and evaluation.
2. Hazards are analyzed for consequences or risk; it is further analyzed to determine the likelihood of the event occurring, and the seriousness of the impact on human life and company assets.
3. If the initial assessment is not acceptable, steps are taken in consultation with subject matter experts (SME's) to control and mitigate the risk to an acceptable level.
4. The risk is monitored periodically to check for any change in the risk status, this monitoring becomes a part of Safety Assurance, (refer [section 3](#)).
5. The risk is then logged in the risk register.

SRM is integral to the Management of Change process, all Planned changes in safety related activities shall undergo Management of Change, refer [section 3.4](#). Risk management duties and responsibilities are imposed on all departments (including outsourced contractors and subcontractors in accordance with signed SLAs). These parties must take all reasonably practicable measures to ensure that the workplace is safe for every person within its premises.

Where contractors and suppliers undertake work for Riyadh Air, they must take all reasonably practicable measures to eliminate or reduce the risk that may be posed by their machinery, equipment, or hazardous substances to an acceptable level. Contractors and suppliers must also provide information about any



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machinery, equipment, or hazardous substances to the concerned Riyadh Air department for risk assessment in the workplace. For example, contractors and suppliers should provide operation manuals, maintenance manuals, safety data sheets, etc.

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2.2 HAZARD IDENTIFICATION

Riyadh Air has a Hazard Identification System, and the process is in place to:

1. Determine what safety data and safety information it must collect to support the safety performance management process and make safety decisions;
2. Collect and store safety data that come from different sources, both internal and external;
3. Clearly define the responsibilities for the identification of hazards for the entire chain of services within the system (including external organization), without gaps or overlaps;
4. Ensure the organizations is knowledgeable about the safety risks induced by the activities of the service providers;
5. Document the sources that will be used for hazard identification;
6. Ensure the protection to safety data, safety information and related sources;
7. Be systematically conducted on all sources employed and where possible, be carried out as a joint exercise with the interfacing organizations;
8. Ensure effective coordination among departments or divisions is necessary to streamline efforts for reporting and collecting safety data to avoid duplication; and
9. Document hazards and their potential consequences and ideally categorize safety data using taxonomies and supporting definitions so that the data can be captured and stored using meaningful terms (i.e., it would help identifying potential or emerging risks).

2.2.1 Internal Safety Reporting Scheme

GACAR Part 4.1, 4.7

Safety Reporting is the most significant hazard identification tool, as it provides line operations data of potential hazards in the system and/or environment. The aviation industry, with its inherent complexities and high-risk environment, places paramount importance on safety. The ability to identify, report, and analyze safety occurrences is a critical aspect of maintaining and enhancing the safety standards within this industry. This report provides an in-depth examination of reportable safety occurrences within our airline operations.

The overall purpose of the internal safety reporting scheme is to use reported information to improve the level of the safety performance of the organization and not to attribute blame. The objectives of the scheme are to:

1. Enable an assessment to be made of the safety implications of each relevant incident and accident, including previous similar occurrences, so that any necessary action can be initiated; and
2. Ensure that knowledge of relevant incidents and accidents is disseminated, so that other persons and operators may learn from them.

In the following sections, we will present detailed analysis of various categories of safety occurrences, discuss the underlying causes, and propose recommendations for enhancing our safety protocols and procedures. The goal is to ensure the highest level of safety for our passengers, crew, and aircraft, and to uphold our commitment to continuous improvement in our safety performance.

All staff have an obligation under the safety and quality policy to notify the company about all corporate safety occurrences, unsafe practices, violations, hazards, risks they might come across, which are potential hazards to company assets or personnel, without fear of any repercussion, by using any of the reporting methods discussed in this section.

Corporate safety and quality policy, GACA, and AIB encourage safety reporting (in Arabic or English). The data obtained from such reporting is a vital resource for identifying emerging hazards, assessing the performance of risk controls in the operational systems, and building a long-term internal Safety Communication platform.

Riyadh Air safety reporting system:

1. Encourages and facilitates staff to submit reports that identify safety hazards, identify safety deficiencies, and raise safety concerns;
2. Ensures mandatory reporting in accordance with applicable regulations; and
3. Includes analysis and management activities as necessary to address safety issues identified through the reporting process.

Data obtained from safety reporting is used to establish a robust system for data collection and analysis, as part of the SMS. The safety reporting database comprises of hazard reports, audit non-conformances, and safety observations, and the VP Corporate Safety, Security and Environment is responsible for handling and storage of all data collected under the safety reporting system.

The following reporting systems are used to record, analyze, and report safety data to support the Safety Management System. They include but are not limited to:

1. Mandatory reporting.
2. Voluntary reporting; and
3. Confidential reporting system.

Internal safety reporting systems include:

1. Collection and evaluation of those errors, near-misses, and hazards reported internally;
2. Feedback to the reporting person on what decisions or actions have been taken to ensure his/her support to the internal reporting system and disseminate the results to other relevant parties. This helps to promote a positive safety culture and encourage future reporting;
3. A process for analyzing data, safety reports and other safety related information;
4. Ongoing monitoring to ensure corrective and preventive actions are taken to address any safety issues and hazards and to confirm its effectiveness;
5. Ongoing monitoring to identify hazardous trends;
6. Appropriate protections and a non-punitive approach which encourage safety reporting within a system that clearly indicates which types of behaviors are unacceptable;
7. Provisions for anonymous and confidential reporting of hazards;

8. Feedback to the organization's safety training, while maintaining appropriate confidentiality;
9. Accessibility to personnel at all levels and across all disciplines (including at the SMS interfaces and external organizations supporting the activities);
10. Use of a taxonomy, or a classification system, as much as practicable;
11. Recording of all identified hazards and their potential consequences;
12. Use of a structured decision-making approach with defined criteria points to initiate an investigation, including occurrences and hazards considered to have a high-risk potential;
13. Promotion to ensure that everyone is made aware of the benefits of safety reporting and what should be reported;
14. Investigation process to identify and address factors contributing to occurrences, establish root causes, and determine adverse trends.

Note:

All corporate safety occurrences shall be reported to the Corporate Safety, Security, & Environment division immediately.

For reports that fall in the Mandatory Occurrence Reports (MOR) category, they shall be forwarded to GACA immediately.

2.2.2 Safety Reporting Process

2.2.2.1 Safety Data Collection and Processing

An effective Safety Management System requires robust systems for data collection and analysis. Riyadh Air's Safety Data Collection and Processing System (SDCPS) provides a combination of reactive, proactive, and predictive methods. The SDCPS comprise of databases for Occurrences, Hazard Reports, Audit Non conformances and Flight Data Analysis Reports, Surveys, and Inspection. The use of databases ensures the effective management of data derived from the hazard identification and risk assessment and mitigation programs. These are used to record, analyze, and report safety data in support of the Safety Management System. The databases are supported by other applications from various domains such as human resources, Flight Operations (e.g., XXX Crew Rostering), and Engineering (e.g., AMOS).

SMS & QMS Systems and FDAP System are the data management system used by Riyadh Air to identify, record, analyze, assess risk level, and record feedback/investigation of various Occurrences, Hazard reports, Safety Audits and Flight Data Analysis, Surveys, and Inspection Program respectively.

The following rules apply to employee safety reporting:

1. Safety reports should be sent as soon as possible using any means necessary.
2. If an employee observes an activity, which may impact safety, they shall report the occurrence , irrespective of its validity.

3. Employees shall provide all possible details at the earliest opportunity, to avoid forgetting key information.
4. Anonymous reporting applies to all staff who wish to keep the reporting confidential. Identifiable reports will also be treated with confidentiality.
5. SMS Administrator, safety Manager should be able to judge whether the report is valid, requires an urgent response or not
6. An initial Risk Assessment as per 5 by 5 risk matrix will be conducted under the supervision of the Director Corporate Safety (DCS), refer [section 2.3.2](#).
7. Based on the risk assessment, the DCS will decide whether corrective and preventive action is needed. If needed, the report shall be assigned to the respective safety specialist and concerned division/department responsible for the corrective and preventive actions.
8. The responsible division/department shall document, implement the corrective and preventive actions, and submit the evidence to the safety specialist. If satisfactory, the report shall be closed with DOCS's Approval, or it shall be sent back to the responsible division/department for amendment.
9. The report shall be closed once the DOCS is satisfied that no further action is required.
10. Once the report is closed, feedback shall be shared with the reporting employee.

Note:

Employees have two options for report submission.

Submit reports electronically.

Submit reports as hard copy if reporting system is not accessible. Refer to Appendix XXX.

2.2.2.2 Reactive And Proactive Hazards Identification Process

Reactive and proactive hazard identification processes are two different approaches to identifying hazards in the workplace. Reactive hazard identification processes are based on identifying hazards after they have occurred, while proactive hazard identification processes are based on identifying hazards before they have occurred.

Reactive hazard identification processes typically involve investigating occurrences (e.g., accidents and incidents) that have already occurred and then taking steps to prevent them from happening again. This approach can be effective in identifying hazards that have already caused harm, but it is not always effective in identifying hazards that have not yet caused harm.

Proactive hazard identification processes, on the other hand, are based on identifying hazards before they have occurred. This approach can be more effective in preventing accidents and incidents from happening in the first place. Proactive hazard identification processes typically involve review and analysis of current data/reports, checking trends, inherent risk, risk assessments and inspections, and then taking steps to mitigate any hazards that are identified.

Hazard Sources	Methods
Safety Reporting	Reactive
Safety Investigation Findings	
Flight data analysis	
Regulatory Audit Finding	
Brainstorming Session for Management of Change (refer section 3.4) for induction or amendment of operational procedures	Proactive
SRB and SAG, refer section 1.4	
Flight Data Analysis- Trends monitoring	
Quality Audit Program, refer Quality Management System manual	
Safety Survey	

Table 1 - Reactive and Proactive Hazard Sources

2.2.2.3 Types of Hazard Report

Reports	Description
Air Safety Report (ASR)	It shall be raised by flight crew members and flight dispatchers in case of safety and security occurrences, incidents, and accidents; or whenever hazards and deficiencies are identified.
Ground Incident Report (GIR)	Ground Incident Report is completed when one of the following incidents occurs: <ul style="list-style-type: none"> • Injury to any person; • Damage to aircraft; • Damage to equipment; • Fire or explosion.
Cabin Safety Report (CSR)	It shall be raised by cabin crew members in case of safety and security occurrences, incidents, and accidents; or whenever hazards and deficiencies are identified.
Onboard Cabin Report (OCR)	The Onboard Cabin Report shall be raised by Cabin Managers, Food & Beverage Managers, and Cabin Seniors to report service, performance, or operational matters or irregularities not related to Safety or Security.
Ground Safety Report (GSR)	It shall be raised by Ground Services, Cargo Handling, Network Operations, Ground Handling Agent, Crew Training, office based etc., in case of safety and security occurrences, incidents and accidents; or whenever hazards and deficiencies are identified.



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	<p>Ground occurrences are classified as events that have or which may have, an impact on operational, or industrial safety that affects or may affect Riyadh Air operations, personnel, equipment, aircraft, guests, premises, or any interface with contracted service providers.</p> <p>For the purpose of ramp operations, a ground occurrence is classified as an event that takes place between the times an aircraft stops moving on its own power until the moment an aircraft starts moving on its own power again.</p>
Health and Safety Report (including medical, injury and sickness on duty) (HSR)	A Health and Safety Report shall be filled-out by any Riyadh Air staff in the event of any occupational safety and health related event, medical, injury, or sickness while on duty, including any medical occurrence related to a passenger, visitor, or contractor working on for / or on Riyadh Air premise.
Engineering Safety Report (ESR)	<p>Engineering Safety Report (ESR) is raised for safety related incidents and accidents within the Engineering and Maintenance department. This may include the following:</p> <ul style="list-style-type: none"> • Injury to any person while carrying out ground maintenance. • Incidents which could have potential to cause serious injury or potential damage to property. • Incidents which could have affected safety of people, aircraft, or assets.
Confidential Safety Report (CONF)	May be raised for reporting of events, hazards, and/or concerns resulting from, or associated with, human performance in operations, potential unsafe conditions or occurrences and contributing factors to safety related accidents, incidents, and events. Anonymous reporting shall be a part of confidential safety reporting, for details refer to section 2.2.4.3 .
Fatigue Report (FTG)	A Fatigue Report can be raised by any Riyadh Air staff for any fatigue issues which are seen as potential hazards or contributing factors to safety related accidents, incidents, and events.
Security Report (SER) (SeMS)	It shall be raised by any staff whenever a security breach or threat has occurred or has been identified EXCEPT for Flight crew members who shall always raise an ASR and cabin crew members who shall always raise a CSR.
Dangerous Goods Occurrence Report (DGOR)	<p>This is a mandatory requirement according to the ICAO Technical Instruction and IATA Dangerous Goods Regulations.</p> <p>When undeclared or mis-declared dangerous goods are discovered in cargo and dangerous goods not permitted under Sub-section 2.3 of the IATA DGR manual are discovered in passengers' baggage a report shall be made to the appropriate authority of the State in which the incident occurred.</p>

Table 2 - Reports

2.2.2.4 Reporting Procedure

2.2.3 Reporting To Authority

GACAR Part 4.17

The V.P. Corporate Safety, Security & Environment shall decide whether the report is subject to the GACA mandatory reporting scheme. The initial report for incidents needs to be submitted at the earliest, and a comprehensive report including remedial actions needs to be submitted within 96 hours of the incident. For accidents and serious incident, a report detailing the accident or incident must reach the authority within 48 hours.

Reportable occurrences are reported to AIB and GACA as follows:

1. GACA

Through Q5 portal credentials provided for Riyadh Air.

For more details, refer to <https://q5.gaca.gov.sa/Login.action>.

For more user information email support@q5system.com.

2. AIB

Tel: +966 012 685 6551

Duty Officer: +966 055 772 4752

Fax: +966 12 685 4250

Email: report@aib.gov.sa

Website: www.aib.gov.sa

For details of AIB notification forms refer to [Appendix 1](#).

2.2.4 Safety Occurrences

2.2.4.1 Reportable Occurrences

GACAR Part 4 Appendix A

Reportable safety occurrences are events or situations that have, or could have, implications for the safety of flight operations. These occurrences can range from minor incidents, such as technical malfunctions or procedural non-compliance, to major events like near misses or accidents. The reporting of these occurrences is not merely a regulatory requirement but also a proactive measure to identify potential risks, prevent future incidents, and foster a safety-conscious culture within the organization.



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The following is a non-exhaustive list of reportable occurrences which should be reported to the company:

Scope	Reportable Occurrences
Flight Operations	
Flight Preparation	Using incorrect data in equipment for navigation or performance calculations that have or could have endangered the aircraft and its occupants. Carrying or attempted carriage of dangerous goods in contravention of applicable legislation, including incorrect labeling, packaging, and handling of dangerous goods.
Aircraft Preparation	Incorrect fuel type or contaminated fuel. Missing, incorrect, or inadequate De-icing/Anti-icing treatment.
Take-off and landing	Taxiway or runway excursion. Actual or potential taxiway or runway incursion. Final Approach and Take-off Area (FATO) incursion. Any rejected take-off. Inability to achieve required or expected performance during take-off, go-around, or landing. Actual or attempted take-off, approach, or landing with the incorrect configuration setting. Tail, blade/wingtip, or nacelle strike during take-off or landing. Approach continued against airline stabilized approach criteria. Continuation of an instrument approach below published minimums with inadequate visual references. Precautionary or forced landing. Short and long landing. Hard landing Heavy Landing (overweight landing)
Any Phase of the Flight	Jet blast occurrences that have or could have endangered the aircraft, its occupants, or any other person. Misinterpretation of automation mode or any flight deck information provided to the flight crew that has or could have endangered the aircraft, its occupants, or any other person. Loss of control. Aircraft upset, exceeding normal pitch attitude, bank angle, or airspeed inappropriate for the conditions.



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	<p>Flight Level bust.</p> <p>Activation of any flight envelope protection, including stall warning, stick shaker, stick pusher, and automatic protections.</p> <p>Unintentional deviation from the intended or assigned track of the lowest of twice the required navigation performance or ten nautical miles.</p> <p>Exceedance of aircraft flight manual limitation.</p> <p>Operation with incorrect Altimeter setting.</p>
Other type of occurrences	<p>Unintentional release of cargo or other externally carried equipment.</p> <p>Loss of situational awareness (environmental, mode, and system awareness, spatial disorientation, and time horizon).</p> <p>Any operation wherein the human performance has directly contributed to or could have contributed to an accident or a serious incident.</p> <p>Spillage of Dangerous goods</p>
Technical Operations	
Structure and systems	<p>Loss of any part of the aircraft structure in flight.</p> <p>Loss of a system.</p> <p>Loss of redundancy of a system.</p> <p>Leakage of any fluid which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems, or equipment, or which has or could have endangered the aircraft, its occupants, or any other person.</p> <p>Fuel system malfunctions or defects, which affected fuel supply and distribution.</p> <p>Malfunction or defect of any indication system results in misleading indications to the crew.</p> <p>Abnormal functioning of flight controls such as asymmetric or stuck/jammed flight controls (For example: lift (flaps/slats), drag (spoilers), attitude control (ailerons, elevators, rudder) devices).</p>
Propulsion (including engines systems) and Auxiliary power units (APUs)	<p>Significant malfunction of any part contributes to the failure of the propeller or powerplant.</p> <p>Flameout, an in-flight shutdown of an engine, or shut down of APU during ETOPS (Extended Range Twin-engine Aircraft Operations) or operation under MEL (Minimum Equipment List).</p>

	<p>Engine operating limitation exceedance, including Overspeed or inability to control the speed of any high-speed rotating component (for example, APU, air starter, air cycle machine, air turbine motor).</p> <p>Failure or malfunction of any part of an engine, powerplant, APU, or transmission resulting in any one or more of the following:</p> <p>thrust-reversing system failing to operate as commanded.</p> <p>inability to control power, thrust, or rpm (revolutions per minute).</p> <p>non-containment of components/debris.</p>
Interaction with Air Navigation Services (ANS) and Air Traffic Management (ATM)	
Unsafe ATC (Air Traffic Control) clearance.	
Prolonged loss of communication with ATS (Air Traffic Service) or ATM Unit.	
Conflicting instructions from different ATS Units potentially leading to a loss of separation.	
Misinterpretation of radio communication which has or could have endangered the aircraft, its occupants, or any other person.	
Intentional deviation from ATC instruction which has or could have endangered the aircraft, its occupants, or any other person.	
Emergencies and other Critical Situation	
Any event leading to the declaration of an emergency ('Mayday' or 'PAN call').	
Any burning, melting, smoke, fumes, arcing, overheating, fire, or explosion.	
Contaminated air in the cockpit or passenger compartment, which has or could have endangered the aircraft, its occupants, or any other person.	
Failure to apply the correct non-normal or emergency procedure by the flight or cabin crew to deal with an emergency.	
Using any emergency equipment or non-normal procedure affecting in-flight or landing performance.	
Failure of any emergency or rescue system or equipment that has or could have endangered the aircraft, its occupants, or any other person.	
Uncontrollable cabin pressure.	
Critically low fuel quantity or fuel quantity at destination below the required final reserve fuel.	
Any use of crew oxygen system by the crew.	
Incapacitation of any cockpit crew or cabin crew resulting in the reduction below the minimum certified crew complement.	

Actual or potential Crew fatigue impacting their ability to perform their flight duties safely.
External Environment and Meteorology
A collision or near-collision with another aircraft, terrain, or obstacle, including vehicles.
ACAS RA (Airborne Collision Avoidance System, Resolution Advisory).
Activation of genuine ground collision system such as GPWS (Ground Proximity Warning System)/TAWS (Terrain Awareness and Warning System) warning.
Wildlife strike, including bird strike.
Foreign object damage/debris (FOD).
Unexpected encounter of poor runway surface conditions.
Wake-turbulence encounters.
Interference with the aircraft by firearms, fireworks, flying kites, laser illumination, high-powered lights, lasers, Remotely Piloted Aircraft Systems, model aircraft, or similar means.
A lightning strike that resulted in damage to the aircraft or loss or malfunction of any aircraft system.
A hail encounter that resulted in damage to the aircraft or loss or malfunction of any aircraft system.
Severe turbulence encounter or any encounter resulting in injury to occupants or deemed to require a 'turbulence check' of the aircraft.
A significant windshear or thunderstorm encounter which has or could have endangered the aircraft, its occupants, or any other person.
Icing encounter resulting in handling difficulties, damage to the aircraft, or loss or malfunction of any aircraft system.
Volcanic ash encounter
Security
Bomb threat or hijack.
Difficulty in controlling intoxicated, violent, or unruly passengers.
Discovery of a stowaway.

2.2.4.2 Mandatory Occurrence Reporting (MOR)

In compliance with regulatory requirements, some occurrences must be reported to the AIB and/or GACA.

If any person is in doubt about whether an occurrence (or potential safety hazard) is a valid subject for a MOR, they should file the report in any case. V.P. Corporate Safety Security & Environment shall decide whether to accept the report as a MOR or to initiate an internal process.

MORs shall be filed as per the non-exhaustive occurrences listed below:

1. Near collisions requiring an avoidance maneuver to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.
2. Collisions that are not classified as accidents.
3. Controlled flight into terrain only marginally avoided.
4. Aborted take-offs on a closed or engaged runway, taxiway, or unassigned runway.
5. Take-offs from a closed or engaged runway, from a taxiway, or unassigned runway.
6. Landings or attempted landings on a closed or engaged runway, taxiway, or unassigned runway.
7. Gross failures to achieve predicted performance during take-off or initial climb.
8. Fires or smoke in the cockpit, in the passenger compartment, in cargo compartments, or engine fires.
9. Events requiring the emergency use of oxygen by the flight crew.
10. Failure of aircraft structure or engine, or uncontained turbine engine failures (not classified as an accident).
11. Malfunctions of multiple aircraft systems affect the aircraft operation seriously.
12. Flight crew incapacitation in flight.
13. Fuel quantity level or distribution situations requiring the declaration of an emergency by the pilot, such as insufficient fuel, fuel exhaustion, fuel starvation, or inability to use all usable fuel onboard.
14. Runway incursions classified with severity, A. The ICAO Manual on the Prevention of Runway Incursions (Doc 9870) contains information on the severity classifications.
15. Take-off or landing incidents. Incidents such as under-shooting, overrunning, or running off the side of runways.
16. System failures, weather phenomena, operations outside the approved flight envelope, or other occurrences which caused or could have caused difficulties controlling the aircraft.
17. Failures of more than one system in a redundancy system are mandatory for flight guidance and navigation.

2.2.4.3 Anonymous Reporting

Anonymous reporting system is available for all personnel through the reporting system. Staff are not required to disclose their identity. The system is intended to allow staff to report any event, error, or discrepancy that they do not wish to report through the normal channels. It is confidential and is non-punitive in nature. It also guarantees immunity from disciplinary action unless the regulatory authority independently pursues the incident, or if reporting of the incident through other channels is a regulatory requirement.

Note:

Anonymous reporting is not encouraged in Riyadh Air Safety Reporting system. However, to improve the reporting culture and to eliminate fear from individual, this provision has been given. To avoid the misuse of this provision, Safety office may independently verify the facts before processing anonymous reports.

2.2.4.4 Confidential Reporting

The purpose of confidential reporting is to provide all staff a secure system through which employees can report items, including, but not limited to, hazards, errors, safety concerns, actual or potential safety deficiencies, and incidents, as well as proposed solutions and safety improvements.

The success of confidential reporting depends on the following fundamentals:

1. The ability of the organization to assure absolute protection of a report submitted by any individual.
2. The level to which individuals within the organization exercise their freedom to report actual or potential unsafe conditions or occurrences.

The Corporate Safety Department shall fully process and investigate every report with a team of highly experienced and knowledgeable individuals and publish prevention recommendations.

Operational Divisions shall encourage staff to report through confidential reporting, cases which cannot be reported by usual means due to fear and shyness of the employee, or sensitivity of the case and/or lack of management cooperation.

Operational staff shall utilize the confidential reporting system for all the hazards that may be identified, and which may not be reported through normal reporting means.

The confidential report can be submitted thru Safety System (IQSMS) and will only be viewed by the V.P. Corporate Safety, Security & Environment and Director Corporate Safety. Necessary investigation will be conducted, and the reporter's information will be de-identified. The V.P. Corporate Safety, Security & Environment and Director Corporate Safety shall ensure that corrective and preventive actions will be taken in addressing the safety issue. Updates on the progress of the report will be received by the reporter through the IQSMS.

Note:

Any mandatory report or incident report cannot be raised as anonymous report or confidential report.

2.2.4.5 Safety Reporting – Information Sharing

2.2.4.5.1 Internal Data Sharing

Data gathered over time shall be shared periodically within the organization, to enhance corporate safety understanding. Corporate safety department will share reporting data to the following:

1. Accountable Executive.
2. SRB members for proactive strategies; and
3. To the reporting staff, as feedback.

2.2.4.5.2 Fleet Operational Performance Report/Engineering Statistics Report

GACAR Part 4.3.3

The relevant operational postholders shall submit the reports as per the below mentioned guidelines:

1. A fleet operational performance report will be submitted on the 10th of every month to GACA.
2. An engineering statistics report containing the following information:
 - a. Type wise aircraft registration details – make, model, and registration marks; and
 - b. Fleet flying details – Total flying hours: revenue and non-revenue; Number of landings, daily utilization (Fleet) hours, daily utilization (Fleet) landing,
 - c. Total number of incidents; Number of incidents per 1000 landings; and
 - d. Total number of technical delays of more than 15 minutes and technical dispatch reliability.
 - e. Total number of MELs; List of MELs; MEL rate: MEL per 1000 operations.
 - f. Total number of major defects and aircraft details.
 - g. List of incidents, including ground incident indicating.
 - h. Engine operational Review – Total number of engines owned, Total engine hours and cycles; Total number of scheduled and unscheduled removal; engine hours per premature removal; Unscheduled removal per 1000 engine hours; inflight shut down/1000 flight hours.
 - i. APU operational Review.
 - j. Total number of defects ATA Chapter wise, including three months cumulative and average.
 - k. List unscheduled components removal and replacement.
 - l. Auto landing (CAT I/II/III) system reliability, as applicable
 - m. Reports on Flight Data Analysis and list of exceedance details.
3. The reports shall be prepared with supporting graphs, charts, and diagrams.

For record retention requirement, refer [section 1.5.1.2](#), it is the responsibility of the Director Corporate Safety to maintain the monthly data under the safety reporting system for a minimum of 5 years.

2.2.5 Notification Of Accident

Refer to Emergency Response Manual, Section XXX

2.2.5.1 Urgently Reportable and Other Occurrences

Safety reporting is an essential part of the overall monitoring function of Riyadh Air. The objective of serious occurrence reporting, and investigation is to:

1. Contribute to the improvement of aviation safety by ensuring that relevant information on safety is reported, collected, analyzed, stored, protected, and disseminated.
2. Prevention of accidents and incidents and not to attribute blame or liability.
3. To enable assessment of safety implications of each occurrence, including previous similar occurrences, so that any necessary action is initiated to prevent similar occurrences in future.
4. To ensure dissemination of information to all concerned.

2.2.5.1.1 Urgently Reportable Occurrences

GACAR Part 4.11, 4.13, 4.15

Reportable occurrences are the occurrences defined in GACAR 4 and are listed in [Section 2.2.4.1](#) and [2.2.4.2](#) of this manual. These occurrences are mandated to be reported to GACA and AIB (Investigation Authority) duty officer.

2.2.5.1.2 Notification Procedure for Urgently Reportable Occurrences/Serious Incidents

To ensure compliance to GACAR 4 for reportable occurrences for the reporting of serious incident the following reporting procedure shall be followed in the event of a serious incident involving Riyadh Air aircraft/personnel/property:

1. The preliminary information shall be communicated by quickest available means of communication to OCC by the crew and to MCC by the technical staff who is involved or becomes aware of the urgently reportable occurrence.
2. The OCC controller and the MCC controller shall call and inform the V.P. Corporate Safety Security & Environment about the occurrence.
3. V.P. Corporate Safety Security & Environment shall notify the same by fastest means of communication to the AIB and to the GACA Principal Inspector.
4. The Crew/Technical staff shall file the Air Safety report (ASR)/Engineering Safety Report on the IQSMS as soon as possible.
5. V.P. Corporate Safety Security & Environment shall file the report on GACAR reporting system

2.2.5.1.3 Mandatory Reportable Occurrences/Incidents

Mandatory reportable occurrences are the occurrences defined in GACAR 4 are listed in [Section 2.2.4.2](#) of this manual. These occurrences are mandated to be reported to the GACA through GACA reporting system within stipulated timeframe.

Meanwhile, volcanic ash clouds and events concerning PBN operations shall also be reported to Safety department.

Notification Procedure for Mandatory Reportable Occurrences

1. The details of the occurrence shall be filed by cockpit crew as Air Safety Report (ASR), technical staff as Engineering Safety Report (ESR), by cabin crew as Cabin Safety Report (CSR) and by the ground staff as Ground Incident Report (GIR) on the IQSMS system within 6 Hours from the time they became aware about the occurrence.



RIYADH AIR
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CORPORATE SAFETY MANAGEMENT MANUAL

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2. Safety Administrator on behalf of V.P. Corporate Safety Security & Environment shall file the report on GACA reporting system.

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2.3 RISK ASSESSMENT AND MITIGATION

2.3.1 General

Once hazards have been identified the potential consequences shall be assessed. Risk assessment uses a conventional breakdown of risk into two components — the probability of occurrence of a damaging event or condition, and the severity of the event or condition, should it occur. Safety risk decision making, and acceptance is specified through use of a risk tolerability matrix. After safety risks have been assessed through the preceding step, elimination and/or mitigation must take place.

Identified hazards will be assessed, using the following structure:

1. Identify potential risk(s) and their trigger mechanism.
2. Identify and evaluate existing defenses.
3. Assess the risk in terms of probability of occurrence and severity of impact, deciding whether the safety risk is acceptable.
4. If the risk(s) is unacceptable and/or intolerable, identify additional defenses to reduce risks to an acceptable level.

Note:

Risk likelihood and severity may be expressed in quantitative terms using the Risk Matrix.

2.3.2 Risk Assessment

2.3.2.1 Risk Assessment Phases

Risk Assessment is an evolving process which primarily depends on the circumstances under which the hazard was identified. Risk assessment is managed through multiple phases, as described below:



Figure 6 – Risk Assessment Phases

1. **Initial Assessment:** Assessment is done by the concerned department and has not been sufficiently analyzed or endorsed by the SAG. Draft assessments are not auditable and are for brainstorming purposes only.
2. **Credible Risk:** Assessment has been agreed as a credible risk in the SAG based on historical events and/or Subject matter experts (SMEs) input.
3. **Managed Risk:** Assessment contains sufficient implemented controls as deemed appropriate by the SAG. Managed risk assessments will be endorsed in the SAG as required.
4. **Risk Accepted:** Assessment has reached a sufficient level of maturity as deemed appropriate by the SAG and monitored continuously.
5. **Closed:** Risk no longer poses a credible threat to the organization.

2.3.2.2 Severity of Risk

Safety risk severity is defined as the extent of harm that might reasonably be expected to occur as a consequence or outcome of the identified hazard. The severity classification should consider:

1. Fatalities or serious injury which would occur as a result of:
 - a. being in the aircraft.
 - b. having direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or
 - c. having direct exposure to jet blast; and
2. Damage:
 - a. damage or structural failure sustained by the aircraft which:
 - i. adversely affects the structural strength, performance, or flight characteristics of the aircraft.
 - ii. would normally require major repair or replacement of the affected component.
 - b. Damage sustained by ATS or aerodrome equipment which:
 - i. adversely affects the management of aircraft separation; or
 - ii. adversely affects landing capability.

Severity assessment should consider all possible consequences related to a hazard, taking into account the worst foreseeable situation. The table below presents safety risk severity, it includes five categories to denote the level of severity, the description of each category, and the assignment of a value to each category.



Severity	Meaning	Value
Catastrophic	<ol style="list-style-type: none"> 1. Aircraft/equipment destroyed. 2. Multiple deaths. 3. Loss of Aircraft 	A
Hazardous	<ol style="list-style-type: none"> 1. A large reduction in safety margins, physical distress, or a workload such that operational personnel cannot be relied upon to perform their tasks accurately or completely. 2. Serious injury. 3. Major equipment damage. 4. Physical distress, or workload where crew/staff cannot be expected to perform tasks accurately or completely. 	B
Major	<ol style="list-style-type: none"> 1. A significant reduction in safety margins, a reduction in the ability of operational personnel to cope with adverse operating conditions because of an increase in workload or because of conditions impairing their efficiency. 2. Serious incident. 3. Injury to persons. 4. Serious incident with physical distress to occupants of aircraft, injuries, and equipment damage. 	C
Minor	<ol style="list-style-type: none"> 1. Nuisance 2. Operating limitations 3. Use of emergency procedures 4. Minor incident 5. Minor Equipment Damage 6. Slight reduction in safety margins 	D
Negligible	<ol style="list-style-type: none"> 1. Little consequences 2. Has no effect on Safety 	E

Table 3 - Severity Table

2.3.2.3 Probability of Risk

Risk probability is the likelihood that a safety consequence or outcome will occur. It is important to envisage a variety of scenarios so that all potential consequences can be considered. The following questions can assist in the determination of probability:

1. Is there a history of occurrences similar to the one under consideration, or is this an isolated occurrence?
2. What other equipment or components of the same type might have similar issues?

3. What is the number of personnel following, or subject to, the procedures in question?
4. What is the exposure of the hazard under consideration? For example, during what percentage of the operation is the equipment or activity in use?

Taking into consideration any factors that might underlie these questions will help when assessing the probability of the hazard consequences in any foreseeable scenario.

An occurrence is considered foreseeable if any reasonable person could have expected the kind of occurrence to have happened under the same circumstances. Identification of every conceivable or theoretically possible hazard is not possible. Therefore, good judgment is required to determine an appropriate level of detail in hazard identification. Service providers should exercise due diligence when identifying significant and reasonably foreseeable hazards related to their product or service.

Note:

Regarding product design, the term "foreseeable" is intended to be consistent with its use in airworthiness regulations, policy, and guidance.

The table below details safety risk probability classification, it includes five categories to denote the probability related to an unsafe event or condition, the description of each category, and an assignment of a value to each category. This example uses qualitative terms; quantitative terms could be defined to provide a more accurate assessment. This will depend on the availability of appropriate safety data and the sophistication of the organization and operation.

Probability	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Rare/Extremely improbable	Almost inconceivable that the event will occur	1

Table 4 - Probability Table

Once risk is assessed, the results would be used to populate the risk assessment module of the safety reporting system, if it is not available a paper form can be used, refer Appendix XXX.

While populating the form the following points need to be considered:

1. The Risk Assessment is completed in line with the Severity and Likelihood tables detailed above.
2. Hazards are analyzed to determine corresponding safety risks to operations.
3. Safety risks are assessed to determine the requirement for risk mitigation action(s).

4. The risk mitigation actions are then developed and implemented in the concerned operational activity.

2.3.2.4 Risk Assessment Matrix

The acceptability of risk can be evaluated using a risk matrix, as illustrated in the table below. The matrix shows three areas of tolerability and is color-coded as:

1. Intolerable (Red/High).
2. Tolerable with safety risk mitigation (Yellow/Medium); and
3. Acceptable (Green/Low).

Safety Risk		Occurrence severity				
Occurrence Likelihood		Catastrophic	Hazardous	Major	Minor	Negligible
		A	B	C	D	E
Frequent	5	HIGH	HIGH	HIGH	MEDIUM	MEDIUM
Occasional	4	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM
Remote	3	HIGH	MEDIUM	MEDIUM	MEDIUM	LOW
Improbable	2	MEDIUM	MEDIUM	MEDIUM	LOW	LOW
Rare/Extremely improbable	1	MEDIUM	LOW	LOW	LOW	LOW

Table 5 - 5*5 Risk Matrix

The index obtained from the safety risk assessment matrix should then be exported to a safety risk tolerability table that describes — in a narrative form — the tolerability criteria and the recommended actions, refer table below.

Safety Risk Index Range	Safety Risk Description	Recommended Action
5A, 5B, 5C, 4A, 4B, 3A	Intolerable	Take immediate action to mitigate the risk or stop the activity. Perform priority safety risk mitigation to ensure additional or enhanced preventative controls are in place to bring down the safety risk index to tolerable.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	Tolerable	Can be tolerated based on safety risk mitigation. It may require management decision to accept the risk.
3E, 2D, 2E, 1B, 1C, 1D, 1E	Acceptable	Acceptable as is. No further safety risk mitigation required.

Table 6 - Tolerability and Actions

2.3.2.5 Risk Acceptance Authority

Within the risk acceptance process the following positions have the authority to make decisions regarding risk tolerability with respect to the safety and/or security of aircraft operations:

1. **Accountable Executive:** The individual with overall accountability in respect of all functions which are subject to regulation. Only the AE, therefore, is authorized to take risk acceptance decisions at all levels of the business. Responsibility for risk acceptance decisions may be delegated to the people listed below.
2. **VP Corporate Safety, Security and Environment:** The individual responsible for risk acceptance in all areas of corporate safety, security, OHSE, and oversight.
3. **VP Flight Operations/VP Technical Operations/VP Ground Operations:** The individuals responsible for operations areas (flight operations, ground operations and maintenance). For decisions that cover more than one operations area, the AE can make a risk acceptance decision in consultation with VP Corporate Safety, Security and Environment.

This responsibility cannot be delegated beyond the people listed above. In the absence of any of the personnel mentioned above, the risk is escalated to the SRB for review and decision is taken/implemented by the SRB with guidance from AE and VP Corporate Safety, Security and Environment.

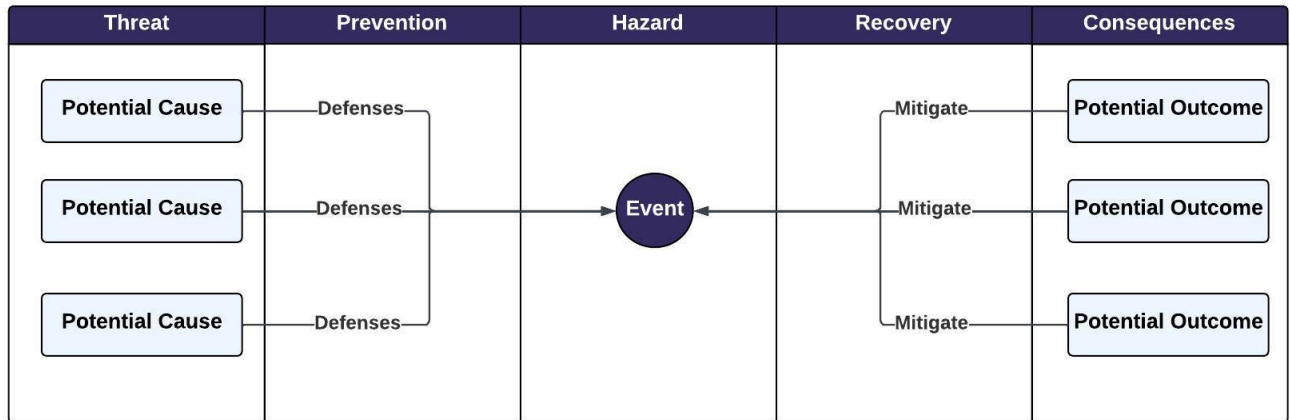
2.3.3 Identify And Assess Preventive Defenses

A major component of any safety system is the defenses put in place to protect people, property, or the environment. These defenses can be used to:

1. Reduce the probability of unwanted events occurring; and
2. Reduce the severity of the consequences associated with any unwanted events.

Defenses are categorized into two types, namely:

1. **Physical defenses:** These include objects that discourage or prevent inappropriate action, or that mitigate the consequences of events (for example, squat switches, switch covers, firewalls, survival equipment, warnings, and alarms).
2. **Administrative defenses:** These include procedures and practices that mitigate the probability of an accident (for example, safety regulations, SOPs, supervision and inspection, and personnel proficiency).



Can the Potential Cause the Event and does the Event Cause the Outcome?

Figure 7 - Defenses and Mitigations

While assessing defenses, it is important to understand why the existing system of defenses was inadequate. The following line of questioning may pertain:

1. Were defenses provided to protect against such hazards?
2. Did the defenses function as intended?
3. Were the defenses practical for use under actual working conditions?
4. Were affected staff aware of the risks and the defenses in place?
5. Are additional risk mitigation (recovery) measures required?

The actions taken can be evaluated through the following criteria:

Evaluation of effectiveness of control	Rating	Criteria	Action/Remarks
Defenses are extremely effective	Effective	No occurrence of accident/incident/no major non-conformities, safety objectives and targets are met/maintained and no notice of violations from any regulators and no critical impact to operation/asset/reputation as a result of the accident/incident.	No additional defenses needed
Defenses are moderately effective	Moderately Effective	There are occurrences of incident/accident, first-aid, minor or potential non-conformities were noted within the year. Impact on operation/asset/reputation is within moderate risk.	Additional defenses may be provided as required
Defenses are insufficient	Insufficient	There are occurrences of lost-time or disabling accidents /emergency situation / notice of	Need to provide additional defenses

		violations/penalties within the year and safety objectives and targets are not attained/ maintained. Critical impact to operation, reputation, and asset within the year.	as defenses provided are insufficient
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Table 7 - Effectiveness of Control

2.3.4 Review And Monitor Effectiveness of Risk Mitigations

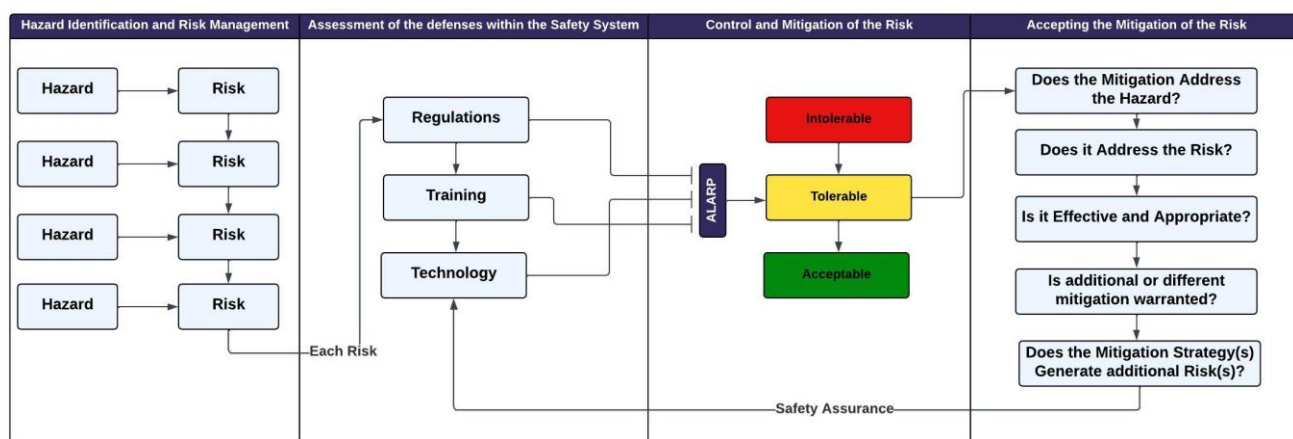
2.3.4.1 Acceptable Risk Level

Where risk is concerned, there is no such thing as absolute safety. Risks shall be managed to a level “as low as reasonably practicable” (ALARP). This means that the risk shall be balanced against the time, cost, and difficulty of taking measures to reduce or eliminate the risk.

When the acceptability of the risk has been found to be Undesirable (Action) or Unacceptable, control measures must be introduced — the higher the risk, the greater the urgency. The level of risk can be lowered by reducing the severity of the potential consequences, by reducing the likelihood of occurrence or by reducing the exposure to that risk.

The optimum solution will vary depending on the local circumstances and exigencies. In formulating meaningful safety action, an understanding of the adequacy of existing defenses is required.

2.3.4.2 Risk Mitigation Strategies



1. **Avoidance:** The operation or activity is cancelled or avoided because the safety risk exceeds the benefits of continuing the activity, thereby eliminating the safety risk entirely.
2. **Reduction:** The frequency of the operation or activity is reduced, or action is taken to reduce the magnitude of the consequences of the safety risk.
3. **Segregation: Action** is taken to isolate the effects of the consequences of the safety risk or build in redundancy to protect against them.

The consideration of human factors is an integral part of identifying effective mitigation because humans are required to apply, or contribute to, the mitigation or corrective actions. For example, mitigation may include the use of processes or procedures. Without input from those who will be using these in "real world" situations and/or individuals with human factors expertise, the processes or procedures developed may not be fit for their purpose and result in unintended consequences. Further, human performance limitations should be considered as part of any safety risk mitigation, building in error capturing strategies to address human performance variability. Ultimately, this important human factor perspective results in more comprehensive and effective mitigation.

A safety risk mitigation strategy may involve one of the approaches described above or may include multiple approaches. It is important to consider the full range of possible control measures to find an optimal solution.

The effectiveness of each alternative strategy must be evaluated before a decision is made. Each proposed safety risk mitigation alternative should be examined from the following perspectives:

1. **Effectiveness.** The extent to which the alternatives reduce or eliminate the safety risks. Effectiveness can be determined in terms of the technical, training, and regulatory defenses that can reduce or eliminate safety risks.
2. **Cost/benefit.** The extent to which the perceived benefit of the mitigation outweighs the costs.
3. **Practicality.** The extent to which mitigation can be implemented and how appropriate it is in terms of available technology, financial and administrative resources, legislation, political will, operational realities, etc.
4. **Acceptability.** The extent to which the alternative is acceptable to those people that will be expected to apply it.
5. **Enforceability.** The extent to which compliance with new rules, regulations or operating procedures can be monitored.
6. **Durability.** The extent to which the mitigation will be sustainable and effective.
7. **Residual safety risks.** The degree of safety risk that remains after the implementation of the initial mitigation and which may necessitate additional safety risk control measures.
8. **Unintended consequences.** The introduction of new hazards and related safety risks associated with the implementation of any mitigation alternative.
9. **Time.** Time required for the implementation of the safety risk mitigation alternative.

Final risk mitigation controls shall be implemented once they are accepted by the Accountable Executive and the SRB. The respective post holders shall ensure that mitigations/controls comply with GACA regulations.

2.3.5 Safety Risk Register

Safety risk management activities should be documented, including any assumptions underlying the probability and severity assessment, decisions made, and any safety risk mitigation actions taken. This may be done using a spread sheet or table. A Safety Risk Register is maintained by the Corporate Safety department where large amounts of safety data and safety information can be stored and analyzed.

Maintaining a risk register minimizes the likelihood that the organization will lose sight of its known risks. When hazards are identified, they can be compared with the known risks in the register to see if the hazard has already been registered, and what action(s) were taken to mitigate it. Risk registers are usually in a table format and typically include:

1. ID (i.e., Risk Number)
2. Originator (i.e., Internal or External)
3. Source (i.e., Safety Reports, FDA, Internal or External Audit Findings, Internal or External Investigation Reports, Regulatory Safety Alerts, Brainstorming, Surveys, etc.)
4. Event Date
5. Date added to the Register.
6. Functional Area (i.e., Flight Operations, Cabin, Ground Operations, Training, Maintenance)
7. Event
8. Hazard
9. Contributory Factors
10. Worst Foreseeable Effect
11. Existing Defenses (Risk Mitigation)
12. Initial Risk Assessment (Outcome Pre-Mitigation)
13. Results
14. Additional Controls to Reduce the Risk (Risk Mitigation)
15. Actions to be Taken.
16. Owner (i.e., person responsible for implementation)
17. Target Date for Implementation of Additional Mitigation
18. Implementation Date of Additional Mitigation
19. Residual Risk (Outcome Post Mitigation)

20. Evaluation of Defenses
21. Post Mitigation Risk Assessed by
22. Medium to Measure Effectiveness
23. Monitoring Effectiveness of Controls
24. Status
25. Review Period
26. Remarks

2.3.5.1 Risk Register Process Description

Below process shall be followed in accomplishing the risk register:

1. Identify the Hazards through all available internal and external sources such as but not limited to safety reports, FDA, audit findings, survey, and investigation.
2. Provide a risk register number.
3. Determine contributory factors.
4. Risk assessment shall be done by determining the impact/consequences and its severity and probability to generate the Initial Risk Rating.
5. Existing defenses shall be reviewed by Safety Specialist.
6. Once the existing defenses are reviewed, these shall be evaluated to conclude if these are effective or insufficient.
7. If the defenses are found to be insufficient, additional defenses will be required from the concerned department to mitigate the risk. The goal is to lower the unacceptable risk to tolerable and/or acceptable level.
8. Medium to measure effectiveness of controls needs to be identified. This may be through monitoring of trends and statistics via SAG meetings, safety inspections, and Safety performance monitoring status.
9. The result of monitoring the effectiveness of controls should also be reflected in the risk register. Comparison of trends should be recorded to show the result after additional defenses have been put in place.
10. The responsible Post holder/Manager who will perform the mitigating actions shall be included in the risk register for traceability; including the target date of implementation of additional controls.
11. Existing and additional defenses shall be monitored to measure the effectiveness of the mitigating actions.
12. The risk register shall be maintained and updated to include progress in monitoring the fatigue and all other operational hazards/risks.

13. This shall be coordinated to Departments Heads for periodic review and approval or acceptance of risk. The risk register shall be updated and maintained by the Director Corporate Safety. For Sample Risk Register refer Appendix XXX

2.3.6 Safety Data Analysis

Safety data is analyzed to find the effectiveness of the safety oversight (monitoring and risk controls), identify deficiencies, their root causes and identify any new hazards.

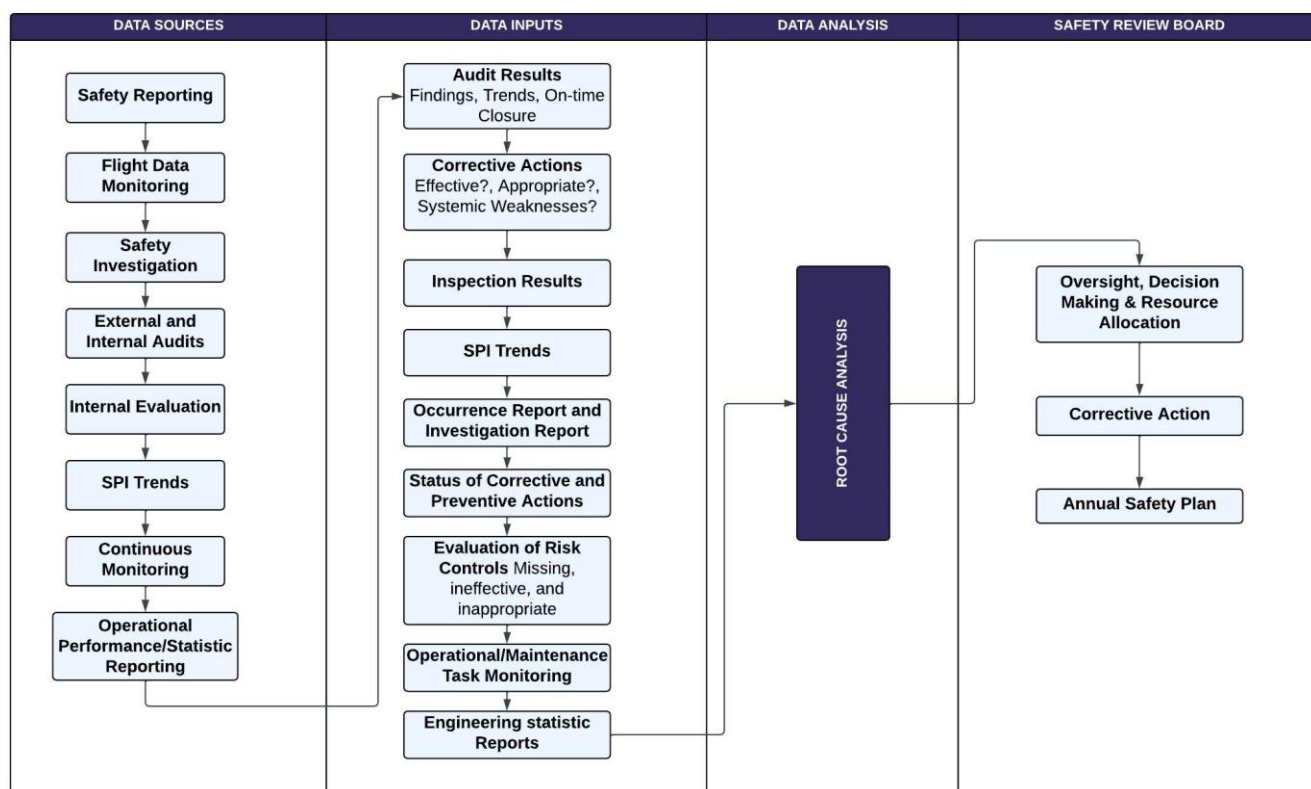


Figure 9 - Data Analysis

Data Analysis Steps			
Steps	Task	Tool	Responsibility
Collect data (annually)	Collect and review data from the following sources: <ol style="list-style-type: none"> Continuous Monitoring. Internal Audits. Internal Evaluations. 	Reporting system database.	VP Corporate Safety, Security and Environment (delegated to DCS) Head of Quality



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	<ul style="list-style-type: none"> 4. External Audits. 5. Mandatory/Voluntary Reporting. 6. Incident Investigations. 7. SPI Trend Analysis. 8. Operational Performance. 9. Engineering Statistics. 		
Analyze	<p>Analyze data to assess:</p> <ul style="list-style-type: none"> 1. Procedures followed? 2. Risk Controls effective? 3. Safety Performance Targets achieved? 4. Repeat findings or incidents? 5. Emerging patterns of failure? 	Reporting system database.	VP Corporate Safety, Security and Environment (delegated to DCS) Head of Quality
Identify Root cause	Determine Root Cause of deficiencies.	Preventive Action/Corrective Action Procedures.	VP Corporate Safety, Security and Environment (delegated to DCS) Head of Quality
Action	Agree on corrective actions required, document and track.	Reporting system database.	VP Corporate Safety, Security and Environment (delegated to DCS) Head of Quality
Update	<p>Update specific measurement parameters to drive improvement:</p> <ul style="list-style-type: none"> 1. SPIs and SPTs. 2. FDA parameters. 	Reporting system database.	VP Corporate Safety, Security and Environment (delegated to DCS) VP Flight Operations VP Technical Operations VP Ground Operations
Communicate	Inform senior management of results and recommend strategic improvements.	SRB	VP Corporate Safety, Security and

			Environment (delegated to DCS)
Decide	Determine necessary SMS improvements and adjust policy, objectives, processes.	SRB	VP Corporate Safety, Security and Environment (delegated to DCS)
Update	Amend any strategic safety plans and allocate resources as required.	SRB	CEO
Communicate	Share any updated strategic plans on safety and associated objectives, targets, and improvements.	Safety Promotion	VP Corporate Safety, Security and Environment (delegated to DCS) VP Flight Operations VP Technical Operations VP Ground Operations

Figure 10 - Data Analysis Steps

2.3.7 Benefits Of Risk Management

A Risk Management program will help Riyadh Air to improve in areas such as:

1. Training and awareness.
2. Culture and attitudes.
3. Loss prevention and control.
4. Auditing procedures.

The benefits to Riyadh Air are:

1. Safer operation.
2. Cost savings.
3. Reduced claims.
4. Establishment of a healthy safety culture.
5. Enhanced reputation