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1.0 PURPOSE

The purpose of this Manual is to provide guidance to aerodrome operators on establishment of Runway Safety Teams (RSTs) at airports as an effective means to reduce runway related accidents and incidents. Improving runway safety on an aerodrome is a collaborative process, with the primary objective being to develop a runway safety action plan that identifies and addresses safety issues through effective hazard identification and risk mitigation.

This Manual is designed to:

- (a) describe the components of an effective Runway Safety Team (RST);
- (b) provide useful examples and serve as a single reference while conducting RST activities;
- (c) Establish a network for sharing safety information between RSTs via the ICAO Runway Safety Team Portal (<https://portal.icao.int>).

1.1 REFERENCE

- i. Civil Aviation (Aerodromes Designs and Operations) Regulations, 2024
- ii. PANS-Aerodromes (Doc 9981)
- iii. ICAO Runway Safety Team Handbook Second Edition
- iv. Flight Safety Foundation (FSF) Report: Reducing the Risk of Runway Excursions
- v. FSF: Global Action Plan for the Prevention of Runway Excursions (GAPPRE)
- vi. European Aviation Safety Agency (EASA): European Plan for Aviation Safety (EPAS) 2021-2025

2.0 INTRODUCTION

2.1 Background

ICAO Assembly resolution A37-6 urged States to enhance runway safety. ICAO promotes and supports the establishment and enhancement of multi-disciplinary Runway Safety Teams at aerodromes. The ICAO Runway Safety Programme (RSP) promotes the establishment of Runway Safety Teams (RSTs) at airports as an effective means to reduce runway related accidents and serious incidents. The requirement for

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airports to establish a Runway Safety Team (RST) is one of the main outcomes of the ICAO Global Runway Safety Symposium held in Montreal, Canada, in May 2011.

RSTs have proven highly successful at mitigating the risks of runway incursions and excursions, providing a collaborative solution which regulators, air navigation service providers, airline and airport operators have all positively contributed to. The correct establishment of local RSTs at individual aerodromes is key to the development and implementation of an effective action plan for runway safety and recommend strategies for hazard removal and mitigation of residual risks.

2.1.1 Runway Safety

Runway safety is a key priority for aerodrome operators, aircraft operators, and air traffic services (ATS). The prevention of both runway incursions and excursions should be an important part of programmes and activities for improving runway safety.

The aerodrome operator and ATS cannot solely bring about improvements or positively manage runway safety without the coordination and cooperation of other stakeholders.

Improving runway safety on an aerodrome is a collaborative process, with the primary objective being to develop a runway safety action plan that identifies and addresses safety issues through effective hazard identification and risk mitigation.

Gathering, monitoring and analyzing data on runway safety performance greatly contributes to understanding and proactively managing the risks related to the operations of a runway.

2.1.2 Scope

A successful RST programme requires all key stakeholders to cooperate in a collaborative manner. This document, therefore, is intended to serve as a guidance for aerodrome operators, air traffic services organizations, commercial air operators,

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organizations representing the general aviation community, the regulatory authority, meteorological services and other stakeholders interested in improving runway safety. It included the guidance on the establishment of a runway safety team at an aerodrome, the identification of hazards related to runway safety, the development and implementation of action plans, collection of data and the promulgation of safety information.

2.1.3 How to use the Manual

This Manual is divided into the following sections and appendices:

- i. **Section 3** serves as a reference for acronyms, abbreviations and definitions the reader may find useful.
- ii. **Section 4** is divided into two main areas—technical and administrative processes. Under **RST Technical Processes**, the reader is presented with the core components of the RST programme and a detailed example of an RST meeting. Under **RST Administrative Processes**, various topics associated with operating an RST are discussed. These include the RST “*Terms of Reference and Composition*”, a discussion of roles associated with the programme, a discussion related to information sharing (both within the airport environment and with other RSTs) and continuous improvement techniques.
- iii. **Section 5** contains an RST set-up checklist to ensure the programme contains the minimum requirements and processes
- iv. **Appendix A** (Model Meeting Organizer)
- v. **Appendix B** (Model Agenda) help the RST organize their activities in preparation for their first meeting.
- vi. **Appendix C** contains guidance material related to identifying hazards and defining the operational consequences associated with each specific hazard.
- vii. **Appendix D** contains processes and best practices for hot spots identification, removal and promulgation
- viii. **Appendix E** contains list of runway safety causal factors.
- ix. **Appendix F** Contains practices and best practices in cases of a planned or unplanned suspension or closure of runway operations.
- x. **Appendix G** contains an example of RST case
- xi. **Appendix H** provides a list of reference material.

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The material in the appendices helps to guide RST members through their meetings. Use the material in **Section 4** to verify that your programme contains the minimum requirements and processes to ensure continuous improvement.

3.0 ACRONYMS, ABBREVIATIONS, AND DEFINITIONS

3.1 Acronyms and Abbreviations:

AIP	Aeronautical Information Publication
AIS	Aeronautical Information Services
ALARP	As Low As Reasonably Practicable
ATC	Air Traffic Control
CBA	Cost Benefit Analysis
HIRM	Hazard Identification and Risk Management
ILS	Instrument Landing System
MoU	Memorandum of Understanding
RSM	Runway Safety Management
RST(s)	Runway safety team(s)
SMGCS	Surface Movement Guidance and Control System
SMS	Safety management system
ToR	Terms of Reference

3.2 Definitions:

Hazard: A condition or an object with the potential to cause injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.

Risk Assessment: The process of determining the probability and potential severity of safety-related hazards and events and identify when the associated risks require mitigation.

Risk Mitigation: The process of incorporating defences or preventive controls to lower the severity and/or likelihood of a hazard's projected consequence.

Safety Risk: The predicted probability and severity of the consequences or outcomes of a hazard.

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Safety risk probability: The likelihood or frequency that a safety consequence or outcome might occur.

Safety Risk Severity: The possible consequences of an unsafe event or condition, taking as reference the worst foreseeable situation.

4.0 RUNWAY SAFETY TEAM (RST)

An aerodrome operator shall establish a runway safety team comprised of relevant organizations operating or providing services on the aerodrome. The runway safety team shall identify runway related hazards. These may include aerodrome design, markings, signs and lights, as well as relevant aerodrome operations and procedures.

Within the context of the runway safety team, measures shall be taken to mitigate any hazards identified in accordance with the above paragraph and, as appropriate, reduce the safety risk of issues related to runway safety, including but not limited to the following:

- a) runway incursion;
- b) runway excursion;
- c) runway confusion; and
- d) suspension or closure of runway operations

The runway safety team shall identify hazards and develop mitigation strategies and procedures to maintain runway safety during abnormal operations, including the suspension of runway operations. These strategies and procedures shall be implemented under the responsibility of the aerodrome operator.

Procedures to collect, monitor, analyse and protect safety data and safety information shall be established to understand and improve runway safety performance. Information that could enhance runway safety, including identified hot spots and specific local procedures shall be communicated to the relevant users.

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4.1 Goals and General Description of the RST Programme

The primary role of a runway safety team is to advise relevant operators and service provider's management and operational staff on prevailing local conditions on the runway, taxiways and adjacent areas, other issues of concern and develop mitigating measures and solutions to identified issues.

The RST should implement an action plan for runway safety, advise management as appropriate on potential runway safety issues and recommend strategies for hazard removal and mitigation of the residual risk. These strategies may be developed based on local occurrences or combined with information collected elsewhere.

The RST is aimed to improve and support runway safety by integrating the safety systems of the participating organizations (stakeholders). Interfacing service providers should document the interface between the SMS and the RST, where RSTs are available. RSTs can serve as an excellent tool for managing runways safety related risk identified by the service provider programs. In addition, the service provider SMS process should be used to evaluate possible risk posed by operational changes resulting from RST proposed corrective actions.

The RST's meeting schedule depends on the situation and environment of the aerodrome. For example, if major works are proposed, or runway hazards and incidents are increasing, then the RST may need to meet more frequently. However, if operations are stable, with few hazards identified, then the meetings may be less frequent.

The RST is built on the principles of a formal Hazard Identification and Risk Management (HIRM) process, in accordance with the Civil Aviation (Safety Management) Regulations, 2018. The RST should be able to capture the HIRM results

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from its members, as most of them will have their own SMS's with differing HIRM processes.

The RST should cover a wide range of issues related to runway safety, including but not limited to, the following occurrence categories:

- Abnormal runway contact;
- Bird strike;
- Ground collision;
- Ground handling;
- Runway excursion;
- Runway incursion;
- Loss of control on ground;
- Collision with obstacle(s);
- Undershoot / overshoot, aerodrome
- Use of the wrong runway (runway confusion)
- High Speed Rejected Take-Off
- Wildlife Event
- Damage from Foreign Object Debris (FOD)

4.2 RST administrative processes

All organizations involved in the RST should participate in a collaborative process of hazard identification and safety risk assessment, as well as in the development of a robust runway safety action plan.

The primary role of the RST should be to develop a runway safety action plan. This action plan should, as a minimum, facilitate the identification of runway safety hazards and the conduct of runway safety risk assessments and recommend measures for hazard removal and mitigation of the residual risk. These measures may be developed

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based on local occurrences or combined with information collected from external databases.

The aerodrome operator should have ownership of the runway safety action plan and ensure that it forms an effective element of the aerodrome safety management system, as appropriate.

4.2.1 Runway Safety Team Terms of Reference (ToR) and Composition

The terms of reference and composition of the runway safety team (RST) should be established and included in the aerodrome manual. Activities to be included in the terms of reference as well as the proposed composition of an RST are listed below.

The terms of reference (ToRs) of the runway safety team (RST) should include, at a minimum, the following activities:

- a) analyse the safety data relating to the number, type, and, if available, severity of runway incursions;
- b) consider the outcome of investigation reports in order to identify local hot spots or problem areas at the aerodrome;
- c) work as a cohesive team to better understand the operating difficulties of personnel working in other areas and recommending areas for improvement;
- d) ensure that recommendations for the prevention of runway incursions are implemented;
- e) identify any local problem areas and suggest improvements;
- f) conduct runway safety awareness campaigns that focus on local issues, for example, producing and distributing local hot spot maps or other guidance material as considered necessary; and
- g) regularly review the aerodrome and runway operations to proactively identify any situation that may contribute to runway safety risks.

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Suggested ToRs for the RST should include:

- i) Objectives, scope of oversight, and expected frequency of RST meetings
- ii) Membership selection processes
- iii) Roles and responsibilities of individual RST members
- iv) Processes and formal agreements governing sharing of safety data, safety reports, and safety information as well as the protection of the sources of information shared within the RST (protection from inappropriate use and protection against disclosure)
- v) Consultation, decision-making and conflict resolution processes
- vi) Regularly review the airfield to ensure its adequacy and compliance with the Civil Aviation Regulations
- vii) Ensure that the recommendations contained in the Manual on the Prevention of Runway Incursions are implemented
- viii) Documentation and reporting requirements
- ix) Monitor runway incidents by type, severity and frequency of occurrence
- x) Identify risk factors and local issues, particular locations where risk exist (e.g., hot spots), and problems in daily operations and suggest improvements
- xi) Solicit assistance by safety experts from within the industry
- xii) Contribute to active development of solutions to these issues
- xiii) Ensure that the best possible solution is implemented
- xiv) Learn lessons from other incidents and consider the outcome of other investigation reports
- xv) Disseminate information on developed solutions to stakeholders
- xvi) Initiate a comprehensive safety-awareness campaign to ensure that all stakeholders' staffs are aware of safety issues, such as producing and distributing local hot spot maps or other guidance material

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The composition of the RST should include members who are directly involved in runway operations at the given aerodrome, from the following groups:

- a) aerodrome operators;
- b) air traffic services;
- c) commercial air operators;
- d) representatives of flight crew operating at the aerodrome; and
- e) members from the general aviation community (if applicable).

The RST may also include:

- a) the regulatory authority (as an observer);
- b) technical experts of controller associations;
- c) technical experts of pilots associations;
- d) military operator (if applicable, based on joint use of the aerodrome or other military roles);
- e) support services (de-icing, catering, ground handling, etc.);
- f) emergency response service providers;
- g) subject matter experts (meteorologists, ornithologists, accident investigation authority (AIA), etc.) (upon invitation); and h) consideration may be given to periodically inviting members of other RSTs to promote coordination, learning and the sharing of information.

4.2.2 Runway incursion prevention

New infrastructure and changes to existing infrastructure should be designed so as to prevent runway incursions.

Changes to manoeuvring area practices and procedures, including planned works and work in progress, should take account of runway safety and may require consultation with the RST. A safety assessment should be included for procedural and/or infrastructural changes on the manoeuvring area .

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The aerodrome operator should designate taxiways in order to eliminate ground navigation errors and communication confusion.

The aerodrome operator should avoid infringing on the lines of sight from the air traffic control (ATC) tower. The safety risks associated with visibility restrictions from the tower impacting the ability to see the manoeuvring area should be assessed and appropriately mitigated.

Procedures for conducting runway inspections should take account of runway incursion prevention.

When relevant, the aerodrome operator should produce aerodrome charts identifying runway incursion hot spots. These charts should be periodically revised as needed, distributed locally to manoeuvring area drivers, and published in the State's Aeronautical Information Publication (AIP).

Safety risks associated with the identified hot spots should be assessed or mitigated at the earliest opportunity.

Runway incursion prevention should be taken into account if the aerodrome operator develops surface movement guidance and control systems (SMGCS) in cooperation with the aerodrome air traffic services provider. Further information can be found in the Manual of Surface Movement Guidance and Control Systems.

The RST should review the runway safety action plan when one or more of the following circumstances arise:

- a) the volume and density of aircraft and vehicle traffic increases significantly;
- b) operations in lower visibility conditions than currently permitted are planned;
- c) the aerodrome layout has changed, i.e. new runways, taxiways, or aprons are brought into operation;
- d) occurrences such as unintended entry of aircraft, persons and vehicles into runways and taxiways; and

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- e) reports received from pilots, ATC or operations personnel about unclear indication of, inter alia, lights, markers, markings and signs etc., which can potentially lead to confusion.

The RST should periodically review the provision and operational use of visual aids aimed at protecting the runway.

Aerodrome operators should establish and implement a formal “manoeuvring area vehicle driver training and assessment programme” and periodically review driver guidelines.

Aerodrome operators should ensure that all manoeuvring area vehicle drivers are briefed on the operational conditions of the manoeuvring area (runway in use, visibility conditions, etc.) at the start of their shift and also reminded that situational awareness is maintained throughout their shift.

Aerodrome operators should ensure that procedures for the control of all vehicles on the manoeuvring area are developed and implemented in cooperation with air traffic control.

Runway-holding positions should be clearly marked, signed and, if required, lit.

4.2.3 Runway excursion prevention

Where instrument landing systems (ILS) are provided, the aerodrome operator shall ensure that the critical and sensitive areas associated with these navigational aids are protected and not subject to signal disturbances.

Aerodrome operators shall ensure that aeronautical ground lighting, signs and markings are suitable for the planned operations on the runway, in particular:

- a) the aiming point and threshold should be clearly visible, contrasting with the surface, and maintained;

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- b) runway holding positions should be clearly marked, signed and, if required, lit to prevent departing aircraft commencing take-off roll at the wrong runway entry point;
- c) the use of signs at the runway holding positions used for intersection take-offs to indicate the take-off run available should be considered; and
- d) the use of visual aids to indicate the runway distance remaining should be considered.

The timely removal of rubber deposits and other contaminants from the runway should be undertaken to ensure that adequate friction is maintained.

The provision of wind information, including direction, strength and gusts, to pilots on approach by ATS reduces the likelihood of an excursion. Wind sensors and wind direction indicators should be sited to give the best practicable indication of conditions along the runway and touchdown zones.

Aerodrome operators should ensure that the declared distances notified to the aeronautical information service (AIS) for publication in the AIP are correct.

Aerodrome operators shall ensure that procedures are in place for calculating accurate temporarily reduced declared distances (e.g. due to work in progress on the runway).

When reduced declared distances are in operation, the aerodrome operator shall ensure that the temporary markings, lighting and signs accurately portray the reduced distances and that they are well-communicated to the AIS for publication. Consideration should also be given to measures taken to restrict access to intermediary runway entry points.

4.2.4 Runway confusion

The RST should undertake a safety assessment including the following factors, with the objective of identifying measures to reduce the risk of runway confusion:

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- a) night operations;
- b) low visibility operations;
- c) adverse weather;
- d) lack of precision in RTF communications;
- e) inadequate lights, markings and signs;
- f) intersection departures;
- g) work in progress;
- h) parallel taxiway use;
- i) late issue or amendment of departure clearance;
- j) time pressure;
- k) taxiway and runway geometry and configurations; and
- l) use of runways as taxi routes.

The manoeuvring area should be clear of situations that may lead to the selection of the incorrect runway. Examples of mitigation measures can take the form of:

- a) proper identification and promulgation of hot spots;
- b) reduction in the size/width of runway entrance taxiways;
- c) closing certain runway entrance taxiways;
- d) covering signs with the potential for confusion during work in progress;
- e) isolating taxiway aerodrome ground lighting routes; and
- f) using enhanced markings.

The RST should include human factors and performance in the selection of mitigation measures.

4.2.5 Suspension or closure of runway operations

Procedures for the temporary suspension of runway operations or planned runway closures shall be established collaboratively between the aerodrome operator and ATS.

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These procedures should contain roles and responsibilities, methods of promulgation of information and provisions for recommencement of runway operations. The procedures should be coordinated and regularly reviewed with the relevant stakeholders, and may contain specific local scenarios.

When temporarily suspending runway operations or closing a runway, close communication and coordination between the aerodrome operator, ATS, AIS units (when relevant) and runway users should be ensured.

The aerodrome operator, in collaboration with ATS, should ensure that the planning of construction works on the runway is, if possible, undertaken during low traffic times of the day or year.

4.2.6 Continuous improvement

All team members will monitor the RST activities for areas in need of improvement and/or failure to achieving the conditions set forth in the ToR. Additionally, the chairperson will schedule the following activities:

a) Internal reviews

At least once every six months, the team will allocate time during a regularly scheduled meeting to discuss each item on the checklist found in Section 5. Their responses will be recorded and maintained as part of the safety library for at least two years.

b) External reviews

At least once per calendar year, the RST documentation should be audited and at least one meeting observed by a member of the regulatory body. The results of this appraisal will be recorded and maintained as part of the safety library for a period described in the SMS of the aerodrome operator.

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4.3 RST organizational structure

The organizational setup required for an RST depends on the number of participating members, their interaction and cooperation capabilities and any other local requirements. In any case, the initiator would normally be the aerodrome operator.

This section provides basic concepts of leadership and administration sharing in order to assist RST as necessary. It may vary depending on the size and setup of each team. Irrespective of the final RST set up, the team will require the designation of leadership and administration. These tasks may be carried out by one or more members of the RST; e.g. one Chairperson and one Rapporteur.

4.3.1 The RST Chairperson

The Chairperson serves as the coordinator and spokesperson for the team. The nomination and role of the Chairperson can, for example, be organized on a rotational basis amongst all RST members. The roles and responsibilities of the nominated Chairperson may also include a variety of administrative and/or organizational aspects, such as:

a) Meeting planning

The Chairperson schedules the meetings and arranges the venue. He or she gathers input from the members in the weeks prior to the meeting and distributes an agenda one week prior to the meeting date. Guidance on meeting planning is included in Appendix A.

b) Meeting facilitation

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The Chairperson ensures the meetings are conducted in a collaborative manner and in accordance with the ToR processes. He or she constantly strives to enhance the programme by regularly engaging in continuous improvement activities.

c) Maintaining the safety library

The Chairperson ensures the actions of the RST are properly documented and maintained in the RST safety library.

d) Coordinating with external agencies

The Chairperson serves as the point of contact with external agencies and ensures all RST activities are properly communicated to applicable agencies/organizations.

4.3.2 Role of RST members

a) Meeting planning

RST members will submit items for discussion at the next scheduled meeting as soon as possible, but not later than the date requested by the Chairperson. Each member presenting during the meeting should prepare briefing material and invite subject matter experts as necessary to provide the other members with a clear understanding of the issue they wish to discuss. The members should tour the airport just prior to the meeting to familiarize themselves with the current situation and identify potential safety hazards.

A tour of the airport during different times of the day and varying environmental conditions should be considered to allow identification of hazards specific to certain light and adverse weather conditions. The tour is for the identification of safety issues only

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and should not be used by any person external to the RST nor cause disruption to current operations.

b) Meeting participation

RST members will openly share information and strive to achieve consensus during decision- making activities. They will constantly strive to enhance the programme by engaging in continuous improvement activities.

c) Contributing to the safety library

RST members should contribute safety data & analysis, reports, and information from the safety management systems or other safety relevant sources of their participating organizations to the RST.

d) Coordinating with participating organizations

RST members will communicate the findings and decisions of the RST within their respective organizations and ensure the recommendations are properly addressed.

4.3.3 Role of the regulator

The RST is considered an activity of the SMS of the aerodrome operator, which coordinates safety issues from all the users of that aerodrome. Although their participation is not required, ICAO encourages members of the regulatory authority to attend RST meetings to advise on regulatory matters, participate in the information sharing activities, understand the current hazards and risks associated with local operations, and interface with other government agencies (e.g. land use authorities) on behalf of the RST when appropriate.

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4.4 RST technical processes

4.4.1 Meetings

The RST meeting is the most important component of the programme as it is the forum in which hazards are discussed, consequences determined, risks assessed, priorities determined, and recommendations developed. This type of face-to-face interaction leads to improved collaboration, problem-solving and risk management because the team members benefit from information sharing and the perspectives of representatives from other groups.

Given the RSTs operational focus, it should include representatives from the following groups:

- a) aerodrome operators;
- b) air traffic services;
- c) commercial air operators;
- d) representatives of flight crew familiar with the aerodrome;
- e) members from the general aviation community (if applicable);
- f) technical experts of controller associations; and
- g) technical experts of pilots associations.

The team may also include:

- a) the regulatory authority;
- b) military operator (if applicable, based on joint use of the airport or other military roles);
- c) support services (de-icing, catering, ground handling, etc.);
- d) emergency response service providers;

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- e) subject matter experts (meteorologists, ornithologists, accident investigation authority, etc.) (upon invitation); and
- f) consideration may be given to periodically inviting members of other RSTs to enable sharing of information and learning.

In addition to the normal RST members, service providers operating at the aerodrome may participate in the RST process to address operational hazards identified by their internal SMS. In this regard, the service providers will interface with the RST as needed to address the specify concern.

Note. — Refer to Appendix E for a sample Runway Safety Team meeting agenda.

4.4.2 Hazards and associated consequences

Once the team members are identified, the Chairperson selected, and the ToR and schedule are agreed to, the real work of the RST begins with the hazard identification process. It is anticipated that each member will come to the meeting prepared to brief on the hazards related to runway safety, as identified through their respective SMS or other aviation safety relevant systems (arising mostly from safety reporting, investigation and audit activities). Hazards identified through the SMS of service providers who may not be participating in person at the meeting should be presented for evaluation.

In addition to the hazard reporting systems of the member organizations, the RST should also conduct periodic visits to various airport locations (i.e., tower facility, construction areas, taxiway intersections, etc.) and solicit input especially from organizations without formal representation at the meeting. These may include corporate operators, flight schools, industry organizations, ground services and others.

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By casting a wide net, the RST will develop a deeper understanding of the operational complexity associated with the airport environment and, therefore, be better able to identify hazards and determine operational risks.

As the team discusses the destructive potential of the hazard, it is important to keep in mind that these “consequences” should be framed in realistic operational opposed to extremely remote and unlikely outcomes. A useful technique is to identify the top-level (or generic) hazard, then to list specific hazards and associated consequences. For example, a generic hazard category might be “airport construction.” The specific hazards associated with a construction project at the airport might be “the presence of construction equipment” and “the closure of taxiways.” These, in turn, may result in the RST identifying the potential consequences of these specific hazards as “an aircraft colliding with the construction equipment” and “an aircraft taxiing onto a closed taxiway.” By correctly identifying (and documenting) the hazard and defining the associated consequences in operational terms, the RST is able to assess the safety risk.

Hazardous conditions can sometimes combine, resulting in an even greater severity and/or probability of outcome. For example, the hazards associated with airport construction, coupled with the hazards of low visibility and night operations, may result in a greater risk than just the airport construction hazard alone (in this situation, the probability of the risk would likely be increased).

4.4.3 Safety risk assessment

The reason for conducting safety risk assessments is to provide the RST with a method for appropriately managing the risks of identified hazards, developing effective risk mitigation strategies, and prioritizing their workflow. Given that time and financial resources are limited, the following process allows the RST to efficiently determine

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which areas require its immediate attention to reduce the runway safety risk to As Low as Reasonably Practicable (ALARP).

The process of runway safety risk assessment and management should be in line with the applicable Civil Aviation (Safety Management) Regulations. Once the hazards have been identified by the RST, the objective is for the airport operator to make a determination of the safety risk severity in the context of the local system, accounting for current defences and mitigations in place at the time. This information should then be used to categorize the safety risk severity using predefined guidance in the Civil Aviation (Safety Management) Regulations and safety ICAO Doc 9859.

Based on the event that would be the worst consequence, the next step is to evaluate the relative probability (or likelihood) of that event occurring in the specific operational environment, after taking into account the current defences and risk mitigation strategies in place. The team should consult associated safety and hazard report databases, incident & accident investigation reports, flight data monitoring and analysis, operational audit data and other historical sources to determine the likelihood of the identified consequence occurring.

The last step in the assessment process is to ensure that the resulting level of safety risk is acceptable.

One of the advantages of using the RST to conduct the risk assessment is that all stakeholders have been involved in the risk assessment process, thus ensuring that the worst outcome and appropriate probability have been evaluated.

4.4.4 Developing recommendations and action plan

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Following the safety risk assessment, the RST should develop specific recommendations to reduce the risk, and an action plan to ensure the recommendations are implemented. In doing so, the following concepts should be considered:

a) Prioritization

The RST should ensure their solutions are prioritized according to the “safety risk tolerability” assessment. For example, if they determine that “the operation may continue” with the assessed level of safety risk, their recommendations should reflect a strategy where improvements are implemented as resources become available. Conversely, if they determine “the operation may continue with mitigation,” their recommendations should reflect a strategy requiring immediate action(s) to address the consequences of the hazard. Thus, time frames for completing the actions must be commensurate with the risk levels involved.

b) Control strategies

Safety risk is controlled by addressing either:

1. the probability of the consequences occurring;
2. the severity level of the consequences; or
3. both simultaneously.

Key approaches to controlling safety risk include:

1. **Avoidance:** The operation or activity is cancelled because the safety risk exceeds the benefit of continuing the operation or activity.
2. **Reduction:** The frequency of the operation or activity is reduced, or action is taken to reduce the severity of the consequences of the risks.

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- 3. Segregation:** Action is taken to isolate the effects of the consequences of the hazard or build in redundancy to protect against them.

c) Evaluating alternative solutions

During the process, the RST should explore several strategies for controlling safety risks. These strategies should be evaluated against one another to find the most effective and efficient solution using objective and subjective measures. These measures may include criteria such as conducting a cost/benefit analysis, determining the enforceability of the proposal, assessing the acceptability to the affected stakeholder, and others. In all cases, however, the RST must conduct a risk assessment of their proposed solution and evaluate any potential hazards created by their strategy.

However, just because a solution is easy to implement, cost effective and acceptable to all stakeholders, it does not mean that it will reduce the risk level. The effectiveness of the strategy in reducing the risk is measured by the residual or remaining risk once the strategy has been activated. A risk assessment should determine if the remaining (residual) risk is acceptable, or if more solutions and mitigations are required.

d) Notification to Affected Stakeholder

If the RST determines that either a mitigation strategy is required or part of the operation should be modified or suspended, it should make a formal recommendation to the organization responsible for that part of the operation and include the rationale and risk assessment.

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A summary of the entire process should include a master register of the hazards identified, current controls and defences, risk analysis and outcome, additional controls and mitigations, action plan for implementation (owner and timelines), and residual risk. Appendix C contains the RSM Form, which can serve as the tool to accomplish the recording of hazard and associated mitigation processes.

4.4.5 Record keeping – data sharing

Proper and structured record keeping of observed and identified hazards, safety events and corrective actions allow for trend analysis. The RST should identify a gate keeper who is responsible for the maintenance of the data base and can present reports and analysis upon request of the RST members.

Data exchange and sharing amongst RST members enhances the effectiveness of the RST. RSTs from different airports are encouraged to set a protocol in place that could allow for data sharing across various locations and will support the teams in identifying proper mitigation strategies.

5.0 RUNWAY SAFETY TEAM SET-UP CHECKLIST

5.1 Instructions

The following checklist is provided to assist both existing and new RSTs in determining if gaps exist in their programme, or if improvements can be made. Although not intended to be an exhaustive list, the items on the checklist are designed to identify gaps in the system that would hinder the RST from achieving their goal of improving runway safety.

Five main areas are included in the checklist:

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- 1) Terms of Reference;
- 2) Hazard identification;
- 3) Safety Risk Management;
- 4) Communication; and
- 5) Continuous improvement.

A negative response to any of the associated question indicates an area that should receive attention by all members of the RST (and the organizations they represent) until the gap is filled.

5.2 Checklist

Item	Question	Response	Comments
1. Terms of Reference (ToR)			
1.1	Is there a ToR agreement in place?	☐ Yes ☐ No	
1.2	Does the ToR define the scope of work of the RST?	☐ Yes ☐ No	
1.3	Does the ToR define the roles for members of the RST?	☐ Yes ☐ No	
1.4	Does the ToR define a process for handling data/reports received from the participating organizations?	☐ Yes ☐ No	
1.5	Does the ToR describe the decision-making process to be used by the RST?	☐ Yes ☐ No	
1.6	Does the ToR define a process for resolving disagreements between RST members?	☐ Yes ☐ No	
2. Hazard identification			
2.1	Does the RST have a formal safety data collection and processing system for documenting operational hazards?	☐ Yes ☐ No	
2.2	Do all RST members contribute to the formal safety data collection and processing system by sharing identified operational hazards?	☐ Yes ☐ No	

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Item	Question	Response	Comments
2.3	Does the RST define and document specific consequences for the operational hazards?	☐ Yes ☐ No	

Item	Question	Response	Comments
3. Safety Risk Management			
3.1	Does the RST have a formal process to manage the operational risk?	☐ Yes ☐ No	
3.2	As part of the risk management process, are the consequences of the operational hazards assessed in terms of probability and severity?	☐ Yes ☐ No	
3.3	Is there a formalized process to determine the level of risk the RST is willing to accept?	☐ Yes ☐ No	
3.4	Does the RST develop risk mitigation strategies to control the level of risk within the operational environment?	☐ Yes ☐ No	
3.5	Is there a formalized process for the RST to make recommendations to applicable stakeholders?	☐ Yes ☐ No	
3.6	Is there a formalized process to document the decisions made by the RST during the risk management process?	☐ Yes ☐ No	
3.7	Are the decisions made by the RST periodically reviewed to determine if the desired effect was achieved by their mitigations/recommendations?	☐ Yes ☐ No	
4. Communication			
4.1	Does the RST have a formal process to communicate with applicable stakeholders?	☐ Yes ☐ No	
4.2	Does the RST periodically provide runway safety material to key frontline employees?	☐ Yes ☐ No	
4.3	Does the RST participate in information sharing activities with other RSTs?	☐ Yes ☐ No	
4.4	Does the RST solicit safety-related information from all airport users via common links embedded within websites of the RST participating organizations?	☐ Yes ☐ No	
5. Continuous improvement			
5.1	Does the RST have a formal process to continuously improve their processes & products?	☐ Yes ☐ No	
5.2	Does the RST engage in formal, periodic reviews of their programme to ensure they are improving runway safety?	☐ Yes ☐ No	
5.3	Are the results of the continuous improvement programme documented?	☐ Yes ☐ No	

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APPENDIX A — RST MEETING ORGANIZER TOOL (EXAMPLE)

1. Schedule meeting

- a) Date
- b) Time
- c) Location

2. Determine invitees

- aerodrome operators;
- air traffic services;
- commercial air operators;
- representatives of flight crew familiar with the aerodrome;
- members from the general aviation community (if applicable);
- technical experts of controller associations; and
- technical experts of pilots associations. The team may also include:
- the regulatory authority;
- military operator (if applicable, based on joint use of the airport or other military roles);
- support services (de-icing, catering, ground handling, etc.);
- emergency response service providers;
- subject matter experts (meteorologists, ornithologists, accident investigation authority, etc.) (upon invitation); and
- consideration may be given to periodically inviting members of other RSTs to enable sharing of information and learning.

3. Plan Discussion Topics

- a) Three weeks prior to the meeting date:

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- Notify stakeholders of the meeting date, time, and location.
- Solicit input for agenda items from each of the members.
- b) Two weeks prior to the meeting date:
 - Schedule airport tours (as required).
 - Send tentative agenda to the team.
- c) One week prior to the meeting date:
 - Consolidate updates and information received from members.
 - Distribute the final agenda and supporting documents to the team.

4. Meeting Logistics

- a) Confirm availability of members
- b) Schedule meeting room appropriate for the size and requirements of the RST
- c) Coordinate airfield tour with airport management, tower, etc., including vehicle and escort availability.

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APPENDIX B — RUNWAY SAFETY TEAM MEETING AGENDA (EXAMPLE)

1. Meeting information

- a) Date
- b) Time
- c) Location

2. Members and guests in attendance

- aerodrome operators;
- air traffic services;
- commercial air operators;
- representatives of flight crew familiar with the aerodrome;
- members from the general aviation community (if applicable);
- technical experts of controller associations; and
- technical experts of pilots associations.

The team may also include:

- the regulatory authority;
- military operator (if applicable, based on joint use of the airport or other military roles);
- support services (de-icing, catering, ground handling, etc.);
- emergency response service providers;
- subject matter experts (meteorologists, ornithologists, accident investigation authority, etc.) (upon invitation); and
- consideration may be given to periodically inviting members of other RSTs to enable sharing of information and learning.

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3. Previous business [Review the status of previous action items and update the Action log as appropriate]

4. New business

[Members present new projects, hazards, or events identified within their safety management systems. The team then: (a) the hazards, conducts safety risk assessments, and proposes recommendations for managing the safety risk]

5. Action log [Document findings and action plan]

6. Next meeting [Agree to the date, time, and location for the next meeting]

Note. — Airport tour – the intent of the airport tour is to identify existing and new hazards as well as to observe rectification measures that have been implemented based on previous findings. The most suitable time for the tour, if conditions permit, is between Agenda Item 3 and 4.

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APPENDIX C — RUNWAY SAFETY MANAGEMENT FORM

Runway Safety Management Form																																											
Reference:	Date Opened dd/mm/yy	Date Closed dd/mm/yy																																									
General Information																																											
Airport:	What area is affected: ☐ runway ☐ taxiway ☐ ramp ☐ general																																										
Specific Identifier (runway/taxiway identifier):																																											
Safety Outcomes																																											
Safety Risk Type:	☐ Runway Excursion ☐ Runway Incursion - Aircraft ☐ Wildlife Encounter ☐ Runway Confusion ☐ Abnormal Landing ☐ Runway Incursion - Vehicle ☐ Birdstrike ☐ Other (Specify)																																										
Has an event occurred, or is this a hazard (potential outcome):	☐ actual outcome (event occurred) ☐ potential outcome (no event occurred)	occurrence date dd/mm/yy																																									
Description of actual or potential outcome																																											
Supporting Document Type: ☐ Accident Report ☐ Incident Report ☐ Audit Report ☐ Other (Specify)																																											
Safety Issues																																											
☐ Navigation Aids ☐ Meteorological ☐ Approach Vectoring ☐ Other ☐ Runway/Taxiway Marking ☐ Obstacles ☐ Runway Surface Condition ☐ VASI / PAPI ☐ Approach lights ☐ Airport Construction ☐ Communications ☐ Runway/Taxiway Lights ☐ Procedures																																											
<i>Once you have completed the identification of the safety issues - please submit the form to log this report. During the runway safety team meeting you should address each of the reports as an item on the agenda. The following sections are provided as a tool to manage the outcomes of the meeting.</i>																																											
Risk Assessment																																											
(The risk assessment portion is to be completed as part of the runway safety team meeting)																																											
What is the Severity of occurrence:	☐ Catastrophic ☐ Hazardous ☐ Major ☐ Minor ☐ Negligible																																										
What is the Likelihood of occurrence:	☐ Frequent ☐ Occasional ☐ Remote ☐ Improbable ☐ Extremely Improbable																																										
Risk Level (from below risk table):	☐ High ☐ Moderate ☐ Low																																										
<i>If the risk level is Moderate or High, a corrective action plan is required</i>																																											
<table border="1"> <thead> <tr> <th rowspan="2">Severity</th> <th colspan="5">Likelihood</th> </tr> <tr> <th>Certain / Frequent</th> <th>Likely / Occasional</th> <th>Possible / Remote</th> <th>Unlikely / Improbable</th> <th>Exceptional / Impossible</th> </tr> </thead> <tbody> <tr> <td>Catastrophic</td> <td>High</td> <td>High</td> <td>High</td> <td>Moderate</td> <td>Moderate</td> </tr> <tr> <td>Major</td> <td>High</td> <td>High</td> <td>Moderate</td> <td>Moderate</td> <td>Moderate</td> </tr> <tr> <td>Moderate</td> <td>High</td> <td>Moderate</td> <td>Moderate</td> <td>Moderate</td> <td>Low</td> </tr> <tr> <td>Minor</td> <td>Moderate</td> <td>Moderate</td> <td>Moderate</td> <td>Low</td> <td>Low</td> </tr> <tr> <td>Insignificant</td> <td>Low</td> <td>Low</td> <td>Low</td> <td>Low</td> <td>Low</td> </tr> </tbody> </table>			Severity	Likelihood					Certain / Frequent	Likely / Occasional	Possible / Remote	Unlikely / Improbable	Exceptional / Impossible	Catastrophic	High	High	High	Moderate	Moderate	Major	High	High	Moderate	Moderate	Moderate	Moderate	High	Moderate	Moderate	Moderate	Low	Minor	Moderate	Moderate	Moderate	Low	Low	Insignificant	Low	Low	Low	Low	Low
Severity	Likelihood																																										
	Certain / Frequent	Likely / Occasional	Possible / Remote	Unlikely / Improbable	Exceptional / Impossible																																						
Catastrophic	High	High	High	Moderate	Moderate																																						
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Minor	Moderate	Moderate	Moderate	Low	Low																																						
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Corrective Action Plan																																											
(The corrective action plan is based on the recommendations of the Runway Safety Team and is to be completed as part of the Runway Safety Team meeting)																																											
Action Plan Description:																																											
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APPENDIX D: BEST PRACTICE GUIDE FOR “HOT SPOTS” IDENTIFICATION, REMOVAL AND PROMULGATION

1.1. Aerodrome operators, air navigation services providers (ANSPs) and other key stakeholders should be especially aware of locations on an aerodrome with a history of, or potential risk for, collisions or runway incursions. Additionally, hot spots may be locations that, although fully compliant, are potentially difficult to navigate due to awkward geometry, or where additional awareness is required, such as at runway crossing locations.

1.2. Ideally, the runway safety team (RST) will ensure that hot spots do not exist. To achieve this objective, aerodrome operators, in conjunction with the RST, should conduct an assessment to determine whether any hot spot currently exists on the aerodrome. The assessment should also address the potential for air traffic procedures (particularly acknowledging runway incursion causal factors, such as the use of conditional clearances and non-standard communications) and other aerodrome operating procedures to create any hot spots. Human factors should also be given due consideration in any hot spot assessment.

1.3. If hot spots are identified, the recommended strategy should be implemented to remove the hazard and, where this is not immediately possible, manage and mitigate the risk. These strategies may include:

- a) construction of new taxiways;
- b) additional visual aids (signs, markings, lights);
- c) use of alternative routings;
- d) mitigating against blind spots in the aerodrome control tower;
- e) awareness campaigns; and
- f) publishing the hot spot in the AIP.

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1.4. Some hot spot causal factors may be addressed swiftly but others may take much longer to remove, or it may be impracticable to remove them altogether.

1.5. A new hot spot may occur as a result of a change to the movement area or an operating procedure. An assessment should therefore be conducted before the start of any work, such as new pavement layout on the maneuvering area, or the introduction of a new or revised operating procedure, to prevent the inadvertent creation of new hot spots.

1.6. The assessment described above should be repeated periodically to ensure its validity and take into account current aerodrome operating practices and design.

1.7. Where the measures to mitigate or remove an identified hot spot will be a lengthy process, or if it is considered that the publication of a hot spot would benefit pilot awareness, the hot spot should be notified by an appropriate means to air traffic services personnel and pilots using the aerodrome. However, if a hot spot is likely to exist for more than one aeronautical information regulation and control (AIRAC) publication cycle, it should be notified on the aerodrome chart in the AIP as specified in the Civil Aviation (Aeronautical Charts) Regulations and as a warning in the specific aerodrome as per Civil Aviation (Air Traffic Services) Regulations.

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APPENDIX E: RUNWAY SAFETY EVENT CAUSAL FACTORS

The following list is provided to identify the most common causes of runway safety events:

- a) weather.
- b) runway surface conditions (contamination);
- c) aerodrome design;
- d) longitudinal runway slopes;
- e) conditional clearances;
- f) multiple line-up procedures;
- g) runway crossing procedures;
- h) simultaneous use of intersecting runways;
- i) late issuance or late changes of departure clearances;
- j) inadequate, improper or non-standard phraseology;
- k) concurrent use or use of more than one language for ATS communication;
- l) radio frequency congestion;
- m) English language competence;
- n) excessive pilot workload;
- o) excessive controller workload;
- p) work in progress; and
- q) distraction (pilot, controller, driver, etc.).

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APPENDIX F: SUSPENSION OR CLOSURE OF RUNWAY OPERATIONS

1.1 Planned and unplanned events on an aerodrome can necessitate the temporary suspension of runway operations for a short period of time (counted in hours) or for a longer period of time (counted in days).

1.2 In the majority of cases, reasons for suspending runway operations will be unplanned. Examples may include:

- a) short-term removal of disabled aircraft or vehicle on runway;
- b) significant foreign object debris (FOD) on runway;
- c) significant wildlife strike remains on runway; d) significant failure of aeronautical ground lighting or instrument landing system (ILS);
- d) presence of ice/snow/flooding on runway;
- e) aircraft incident, e.g. tail scrape, aborted take-off, tire burst; and
- f) full emergency or local standby.

1.3 If runway operations must be suspended for a longer period of time due to planned circumstances, consideration should be given to closing the runway. Examples for runway closure may include:

- a) removal of disabled aircraft or heavy vehicle on runway which is expected to take significant time;
- b) significant deterioration of runway surface; and
- c) planned maintenance (e.g. rubber removal, repainting of markings, aeronautical ground lighting maintenance/cleaning, surface repairs).

1.4 Aerodrome operators should ensure that all stakeholders are fully aware of the procedures in place in the event of a suspension of runway operations. During such a suspension, the aerodrome operator should maintain a record of all activities.

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1.5 The aerodrome operator should augment the testing of the written procedure through regular table-top exercises.

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APPENDIX G — AN EXAMPLE OF RST CASE

Note. — This material is offered as an example “case scenario” only and not intended to serve as a standard for how RST meetings should be conducted. The authors of this handbook recognize that the procedure used by a particular RST is dependent on the needs, capabilities, and complexities of the participating organizations.

a) Meeting Preparation

Three weeks prior to the meeting, the Chairperson solicited input for agenda topics from each of the members. In response to this request, the airport manager indicated that he would like to discuss a planned construction project near the approach end of one of the parallel runways. After receiving input from the rest of the members, the Chairperson consolidated the information and distributed the agenda to the team one week prior to the meeting date.

b) Attendance

The following attendees were present during the meeting:

- Tower Supervisor (Chairperson), voting member.
- Airport Manager, voting member.
- Airline Operations Manager, voting member.
- Flight School Operations Manager, voting member.
- Airport Safety Manager (RST Secretary), supporting member.
- Fire Chief routinely invited guest.
- Regulator, routinely invited guest.
- Construction Foreman, subject matter expert invited by the Airport Manager.

c) Previous Business

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During this phase of the meeting, updates to previous action items were discussed and documented on the

Action Log. Communication plans were reviewed and the next issue of the airport newsletter was presented.

d) New Business

Following the Previous Business, the Chairperson asked each member to present the new hazards and issues identified through their respective safety management systems. When it was his turn, the Airport Manager asked the Construction Foreman to brief the team on the upcoming construction project. The Construction Foreman provided the following details to the RST:

1. In an effort to address water accumulation issues, the airport plans to install a drainage system near the approach end of the secondary runway.
2. Given the location of the worksite, construction vehicles must cross the primary runway.
3. In an effort to reduce the impact on the arrival rate, the work is scheduled to occur at night.
4. In an effort to reduce the likelihood of a runway incursion by a construction vehicle, each driver will be required to attend a special training course and escorts will be used during the project.

e) System Description

The Runway Safety Team discussed how the airport system would be affected by this project. Their comments were documented by the airport Safety Manager and included the following:

1. There will be a high volume of construction vehicles wanting to cross the primary runway during night operations.

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2. The tower may have difficulty in communicating directly with the drivers of the construction vehicles.
3. Signs, markings, and lighting for taxiways and runways will be modified during the period of construction.

f) Hazard Identification

The RST then described the hazards and possible consequences associated with this project. The airport Safety Manager (in his role as the RST Secretary) captured the following comments:

- 1) Generic Hazard: Airport Construction.
- 2) Specific Hazard: Construction vehicles crossing the primary runway.
- 3) Consequences of the Hazard:
 - vii. Construction vehicles may deviate from the prescribed procedures and cross the primary runway without clearance.
 - viii. Aircraft could conflict with a crossing vehicle.

g) Safety Risk Assessment Process

The RST Secretary documented the following results of the risk assessment process:

1. The RST concluded there is a remote probability that a construction vehicle will deviate from prescribed procedures and cross the primary runway without an escort.
2. Given there is a night airfreight operation at the airport, the RST concluded there is a remote probability an aircraft could conflict with a crossing vehicle.
3. While the probability of an aircraft/construction vehicle conflict is remote, the RST assessed that, should such conflict occur, the severity of the occurrence could be catastrophic.
4. The RST assessed existing defenses (driver training programme, use of escorts for construction vehicles, signs, markings and lighting).

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5. Using their safety risk assessment matrix and their safety risk tolerability matrix, the RST assessed the safety risk index as 3A (“unacceptable under the existing circumstances”).
6. The RST concluded, therefore, that the safety risk of the consequences of the hazard generated by movement of construction vehicles to the construction site is, under the prevailing conditions, unacceptable and that control/mitigation is necessary.

h) Safety Risk Control Process

Given the conflict between the need to address the drainage issues by the airport and the unacceptability of the assessed risk by the RST, an adjustment to the original plan must be made.

1. While reviewing the airport diagram, one of the members suggested using the perimeter road to gain access to the construction site while continuing to use the escort vehicles to guide the construction crew.
2. With this mitigation as part of the plan, the RST used the same process to assess the probability and severity of the consequences of the hazards and determined that, although the severity would remain catastrophic, the likelihood would drop to “extremely improbable.”
3. This resulted in an assessment value of 1A (“Acceptable based on risk mitigation. It may require management decision”) using the safety assessment matrix.
4. The RST documented this recommendation in the Action Log and tasked the Airport Manager with the responsibility for ensuring their recommendation was communicated to Airport Authority prior to beginning construction.
5. The Chairperson then added an item to the next RST meeting agenda requesting a follow-up on the status of this recommendation and the project.

i) Action Log Documentation

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Throughout the meeting the RST Secretary documented the process in the Hazard Identification and Safety Risk Management Log. The purpose of this log is to provide a useful method for tracking recommendations and as a reference for future safety risk assessments. The log should be retained permanently in the “safety library” under the care of the current Chairperson. (Please see Appendix E for an example of how this entry might appear in an Action Log maintained by the RST.)

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APPENDIX H — LIST OF USEFUL REFERENCES

- Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual (ICAO Doc 9830)
- Aerodrome Design Manual (ICAO Doc 9157)
- Airport Services Manual (ICAO Doc 9137)
- Circular 329 AN191 Runway Surface Condition Assessment, Measurement and Reporting
- Global Air Navigation Plan (ICAO Doc 9750)
- Global Air Traffic Management Operational Concept (Doc 9854)
- Human Factors Guidelines for Air Traffic Management (ATM) Systems (ICAO Doc 9758)
- Hazardous to Civil Aircraft Operations (ICAO Doc 9554)
- Hazards at Aircraft Accident Sites (ICAO Cir 315)
- Human Factors Digest No. 17 — Threat and Error Management (TEM) in Air
- Traffic Control (ICAO Cir 314)
- ICAO Annex 19 to the Convention on International Civil Aviation, Safety Management
- Manual of Aircraft Ground De-icing/Anti-icing Operations (ICAO Doc 9640)
- Manual of All-Weather Operations (ICAO Doc 9365)
- Manual on Airspace Planning Methodology for the Determination of Separation
- Minima (ICAO Doc 9689)
- Manual on Air Traffic Management System Requirements (ICAO Doc 9882)
- Manual on Certification of Aerodromes (ICAO Doc 9774)
- Manual on ICAO Bird Strike Information Systems (IBIS) (ICAO Doc 9332)
- Manual on the Prevention of Runway Incursions (ICAO Doc 9870)
- Manual on Required Communication Performance (RCP) (ICAO Doc 9869)
- Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument

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- Runways (SOIR) (ICAO Doc 9643)
- Manual of Surface Movement Guidance and Control Systems (SMGCS) (ICAO Doc 9476)
- Operation of New Larger Aeroplanes at Existing Aerodromes (ICAO Cir 305)
- Reducing the Risk of Runway Incursions (Flight Safety Foundation, May 2009)
- Safety Management Manual (ICAO Doc 9859, 3rd edition)
- ICAO Annexes 6, 11, 14 and 19 to the Convention on International Civil Aviation
- ACI Airside Safety Handbook and Wildlife Management Handbook
- CANSO Runway Safety Maturity Checklist
- CANSO Flyer – Avoiding Unstable Approaches
- CANSO Flyer – Runway Excursions
- European Action Plan for the Prevention of Runway Excursions
- European Action Plan for the Prevention of Runway Incursions
- FAA Runway Safety: A Best Practices Guide to Operations and Communications
- FAA Guide to Ground Vehicle Operations
- FAA Pilot's Guide to Airport Signs and Markings Drilled Card
- FAA Pilot and Flight Crew Taxi Procedures at Towered Airports Drilled Card
- Runway Safety Programme (FAA Order 7050.1A)
- IATA Pilot / ATC Phraseology Report
- IATA REER Toolkit
- IFALPA Runway Safety Manual

An ICAO iKit is available, containing available Runway Safety Products from various stakeholders at http://cfapp.icao.int/tools/RSP_ikit/story.html