



State Safety Programme for the UK Overseas Territories

Part 2: The All-OT Safety Plan 2009/10 to 2011/12

Change History

Changes to this document will be achieved by a re-issue of the entire document rather than by the amendment of individual pages.

Issue No	Date	Description
Issue 0.1	7 April 2008	First Draft
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State Safety Programme for the UK Overseas Territories

Part 2: The All-OT Safety Plan 2009/10 to 2011/12

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Introduction

This All-OT Safety Plan is Part 2 of the State Safety Programme for the UK Overseas Territories (OTs) and is the more operationally focused part, covering a period of three years.

In addition to this All-OT Safety Plan, each Overseas Territory Aviation Authority (OTAA) is responsible for its own Safety Plan, to allow for variations and any additional aims and objectives to cover local needs.

The purpose of a Safety Plan is to enable linkage between national regulatory planning and the regulated organisations. This is done by providing safety objectives suitable for adoption in operators' and service providers' safety management systems (SMS) to give focus for proactive measures to improve safety. Clearly it will be up to the individual organisation to ensure that the safety objectives in their SMS take adequate account of the hazards and risks identified in relation to their own activities as well as including relevant safety objectives from the Safety Plans.

In addition to providing safety objectives, the All-OT Safety Plan gives guidance in the form of *examples (in italic text)* of the sort of activities to be conducted by an organisation towards meeting the safety objectives in their SMS. These activities will ideally be set as tasks for managers, and in each case *examples of monitoring questions* are also provided, to be used to measure successful implementation. These activities should be quantified wherever it is reasonably practicable do to so. In this context the values provided <in brackets> will be for the organisation to specify.

In many areas of aviation in the OTs there is an absence of information suitable for establishing baseline performance trends or comparison data, therefore an important early activity will be to ensure that data is gathered and recorded, including safety data from routine aviation operations. Gathering further data in the process of monitoring the activities to meet the safety objectives will then enable the functioning of the SMS to be reviewed for effective implementation, and improvements made.

Whilst the need for more data is seen as an important factor, for example for developing better safety performance indicators (SPI) in the future, the development of an active safety culture is considered vital for the benefits of SMS to be sustained. Both of these factors are reflected in the aims and objectives of the plan.

The All-OT Safety Plan

The All-OT Safety Plan describes safety aims grouped under seven major areas (domains) which are considered to be of central importance for improvements to be made in aviation safety in the Overseas Territories. Within each domain these aims are then refined to provide one or more safety objectives suitable for adoption in operators' and service providers' safety management systems.

The absence of baseline data means that selection of aims and objectives has been to some extent subjective in this first version of the plan. It is hoped that improvements in reporting and recording, and in safety culture generally, will enable future safety planning to include objectives that will be more evidence based.

The aims and objectives of the plan are grouped under the following domains –

- 1 **Effective regulation**
- 2 **Effective safety management**
- 3 **Effective reporting systems**
- 4 **Aerodrome safety and air traffic services (ATS)**
- 5 **Aircraft operations**
- 6 **Continued airworthiness**
- 7 **Emergency preparedness**

How to use the Safety Plan

- 1 Read through the plan and decide which domains are relevant to your own organisation.
Note: Domain 2 'Effective safety management' and domain 7 'Emergency preparedness' are important for every regulated organisation; and domain 3 'Effective reporting systems' is relevant for all.
- 2 Include objectives from the relevant domains as objectives for safety improvement in your SMS.
- 3 Develop activities which you believe will result in achievement of each objective; and at the same time write the monitoring questions, using the *examples provided for guidance*. Design the activities and questions in terms that are measurable wherever practicable.
- 4 Be sure to include tasks for gathering and recording baseline data, and also for gathering further data to check for effective implementation.
- 5 Ensure the activities are appropriately assigned to managers, so they know exactly what needs to be done on a day-to-day basis towards achieving the safety objectives of the SMS.
- 6 Your monitoring questions should be used in conjunction with the SMS evaluation question sets (on the ASSI website www.airsafety.aero) to monitor the functioning of your SMS and to prepare for external auditing.
- 7 Review and reset your safety policy and objectives at least annually to ensure your SMS is focused on the correct areas, including any changes in the objectives set by OT Safety Plans.

Acknowledgements

ASSI acknowledges the assistance of Professor Richard Booth and Health And Safety Technology And Management Ltd towards developing this All-OT Safety Plan. Monitoring questions are intended to be compatible with HASTAM's 'CHASE' audit program.

Aims and Objectives

DOMAIN 1: Effective regulation

Aim

- 1.1 To ensure the Overseas Territory Aviation Authority (OTAA) is fit for purpose. (ICAO's 8 Critical Elements of a Safety Oversight System)

Objectives

- 1.1.1 Ensure the effectiveness of the OTAA assessment programme.
1.1.2 Ensuring the independence of the regulator.
1.1.3 Ensuring the OTAA management system is appropriate.

Aim

- 1.2 To provide focus for proactive measures to improve safety.

Objectives

- 1.2.1 Develop a Safety Plan specific to the particular Overseas Territory.

Aim

- 1.3 To ensure that the benefits of introducing SMS will be sustained.

Objectives

- 1.3.1 Support the development of an active safety culture in the Territory.

DOMAIN 2: Effective safety management (by operators/service providers)

Aim

- 2.1 To achieve continuous improvement of the overall performance of the SMS.

Objectives

- 2.1.1 To implement a fully functional SMS as an integral part of the management and working practices of the organization.
2.1.2 To promote the development of an active safety culture so that the benefits of the SMS will be sustained.

DOMAIN 3: Effective reporting systems

Aim

- 3.1 To enable data to be used effectively in setting and reviewing safety objectives.

Objectives

- 3.1.1 Encourage full and complete reporting of all accidents, incidents and potential hazards.
3.1.2 Encourage development of systems/databases for storage, and the investigation and follow-up of reports and information.
3.1.3 Ensure that results of analysis and trend identification are used.

DOMAIN 4: Aerodrome safety and air traffic services (ATS)**Aim**

4.1 To improve safety in the aerodrome environment.

Objectives

- 4.1.1 Mitigate risks from obstacles/terrain on runway approach/extended centreline at uncertificated aerodromes.
- 4.1.2 Minimise the risks associated with short runway operations.
- 4.1.3 Reduce/eliminate incidence of runway incursions.
- 4.1.4 Improve safeguarding of aerodrome protected surfaces and areas.

Aim

4.2 To improve physical infrastructure at airports / ATS units.

Objectives

- 4.2.1 Reduce/eliminate cases of dilapidation and disrepair at airports / ATCUs.
- 4.2.2 Ensure ATC equipment is suitable and remains functional.

Aim

4.3 To mitigate the consequences of communication failure in air traffic control (ATC).

Objectives

- 4.3.1 To ensure continued safe operations when communication is lost with aircraft at a critical stage of approach/missed approach.
- 4.3.2 To reduce the incidence of loss of separation due to lack of communications.
- 4.3.3 Ensure the ability to provide a safe air traffic service when telephone communication with adjacent unit(s) is lost.

DOMAIN 5: Aircraft operations**Aim**

5.1 To improve safety of flight by visual reference at night and/or in reduced visibility / instrument meteorological conditions (IMC).

Objectives

- 5.1.1 Prevent loss of control on take-off.
- 5.1.2 Minimise risk of collision with terrain or obstacle on take-off/en-route.
- 5.1.3 Reduce the incidence of Airproxes.
- 5.1.4 Prevent loss of control on approach.

Aim

5.2 To mitigate risks from obstacles/terrain on runway approach/extended centreline at uncertificated aerodromes.

Objectives

- 5.2.1 Prevent loss of control avoiding obstacle.
- 5.2.2 Reduce incidence of unstabilised approach/late touchdown, landing over-run.

Aim

5.3 To minimise errors and omissions by flight crew.

Objectives

- 5.3.1 Improve flight crew co-ordination.
- 5.3.2 Improve situational awareness.

DOMAIN 6: Continued airworthiness (includes aircraft technical and maintenance etc.)**Aim**

6.1 To prevent aircraft from being operated in contravention of continued airworthiness/maintenance requirements.

Objectives

6.1.1 Ensure that compliance with applicable requirements is not undermined by external or internal influences.

6.1.2 Ensure that only bona-fide aircraft components, parts and equipment are used.

6.1.3 Ensure that maintenance procedures remain appropriate.

DOMAIN 7: Emergency preparedness (includes emergency response plans and continuity planning)**Aim**

7.1 To ensure preparedness for different emergency scenarios.

Objectives

7.1.1 Ensure safety of operations during emergency response.

7.1.2 Maintain safety of operations during the recovery phase following an emergency.

DOMAIN 1: Effective regulation**Aim**

1.1 To ensure the Overseas Territory Aviation Authority (OTAA) is fit for purpose. (ICAO's 8 Critical Elements of a Safety Oversight System)

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
1.1.1 Ensure the effectiveness of the OTAA assessment programme.	<i>Agree programming and terms of reference (ToR) for OTAA assessments.</i>	<i>Have the dates and ToR for the next OTAA assessment been agreed?</i>
	<i>Ensure rectification action is carried out to close corrective and preventive action requests (CPARs) within the agreed timescales.</i>	<i>Have rectification actions been translated into activities, and tasks allocated to ensure closure of CPARs within the agreed timescales?</i>
	<i>Include consideration of all relevant ICAO audit findings into own OTAA forward planning.</i>	<i>Have ICAO audit findings been taken into account in own OTAA forward planning?</i>
	<i>Develop and maintain an action plan for the OTAA to progress towards full designation in all functional areas.</i>	<i>When was the designation action plan last reviewed and updated?</i>

Aim

1.1 To ensure the Overseas Territory Aviation Authority (OTAA) is fit for purpose. (ICAO's 8 Critical Elements of a Safety Oversight System)

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
1.1.2 Ensuring the independence of the regulator.	<i>Review arrangements for effectiveness of separation of regulation from service provision.</i>	<i>When were the arrangements for ensuring separation of regulation from service provision last reviewed?</i>
	<i>Present results of the review and any recommendations for improvement of the regulatory arrangements for consideration by the Governor/government <biannually>.</i>	<i>Have the results of the review and recommendations for improvement of the regulatory arrangements been presented for consideration by the Governor/government as planned?</i>
	<i>Ensure there is in place an appropriate and robust whistleblowing policy and procedures.</i>	<i>Are the provisions for protected disclosure adequate to assure staff that they are properly protected if they need to raise concerns about practices that may affect the integrity and/or independence of regulatory activities?</i>

Aim

1.1 To ensure the Overseas Territory Aviation Authority (OTAA) is fit for purpose. (ICAO's 8 Critical Elements of a Safety Oversight System)

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
1.1.3 Ensuring the OTAA management system is appropriate.	<i>Do preparatory work to understand the need.</i>	<i>Has reference been made to ICAO Doc.9734 Part A 'Establishment of a State's Safety Oversight System' and ICAO Doc.9859 Ed.2 Chapter 11 'State Safety Programme'?</i>
	<i>Make and communicate a plan.</i>	<i>Does the plan identify who will do what, and does it provide timescales?</i>
	<i>Conduct a gap analysis of the existing management system, taking account of the key challenges, hazards and risks faced by the OTAA (i.e. a risk profile).</i>	<i>Has the existing management system made appropriate provision in relation to e.g. quality management?</i>
	<i>Prepare a report and communicate the results.</i>	<i>Are all staff members aware of the findings contained in the report?</i>
	<i>Ensure actions to implement any necessary changes are incorporated in the OTAA business plan.</i>	<i>Does the OTAA business plan identify the required actions and timescales?</i>
	<i>Implement a procedure for periodic review of the OTAA management system so that optimum performance can be achieved and sustained.</i>	<i>Does the documented review procedure ensure that the results of the management system review will be presented to key stakeholders?</i>

Aim

1.2 To provide focus for proactive measures to improve safety.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
1.2.1 Develop a Safety Plan specific to the particular Overseas Territory.	<i>Consider the Aims and Objectives in the All-OT Safety Plan and adopt those that are relevant for own Territory and/or aircraft on register.</i>	<i>Have relevant Aims and Objectives from the All-OT Safety Plan been included in the <own OT> Safety Plan?</i>
	<i>Develop <own OT> Safety Plan including appropriate Aims, Objectives and any variations to cover needs for own Territory and/or aircraft on register.</i>	<i>Have the Aims and Objectives in the <own OT> Safety Plan been defined in terms that facilitate linkage to the safety objectives in an operator's/service provider's SMS?</i>

	<i>Ensure target dates for SMS evaluation are included in <own OT> Safety Plan, taking account of the proposed timescales in the SMS Evaluation Plan (on the ASSI website www.airsafety.aero).</i>	<i>Have target dates for SMS evaluation been translated into activities and allocated to regulatory staff to ensure progress of SMS implementation within the agreed timescales?</i>
	<i>Promulgate the <own OT> Safety Plan by <31 December 2009>.</i>	<i>Are operators/service providers aware that the safety objectives in their SMS should reflect relevant objectives in the Safety Plans in addition to the identified hazards and risks for their operation?</i>

Aim

1.3 To ensure that the benefits of introducing SMS will be sustained.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
1.3.1 Support the development of an active safety culture in the Territory.	<i>Ensure OTAA managers and staff are aware of their personal responsibility to promote active reporting/safety culture.</i>	<i>What examples can be given to demonstrate the individual manager's efforts to promote active reporting/safety culture?</i>
	<i>Review and ensure adequacy of mechanisms for training, communication, and dissemination of safety information to support operators and service providers in the development of an active safety culture.</i>	<i>Do current arrangements adequately provide for training, communication, and dissemination of safety information to support the development of an active safety culture?</i>
	<i>Seek OTAA participation in industry activities for safety promotion and opportunities for demonstrating commitment.</i>	<i>Have OTAA staff participated in other organisations' safety promotion activities?</i>
	<i>Engage the involvement of the Governor/visiting dignitaries to give prominent endorsement for promoting safety culture.</i>	<i>How many times have opportunities been taken to involve the Governor/visiting dignitaries, for example to present safety awards?</i>
	<i>Include SMS implementation/promotion of safety culture as a standing agenda item for OTAA staff meetings.</i>	<i>What are the opinions of OTAA staff regarding the effectiveness of their efforts to promote active reporting/safety culture?</i>

DOMAIN 2: Effective safety management (by operators and service providers)**Aim**

2.1 To achieve continuous improvement of the overall performance of the SMS.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
2.1.1 To implement a fully functional SMS as an integral part of the management and working practices of the organization.	<i>Ensure that everyone involved in the operation will have the opportunity to contribute to the development and implementation of the SMS; e.g. a safety committee with input from all work areas and meetings to be held every <month> but at intervals not greater than <6 weeks>.</i>	<i>Has the organisation made systematic efforts so that everybody involved in the operation can contribute to the development and implementation of the SMS?</i>
	<i>Conduct a gap analysis to find out which SMS components and elements are already in place and to identify the parts that are missing, by reference to the requirements in OTARs and guidance in SMS OTACs.</i>	<i>Do the results of the gap analysis show which SMS components and elements are already in place and identify the parts that are missing, e.g. in a table?</i>
	<i>Identify and record the boundaries of the SMS, and develop an SMS implementation plan.</i>	<i>Does the SMS implementation plan identify who will do what, and does it provide timescales?</i>
	<i>Ensure the SMS implementation plan is communicated effectively to all those affected.</i>	<i>Does everyone involved in the operation understand how SMS implementation will affect their role and/or location where they are working?</i>
	<i>Check and update training plans to ensure that all employees and interested parties receive appropriate SMS education and training.</i>	<i>Have all employees and interested parties received the planned SMS education and training?</i>
	<i>Ensure all employees at all levels understand that safety is everybody's responsibility.</i>	<i>Have all employees' job descriptions and managers' objectives been updated to reflect the functioning of the SMS?</i>
	<i>Make use of the 'Basic SMS Evaluation' as an aid to monitoring implementation of the SMS (on the ASSI website www.airsafety.aero).</i>	<i>Is there evidence that implementation of the SMS is being monitored and are details available for verification?</i>
	<i>When 'Basic SMS Evaluation' indicates that a component of the SMS is be developing towards the 'Functional' stage, apply the relevant section of the 'Advanced SMS Evaluation' (e.g. Section 5 'Risk assessment & mitigation').</i>	<i>Has use been made of the 'Advanced SMS Evaluation' question set in relation to any SMS component (or to guide future action)?</i>

	<i>Provide regular communication and feedback (both internal and external) every <week/month>, e.g. via meetings, safety bulletins etc.</i>	<i>Does the organisation have adequate mechanisms to communicate, disseminate safety information and provide feedback, and are these being used?</i>
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Aim

2.1 To achieve continuous improvement of the overall performance of the SMS.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
2.1.2 To promote the development of an active safety culture so that the benefits of the SMS will be sustained.	<i>Ensure all managers are aware of their personal responsibility and accountability to promote active reporting/safety culture.</i>	<i>What examples of e.g. leadership/example/commitment can be given to demonstrate the individual manager's efforts to promote active reporting/safety culture?</i>
	<i>Ensure all employees at all levels understand that safety is everybody's responsibility.</i>	<i>Do hazard/unsafe condition reports properly reflect the whole spectrum of the organisation's activities and the full range of incidents and near misses that would be expected?</i>
	<i>Engage the involvement of the Chairman/Chief Executive to give prominent endorsement for promoting just culture/safety culture.</i>	<i>How many times have opportunities been taken to involve the Chairman/Chief Executive, for example chairing safety committee, undertaking safety tours, presenting safety awards etc?</i>
	<i>Hold staff meetings every <appropriate interval> and include SMS implementation/promotion of safety culture as a standing agenda item.</i>	<i>Have the staff meetings been held as planned? Have all staff attended at least <x%> of staff meetings?</i>
	<i>Record action items for all meetings, and ensure these are followed up, reviewed and closed when completed.</i>	<i>Have action items from all meetings been appropriately tracked?</i>
	<i>Seek opportunities for activities for safety promotion and for demonstrating commitment.</i>	<i>Have employees and interested parties participated in own or other organisations' safety promotion activities?</i>
	<i>Ensure that effective communication and feedback mechanisms are in place and used, especially between managers and staff.</i>	<i>What are the employees' opinions about the organisation's efforts to promote active reporting/safety culture?</i>

DOMAIN 3: Effective reporting systems

Aim

3.1 To enable data to be used effectively in setting and reviewing safety objectives.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
3.1.1 Encourage full and complete reporting of all accidents, incidents and potential hazards.	<i>Publish a statement of the organisation's reporting policy, endorsed by the Chief Executive/Accountable Manager, and emphasising just culture.</i>	<i>Do employees understand the organisation's reporting policy?</i>
	<i>Ensure all managers are aware of their personal responsibility and accountability for providing leadership to encourage full and complete reporting.</i>	<i>What examples can be given to demonstrate the individual manager's efforts to promote full and complete reporting/just culture?</i>
	<i>Review managers' job descriptions and objectives to reflect the need for full and complete reporting.</i>	<i>When was each manager's performance last reviewed in relation to achievement of reporting objectives?</i>
	<i>Ensure adequacy of training so that all employees at all levels understand how and when they should submit reports.</i>	<i>Do submitted reports properly reflect the whole spectrum of the organisation's activities and the full range of incidents and near misses that would be expected?</i>
	<i>Liaise with external service providers and contractors, to achieve compatibility in the reporting of faults and errors etc.</i>	<i>Do the procedures for co-ordination with external service providers and contractors address the reporting of faults and errors etc?</i>
	<i>Develop an incentives scheme to improve the quality of reporting/investigation, and to increase the number of near misses reported.</i>	<i>Has the organisation made systematic efforts to acknowledge (and reward?) examples of improved reporting standards?</i>
	<i>Provide tangible responses to improve the quality of reporting/investigation, and to increase the number of near misses reported.</i>	<i>Does the organisation consistently respond, act upon and provide feedback for reports received, particularly when they do not accord with the management view?</i>
	<i>Engage the involvement of the Chairman/Chief Executive to give prominent endorsement for promoting just culture/safety culture.</i>	<i>How many times have opportunities been taken to involve the Chairman/Chief Executive, for example chairing safety committee, undertaking safety tours, presenting safety awards etc?</i>

	<i>Find out if efforts have been effective towards improving the range and quality of reports being made.</i>	<i>What are the employees' opinions about the organisation's efforts to encourage full and complete reporting of all accidents, incidents and potential hazards?</i>
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Aim

3.1 To enable data to be used effectively in setting and reviewing safety objectives.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
3.1.2 Encourage development of systems/databases for storage, and the investigation and follow-up of reports and information.	<i>Find out what the storage/tracking system needs to be able to do.</i>	<i>Has the functionality of the report storage and tracking system been defined?</i>
	<i>Consider the need for compatibility with other relevant systems/databases.</i>	<i>Is the database compatible with other relevant databases?</i>
	<i>Ensure that reports are verified (i.e. checking the facts) and followed up appropriately, and closed on completion of any necessary investigation.</i>	<i>Have staff followed the procedures for verification and follow-up and closure for reports and information received?</i>
	<i>Convey confidence that the purpose of investigation and follow-up is to maximise the potential safety benefits.</i>	<i>Do employees believe assurances regarding the data that is retained and how it will be used?</i>

Aim

3.1 To enable data to be used effectively in setting and reviewing safety objectives.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
3.1.3 Ensure that results of analysis and trend identification are used.	<i>Generate baseline data to enable future safety performance indicators (SPI) and safety performance targets (SPT) to be devised.</i>	<i>Have managers been made accountable for activities designed to gather suitable baseline data, e.g. per x movements, per hour of business, per day/week/month year, in relation to what it should have been etc?</i>
	<i>Analyse trends and present the results for review by safety committee/senior management every <appropriate interval>.</i>	<i>Has analysis been undertaken and trends presented for review every <appropriate interval>?</i>

	<i>Maintain safety risk register and propose changes to the organisation's safety risk profile.</i>	<i>Have changes to the safety risk register been used for maintaining the organisation's safety risk profile up to date?</i>
	<i>Review and propose amendments to the organisation's safety objectives in light of trend analysis and the changing safety risk profile.</i>	<i>Have the organisation's safety objectives been reviewed and amended taking into account the available evidence?</i>
	<i>Promulgate information to reduce the incidence of repeat accidents and incidents.</i>	<i>Has information that could reduce the incidence of repeat accidents and incidents been effectively promulgated as soon as it became available?</i>

DOMAIN 4: Aerodrome safety and air traffic services (ATS)**Aim**

4.1 To improve safety in the aerodrome environment.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.1.1 Mitigate risks from obstacles/terrain on runway approach/extended centreline at uncertificated aerodromes.	<i>Conduct a survey and chart relevant obstacles/terrain.</i>	<i>Has the obstacle/terrain survey been completed and charts produced?</i>
	<i>Review the obstacle/terrain survey <annually>.</i>	<i>Are the survey results/charts up to date?</i>
	<i>Liaise with other interested parties and arrange for increased conspicuity/obstruction lights to be installed where identified by the survey.</i>	<i>Are significant obstructions appropriately conspicuous/lighted?</i>
	<i>Arrange for obstacles to be removed where possible.</i>	<i>Has the hazard been eliminated?</i>
	<i>Promulgate appropriate and up to date information in relation to any particular obstacles/terrain identified as presenting particular risks.</i>	<i>Has up to date information been appropriately promulgated for any obstacles/terrain identified as presenting particular risks?</i>

Aim

4.1 To improve safety in the aerodrome environment.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.1.2 Minimise the risks associated with short runway operations.	<i>Require prior permission for use of the aerodrome (PPR).</i>	<i>Is there available an up to date list of those operators (and types and registrations of aircraft) that currently have permission to use the aerodrome?</i>
	<i>Restrict operations according to defined criteria.</i>	<i>Have the criteria been defined: for particular operators, by aircraft type etc?</i>
	<i>Check runway dimensions and markings.</i>	<i>Are runway markings correct and accurate; and are they adequate?</i>
	<i>Monitor runway surface condition and availability of runway end safety areas (RESAs) every <appropriate interval>.</i>	<i>Has runway surface information been passed for all aircraft movements?</i>
	<i>Ensure adequate surface wind indication and information passed to pilots.</i>	<i>Has surface wind information been passed for all aircraft movements?</i>

	<i>Investigate installation/check/improve adequacy of glide slope indication.</i>	<i>Are glide slopes correctly indicated?</i>
	<i>Ensure operators are aware of the need to ensure aircraft performance will be adequate to enable safe operations.</i>	<i>Is the need for short runway operations procedures and training made clear in PPR information/brief?</i>

Aim

4.1 To improve safety in the aerodrome environment.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.1.3 Reduce/eliminate incidence of runway incursions.	<i>Check complete visibility of aerodrome manoeuvring area from control tower.</i>	<i>Is the control tower adequately sited?</i>
	<i>Check that marking of runway stop bars etc is correct: by day and night.</i>	<i>Does marking of runway stop bars etc conform with the requirements?</i>
	<i>Ensure that runway stop bars etc inspected <twice daily>.</i>	<i>Are there adequate records of inspections of runway stop bars etc?</i>
	<i>Record incidence of runway incursions including incidents that nearly happened.</i>	<i>Are the arrangements for monitoring and gathering this data being used?</i>
	<i>Identify runway hotspots (places where incursions may be more likely) and ensure these are marked on aerodrome maps.</i>	<i>Are runway hotspots clearly identified on aerodrome maps?</i>
	<i>Develop a plan to eliminate/mitigate runway hotspots.</i>	<i>Does the plan for eliminating/mitigating runway hotspots identify who will do what, and does it provide timescales?</i>
	<i>Ensure that all drivers have received appropriate training prior to driving airside.</i>	<i>Is there available a list of all drivers holding valid airside driving permit?</i>
	<i>Ensure that formal procedures and briefing are in place for vehicle drivers, and aerodrome maps provided.</i>	<i>Have all airside drivers received appropriate briefing prior to driving airside and at the intervals specified in the procedure?</i>
	<i>Monitor carriage of aerodrome maps in every vehicle every <appropriate interval>.</i>	<i>Are there adequate records of checks made on vehicles used on the aerodrome?</i>
	<i>Provide publicity regarding dangers of runway incursion.</i>	<i>Are the dangers of runway incursion appropriately publicized?</i>

	<i>Ensure controllers understand the importance of clear, unambiguous clearance instructions from ATC, including correct readback.</i>	<i>Is clarity of clearances included in all controllers' competence checks?</i>
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Aim

4.1 To improve safety in the aerodrome environment.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.1.4 Improve safeguarding of aerodrome protected surfaces and areas.	<i>Produce an aerodrome safeguarding procedure.</i>	<i>Do staff understand the procedure and is it being used?</i>
	<i>Conduct safeguarding surveys every <appropriate interval>.</i>	<i>Have safeguarding surveys been carried out at the specified intervals?</i>
	<i>Ensure safeguarding survey reports are presented for senior management review.</i>	<i>Have safeguarding survey reports been presented for senior management review?</i>
	<i>Liaise with government/local planning department and agree co-ordination arrangements.</i>	<i>Have suitable co-ordination arrangements been agreed by all interested parties?</i>
	<i>Liaise with Attorney General and airport regulator, as appropriate, to ensure legal process is in place to ensure safeguarding.</i>	<i>Are the necessary legal arrangements in place to enable effective aerodrome safeguarding?</i>

Aim

4.2 To improve physical infrastructure at airports / ATS units.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.2.1 Reduce/eliminate cases of dilapidation and disrepair at airports / ATCUs.	<i>Monitor condition of buildings, facilities and equipment every <appropriate interval>.</i>	<i>Is condition of infrastructure monitored/inspected at appropriate intervals?</i>
	<i>Ensure that formal arrangements are in place for maintenance/replacement of the fabric of buildings, facilities and equipment.</i>	<i>Are there formal arrangements for maintenance/replacement of the fabric of buildings, facilities and equipment?</i>
	<i>Require/encourage reports of all damage and/or deterioration through company reporting schemes.</i>	<i>Is all damage and/or deterioration being reported?</i>
	<i>Ensure reports are presented for senior management review.</i>	<i>Have reports been presented for senior management review?</i>

Aim

4.2 To improve physical infrastructure at airports / ATS units.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.2.2 Ensure ATC equipment is suitable and remains functional.	<i>Ensure that formal arrangements are in place for replacement and maintenance of ATC and other technical equipment.</i>	<i>Is there a plan in place for the replacement and maintenance of ATC and other technical equipment?</i>
	<i>Review, with safety in mind, all proposed new equipment acquisitions and related procedures (e.g. SHELL analysis*).</i>	<i>Have all new equipment acquisitions been subject to appropriate change management processes under the organisation's SMS?</i>
	<i>Define the competencies required for maintenance staff/contractors and ensure that only competent persons/organisations are employed.</i>	<i>Have all persons/organisations engaged to do maintenance work met the defined competencies?</i>

* SHELL = software / hardware / environment / liveware / liveware

Aim

4.3 To mitigate the consequences of communication failure in air traffic control (ATC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.3.1 To ensure continued safe operations when communication is lost with aircraft at a critical stage of approach/missed approach.	<i>Ensure availability of a serviceable signal lamp.</i>	<i>Do staff know who is responsible for ensuring that the signal lamp is available and that it works? Have daily checks included serviceability of the signal lamp?</i>
	<i>Ensure ATC personnel understand the correct procedures and lamp signals etc to be used if radio communications are lost.</i>	<i>Do the controllers know and understand the procedures and lamp signals etc to be used if radio communications are lost?</i>
	<i>Practise communications failure procedures, by prior arrangement, every <x months>.</i>	<i>Have communications failure procedures been practised every <x months> as planned?</i>

Aim

4.3 To mitigate the consequences of communication failure in air traffic control (ATC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.3.2 To reduce the incidence of loss of separation due to lack of communications.	<i>Ensure that controllers have received appropriate and effective training in radio communications failure procedures.</i>	<i>Are loss of communications procedures and procedures to avoid separation loss included in controllers' competence checks?</i>
	<i>Include checks of communications failure procedure in SMS internal monitoring not less than every <appropriate interval>.</i>	<i>Have checks of communications failure procedure been made during SMS internal monitoring at the specified intervals?</i>

Aim

4.3 To mitigate the consequences of communication failure in air traffic control (ATC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
4.3.3 Ensure the ability to provide a safe air traffic service when telephone communication with adjacent unit(s) is lost.	<i>Liaise with adjacent unit(s) to check/update local procedures for using aircraft relay / alternative landline communications when telephone communication is lost.</i>	<i>Are local procedures up to date and co-ordinated with adjacent unit(s)?</i>
	<i>Ensure ATC personnel understand the local procedures for alternative communications with adjacent unit(s) when telephone communication is lost.</i>	<i>Do the controllers know and understand the procedures to cope with loss of telephone communication?</i>
	<i>Ensure daily checks include serviceability of any back-up equipment.</i>	<i>Have instances of unserviceability been reported and rectified?</i>
	<i>Run exercises every <appropriate interval> on to test validity of loss of communications procedures and effectiveness of training.</i>	<i>Have results of loss of communications exercises been documented and used to test the validity of the procedures and effectiveness of training?</i>

DOMAIN 5: Aircraft operations**Aim**

5.1 To improve safety of flight by visual reference at night and/or in reduced visibility / instrument meteorological conditions (IMC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.1.1 Prevent loss of control on take-off.	<i>Record number (proportion) of take-offs made at night and/or in reduced visibility, and details of crews involved.</i>	<i>Are there arrangements in place to monitor the number (proportion) of take-offs made at night and/or in reduced visibility?</i>
	<i>Consult with pilots and aerodrome authorities to identify any departures with particular risks.</i>	<i>Has effective consultation taken place with pilots and aerodrome authorities, and were departures with particular risks identified?</i>
	<i>Promulgate appropriate and up to date information in relation to any particular departures identified as presenting particular risks.</i>	<i>Has up to date information been promulgated for any departures identified as presenting particular risks?</i>
	<i>Check and update training plans to ensure appropriate initial and recurrent training for all pilots.</i>	<i>Have all pilots received the planned training?</i>
	<i>Promote awareness of e.g. black hole/somatogravic illusion and importance of practising instrument scan and sterile cockpit in good VMC.</i>	<i>Have there been effective safety promotion/education activities and awareness to maintain control for both visual and instrument flight?</i>

Aim

5.1 To improve safety of flight by visual reference at night and/or in reduced visibility / instrument meteorological conditions (IMC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.1.2 Minimise risk of collision with terrain or obstacle on take-off/en-route.	<i>Monitor carriage of current route guides, charts and plates not less than every <appropriate interval>.</i>	<i>Are there adequate records of checks made on document carriage?</i>
	<i>Gather data on application of IFR minimum flight altitudes and cancellation of IFR flight plans</i>	<i>Has data been recorded to understand the proportion of IFR to VFR?</i>
	<i>Ensure that pilots and operations staff understand the procedures for determining visibility, and the rules for choice of IFR/VFR.</i>	<i>Are pilots and operations staff using correct procedures to determine visibility and the choice of IFR/VFR?</i>

Aim

5.1 To improve safety of flight by visual reference at night and/or in reduced visibility / instrument meteorological conditions (IMC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.1.3 Reduce the incidence of Airproxes.	<i>Ensure pilots monitor correct seat adjustments, lookout and visual scanning, and cleanliness of cockpit windows in the context of flight-crew co-ordination.</i>	<i>Are pilots making reports so that data can be gathered generally, regarding corrective interventions made in the context of flight crew co-ordination?</i>
	<i>Check ACAS/TCAS equipage complies with the requirements in OTARs.</i>	<i>Is there a record of the TCAS versions that are installed in the aircraft?</i>
	<i>Ensure that all pilots of ACAS equipped aircraft have received appropriate training in use of ACAS. (See OTAC 'ACAS Training for Pilots'.)</i>	<i>Have all pilots of ACAS equipped aircraft received appropriate training?</i>
	<i>Ensure that pilots understand the procedures for the use of ACAS contained in the Operations Manual.</i>	<i>Do pilots know and understand the correct procedures for responding to TAs and RAs?</i>

Aim

5.1 To improve safety of flight by visual reference at night and/or in reduced visibility / instrument meteorological conditions (IMC).

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.1.4 Prevent loss of control on approach.	<i>Consult with pilots and aerodrome authorities to identify any approaches with particular risks.</i>	<i>Has effective consultation taken place with pilots and aerodrome authorities?</i>
	<i>Promulgate appropriate and up to date information in relation to any particular approaches identified as presenting particular risks.</i>	<i>Has up to date information been promulgated for any approaches identified as presenting particular risks?</i>
	<i>Maintain liaison with aerodrome authorities and ensure any mitigations/changes in the aerodrome environment are promulgated to pilots.</i>	<i>Is there up to date aerodrome information provided to pilots, identifiable by version number and date?</i>
	<i>Ensure pilots know they are expected to follow instrument approach procedures and make full use of visual approach aids whenever visual conditions are marginal and always at night (include in SOPs).</i>	<i>Are pilots using instrument approach procedures and making full use of visual approach aids whenever visual conditions are marginal and always at night?</i>

	<i>Ensure Operations Manual contains appropriate stabilised approach procedures, including limitations on high rates of descent near the surface.</i>	<i>Does the Operations Manual contain appropriate stabilised approach procedures, including limitations on high rates of descent near the surface?</i>
	<i>Ensure that pilots understand the procedures for stabilised approach.</i>	<i>Have reports been made and recorded for corrective interventions that have been made by flight crews?</i>

Aim

5.2 To mitigate risks from obstacles/terrain on runway approach/extended centreline at uncertificated aerodromes.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.2.1 Prevent loss of control avoiding obstacle.	<i>Ensure pilots understand procedures to ensure aircraft performance will be adequate to enable safe operations.</i>	<i>Are pilots using correct procedures to apply weight, altitude, temperature, wind, surface etc performance limitations?</i>
	<i>Ensure emergency and non-normal manoeuvres are conducted for all pilots during training or competency checking (in accordance with OTAR 121.793 or OTAR 135.789).</i>	<i>Do pilots have the ability to recover from extreme flight conditions representative of loss of control in flight scenarios?</i>

Aim

5.2 To mitigate risks from obstacles/terrain on runway approach/extended centreline at uncertificated aerodromes.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
Reduce incidence of unstabilised approach/late touchdown, landing over-run.	<i>Ensure Operations Manual contains appropriate stabilised approach procedures, including limitations on high rates of descent near the surface.</i>	<i>Does the Operations Manual contain appropriate stabilised approach procedures, including limitations on high rates of descent near the surface?</i>
	<i>Ensure that pilots understand the procedures for stabilised approach.</i>	<i>Have reports been made and recorded for corrective interventions that have been made by flight crews?</i>

Aim

5.3 To minimise errors and omissions by flight crew.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.3.1 Improve flight crew co-ordination.	<i>Review Operations Manual <annually> and ensure it contains clear instructions for flight-crew co-ordination, including pre-flight briefing, briefing prior to critical phases of flight, division of duties, monitoring and challenge/response.</i>	<i>When was the Operations Manual last reviewed, and does it contain clear instructions for flight-crew co-ordination in all these areas?</i>
	<i>Ensure Operations Manual contains instructions for use of ACAS/TCAS, including a clear definition of whether the pilot flying or the pilot-in-command will fly the aircraft during a response to an RA.</i>	<i>Does the Operations Manual contain clear instructions for use of ACAS/TCAS, with clear definition of who will fly the aircraft during a response to an RA?</i>
	<i>Ensure all training, including ACAS training, correctly reflects the company's procedures in the Operations Manual and checklists.</i>	<i>Have training notes/syllabus been compared with the company's flight safety documents? Has all training been conducted using flight documentation and procedures that correctly reflect the company's system?</i>
	<i>Monitor checklists for adequacy and availability in the aircraft every <appropriate interval>.</i>	<i>Are there adequate records of checks made on document carriage?</i>
	<i>Ensure pilots monitor operational application of procedures for flight-crew co-ordination.</i>	<i>Have reports been made and recorded for corrective interventions that have been made by flight crews?</i>
	<i>Hold crew meetings every <appropriate interval> and disseminate (without blame) safety information from reports of corrective interventions.</i>	<i>Has this safety information been communicated to everybody who may benefit from knowing?</i>

Aim

5.3 To minimise errors and omissions by flight crew.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
5.3.2 Improve situational awareness.	<i>Ensure that recurrent training includes, and pilots understand the procedures for descent, and the importance of approach briefings for maintaining situational awareness.</i>	<i>Do reports properly reflect the incidence of e.g. rushed checks/briefings and failure to adhere to standard procedures?</i>

	<i>For all pilots of aircraft equipped with GPWS/TAWS, ensure training includes correct use of the visual display to improve awareness of nearby terrain.</i>	<i>Have all pilots of GPWS/TAWS equipped aircraft received appropriate training?</i>
	<i>Ensure that recurrent training includes, and pilots understand, the procedures for ground movement and the significance of aerodrome signs, markings and lights in order to maintain situational awareness.</i>	<i>How many reports have been submitted by pilots in relation to poor/unserviceable signage, markings and lights, uncertainty or confusion on the ground etc.</i>

DOMAIN 6: Continued airworthiness (includes aircraft technical and maintenance etc.)**Aim**

6.1 To prevent aircraft from being operated in contravention of continued airworthiness/maintenance requirements.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
6.1.1 Ensure that compliance with applicable requirements is not undermined by external or internal influences.	<i>Ensure that all maintenance personnel understand their personal responsibilities for safety and for ensuring requirements are adhered to.</i>	<i>Have reports been made of corrective interventions that have been made by maintenance personnel?</i>
	<i>Ensure that all maintenance personnel receive appropriate training in the operation of the SMS.</i>	<i>Have all maintenance personnel received the planned SMS training?</i>
	<i>Hold maintenance staff meetings every <appropriate interval> and disseminate (without blame) safety information, including information from reports of corrective interventions.</i>	<i>Has this safety information been communicated to everybody who may benefit from knowing? Have all maintenance staff attended at least <x%> of staff meetings?</i>
	<i>Record action items for all meetings, and ensure these are followed up, reviewed and closed when completed.</i>	<i>Have action items from all meetings been appropriately tracked?</i>

Aim

6.1 To prevent aircraft from being operated in contravention of continued airworthiness/maintenance requirements.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
6.1.2 Ensure that only bona-fide aircraft components, parts and equipment are used.	<i>Conduct a stock check of all new and pre-used parts held and ensure documentation and storage requirements are correct, no later than <date>.</i>	<i>Was the stock check conducted as planned, and were documentation and storage requirements found to be correct?</i>
	<i>Review procedures for control of components, and identify and correct potential areas of vulnerability, no later than <date>.</i>	<i>What were the areas of vulnerability that were identified, and how were these corrected?</i>
	<i>Develop a plan for routine (on receipt) and <periodic> checking of parts and control procedures.</i>	<i>Does the plan for ongoing and periodic checking of parts and control procedures identify who will do what, and does it provide timescales?</i>
	<i>Draw up an audit programme for periodic checks of contractors, to verify their systems and controls do not erode own organisation's safety levels.</i>	<i>Have contractors' systems and controls been verified on the occasions and at the intervals that were planned?</i>

Aim

6.1 To prevent aircraft from being operated in contravention of continued airworthiness/maintenance requirements.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
6.1.3 Ensure that maintenance procedures remain appropriate.	<i>Gather and review information and data on recurring defects.</i>	<i>What conclusions were drawn from recurring defect information and what actions have been taken as a result?</i>
	<i>Conduct a systematic review no later than <date> and then every <appropriate interval> to check the technical adequacy of information on instructions/work cards.</i>	<i>Have the reviews taken place when planned and action taken where necessary?</i>
	<i>Make provision for involvement of maintenance personnel to gather views and information on the adequacy and clarity of instructions/work cards.</i>	<i>Have maintenance personnel been fully involved and their views and information gathered on the adequacy and clarity of instructions/work cards?</i>
	<i>Liaise with maintenance personnel to identify problem areas e.g. where procedural workarounds have developed, tool control etc.</i>	<i>What problem areas and procedural workarounds were identified?</i>
	<i>Liaise with maintenance personnel to identify where written procedures have become out of date with working practices.</i>	<i>What discrepancies were found between working practices and written procedures? Did the changes in working practices improve or degrade safety?</i>
	<i>Ensure written procedures are brought up to date taking account of problem areas and any changes in working practices.</i>	<i>Have changes to working practices and written instructions been subject to appropriate change management processes of the organisation's SMS (e.g. SHELL analysis*)?</i>
	<i>Hold maintenance staff meetings every <appropriate interval> to gather maintenance information and communicate feedback e.g. where procedures have been updated.</i>	<i>Have all maintenance staff attended at least <x%> of staff meetings?</i>
	<i>Record action items for all meetings, and ensure these are followed up, reviewed and closed when completed.</i>	<i>Have action items from all meetings been appropriately tracked?</i>

* SHELL = software / hardware / environment / liveware / liveware

DOMAIN 7: Emergency preparedness (includes emergency response plans and continuity planning)**Aim**

7.1 To ensure preparedness for different emergency scenarios.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
7.1.1 Ensure safety of operations during emergency response.	<i>Conduct a brainstorming exercise to identify possible emergency scenarios.</i>	<i>Is there a list of the possible emergency scenarios to provide a basis for planning?</i>
	<i>Liaise with government/local disaster management department and other relevant parties and agree co-ordination arrangements.</i>	<i>Have suitable co-ordination arrangements been agreed by the interested parties?</i>
	<i>Ensure that emergency response planning is designed to address the various possible scenarios.</i>	<i>Does the organisation's emergency response plan provide practical guidance that will be useful for the personnel who may have to deal with different emergency situations?</i>
	<i>Identify minimum infrastructure for safe operation during emergency situations (facilities, runway, radio, fire/rescue etc).</i>	<i>Has minimum infrastructure for safe operation been identified for different emergency situations?</i>
	<i>Develop/revise emergency response plan for own organisation/location, including checklists, to maintain safety of operations during emergency response.</i>	<i>Does the emergency response plan address the designation of authority and the assignment of responsibilities? Is the current emergency response plan compatible with government/local contingency plans, including the aviation security plan?</i>
	<i>Promulgate emergency response plan in SMS and to all relevant parties.</i>	<i>Are there up to date copies of the emergency response plan and checklists available at the locations where these will be needed?</i>
	<i>Ensure appropriate emergency training is included in training plans for all employees.</i>	<i>Have all employees received the planned training? Do staff understand the emergency response plan as relevant to their role and/or location where they are working?</i>
	<i>Conduct a disaster/emergency exercise by <date> and then not less than every <appropriate interval>.</i>	<i>Have the disaster/emergency exercises been carried out at the specified intervals?</i>

	<i>Develop and implement a <5 year> programme of disaster/emergency exercises to cover the various scenarios.</i>	<i>Has a programme of exercises been implemented, covering the different possible scenarios?</i>
	<i>Hold immediate post exercise debriefs, and thorough debrief within <x weeks> of each exercise.</i>	<i>Are the findings from the emergency exercise debriefs documented and made available for review of emergency planning and training?</i>
	<i>Ensure emergency response plans are reviewed and revised in light of experience gained.</i>	<i>Have results of disaster/emergency exercises been used to ensure the validity of the plans and effectiveness of training?</i>

Aim

7.1 To ensure preparedness for different emergency scenarios.

Objective	Activity to meet objective (tasks for managers)	Monitoring questions
7.1.2 Maintain safety of operations during the recovery phase following an emergency.	<i>Identify minimum infrastructure for safe continuation of operations (facilities, runway, radio, fire/rescue, maintenance etc).</i>	<i>Has minimum infrastructure for safe continuation of operations been identified?</i>
	<i>Establish minimum staffing levels for continued safe operations (numbers, skills etc).</i>	<i>Have minimum staffing levels been identified?</i>
	<i>Develop a plan for operations to support relief needs in an emergency.</i>	<i>Does the plan for supporting relief needs in an emergency address the designation of authority and the assignment of responsibilities?</i>
	<i>Develop a contingency plan including, e.g. reducing levels of activity, liaison with the public health authority; and handling of communications.</i>	<i>Is the plan for provision of a safe service e.g. with reduced staffing levels compatible with government/local contingency plans?</i>
	<i>Draw up a list of contact details for all personnel and for obtaining staffing support and/or use of alternative arrangements, by <date> and then review at least <annually>.</i>	<i>Is the list of contact details included in the plan and identifiable as being up to date?</i>
	<i>Incorporate with the emergency response plan as part of the SMS and promulgate to all relevant parties.</i>	<i>Has the plan for operations during the recovery phase following an emergency and/or with reduced staffing levels been incorporated with the emergency response plan and made available at the locations where it will be needed?</i>

Aim

Objective	Activity to meet objective (tasks for managers)	Monitoring questions

Aim

Objective	Activity to meet objective (tasks for managers)	Monitoring questions