

APPENDIX

EXTRACT FROM THE EUROPEAN ACTION PLAN FOR THE PREVENTION OF RUNWAY INCURSIONS

The following recommendations have been extracted from the European Action Plan for the Prevention of Runway Incursions to share the lessons learned by this region. The full Action Plan and its supporting appendices can be seen at <http://www.eurocontrol.int/safety/>.

1. GENERAL PRINCIPLES

- 1.1 At individual aerodromes, as designated by the National Aviation Safety Authorities, a Runway Safety Team should be established to lead action on local runway safety issues.
- 1.2 A local runway safety awareness campaign should be initiated at each aerodrome for Air Traffic Controllers, Pilots and Drivers and other personnel who operate on or near the runway.
- 1.3 Confirm that all infrastructure, practices and procedures relating to runway operations are in compliance with ICAO provisions.
- 1.4 Where practicable, ensure that specific joint training and familiarisation in the prevention of runway incursion is provided, to the pilots, air traffic controllers and vehicle drivers, to increase understanding of the roles and difficulties of personnel working in other areas.

2. AERODROME OPERATOR ISSUES

- 2.1 Verify the implementation of Annex 14 provisions and implement maintenance programmes relating to Runway operations e.g. marking, lighting, signage. Ensure that signs and markings are clearly visible, adequate and unambiguous in all conditions.
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- 2.3 Works in progress — Ensure that information about temporary work areas is adequately disseminated and that temporary signs and markings are clearly visible, adequate and unambiguous in all conditions.
- 2.4 Assess the need for additional ICAO standards for aerodrome signage marking and lighting. Make recommendations to ICAO where appropriate.
- 2.5 Implement safety management systems in accordance with ICAO provisions.
- 2.6 Ensure a continued focus on runway safety in internal audit activities.
- 2.7 Introduce a formal Driver training and assessment programme or, where already in place, review it against the Driver training guidelines.

2.8 Introduce formal communications training and assessment for Drivers and other personnel who operate on or near the runway.

3. **COMMUNICATIONS (Language, Radiotelephony, Phraseologies and Procedures)**

3.1 Use full aircraft or vehicle call signs for all communications associated with runway operations.

3.2 Verify the use of standard ICAO RTF phraseologies.

3.3 Use the ICAO read-back procedure (including Drivers and other personnel who operate on the manoeuvring area).

3.4 Improve situational awareness, when practicable, by conducting all communications associated with runway operations using aviation English.

3.5 Improve situational awareness, when practicable, by conducting all communications associated with runway operations on a common frequency.

4. **AIRCRAFT OPERATOR ISSUES**

4.1 Provide training and assessment for Pilots regarding Aerodrome signage, marking and lighting.

4.2 Pilots shall not cross red stop bars when lining up or crossing a runway, unless contingency procedures are in force, for example to cover cases where the stop bars or controls are unserviceable.

4.3 Ensure that flight deck procedures contain a requirement for explicit clearances to cross any runway. *Includes non-active runways.*

4.4 When in receipt of line-up clearance, Flight crew must advise ATC if they will need to hold on the runway for more than 90 seconds beyond the time it would normally be expected to depart.

4.5 Promote best practices on flight deck procedures while taxiing — to include the “Sterile flight deck” concept.

4.6 Promote best practices for pilots planning of ground operations.

5. **ANSP ISSUES**

5.1 Implement safety management systems in accordance with ESARR3 provisions.

5.2 Survey the different methods and techniques in use to indicate to controllers that a runway is temporarily obstructed and recommend Best Practice.

5.3 Whenever practical give ATC en-route clearance prior to taxi.

- 5.4 Develop an ICAO compliant procedure applicable if an aircraft or vehicle becomes lost on the aerodrome manoeuvring area.
- 5.5 Aircraft shall not be instructed to cross red stop bars when entering or crossing a runway unless contingency measures are in force, e.g. to cover cases where the stop bars or controls are unserviceable.
- 5.6 Ensure that ATC communication messages are not overly long or complex.
- 5.7 Ensure that ATC procedures contain a requirement for explicit clearances to cross any runway. Includes non-active runways.
- 5.8 Identify the safety benefits of carrying out runway inspections in the opposite direction to runway movements and if appropriate adopt the procedure.
- 5.9 Use standard taxi routes when practical to minimise the potential for pilot confusion, on or near the runway.
- 5.10 Where applicable use progressive taxi instructions to reduce pilot workload and the potential for confusion.
- 5.11 Avoid infringing sight lines from the tower and assess visibility restrictions from the tower, which have a potential impact on the ability to see the runway, and disseminate this information as appropriate. Recommend improvement when possible and develop appropriate procedures.
- 5.12 Ensure that runway safety issues are included in training and briefing for ATC staff.
- 5.13 Identify any potential hazards of runway capacity enhancing procedures when used individually or in combination and if necessary develop appropriate mitigation strategies.
- 5.14 Do not issue line up clearance to an aircraft if this aircraft will be required to hold on the runway for more than 90 seconds beyond the time that it would normally be expected to depart.
- 5.15 When using multiple line-ups, do not use oblique or angled taxiways that limit the ability of the Flight crew to see the runway threshold.

6. DATA COLLECTION AND LESSON SHARING

- 6.1 Promote the implementation of occurrence reporting compatible with an international harmonised reporting system i.e. the Accident/Incident Reporting System 2000.
- 6.2 Improve the quality of runway occurrence data by starting work to extend the AGA taxonomy in ADREP 2000, used in occurrence reporting.
- 6.3 On a Europe wide basis, disseminate de-identified information on actual runway occurrences to increase understanding of causal and contributory factors to enhance lesson learning.

7. REGULATORY ISSUES

- 7.1 Confirm that all infrastructure, practices and procedures relating to runway operations are in compliance with ICAO provisions.
- 7.2 Make the appropriate regulations available to ensure implementation of safety management systems in accordance with the applicable standards.
- 7.3 Ensure that safety assurance documentation for operational systems (new and modified) demonstrates compliance with regulatory and safety management system requirements.
- 7.4 National Aviation Safety Authorities should focus on runway safety in their inspection activities.
- 7.5 Certify aerodromes according to ICAO provisions, Annex 14.

8. AERONAUTICAL INFORMATION MANAGEMENT

- 8.1 Significant aerodrome information, which may affect operations on or near the runway, should be provided to pilots in “real-time” using radio communication.
- 8.2 Verify that the collection, provision and dissemination of the content of aeronautical information are in accordance with ICAO provisions.
- 8.3 Providers of databases and charts of aeronautical information (including Aircraft Operators) must establish a process with AIS with the objective of ensuring the data accuracy, timeliness, availability and integrity.
- 8.4 Ensure that an accuracy feedback process exists for the users of aeronautical information.
- 8.5 The ergonomics of Maps and Charts and relevant documentation should be improved to enhance their readability and usability.
- 8.6 Aerodrome operators to provide aeronautical information in standard electronic format (i.e. the Aeronautical Information Exchange Model) with ANSPs/AIS for upload into European AIS Database.

9. FUTURE WORK – TECHNOLOGY AND MANAGEMENT

- 9.1 Data on the implementation guidelines for surface movement radar and information about the development of new technologies that can be applied to runway safety shall be disseminated as part of the general runway safety awareness campaign.
- 9.2 Identify any ICAO guidance material that should be upgraded to ICAO standards and recommended practices and review other relevant materials.
- 9.3 Initiate a programme to better understand human factors contribution to runway incursions.

9.4 Review the “Heads up, Heads down” time requirement of procedures and working methods, assess their potential impact on runway safety and recommend improvement when appropriate.

10. ACKNOWLEDGEMENTS

ACI	Airports Council International
AEA	Association of European Airlines
Belgocontrol	
BAA	British Airports Authority
CAA	Safety Regulation Group
DFS	Deutsche Flugsicherung GmbH
DNA	Direction de la Navigation Aérienne
ENAV S.p.A.	
EUROCONTROL	
ECA	European Cockpit Association
ERA	European Regional Airlines Association
GASR	Group of Aerodrome Safety Regulators
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IAOPA	International Council of Aircraft Owner and Pilot Association
IFATCA	International Federation of Air Traffic Controllers’ Association
IFALPA	International Federation of Airline Pilots Association
JAA	Joint Aviation Authorities
NATS	UK National Air Traffic Services Ltd.

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