EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION

EUROCONTROL

ESARR ADVISORY MATERIAL/GUIDANCE MATERIAL
(EAM/GUI)

EAM 3 / GUI 5

MAPPING BETWEEN ESARR 3 AND ICAO PROVISIONS ON SAFETY MANAGEMENT SYSTEMS AT AERODROMES

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Abstract :

This document is intended to provide ATM safety regulators with guidance to deal with situations where SMS is implemented in ATM services provided at aerodromes. It includes a mapping between the ICAO provisions on safety management systems in aerodromes (ICAO Annex 14 SARPs and guidance to States included in the model regulations of Doc 9774) and the safety regulatory requirements established in ESARR 3 Section 5.

The findings and guidance of this document should be considered within the national context and complemented or adapted in the light of aspects related to the specific cases under national consideration.

Keywords :

ICAO	Annex 14	Document 9774
ESARR 3	Mapping of Requirements	Aerodromes
Certification of Aerodromes	Means of Compliance	Safety Management System

Contact Person(s) :	**Tel :**	**Unit :**
Juan Vázquez Sanz	+32 2 729 46 81	DG/SRU

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F.3 DOCUMENT APPROVAL

The following table identifies all management authorities who have approved this document.

AUTHORITY	NAME AND SIGNATURE*	DATE
Quality Control (SRU)	***signed by Daniel Hartin*** (Daniel HARTIN)	18-Mar-04
Head Safety Regulation Unit (SRU)	***signed by Peter Stastny*** (Peter STASTNY)	18-Mar-04
Chairman Safety Regulation Commission (SRC)	***signed by Martin Radusch*** (Martin RADUSCH)	18-Mar-04

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0.1	21-Jan-04	Draft produced after RTF consultation. Document submitted to SRC for review and comment.	Section 6.3
1.0	18-Mar-04	Document formally released.	All

F.5 CONTENTS

F.6 EXECUTIVE SUMMARY

In July 2000, the EUROCONTROL Permanent Commission adopted ESARR 3 Edition 1.0 for its implementation within the national safety regulatory frameworks of the EUROCONTROL Member States (Decision No. 84).

ESARR 3 requires ATM service providers to implement and operate a safety management system (SMS) as an integral part of the management of ATM services. ESARR 3 also identifies the mandatory elements of any SMS implemented in the provision of ATM services within the EUROCONTROL Member States.

Annex 14 to the Convention on International Civil Aviation (ICAO) contains Standards and Recommended Practices (SARPs) on aerodrome design and operations. More particularly, its third edition, dated July 2003, incorporated SARPs requiring States to certify aerodromes used for international operations. Annex 14 also establishes that, as of 24 November 2005, certified aerodromes shall have in operation a safety management system. Guidance to States on criteria for the certification of aerodromes has been provided in ICAO Document 9774 'Manual on Certification of Aerodromes' (hereafter refered to as 'Doc 9774'). It includes model (or sample) regulations proposing specific regulatory arrangements and identifying some elements to be found in any SMS implemented at aerodromes.

As a result, SMS will have to be implemented, not only in the provision of ATM services associated to aerodromes, but also as regards the operation of the certified aerodromes at which those services are provided. This raises the need for a comparison between ESARR 3 and the ICAO provisions on SMS in aerodromes.

This document is intended to provide ATM safety regulators with guidance to deal with situations where SMS is implemented in ATM services provided at aerodromes. The findings and guidance of this document should be considered within the national context and, if applicable, complemented or adapted in the light of aspects related to the specific cases under national consideration.

This document includes a mapping between the ICAO provisions on SMS in aerodromes (ICAO Annex 14 SARPs and guidance to States included in the model regulations of Doc 9774) and the safety regulatory requirements established in ESARR 3 Section 5.

From the findings of that mapping, it becomes clear that ESARR 3 can be used by aerodrome operators to implement the SMS required in the SARPs contained in ICAO Annex 14.

However, the practical application of such option and the links between SMS implemented by aerodrome operators and ATM services providers may depend on local circumstances. Specific aspects may need to be considered within the national regulatory framework. From the different situations that can be found, the document describes some basic case scenarios useful to identify issues that could need to be addressed by the ATM safety regulator.

1. INTRODUCTION

In its initial work on the harmonisation of safety regulatory requirements, the Safety Regulation Commission (SRC) identified and focussed on those safety areas which, in their view, needed most urgent attention. On this basis, the SRC Work Programme recognised the need to establish a number of EUROCONTROL Safety Regulatory Requirements (ESARRs), one of which was ESARR 3 “Use of Safety Management Systems by ATM Service Providers”.

In July 2000, the EUROCONTROL Permanent Commission adopted ESARR 3 Edition 1.0 for its implementation within the national safety regulatory frameworks of the EUROCONTROL Member States (Decision No. 84).

ESARR 3 requires ATM service providers to implement and operate a safety management system (SMS) as an integral part of the management of ATM services. ESARR 3 also identifies the mandatory elements of any SMS implemented in the provision of ATM services within the EUROCONTROL Member States.

Annex 14 to the Convention on International Civil Aviation contains SARPs on aerodrome design and operations. More particularly, its third edition, dated July 2003, incorporated SARPs requiring States to certify aerodromes used for international operations. Annex 14 also establishes that, as of 24 November 2005, certified aerodromes shall have in operation a safety management system. Guidance to States on criteria for the certification of aerodromes has been provided in ICAO Document 9774 ‘Manual on Certification of Aerodromes’[1]. The Manual includes model (or sample) regulations proposing specific regulatory arrangements and identifying some elements to be found in any SMS implemented at aerodromes.

As a result, Safety Management Systems (SMS) will have to be implemented, not only in the provision of ATM service associated to aerodromes but also as regards the complete operation of the certified aerodromes at which those services are provided. This raises the need for a comparison between ESARR 3 and the ICAO provisions on safety management systems in aerodromes.

2. PURPOSE

This document is part of a series of guidance deliverables developed by SRC for its use by ATM safety regulators when dealing with the implementation of ESARR 3 by ATM service providers.

It includes a mapping between the ICAO provisions on safety management systems at aerodromes (ICAO Annex 14 SARPs and guidance to States included in the model regulations of Doc 9774) and the safety regulatory requirements established in ESARR 3 Section 5.

[1] *ICAO Doc 9774 AN/969 Manual on Certification of Aerodromes, First Edition, 2001.*

This document is intended to provide ATM safety regulators with guidance to deal with situations where SMS is implemented in those ATM services provided at aerodromes. The findings and guidance of this document should be considered within the national context and if applicable, complemented or adapted in the light of aspects related to the specific cases under national consideration.

This document does not represent SRC recognition of any particular approach as an acceptable means of compliance to meet ESARR 3 requirements.

3. PROVISIONS UNDER CONSIDERATION AND THEIR SCOPE

Within the ATM domain, consistency between ESARR 3 and ICAO Annex 11 has been documented in EAM 3 / ICAO[2]. That assessment showed that the requirements and recommended practices for ATS safety management published in Annex 11, Edition 13 are adequately covered within ESARR 3.

In that sense, ESARR 3 requires the implementation of a complete safety management system beyond the introduction of specific safety management practices forming a programme as proposed in Annex 11. ESARR 3 has also a wider scope and addresses safety management with regard to all ATM services instead of confining its requirements to ATS as Annex 11 does.

Therefore, ESARR 3 provides for a European-wide solution to the implementation of safety management covering the provisions of Annex 11, Section 2.26. It also addresses the management of safety in any ATM service provided without confining the SMS scope to ATS as Annex 11 proposes. Consequently, this document focuses on ESARR 3 and only refers to Annex 11 wherever it appears necessary.

Regarding aerodrome operations, ICAO Annex 14, Section 1.3 contains SARPs requiring the implementation of SMS in those aerodromes subject to certification by States. In the context of Annex 14, an aerodrome is a defined area on land or water (including **any** buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Annex 14 does not specify any links between the safety management provisions contained in Annexes 11 and 14. In that regard, it should be noted that Section 1.2.1 (Applicability) recognises that the interpretation of some specifications in the Annex expressly requires the exercising of discretion by States. However, a possible interpretation can be found in the guidance[3] of Doc 9774 which indicates[4] that:

- ATS services normally have their own regulations, and therefore ATS regulations are not covered by the Manual on Certification of Aerodromes;

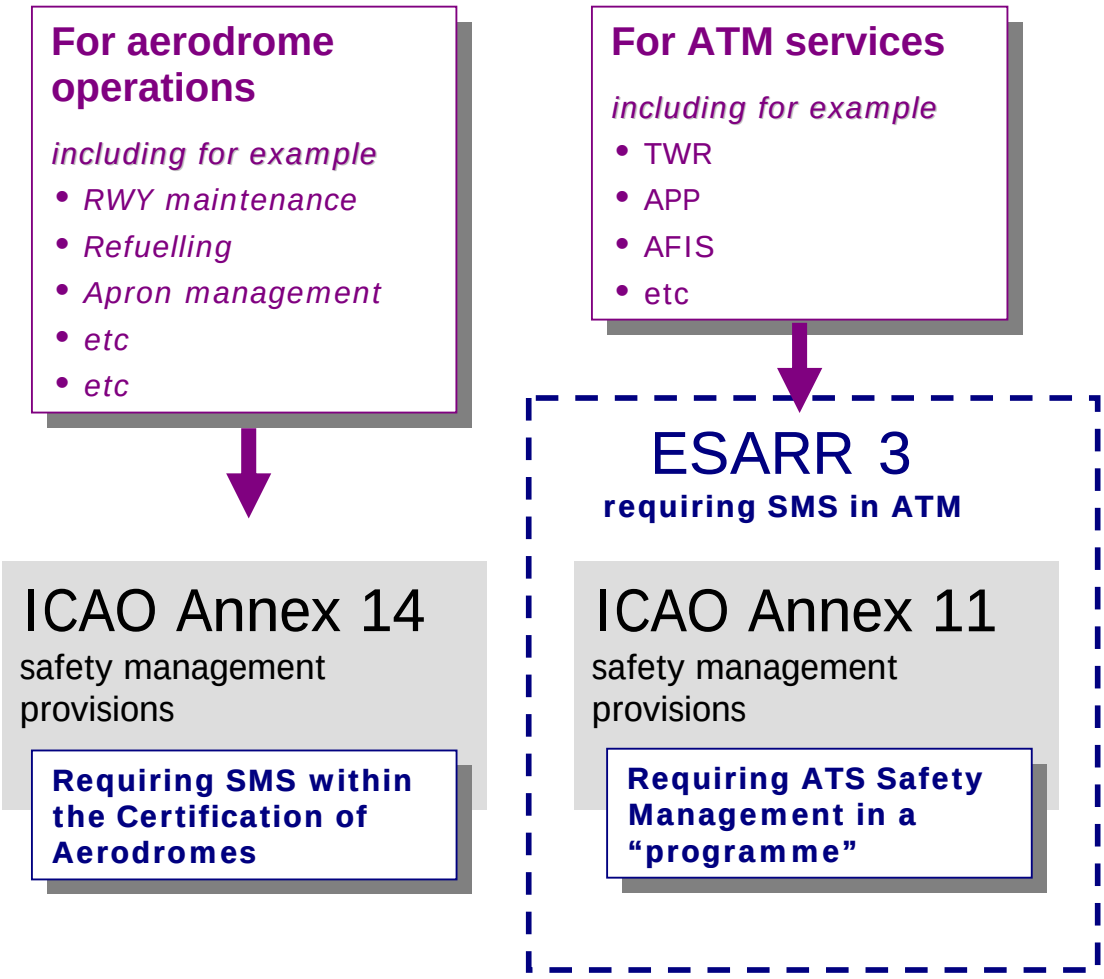
[2] *EAM 3 / ICAO, Consistency between ESARR 3 and ICAO SARPs, Edition 1.0, April 2003*

[3] *Annex 14 considers Doc 9774 as guidance on a regulatory framework for the certification of aerodromes*

[4] *See ICAO Doc 9774, Section 1.2.5.*

- However, since ATS services are an integral part of an aerodrome's operation, their regulation should be co-ordinated with that of aerodromes and considered within the certification process; and
- This could be achieved in a number of ways, with the aerodrome manual proposed in Annex 14 being employed as a link.

From all the above, it follows that, when addressing the provision of ATM services at aerodromes, co-ordination between safety regulation of ATM and aerodromes should provide a framework to ease the implementation of SMS in accordance to the following mandatory provisions[5] derived from international obligations:



(Figure 1 – Rules under consideration)

[5] *ICAO SARPs and EUROCONTROL ESARRs*

Those requirements are supported by additional material:

- ICAO Document 4444 (PANS-ATM) provides for recommendations complementary to the SARPs contained in ICAO Annex 11.

- The series of EAM 3 deliverables produced by SRC includes guidance for its use by ATM safety regulators when dealing with the implementation of ESARR 3.

- Doc 9774 is intended to provide guidance to States in establishing their regulatory system for the certification of aerodromes. In particular it contains model or sample regulations to support the certification process. Some of those model regulations define elements to be implemented by operators within SMS.

4. MAPPING CONDUCTED

Two tables have been produced to map ESARR 3 and the ICAO provisions on SMS in aerodromes:

- Appendix A is intended to relate ESARR 3, Section 5 to the SARPs on SMS contained in Annex 14.

- Appendix B includes an additional mapping between the Doc 9774 guidance developed in form of 'model regulations' and the safety regulatory requirements of ESARR 3 Section 5.

In both cases, the mapping focuses on ICAO materials identifying **those elements to be implemented by the operator within its SMS**. That approach allows the identification of a correspondence with the minimum elements of any SMS implemented by ATM service providers in accordance to ESARR 3.

As a result, the mapping does not necessarily address those issues not directly related to the content and scope of SMS in aerodromes. It does not consider the regulatory arrangements proposed for implementation by regulators either[6].

The mapping between ESARR 3 and ICAO provisions is based on an assessment that considers primarily the exact text of ESARR 3, Section 5 and the set of definitions included in ESARR 3 Appendix A. In some cases, the assessment has also made use of the EAM 3 Explanatory Material[7]. Wherever that is the case, the comments included on the tables make that clear.

[6] *As these arrangements are not part of the SMS implemented by operators.*

[7] *EAM 3 / GUI 1, Guidance Material for ATM Safety Regulators, Explanatory Material on ESARR 3 Requirements, Edition 1.0, June 2001.*

5. SUMMARY OF COMPARISON

This section only summarises the main aspects identified. The tables of the appendices collect all the findings in a more comprehensive manner:

5.1 Comparison between ICAO Annex 14 SARPs and ESARR 3

- ICAO Annex 14 requires the implementation of SMS in those aerodromes subject to certification by States, but does not identify the minimum elements of such SMS. At the level of SARPs, the SMS definition is the only reference to take into consideration when identifying the practical arrangements of a SMS;

- The SMS elements generically outlined within the Annex 14 definition can be fully covered by means of a SMS compliant with ESARR 3 requirements;

- The aerodrome manual should normally include relevant information on the SMS that, in accordance to ESARR 3, must be implemented by the organisation providing the ATM services associated to the aerodrome.

5.2 Comparison between ICAO Document 9774 model regulations and ESARR 3

- ESARR 3 establishes mandatory provisions with regard to the minimum arrangements that SMS should include. The model (or sample) regulations contained in Doc 9774 are only intended to provide States with guidance to develop an appropriate aerodrome certification framework

- Doc 9774 identifies various SMS elements. They may be categorised as follows:

  a) Organisationally, the SMS should describe the structure of the organisation, define and allocate safety responsibilities and be based on a safety policy;

  b) In terms of co-ordination, the aerodrome operator should co-ordinate with the ATS provider to ensure that appropriate ATS services are available at the aerodrome;

  c) Internal auditing should exist as part of the SMS. That aspect can be covered by the arrangements required in ESARR 3, Section 5.3.1 (Safety Surveys) when implemented in line with the guidance provided in EAM 3 / GUI 1;

  d) Additional arrangements should exist as regards SMS strategy, planning, and actions to deal with various aspects such as safety monitoring, safety promotion, implementation of “critical safety areas”, etc. However, the guidance provided in Doc 9774 is generic in regard to these arrangements. On the other hand ESARR 3 provides a detailed framework for the implementation of those features;

  e) Requirements should be imposed to “users” of the aerodrome as part of the SMS arrangements. That notion deserves particular attention and is, therefore, specifically addressed in Section 6.3 below.

- Therefore, the implementation of a SMS model based on ESARR 3 may cover adequately all the elements suggested in Doc 9774, except perhaps the proposals made regarding the requirements to be imposed to users. Wherever such element is needed, its implementation may need particular consideration

6. SIGNIFICANT ISSUES REGARDING INTER-RELATIONSHIP BETWEEN SMS IN ATM AND AERODROMES

From the findings of the mapping, it becomes clear that ESARR 3 can be used by aerodrome operators to implement the SMS required in ICAO Annex 14 SARPs.

However, the practical application of such option and the links between SMS implemented by aerodrome operators and ATM services providers may depend on local circumstances that should be considered at national level by ATM and aerodrome safety regulators.

Different situations can be found depending on who is involved in the operation of the aerodrome and its associated ATM services. The next paragraphs are intended to consider two typical situations.

6.1 First sample scenario: a single organisation is involved

Consider, by way of illustration, the case in which a single organisation[8] operates an aerodrome and provides some associated ATM services (e.g. TWR or AFIS) at and in the vicinity of the aerodrome.

That means that the organisation will have to implement:

- SMS compliant with ESARR 3 (and ICAO Annex 11) in its ATM services;
- SMS compliant with ICAO Annex 14 in its aerodrome operations.

The implementation of a single SMS covering both areas of activities would be an advisable approach to help in rationalising the resources needed for SMS in this type of organisation.

Therefore, the implementation of a single SMS covering the aerodrome and its associated ATM services could be recognised as an acceptable means of compliance to meet all the requirements applicable after an assessment demonstrates compliance.

Without excluding any possible approach, the regulatory framework to support this option could be based on the following points:

- ESARR 3 could provide the arrangements and processes needed by the aerodrome operator. Consequently, national regulations could identify the ESARR 3 elements of a SMS as applicable to aerodrome operators;

[8] *For the purposes of this document, an organisation is as a group of people and resources with an arrangement of responsibilities, authorities and relationships*

- The SMS should be documented, or adequately referenced, within the Aerodrome Manual;

- The SMS should be specifically approved/accepted by the ATM and Aerodrome safety regulator(s) prior to considering the approval/acceptance of the whole aerodrome manual in the certification process required by ICAO;

- In case any discrepancy is raised between the national safety regulatory requirements applicable to ATM and aerodromes, the most stringent requirements should apply.

6.2 Second sample scenario: two different organisations are involved

Take the case in which an ATM services and aerodrome operations are provided by two different organisations (one organisation operates ATM services such as TWR or AFIS, a second organisation operates the aerodrome inclusive of apron management).

Two basic alternatives may be considered:

6.2.1 First Option: two separate SMS

Each organisation implements its own SMS. Consequently, there would be two different SMS:

- One in accordance to ESARR 3 to cover the ATM services;

- One in accordance to ICAO Annex 14 and specific national regulations which could be aligned with ESARR 3 when specifying the SMS elements to be implemented by aerodrome operations.

This approach would be fully consistent with the SMS concept. As described in ESARR 3, the SMS is necessarily linked with the notion of organisation. Safety management should be established and operated as part of the overall management function of an organisation. In that sense, may be reasonable to require separate SMS wherever two different organisations operate the aerodrome and its associated ATM services.

Without excluding any possible approach, this option would normally imply that:

- **Co-ordination between SMS** is essential within this situation. Both SMS should interface with each other regularly. It would therefore make sense to require that the arrangements established to co-ordinate both SMS are documented in a comprehensive manner in the aerodrome manual;

- The SMS implemented by the aerodrome operator should normally be documented in the aerodrome manual. ESARR 3 could provide the arrangements and processes needed by the aerodrome operator. Consequently, national regulations could identify the ESARR 3 elements of a SMS as applicable to aerodrome operators;

- Pertinent information about the SMS implemented by the ATM service provider should be **included, or referenced to,** in the aerodrome manual;

- The SMS implemented by the ATM service provider should normally be approved/accepted by the ATM safety regulator, prior to considering the approval/acceptance of the whole aerodrome manual in the certification process required by ICAO;

- The arrangements to co-ordinate both SMS should be approved/accepted by the ATM and aerodrome safety regulator(s), prior to considering the approval/acceptance of the whole aerodrome manual in the certification process required by ICAO.

6.2.2 Second option: a common SMS

The ATM and aerodrome safety regulator(s) could accept a set of arrangements proposed by both organisations to establish a “common SMS”.

Wherever that option is considered, the arrangements between both organisations are **critical.** The SMS concept involves key aspects whose operation, depending upon the case, might only be possible within the framework of a single organisational structure. Wherever two organisations with separate entity are involved in building up a “common SMS”, the list of arrangements that need close scrutiny may include the following:

- The **organisational authority** under which safety responsibilities are defined and allocated would need to be clearly established. **Reporting lines** should be transparent, notably in the case of a safety managerial function;

- The arrangements to **define, adopt and review safety policies** and safety objectives should ensure that the commitment to safety in both organisations is effective and make sure that top management plays a general role in ensuring safety;

- The **decision-making** on the management of resources should be carefully considered to ensuring that appropriate resources are provided for the implementation of SMS;

- Reporting of shortcomings and **decision-making** related to corrective actions should be carefully considered to ensure appropriate safety assurance.

These and other aspects should be carefully assessed by the ATM and Aerodrome safety regulator(s) to **ensure an appropriate SMS in spite of involving** the management, personnel, equipment, procedures, financial resources and organisational culture from two different organisational entities.

The ATM and aerodrome safety regulator(s) should normally approve/accept the arrangements proposed by both organisations as part of the certification process required by ICAO Annex 14. These arrangements would be documented in the aerodrome manual and, once accepted/approved, the designated authority should monitor them.

6.3 Assessment of the notion of requirements imposed to "users"

As mentioned in Section 5.2 above, the model regulations of Doc 9774 propose that, **within their SMS arrangements**, aerodrome operators should **oblige** all "users" of the aerodrome to comply with the requirements laid down by the aerodrome operator with regard to safety at the aerodrome.

Doc 9774 also proposes that within its SMS arrangements the aerodrome operator should require all "users" of the aerodrome to report any safety occurrences immediately.

The term "user of the aerodrome" is not specifically defined in Doc 9774. However the sample regulations apply that notion to organisations that perform activities independently at the aerodrome **in relation to flight** or aircraft handling. In that regard, it should be noted that:

- Handling agencies and "fixed-base operators" are explicitly referred to as examples of such organisations. It is significant that the term "fixed-based operations" involves the conduct of aircraft flight operations[9];

- Therefore, **aircraft operators can be considered as "users"** in accordance with the above considerations; and

- In the light of the special treatment given to ATS within Doc 9774, ATM service providers should not be considered as "users" on which requirements have to be imposed. The approach suggested in Doc 9774 clearly advocates for the co-ordination between ATS and aerodrome.

ESARR 3 includes requirements with regard to the need for dealing with services supplied by external organisation, but used by ATM service providers to produce ATM services. However, ESARR 3 **does not require the ATM service provider** to directly use its SMS to impose requirements on the "users" of its ATM services.

Generally speaking, aircraft (or pilots) can be considered as the "users" of the ATM services produced by the service-provider. In that context, requirements on the users of ATM services are normally **established at regulatory level**, not as part of SMS arrangements.

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[9] *Fixed-based operator is a term commonly used in the US. A fixed-base operator is an organisation that may provide one or more of the following services on, or connected with, a particular aerodrome:*

- *Transporting passengers by aircraft for hire;*
- *Providing flight instruction for hire;*
- *Transporting parcels or freight for hire*
- *Towing gliders for hire;*
- *Renting aircraft;*
- *Renting hangar space for storage of aircraft;*
- *Servicing, repairing, rebuilding, or remodelling aircraft for hire;*
- *Selling gasoline or other aviation fluid products;*
- *Selling aircraft, aircraft parts, or other aircraft accessories; or*
- *Engaging in other commercial activities or services connected with or related to aviation or other aeronautical activities.*

That does not rule out situations in which requirements[10] identified by a service provider through the operation of its SMS processes could be adopted and imposed by an authority after appropriate co-ordination (e.g. publishing them on the AIP).

Therefore, Doc 9774's notion of aerodrome operators using their SMS to impose requirements to aircraft operations organisations appears to need a particular assessment in each case. **Depending on local circumstances**, that approach could be not applicable and its introduction would not necessarily bring an added value.

If aircraft operators were excluded from the categories of users on which requirements should be imposed, the remaining "users" referred to in Doc 9774 could be **considered as "external services"** employed by the aerodrome operator to provide the final "aerodrome service" used by aircraft operators. In that case, the application of ESARR 3, Section 5.2.6 (external services) can not only fit the approach proposed in Doc 9774 but also cover additional categories of external inputs not specifically addressed in Doc 9774.

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[10] e.g. operational conditions to be met by users could be identified from the risk assessment and mitigation actions undertaken when a new system is to be implemented.

APPENDIX A - Mapping between ESARR 3 and Annex 14 provisions defining SMS elements

ANNEX 14 PROVISIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
1.1. Definitions		
Safety Management System – A system for the management of safety at aerodromes, including the organisation structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for control of safety at, and the safe use of, the aerodrome.	***ESARR 3 Section 5*** (as a whole) ***Appendix A – Definitions*** *Safety Management System (SMS)* - A systematic and explicit approach defining the activities by which safety management is undertaken by an organisation in order to achieve acceptable or tolerable safety	At the level of the ICAO definition, the whole set of ESARR 3 requirements may cover the various generic SMS elements mentioned
1.3. Certification of Aerodromes		
1.3.1. As of 27 November 2003, States shall certify aerodromes used for international operations in accordance with the specifications contained in this Annex as well as other relevant ICAO specifications through an appropriate regulatory framework	-	In conjunction with Section 1.3.6, this statement requires SMS in aerodromes used for international operations
1.3.2. States should certify aerodromes open to public use in accordance with these specifications as well as other relevant ICAO specifications through an appropriate regulatory framework	-	Recommendation to expand the minimum scoped required in 1.3.1 (see above)
1.3.4. Recommendation – A certified aerodrome should have in operation a safety management system	-	It relates the requirement of a SMS to those aerodromes subject to certification (as a minimum those used for international operations)
1.3.5. Recommendation – As part of the certification process, States should ensure that an aerodrome manual which will include all pertinent information on the aerodrome site, facilities, services, equipment, operating procedures, organisation and management including a safety management system, is submitted by the applicant for approval/acceptance prior to granting the aerodrome certificate	***5.2.5. SMS Documentation*** (*within the operation of the SMS, the service provider)* shall ensure that the SMS is systematically documented in a manner, which provides a clear linkage to the organisation's safety policy;	According to Annex 14, the aerodrome manual should include all the pertinent information on facilities, services, equipment, operating procedures, etc. **This leads to the logical conclusion that the aerodrome manual should include information on the ATM services associated with the operation of the aerodrome.** To note that the guidance included in Doc.9774 proposes the use of references to include such type of information (see 3C.3 below)
1.3.6. As of 24 November 2005, a certified aerodrome shall have in place a safety management system	-	It relates the requirement of a SMS to those aerodromes subject to certification (as a minimum those used for international operations)

APPENDIX B - Mapping between ESARR 3 and Doc 9774 'model regulations' defining SMS elements

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
Chapter 3. Section 3A.2 - Definitions		
Safety Management System – A system for the management of safety at aerodromes, including the organisation structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for control of safety at, and the safe use of, the aerodrome.	***ESARR 3 Section 5*** (as a whole) ***Appendix A – Definitions*** *Safety Management System (SMS)* - A systematic and explicit approach defining the activities by which safety management is undertaken by an organisation in order to achieve acceptable or tolerable safety	At the level of the ICAO definition, the whole set of ESARR 3 requirements may cover the various generic SMS elements mentioned
Chapter 3. Section C – Aerodrome Manual		
3C.3 Information to be included in the aerodrome manual The operator of a certified aerodrome must include the following particulars in an aerodrome manual, to the extent that they are applicable to the aerodrome, under the following parts: … ***Part 4.*** The aerodrome operating procedures and safety measures as set out in Part 4 of the schedule of these regulations. This may include references to air traffic procedures such as those relevant to low-visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the aerodrome manual. ***Part 5.*** Details of the aerodrome administration and the safety management system as set out in Part 5 of the schedule of these regulations	***5.2.5. SMS Documentation*** (*within the operation of the SMS, the service provider)* shall ensure that the SMS is systematically documented in a manner, which provides a clear linkage to the organisation's safety policy;	**Within the aerodrome manual, the information on ATM, and notably the information on ATM safety management, may take the form of references to ATM documentation**
Chapter 3. Section D – Obligations of the Aerodrome Operator		
3D.3 Aerodrome operation and maintenance … ***3D.3.4*** The aerodrome certificate holder shall co-ordinate with the ATS provider in order to be satisfied that appropriate ATS services are available to ensure the safety of aircraft in the airspace associated with the aerodrome. The co-ordination shall cover other areas related to safety such as AIS, ATS, designated MET authorities and security	-	**The aerodrome operator is obliged to co-ordinate with the ATS provider** **To note that, in the light of that specific treatment, it follows that the ATS should not be considered as included in the categories of "users" listed in 3D.4.2**

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
3D.4 Aerodrome operator's safety management system ***3D.4.1*** The aerodrome operator shall establish a SMS for the aerodrome describing the structure of the organisation and the duties, powers and responsibilities of the officials in the organisational structure, with a view to ensuring that operations are carried out in a demonstrably controlled way and are improved where necessary.	***5.1.2 Safety Responsibility*** *(have in place a SMS which)* ensures that everyone involved in the safety aspects of ATM service-provision has an individual safety responsibility for their own actions, and that managers are responsible for the safety performance of their own organisations;	**The Aerodrome operator's SMS have to identify safety responsibilities in line with ESARR 3 principles**
3D.4.2 The aerodrome operator shall oblige all users of the aerodrome, including fixed-base operators, ground-handling agencies and other organisations that perform activities independently at the aerodrome in relation to flight or aircraft handling, to comply with the requirements laid down by the aerodrome operator with regard to safety at the aerodrome. The aerodrome operator shall monitor such compliance. ***3D.4.3*** The aerodrome operator shall require all users of the aerodrome, including fixed-base operators, ground handling agencies and other organisations referred to in regulation 3D.4.2 to co-operate in the programme to promote safety at, and the safe use of, the aerodrome by immediately informing it of any accidents, incidents, defects and faults which have a bearing on safety.	***5.2.6 External Services*** *(within the operation of the SMS, the ATM service provider)* shall ensure adequate and satisfactory justification of the safety of the externally provided services, having regard to their safety significance within the provision of the ATM service. *(External Services are defined in ESARR 3, Appendix A – All material and non-material supplies and services, which are delivered by any organisation not covered by the ATM service-provider's safety management system)* *(3D.4.3 is also directly related to 5.2.7 Safety Occurrences and 5.3.2 Safety Monitoring)*	When comparing Doc 9774 guidance with ESARR 3, a **significant conceptual difference is raised:** ❑ ESARR 3 intends to establish requirements as regards the need to deal with "services" produced externally but used by the organisation to produce the ATM service. ❑ **ESARR 3 does not intend to require the service provider to impose requirements on the "users" of ATM services.** Aircraft (pilots) are normally the users of ATM. In the ATM context any requirement on the use of ATM services by the "users" are normally established at regulatory level, not as part of SMS arrangements ❑ **However, the guidance of Doc 9774 proposes to impose requirements on the "users" of the aerodrome. That notion includes aircraft operators, ground handling agencies, etc.** ❑ **On the other hand, the guidance of Doc 9774 does not cover the situations tackled by ESARR 3, 5.2.6. No requirements are suggested in relation to suppliers.** Moreover, the approach proposed in Doc 9774 with regard to "users" is quite strict. According with the guidance given in the model regulations, the aerodrome operator "**shall":** ❑ **Oblige all users to comply** with the requirements laid down by the aerodrome operator. ❑ Monitor such compliance ❑ Require all users report about occurrences **Finally, in the light of 3D.3.4, it follows that ATS should not be considered as included in the categories of "users" listed in 3D.4.2 as Doc 9774 proposes a special treatment in that case.**

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
3D.5 Aerodrome operator's internal safety audits and safety reporting ***3D.5.1*** The aerodrome operator shall arrange for an audit of the SMS, including an inspection of the aerodrome facilities and equipment. The audit shall cover the aerodrome operator's own functions. The aerodrome operator shall also arrange for an external audit and inspection programme for evaluating other users, including fixed-based operators, ground handling agencies and other organisations working at the aerodrome as referred to in regulation 3D.4.2.	***5.3.1. Safety Surveys*** *(within the provision of the SMS, the ATM service provider)* shall ensure that safety surveys are carried out as a matter of routine, to recommend improvements where needed, to provide assurance to managers of the safety of activities within their areas and to confirm conformance with applicable parts of their Safety Management Systems.	**A programme of safety surveys implemented in accordance with ESARR 3 and conducted in line with the guidance provided in EAM 3/GUI 1 (ESARR 3 guidance material), may be a means to implement the arrangements proposed in the guidance of Doc 9774.** EAM3/GUI1 points out that in dealing with the implementation of safety surveys, service providers should normally establish processes in a manner which: - Ensures independence of the area being surveyed; and - Ensures systematic planning, assessment of all factors affecting safety, identification of corrective actions, record of results, initiation and follow up of corrective actions, as the key elements of safety surveys. To note that the arrangements proposed in Doc 9774 specify the need to **audit the "users"**
3D.5.2 The audits referred to in regulation 3D.5.1 shall be carried out every … months, or less, as agreed with the CAA		
3D.5.3 The aerodrome operator shall ensure that the audit reports, including the report on the aerodrome facilities, services and equipment, are prepared by suitably qualified safety experts.		
3D.5.4 The aerodrome operator shall retain a copy of the report(s) referred to in regulation 3D.5.3 for a period to be agreed with the CAA. The CAA may request a copy of the report(s) for its review and reference.		
3D.5.5 The report(s) referred to in regulation 3D.5.3 must be prepared and signed by the persons who carried out the audits and inspections		
Appendix 1 Schedule of the Aerodrome Certification Regulations – Particulars to be included in an aerodrome manual.		
Part 5 – Aerodrome administration and safety management system … **Safety management system (SMS)** Particulars of the SMS established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being:	-	-

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
a) The safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process;	***5.1.1. Safety Management*** *(have in place a SMS which)* … c) includes, as its foundation, a statement of safety policy defining the fundamental approach to managing safety ***5.1. General Requirement*** *(The General Requirement includes high level statements that will be normally considered at policy level due to their policy nature. This concerns 5.1.1 Safety Management, 5.1.2 Safety Responsibility, 5.1.3 Safety Priority, and 5.1.4 Safety Objective of the ATM service)*	**Both approaches require a safety policy. ESARR 3 is more specific.**
b) The structure or organisation of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues;	***5.1.2 Safety Responsibility*** *(have in place a SMS which)* ensures that everyone involved in the safety aspects of ATM service-provision has an individual safety responsibility for their own actions, and that managers are responsible for the safety performance of their own organisations;	**The Aerodrome operator's SMS have to identify safety responsibilities in line with ESARR 3 principles**

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
c) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the SARPs in Volume I of Annex 14 to the Convention on International Civil Aviation, and the national regulations, standards, rules or orders;	***5.1.4. Safety Objective of the ATM service*** *(have in place a SMS which)* ensures that while providing an ATM service, the principal safety objective is to minimise the ATM contribution to the risk of an aircraft as far as reasonably practicable ***5.2.3. Quantitative Safety Levels*** *(within the operation of the SMS, the ATM service provider)* shall ensure that, wherever practicable, quantitative safety levels are derived and are maintained for all systems ***5.2.4 Risk Assessment and Mitigation*** *(within the operation of the SMS, the ATM service provider)* a) shall ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of ATM; b) shall ensure that changes to the ATM system are assessed for their safety significance, and ATM system functions are classified according to their safety severity; c) shall ensure appropriate mitigation of risks where assessment has shown this to be necessary due to the safety significance of the change;	**ESARR 3 is much more specific in describing specific actions that may cover the aspects outlined in Doc 9774**
d) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements	***5.2. Requirements for safety achievement*** *(within the operation of the SMS, the ATM service provider)* … ***5.3. Requirements for safety assurance*** *(within the operation of the SMS, the ATM service provider)* … ***5.4. Requirements for safety promotion*** *(within the operation of the SMS, the ATM service provider)* …	**ESARR 3 is much more specific in describing specific actions that may cover the aspects outlined in Doc 9774**

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
e) A system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme);	***5.2.4 Risk Assessment and Mitigation*** *(within the operation of the SMS, the ATM service provider)* a) shall ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of ATM; b) shall ensure that changes to the ATM system are assessed for their safety significance, and ATM system functions are classified according to their safety severity; c) shall ensure appropriate mitigation of risks where assessment has shown this to be necessary due to the safety significance of the change;	**ESARR 3 is much more specific in describing specific actions that may cover the aspects outlined in Doc 9774**
f) Measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring;	*Among other requirements:* *(within the provision of the SMS, the ATM service provider)* ***5.4.2 Safety Improvement*** a) shall ensure that all staff are actively encouraged to propose solutions to identified hazards, and b) shall ensure that changes are made to improve safety where they appear needed. ***5.3.2 Safety Monitoring*** shall ensure that methods are in place to detect changes in systems or operations which may suggest any element is approaching a point at which acceptable standards of safety can no longer be met, and that corrective action is taken. ***5.2.4 Risk Assessment and Mitigation*** a) shall ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of ATM; b) shall ensure that changes to the ATM system are assessed for their safety significance, and ATM system functions are classified according to their safety severity; c) shall ensure appropriate mitigation of risks where assessment has shown this to be necessary due to the safety significance of the change; ***5.2.7. Safety Occurrences*** shall ensure that ATM operational or technical occurrences which are considered to have significant safety implications are investigated immediately, and any necessary corrective action is taken.	**ESARR 3 is much more specific in describing specific actions that may cover the aspects outlined in Doc 9774**

DOC 9774 MODEL REGULATIONS	ESARR 3 REQUIREMENTS RELATED	COMMENTS/ASSESSMENT
g) The internal safety audit and review system detailing the systems and programmes for quality control of safety	***5.3.1. Safety Surveys*** *(within the provision of the SMS, the ATM service provider)* shall ensure that safety surveys are carried out as a matter of routine, to recommend improvements where needed, to provide assurance to managers of the safety of activities within their areas and to confirm conformance	**A programme of safety surveys implemented in accordance with ESARR 3 and conducted in line with the guidance provided in EAM 3/GUI 1 (ESARR 3 guidance material), may be a means to implement the arrangements proposed in the guidance of Doc 9774.** EAM3/GUI1 points out that in dealing with the implementation of safety surveys, service providers should normally establish processes in a manner which: - Ensures independence of the area being surveyed; and - Ensures systematic planning, assessment of all factors affecting safety, identification of corrective actions, record of results, initiation and follow up of corrective actions, as the key elements of safety surveys.
h) The system for documenting all safety-related airport facilities as well as airport operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts;	***5.3.3. Safety Records*** *(within the operation of the SMS, the ATM service provider)* shall ensure that safety records are maintained throughout the SMS operation as a basis for providing safety assurance to all associated with, responsible for or dependent upon the services provided, and to the safety regulatory authority;	**The safety records implemented in accordance with ESARR 3 may cover the specific aspects described in the guidance of Doc 9774**
i) Staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety-related duties and of certification system for testing their competency; and	***5.2.1 Competency*** *(within the operation of the SMS, the ATM service provider)* shall ensure that staff are adequately trained, motivated and competent for the job they are required to do, in addition to being properly licensed if so required;	**Equivalent statements**, notably if ESARR 3, 5.2.1 is considered in the light of EAM 3/GUI 1 (ESARR 3 Guidance Material)
j) The incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.	***5.2.6 External Services*** *(within the operation of the SMS, the ATM service provider)* shall ensure adequate and satisfactory justification of the safety of the externally provided services, having regard to their safety significance within the provision of the ATM service. *(External Services are defined in ESARR 3, Appendix A)*	**Specific case of external services**, on which Doc 9774 proposes specific actions to ensure adequate justification of safety

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