



EASA
European Aviation Safety Agency



**Taller para la aceptación y vigilancia del SMS
en ATSP:**

1.3 ESARR 3, ESARR 4 & ESARR 5

Lima, 11 a 13 de julio 2017

*This project is funded by the European Union and implemented
by the European Aviation Safety Agency – EASA*

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EUROCONTROL



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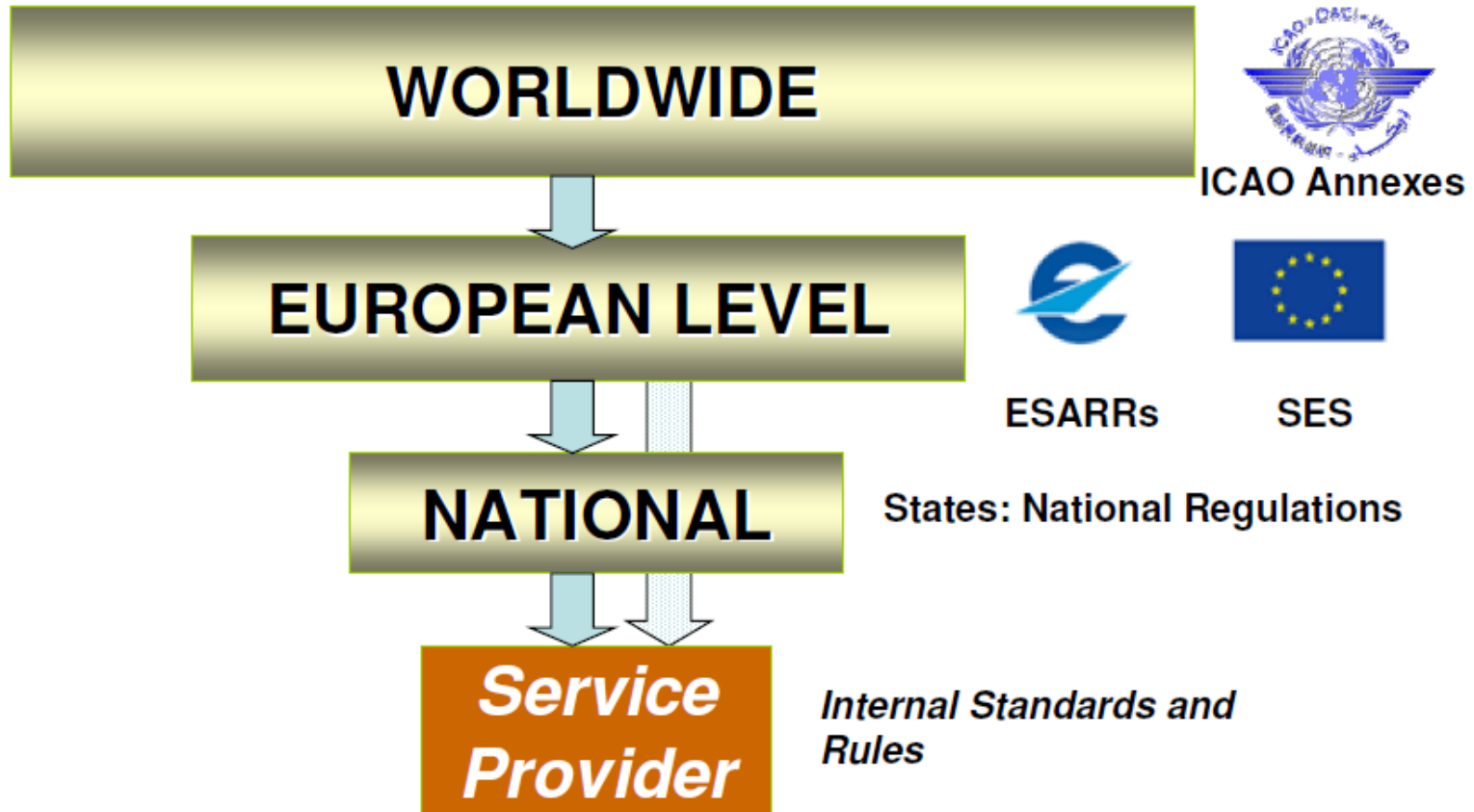
La Organización Europea para la Seguridad de la Navegación Aérea (EUROCONTROL) fue creada en diciembre de 1960, siendo sus promotores Alemania, Bélgica, Francia, Luxemburgo, Países Bajos y Reino Unido.

Se trata de una organización civil y militar integrada actualmente por 41 Estados miembros.





REGULACIONES DE SEGURIDAD





EUROCONTROL Safety Regulatory Requirements (ESARR)

Existen 6 Eurocontrol Safety Regulatory Requirements (abreviadamente ESARR y traducido por Requisitos Reglamentarios de Seguridad de Eurocontrol)

Los ESARR regulan aspectos concretos de la organización global de los servicios de navegación aérea.





EUROCONTROL Safety Regulatory Requirements (ESARR)

ESARR 1: Supervisión de la seguridad

ESARR 3: SMS

ESARR 5: Requisitos reglamentarios de seguridad para el personal de los servicios ATM

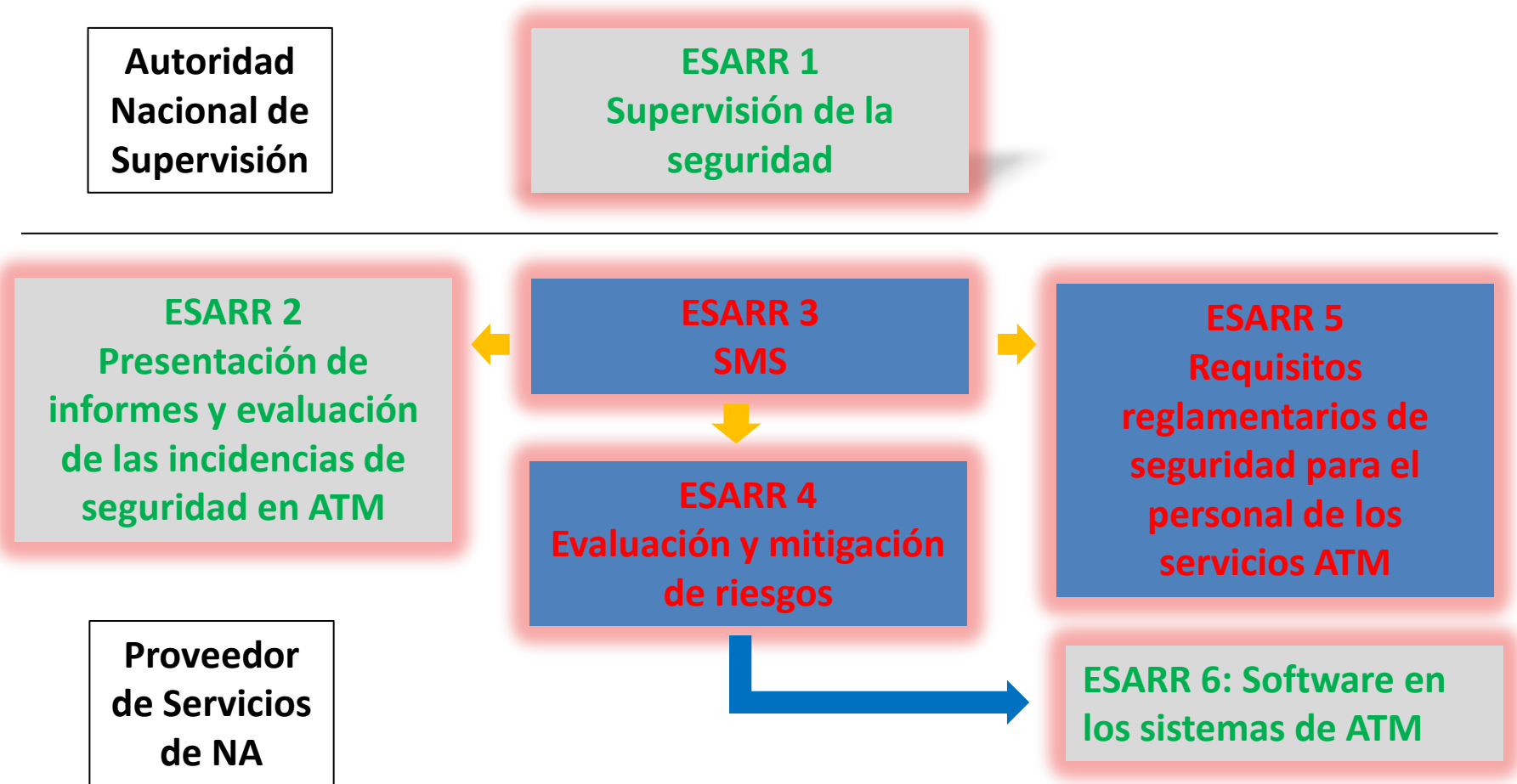
ESARR 2: Presentación de informes y evaluación de las incidencias de seguridad en ATM

ESARR 4: Evaluación y mitigación de riesgos

ESARR 6: Software en los sistemas de ATM



EUROCONTROL Safety Regulatory Requirements (ESARR)





EUROCONTROL Safety Regulatory Requirements (ESARR)

ESARR	Title	Implementation Dates
ESARR1	Safety Oversight in ATM	05-Nov-2007
ESARR2	Reporting and Assessment of Safety Occurrences in ATM	01-Jan-2000 (Phase 1) 01-Jan-2001 (Phase 2) 01-Jan-2002 (Phase 3)
ESARR3	Use of Safety Management Systems (SMS) by ATM Service Providers	13-Jul-2003
ESARR4	Risk Assessment and Mitigation in ATM	05-Apr-2004
ESARR5	ATM Services' Personnel	10-Nov-2003 (ATCO & General) 11-Apr-2005 (ATS engineering and technical)
ESARR6	Software in ATM systems	06-Nov-2006



ESARR Y SES (CIELO ÚNICO EUROPEO)

ESARR	Regulación Comunitaria
ESARR 1	Reglamento (CE) 1315/2004 de la Seguridad Operativa Reglamento (UE) 1034/2011
ESARR 2	Directiva 94/66/CE (Nivel de Seguridad) Sucesos de Seguridad Reglamento (UE) 996/2010 + Reglamento (UE) 376/2014
ESARR 3	Reglamento (CE) 2096/2005, requisitos Comunes Reglamento (UE) 1035/2011
ESARR 4	Reglamento (CE) 2096/2005, requisitos Comunes



ESARR Y SES (CIELO ÚNICO EUROPEO)

ESARR	Regulación Comunitaria
ESARR 5	<p>Reglamento (UE) 2096/2011 Requisitos Comunes Directiva 2006/23/CE del Parlamento Europeo y del Consejo, de abril de 2006 relativa a la licencia comunitaria de controlador de tránsito aéreo</p>
ESARR 6	<p>Reglamento (CE) 482/08, por el que se establece un sistema de garantía de la seguridad del software que deberán implantar los proveedores de servicios de navegación aérea y por el que se modifica el anexo II del Reglamento (CE) nº 2096/2005</p>

**Reglamento (UE)
1035/2011**

**Reglamento (UE)
2015/340**



ESARR Y SES (CIELO ÚNICO EUROPEO)

ESARR	SES	EASA
Seguridad Operacional	Capacidad Competencia Seguridad Operacional	Capacidad Competencia Planteamiento sistémico de seguridad operacional Factores Humanos
Miembros de Eurocontrol	Miembros de la Unión Europea	Miembros de la Unión Europea + Otros países
Terminología: - Regulador - NSA - Sistema	Terminología: - NSA - Certificación de Proveedores - Sistema Funcional ATM	Terminología: - CAA - Certificación de Proveedores + - Sistema Funcional ATM



EUROPEAN ORGANISATION FOR THE SAFETY OF
AIR NAVIGATION



EUROCONTROL


EUROCONTROL SAFETY REGULATORY REQUIREMENT
(ESARR)

ESARR 3

**USE OF SAFETY MANAGEMENT
SYSTEMS BY ATM SERVICE
PROVIDERS**

Edition	: 1.0
Edition Date	: 17-07-2000
Status	: Released Issue
Class	: General Public

EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION



EUROCONTROL

ESARR ADVISORY MATERIAL/ACCEPTABLE MEANS OF
COMPLIANCE
(EAM/AMC)

**ACCEPTABLE MEANS OF
COMPLIANCE WITH
ESARR 3**

Edit
Edit
Stat
Inter
Cate

**Normas no obligatorias
adoptadas con el fin de ilustrar
los medios que permiten
establecer la conformidad con el
requerimiento ESARR y sus
disposiciones de aplicación**



EUROPEAN ORGANISATION FOR THE SAFETY OF
AIR NAVIGATION



EUROCONTROL


EUROCONTROL SAFETY REGULATORY REQUIREMENT
(ESARR)

ESARR 3

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EUROCONTROL

ESARR ADVISORY MATERIAL/GUIDANCE MATERIAL
(EAM/GUI)

EAM 3/GUI 1

**ESARR 3 GUIDANCE TO ATM
SAFETY REGULATORS**

Explanatory Material on ESARR 3
Requirements

**Pensado para prestar ayuda y
apoyo en la implementación del
requerimiento ESARR**



ESARR 3 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011

5.1 General Requirement

An ATM service-provider shall, as an integral part of the management of their services, have in place a safety management system (SMS) which:

5.1.1 Safety Management

- a) ensures a formalised, explicit and proactive approach to systematic safety management in meeting its safety responsibilities within the provision of their services; operates in respect of all their services and the supporting arrangements under its managerial control;
- b) operates in respect of all ATM and supporting services and the supporting arrangements under its managerial control;
- c) includes, as its foundation, a statement of safety policy defining the organisation's fundamental approach to managing safety (safety management);

5.1.2 Safety Responsibility

ensures that everyone involved in the safety aspects of the provision of air traffic services has an individual safety responsibility for their own actions; that managers are responsible for the safety performance of their respective departments or divisions and that the top management of the provider carries an overall safety responsibility (safety responsibility);

5.1.3 Safety Priority

ensures that the achievement of satisfactory safety in air traffic services shall be afforded the highest priority (safety priority);

5.1.4 Safety Objective of the ATM Service

ensures that while providing an ATM service, the principal safety objective is to minimise its contribution to the risk of an aircraft accident as far as reasonably practicable (safety objective).

3.1. Safety management system (SMS)

3.1.1. General safety requirements

Providers of air traffic services shall, as an integral part of the management of their services, have in place a safety management system (SMS) which:

- (a) ensures a formalised, explicit and proactive approach to systematic safety management in meeting their safety responsibilities within the provision of their services; operates in respect of all their services and the supporting arrangements under its managerial control; and includes, as its foundation, a statement of safety policy defining the organisation's fundamental approach to managing safety (safety management);
- (b) ensures that everyone involved in the safety aspects of the provision of air traffic services has an individual safety responsibility for their own actions; that managers are responsible for the safety performance of their respective departments or divisions and that the top management of the provider carries an overall safety responsibility (safety responsibility);
- (c) ensures that the achievement of satisfactory safety in air traffic services shall be afforded the highest priority (safety priority);
- (d) ensures that while providing air traffic services, the principal safety objective is to minimise its contribution to the risk of an aircraft accident as far as reasonably practicable (safety objective).



ESARR 3 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011

<p>5.2.1 Competency</p> <p>shall ensure that staff are competent for the tasks they are required to do, in addition to the requirements of the applicable regulatory requirements;</p>	<p>3.1.2. Requirements for safety achievement</p> <p>Within the operation of the SMS, providers of air traffic services shall:</p> <ul style="list-style-type: none">(a) ensure that personnel are adequately trained and competent for the job they are required to do, in addition to being properly licensed if so required and satisfying applicable medical fitness requirements (competency);(b) ensure that a safety management function is identified with organisational responsibility for development and maintenance of the SMS; ensure that this point of responsibility is independent of line management, and accountable directly to the highest organisational level. However, in the case of small organisations where a combination of responsibilities may prevent sufficient independence in this regard, the arrangements for safety assurance shall be supplemented by additional independent means; and ensure that the top management of the service provider organisation is actively involved in ensuring safety management (safety management responsibility);
<p>5.2.2 Safety Management Requirements</p> <ul style="list-style-type: none">a) shall ensure that the safety management function has the responsibility for development and maintenance of the SMS;b) shall ensure that the safety management function is independent of line management, and accountable directly to the highest organisational level;c) shall ensure that the safety management function is not subject to any other operational or commercial pressures that may compromise its effectiveness;d) shall ensure that the safety management function has the role in ensuring safety management, as required;	
<p>5.2.3 Quantitative Safety Levels</p> <p>shall ensure that, wherever practicable, quantitative safety levels are derived and are maintained for all functional systems (quantitative safety levels);</p>	<p>(c) ensure that, wherever practicable, quantitative safety levels are derived and are maintained for all functional systems (quantitative safety levels);</p>
<p>5.2.4 Risk Assessment and Mitigation</p> <ul style="list-style-type: none">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 the provision of ATM (risk assessment and mitigation). As far as changes to the ATM functional system are concerned, point 3.2 shall apply;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;	<p>(f) ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of the provision of ATM (risk assessment and mitigation). As far as changes to the ATM functional system are concerned, point 3.2 shall apply;</p>



ESARR 3 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011

5.2.5 SMS Documentation

shall ensure that the SMS is systematically documented in a manner, which provides a clear linkage to the organisation's safety policy;

ESARR 3

5.2 Requisitos seguridad

(d) ensure that the SMS is systematically documented in a manner which provides a clear linkage to the organisation's safety policy (SMS documentation);

(e) ensure adequate justification of the safety of the externally provided services and supplies, having regard to their safety significance within the provision of its services (external services and supplies);

5.2.6 External Services

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;

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.

sistema de gestión de

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adadas con la seguridad.

(g) 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 (safety occurrences). They shall also demonstrate that they have implemented the requirements on the reporting and assessment of safety occurrences in accordance with applicable national and Union law.



ESARR 3 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011

5.3 Requirements for Safety Assurance

Within the operation of the SMS, the ATM service-provider:

5.3.1 Safety Surveys

shall ensure that safety improvements within their areas of Management System

5.3.2 Safety Monitoring

shall ensure that monitoring may suggest any element can no longer be met

5.3.3 Safety Records

shall ensure that safety records for providing safety services provided, a

3.1.3. Requirements for safety assurance

Within the operation of the SMS, providers of air traffic services shall ensure that:

- (a) 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 compliance with the relevant parts of the SMS (safety surveys);
- (b) methods are in place to detect changes in functional 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 (safety monitoring);
- (c) 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 competent authority (safety records).

5.3.4 Risk Assessment and Mitigation Documentation

shall ensure that the results and conclusions of the risk assessment and mitigation process of a new or changed safety significant system are specifically documented, and that this documentation is maintained throughout the life of the system.



ESARR 3 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011

ESARR 3

5.4 Requisitos seguridad

5.4 Requirements

Within the operation of the SMS, the ATM service-provider:

5.4.1 Lesson Dissemination

shall ensure that the lessons arising from safety occurrence investigations and other safety activities are disseminated widely within the organisation at management and operational levels.

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.

3.1.4. Requirements for safety promotion

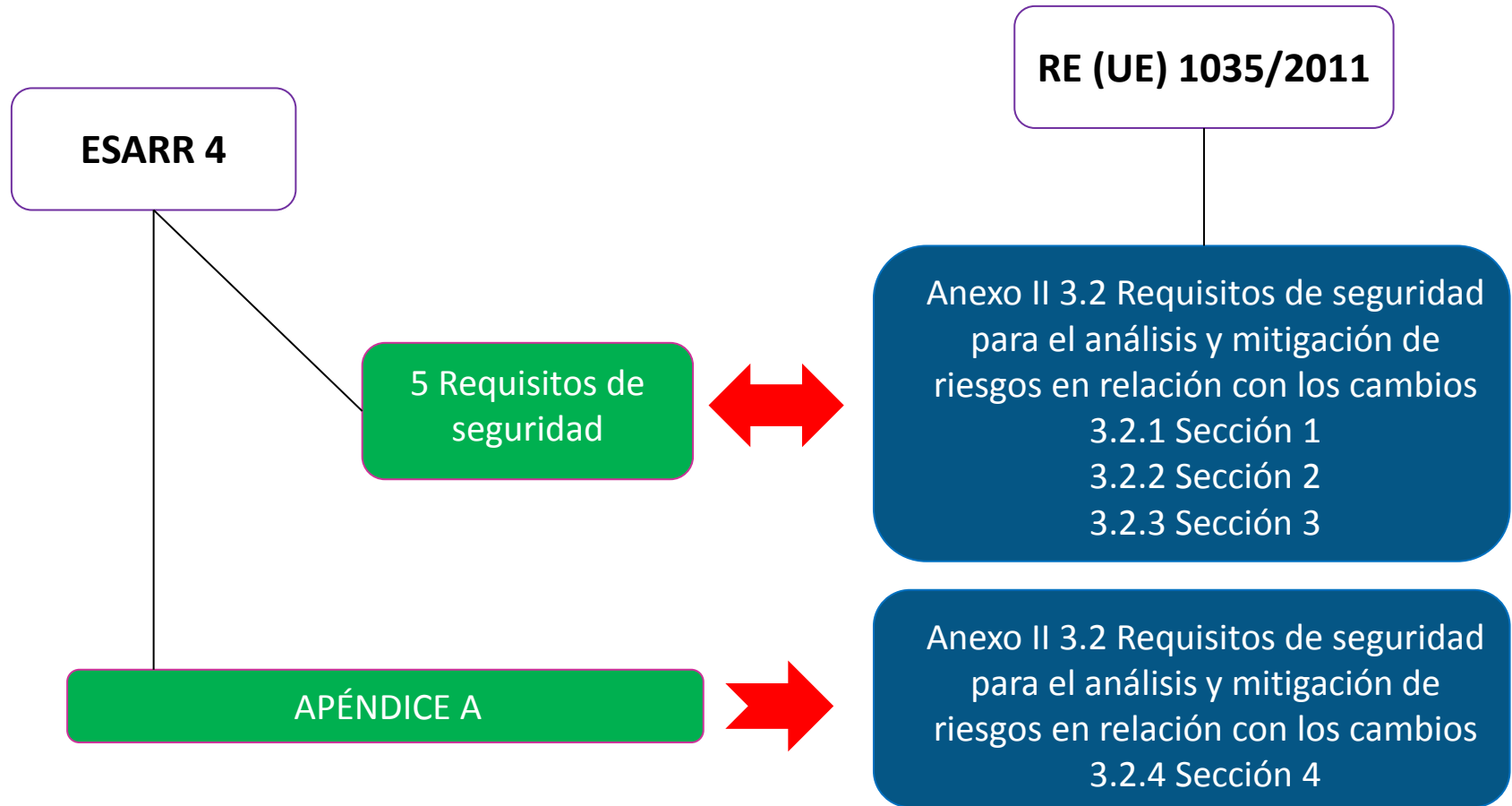
Within the operation of the SMS, providers of air traffic services shall ensure that:

- (a) all personnel are aware of the potential safety hazards connected with their duties (safety awareness);
- (b) the lessons arising from safety occurrence investigations and other safety activities are disseminated within the organisation at management and operational levels (lesson dissemination);
- (c) all personnel are actively encouraged to propose solutions to identified hazards, and changes are made to improve safety where they appear needed (safety improvement).

d.

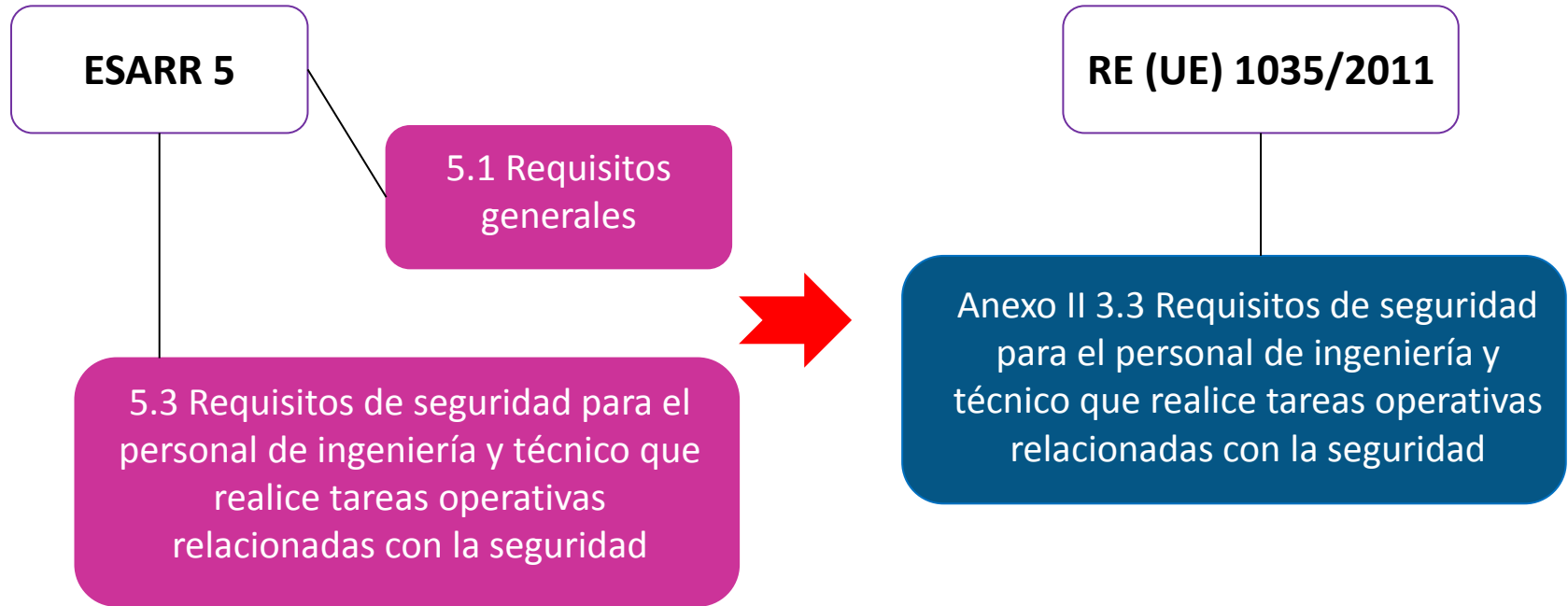


ESARR 4 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011





ESARR 5 Y REGLAMENTO DE EJECUCIÓN (UE) 1035/2011





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Gracias por su atención

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