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Ramp Safety

Introducing the ECAST Ground Safety program

11th annual Ground Handling International Conference
16-18 November, Sorrento

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Plan

- Brief introduction on EASA
- The European Strategic Safety Initiative
- The European Commercial Aviation Safety Team
- ECAST Ground Safety Working Group
 - ★ Where are the issues?
 - ★ Program and WP's

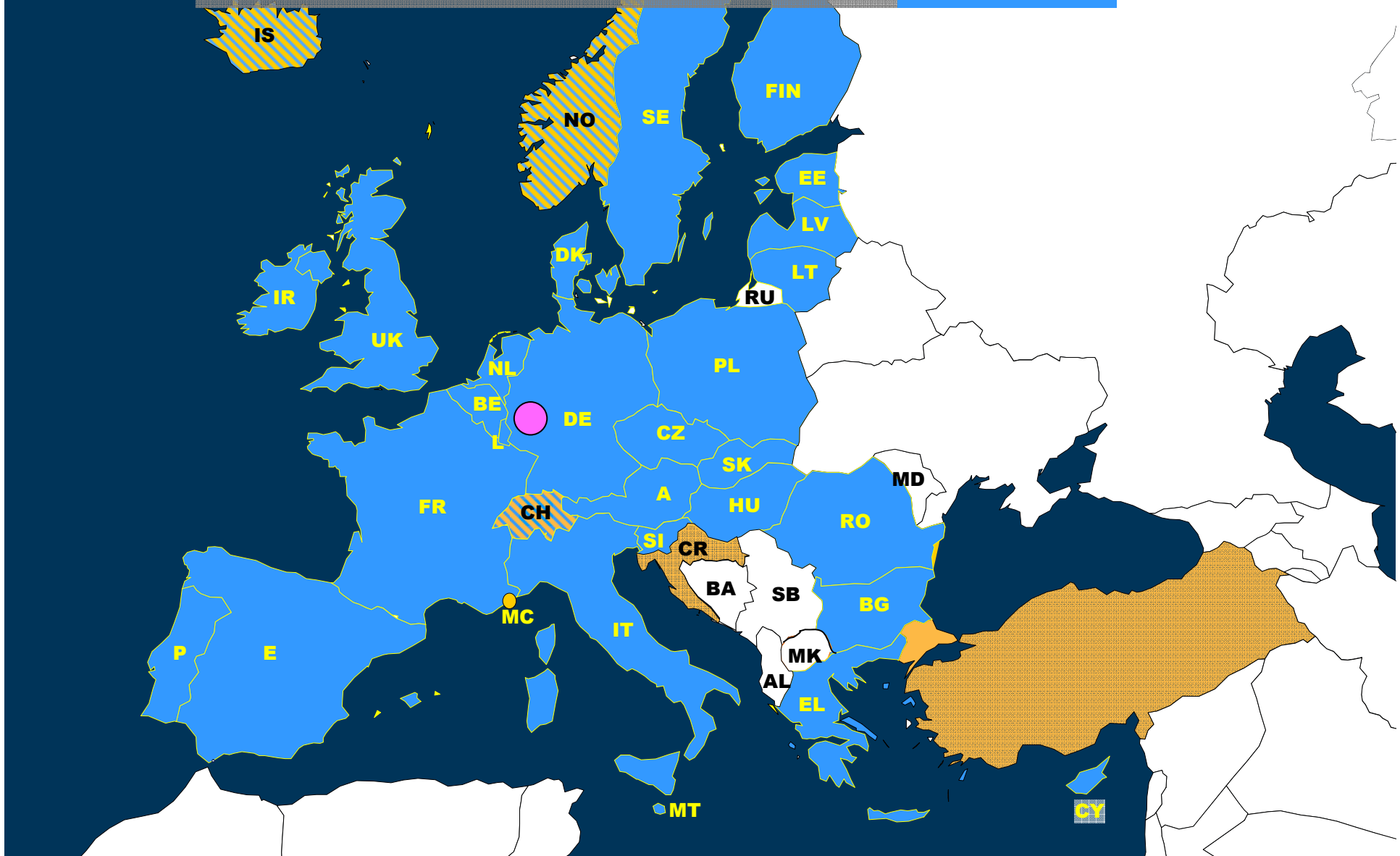
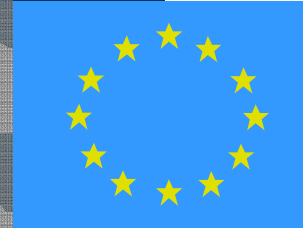


EASA in Cologne, Germany since 2004

- **Independent legal status**
- **Operational since 28 September 2003**
- **Offices in Cologne since 1st November 2004**

EASA Member States

EU 27 + 4



EASA Mission

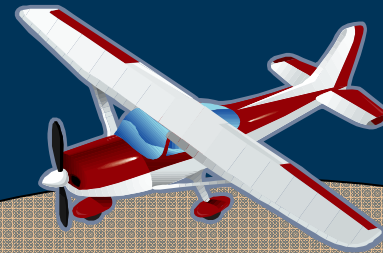
- **Centrepiece of the EU strategy for aviation safety**
- **Mission is to promote highest standards of safety and environmental protection in civil aviation**
- **Rulemaking, Certification, Approval and Standardisation, Safety Analysis and Research**
- **1st remit extension (2009):
Operations, FCL, and
3rd country operators**
- **2nd remit extension (2009):
Aerodromes and ATM**



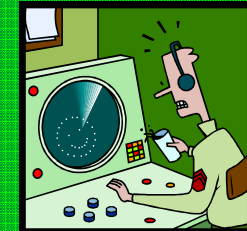
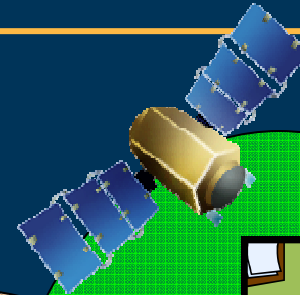
Adopted 7 Sep 2009

Systems and equipment

**Total
system
approach is
necessary!**



Aircraft parts



ANS/ATM
systems

Aerospace
Ground Support
Equipment



**Aerodrome
Equipment**

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The European Strategic Safety Initiative ESSI

- 10 year programme (2006-2016) aimed at improving aviation safety in Europe, and for the European citizen worldwide
- Partnership, with more than 150 organisations
- Powered by industry and facilitated by EASA

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Welcome to the minisite of the European Strategic Safety Initiative!

The European Strategic Safety Initiative (ESSI) is an aviation safety partnership between EASA, other regulators and the industry. The initiative's objective is to further enhance safety for citizens in Europe and worldwide through safety analysis, implementation of cost effective action plans, and coordination with other safety initiatives worldwide. Participants are drawn from the EASA Member States, the ECAC countries, manufacturers, operators and professional unions, research organisations, the EAA and international organisations such as EUROCONTROL and ICAO.

ESSI was launched by EASA as a ten year programme on 29 June 2006 and has three components:

- ECAST: European Commercial Aviation Safety Team
- EHEST: European Helicopter Safety Team
- EGAST: European General Aviation Safety Team

In total, more than one hundred fifty civil and military organisations are participating to date in the ESSI.

More detailed information can be found in the [ESSI presentation](#) attached, and in the [ICAO Information Paper A36-WP/195-TE/SS](#) and the [EASA Annual Safety Review 2006](#) published in 2007.

For further information, or if your organisation wishes to join the ESSI, please contact Michel Masson, ESSI Secretary, at the following email address: essi@easa.europa.eu

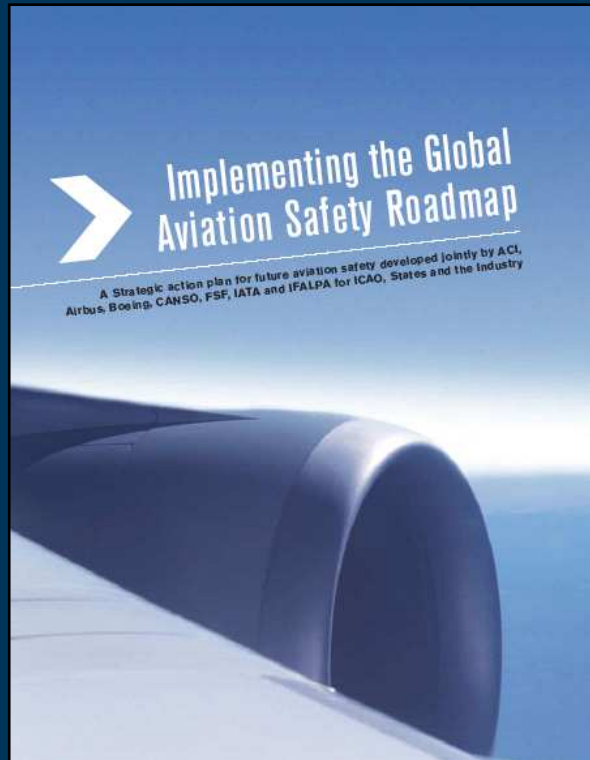
2007 © ESSI

ESSI (facilitated by EASA)

One of the Major Safety Teams worldwide



ESSI in line with the ICAO Global Aviation Safety Roadmap

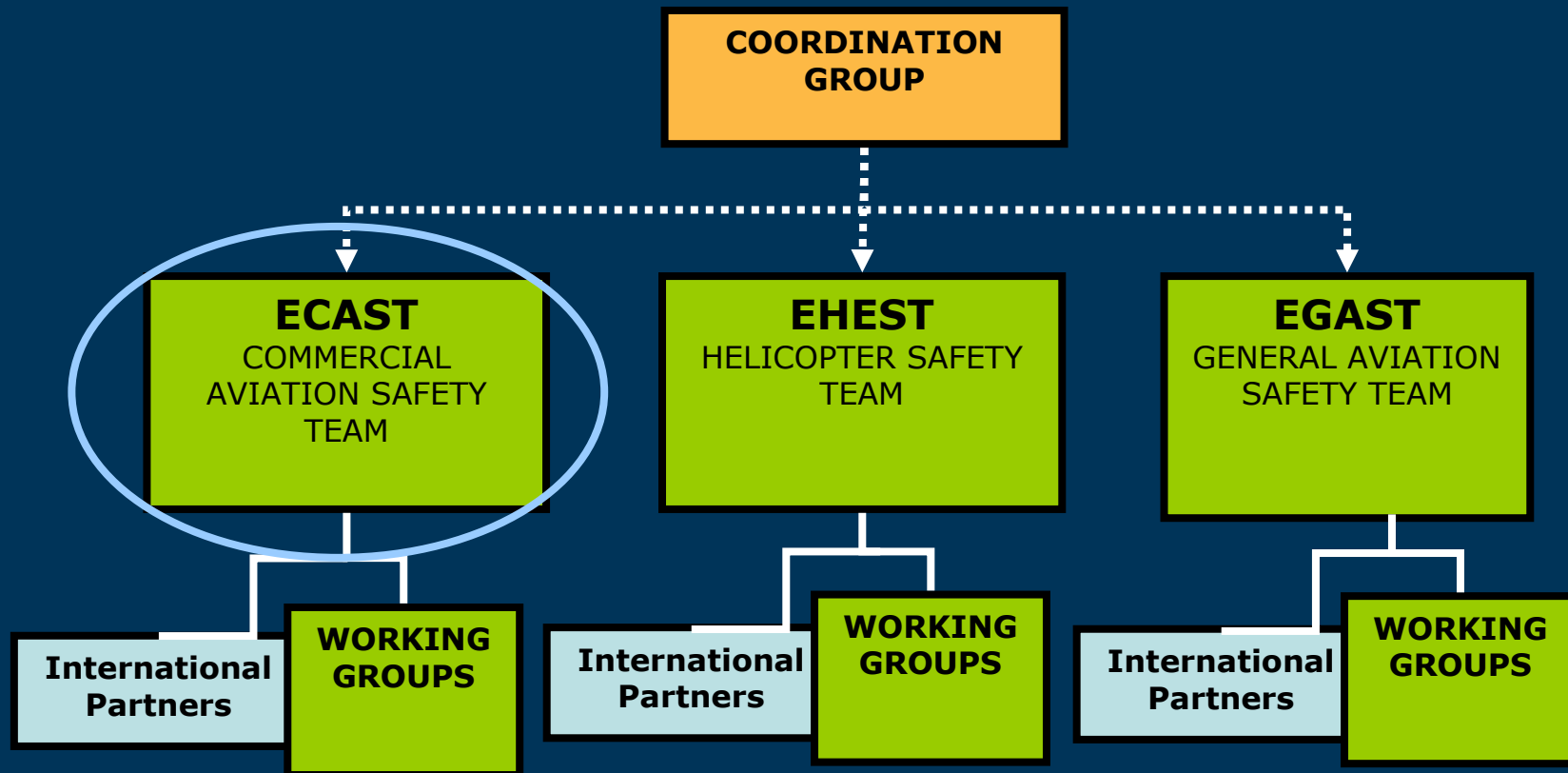


➤ ICAO GASRM - 2006

- ★ Frame of reference for stakeholders, including States, regulators, airline operators, airports, aircraft manufacturers, pilot associations, safety organisations and air traffic service providers
- ★ To improve coordination and sharing
- ★ To minimise duplication

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ECAST

Phase 1 (2006-2007)

Methodology

★ Identification of 18 Priority Areas

- List of priorities sent by the ECAST organisations
- Grouped through an affinity exercise

★ Prioritisation by each ECAST AT organisation

- Free use of internal and external data sources
- In house expertise

★ Consolidation into a agreed list

- 50 votes method

ECAST

Prioritisation Criteria

- ★ **Safety Importance**
- ★ **Coverage**
- ★ **High level Costs benefits considerations**

In line with the Global Aviation Safety Road Map, to avoid duplication priority is modified when topics are already covered.

In such case, coordination is recommended.

The ECAST priorities list therefore is not a list of major safety issues in Europe.

ECAST Priorities 2008-2009



1. Ground Safety
2. Runway Safety
3. SMS & Safety Culture
4. Flight Crew Performance
5. Loss of Control (General)
6. Approach & Landing
7. Aviation System Complexity
8. Fire, Smoke and Fumes
9. Air-Ground Communications
10. Mid Air Collision
11. CFIT
12. Icing
13. Bird Strike
14. Loss of Control (Weight & Balance)
15. Air Navigation
16. Airworthiness (Maintenance & Design)
17. Maintenance (HF)
18. Automation

1. ECAST Ground Safety WG

- Launched Feb 2009

2. Runway Safety

- Through coordination with the Flight Safety Foundation Runway Safety Initiative (RSI)

3. ECAST SMS / Safety Culture WG

- Launched in 2008



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ECAST Ground Safety WG

- **Timeline: 2009 – 2010; KO meeting 10 Feb 2009, Cologne**
- **Chaired by Garth Gray, UK CAA, chair of the UK Ground Handling Operations Safety Team (GHOST)**
- **Coordinating with IATA Safety Audit of Ground Operations (ISAGO)**
- **Good cross-sectorial participation: regulators, industry, associations; includes ACI and EU-OSHA**



ECAST Ground Safety WG

➤ Terms of Reference:

Coordinate with existing initiatives and promote implementation in Europe of existing safety enhancement materials and plans

ECAST Ground Safety Initiatives reviewed

- **FSF Ground Accident Prevention**
- **UK Ground Handling Operational Safety Team (GHOST)**
- **AGSC by UK Aviation Ground Safety Council**
- **ISAGO IATA Safety Audit of Ground Operations**
- **International Handlers' Association IAHA**
- **SAE G12 WG on de-icing fluids**
- **IACA Aircraft Ground Damage database**
- **NLR Ground Safety for CAA NL**
- **EC Directive on Ground Handling**



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★ Where are the issues?

★ Program and WP's

ICAO Database (ADREP)



- **30,000 accidents***
- **10,000 incidents**
- **40,000 reports total**
 - ✦ **Worldwide**
 - ✦ **1970 onwards**
 - ✦ **Narrative-
Classification-
Event Coding**

Analysis using
structured data

*Annex 13 definition of accidents

Ground Handling- Overview

Number of Occurrences

513

Occurrences classified as RAMP*

106

Occurrences involving damage to aircraft by ground equipment

29

Aircraft fires due to refuelling procedures or other sources of fire on the ground

* ECCAIRS includes primarily accidents and serious incidents, occurring after crew board the aircraft. Ground handling occurrences may happen before aircraft is boarded

Conclusion for ADREP

- **ADREP database contains mostly accidents, classified as such using ICAO Annex 13 definitions**
- **As a result there is a very limited number of occurrences which:**
 - ✦ **Involve minor or no aircraft damage**
 - ✦ **Occurred before crew boarded the aircraft**
 - ✦ **Occurred at the aerodrome but did not involve an aircraft**

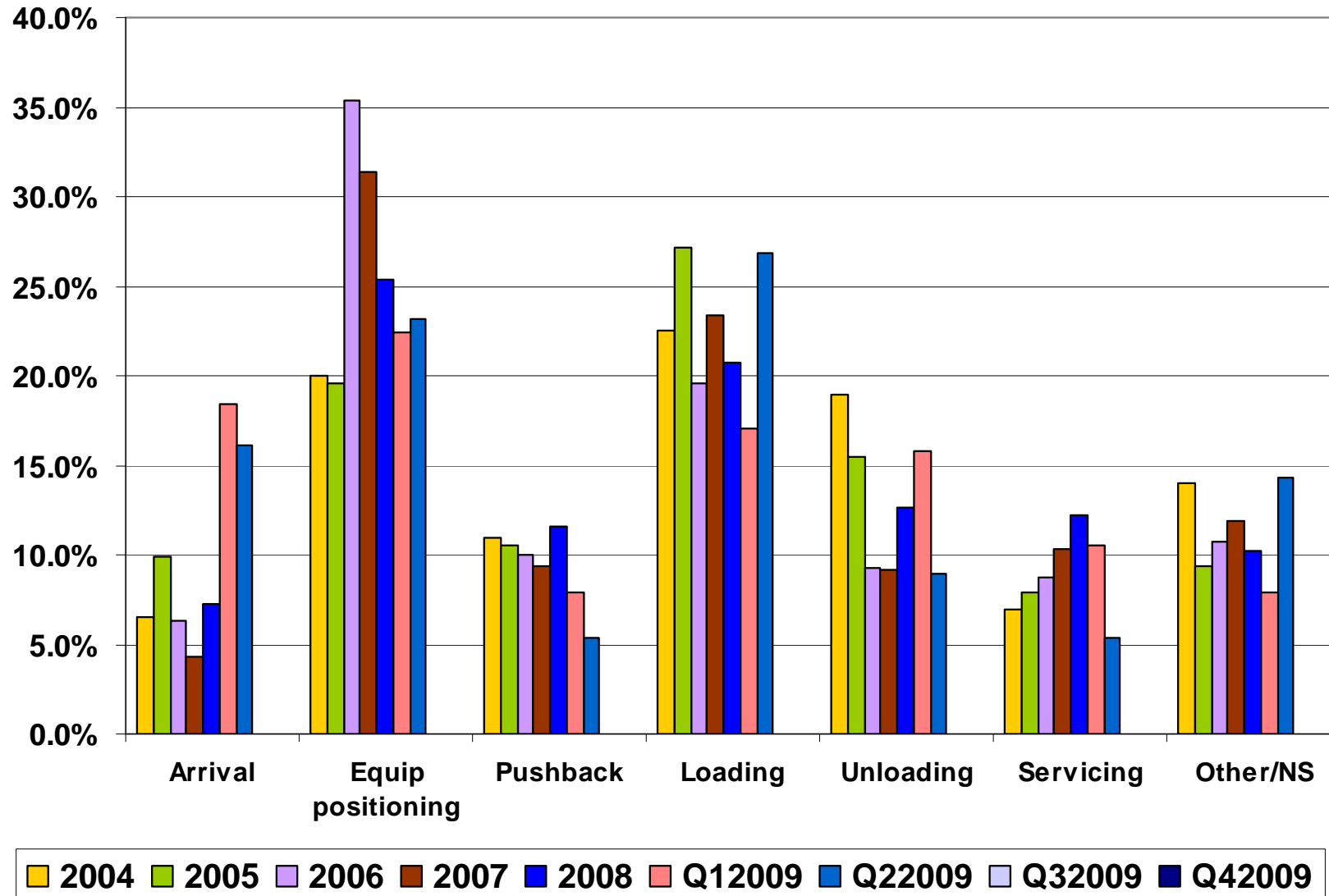
CICTT Aerodrome Taxonomy WG



- **Decision upon default data points for aerodrome occurrences (e.g. aerodrome information)**
- **Review of event codes available and update or addition of new ones in order to better cover the aspect of ground safety, without Annex 13 restrictions.**
- **Event codes Meeting in Montreal February 9th**

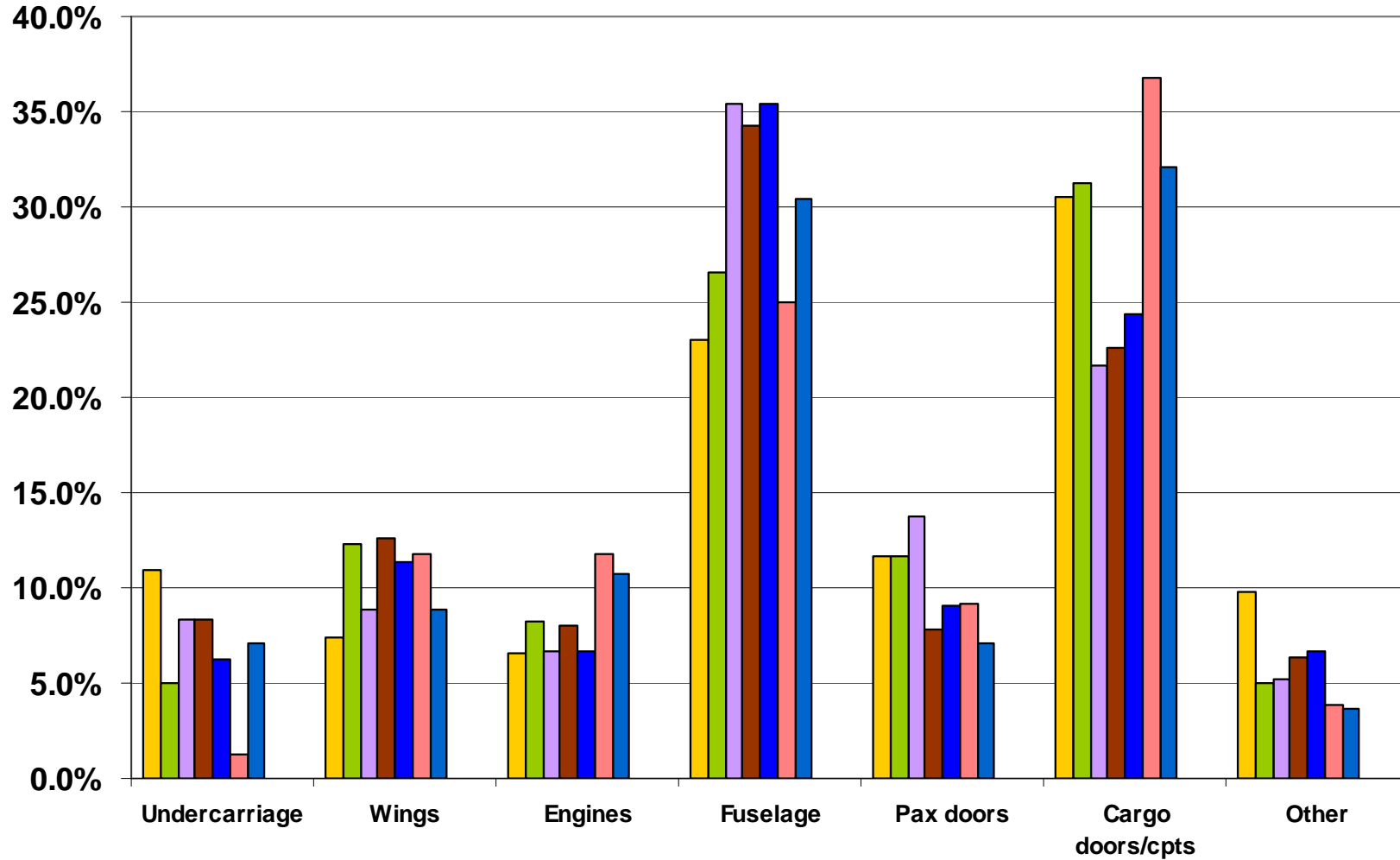
Phase of operation

AGDR (Source IAHA)



Area of damage

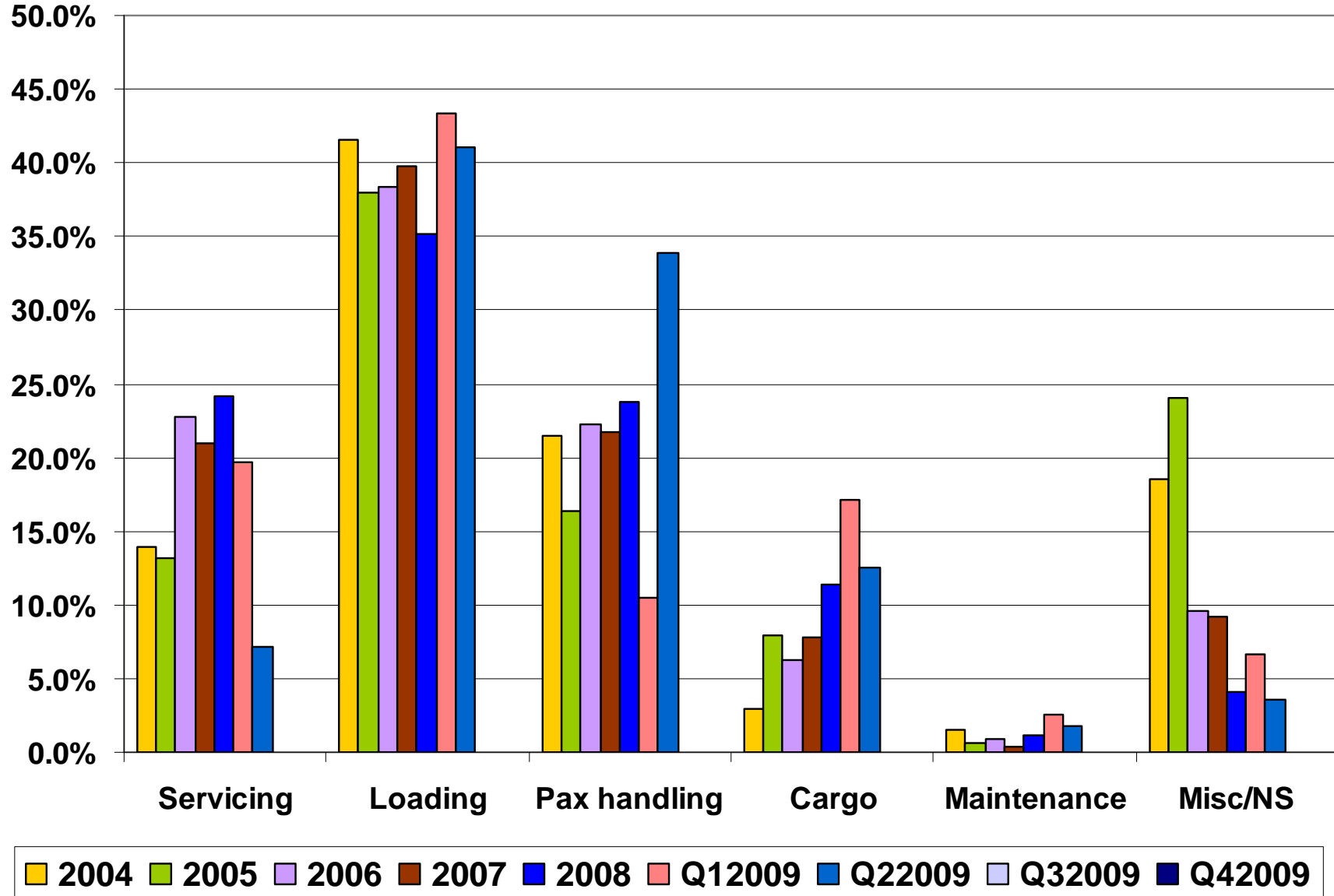
AGDR (Source IAHA)



■ 2004
 ■ 2005
 ■ 2006
 ■ 2007
 ■ 2008
 ■ Q12009
 ■ Q22009
 ■ Q32009
 ■ Q42009

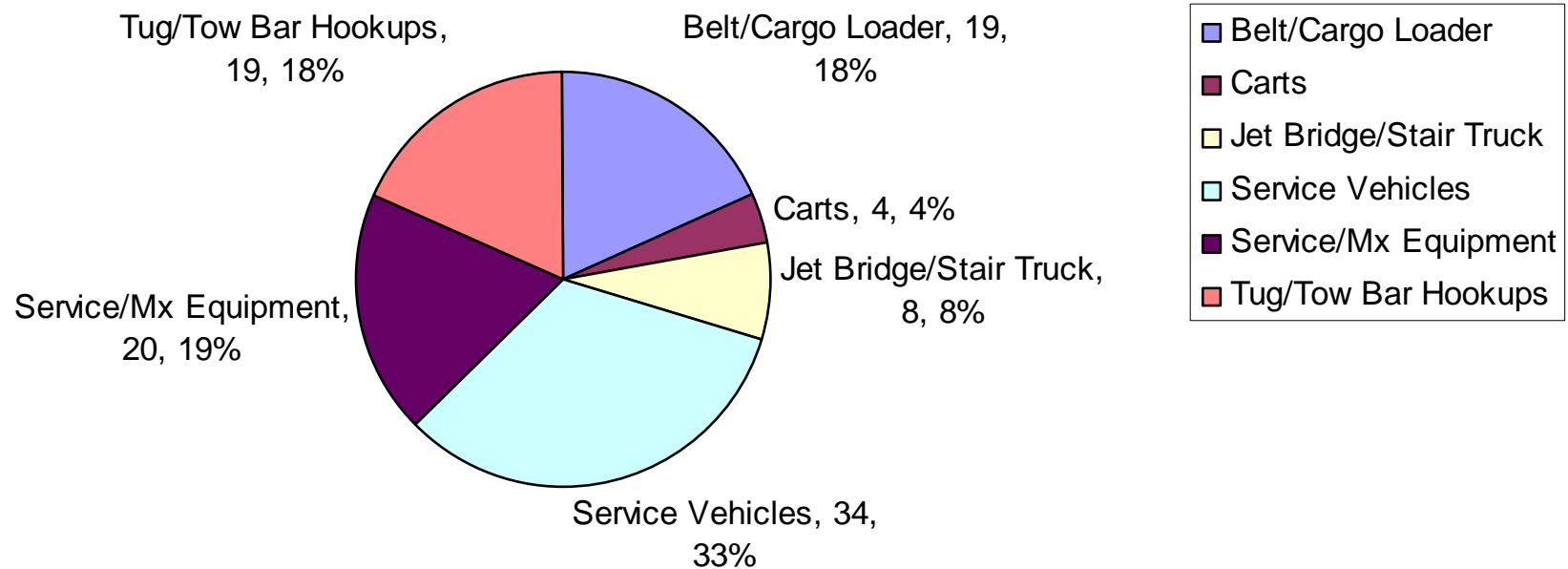
Equipment type

AGDR (Source IAHA)



ASRS Aircraft Ramp Damage Search Results Aug. 08

Vehicles/Objects Impact with Aircraft (N=104)



- Carts include baggage, maintenance, oxygen
- Service Vehicles include catering, fuel, lavatory, vans
- Service/mx Equipment include deicing, lift equipment, forklift, etc

Some of these vehicles are associated with aircraft state (e.g., pushback, parked) or with a particular damage location on the aircraft (e.g., Doors, Nose area, Wings)

Emerging issues

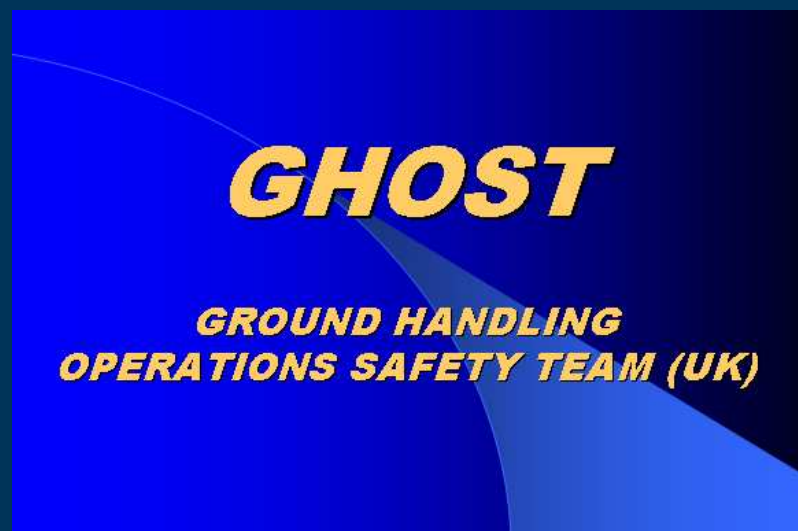
- **Shorter turn rounds**
- **Tighter H&S regulation to protect workers**
- **Present economic situation**
 - ✦ **Reduced numbers as costs are squeezed**
 - ✦ **Cost savings achieved by releasing the more expensive employees**
 - ✦ **“Low cost “ handling agents sometimes operating without complying with standards**
- **No equipage and staff certification, and lack of standardised procedures**

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WP 1 – Training

- **WP 1 - Develop 'standardised' Ground Handling training concepts and syllabi**
Led by Steve Enright, Servisair
 - ✦ **Deliverable due Dec 09**
- **In synergy with with UK GHOST**



- **Standardisation:**
Decision to use ISAGO training approach and material by IATA

WP 2 – Human Factors

- **Research the effect of Human Factors involved in ramp safety**

Performed by **A. Balk, NLR**, for **J. Bossenbroek, CAA NL**



Inspectie Verkeer en Waterstaat
Ministerie van Verkeer en Waterstaat

ECAST GS WG

WP2 - Human Factors

- **Deliverable: Best practices on HF, due March 2010**
-

WP 2 – Human Factors

➤ Objective

- ✦ Investigate human factor issues in ground handling
- ✦ Investigate best practices
- ✦ Identify potential improvements

➤ Methodology

- ✦ Review human factors research methods used in aviation maintenance
- ✦ Review current reporting systems and investigation methods used by ground handling organizations
- ✦ Conduct interviews and/or questionnaires on:
 - ➔ Organizational culture (a.o. workforce, commitment, status)
 - ➔ Equipment (i.e.. maintenance, diversity, complexity)
 - ➔ Procedures (i.e.. diversity, language, update management)
 - ➔ Training (i.e.. effects of CBT, trainer requirements)
 - ➔ Environment (i.e.. space, weather, supervisor, time pressure)

European Commercial Aviation Safety Team



EASA

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Annex

For the Questions & Answers session

EASA Extension Part II

- (EC) 3641/2009 amends regulation (EC) 216/2008 with a view to improving the safety of aerodromes, air traffic management and air navigation services
- Extends EASA's competences to cover the safety of aerodromes, air traffic-management and air navigation services. In particular, the EASA's new tasks will cover:
 - ★ **Rulemaking;**
 - ★ **and standardisation inspections.**
- In addition, as far as ATM and air navigation services are concerned, it will be necessary to coordinate the common safety rules properly with the new Single European Sky regulation and the related implementing rules
- The regulation repeals Council directive 06/23/EEC.

Scope of EASA: Article 1

- 1(c) design, maintenance, and operation of **aerodromes, as well as personnel and organisations involved therein** and, without prejudice to Community and national legislation on environment and land-use planning, the **safeguarding of surroundings of aerodromes**
- 1(d) **design, production and maintenance of aerodrome equipment**, as well as personnel and **organisations involved therein**
- 1(e) **design, production and maintenance of systems and constituents** for Air Traffic Management and Air Navigation Services (ATM/ANS), as well as personnel and **organisations involved therein**
- 1(f) ATM/ANS, as well as personnel and organisations involved therein.