



The European Strategic Safety Initiative

The key partnership to enhance aviation safety in Europe


**Presentation to EAC / CASSOA delegation
20 April 2009, EASA**

**Michel MASSON, PhD
Safety Action Coordinator, EASA
ESSI Secretary**

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**
- In line with the Global Aviation Safety Road Map

www.easa.europa.eu/essi



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 20 June 2006 and has three components:

- ECASST: European Commercial Aviation Safety Team
- EHLSST: European Helicopter Safety Team
- EGASST: European General Aviation Safety Team

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

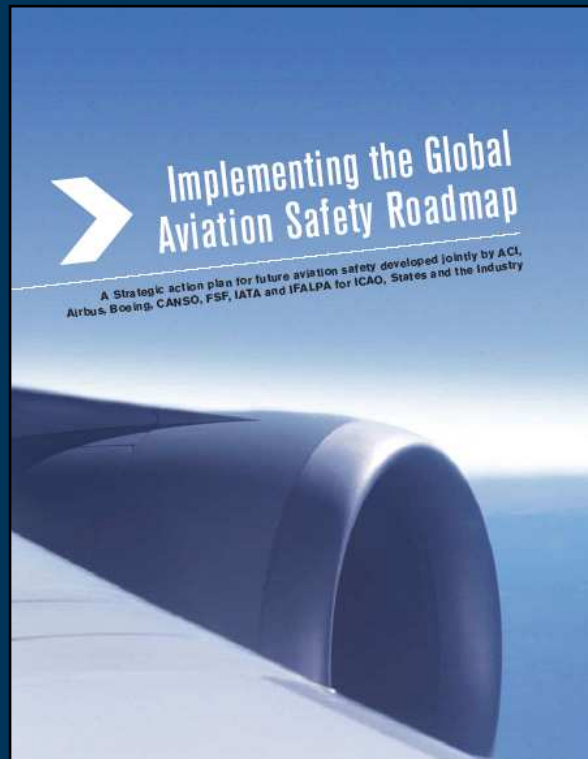
More detailed information can be found in the [ESSI presentation](#), attached, and in the [ICAO Information Paper A/36-WP/195-TE/SS](#) and the [EASA Annual Safety Review 2006](#) published in 2007.

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

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*the partnership to enhance
Commercial aviation,
Helicopter and General
Aviation safety in Europe*

ICAO Global Aviation Safety Roadmap



- Developed for ICAO in 2006 by the Industry Safety Strategy Group (ISSG) under the leadership of IATA
- Frame of reference for stakeholders, including States, regulators, airline operators, airports, aircraft manufacturers, pilot associations, safety organisations and air traffic service providers

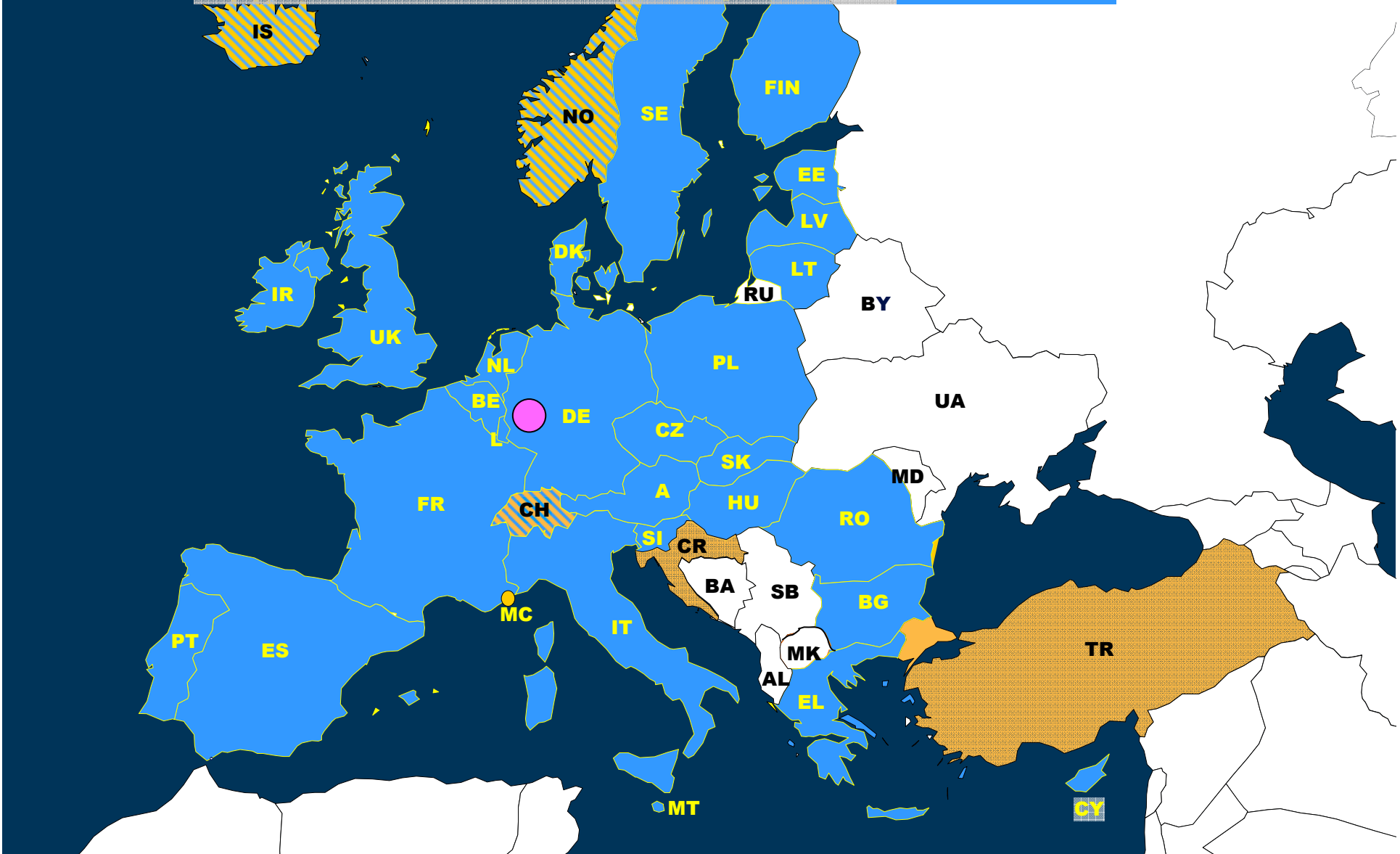
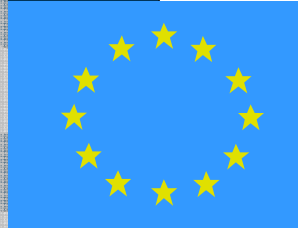
ESSI

One of the Major Safety Teams worldwide



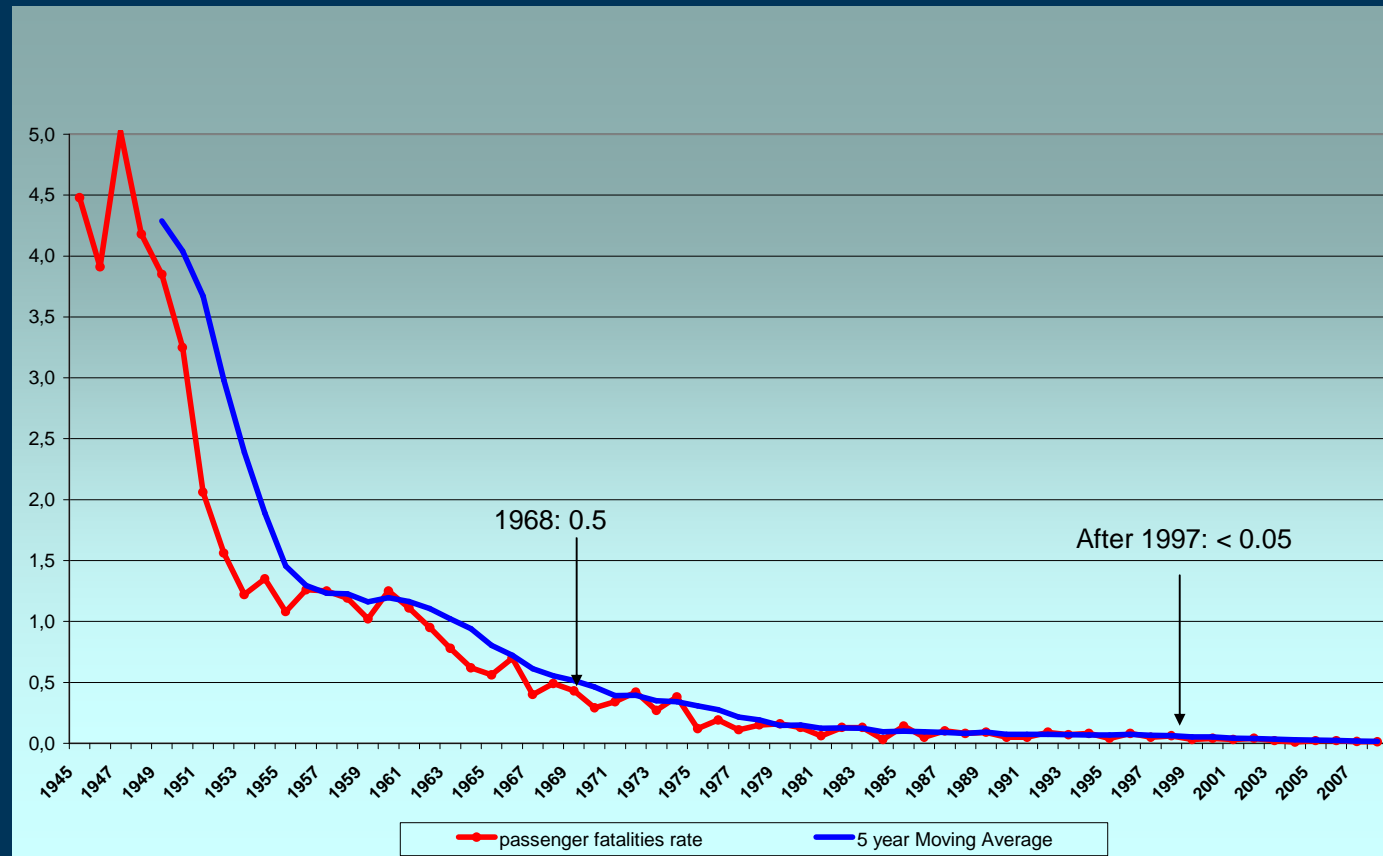
EASA Member States

EU 27 + 4 States



Preview EASA Annual Safety Review 08

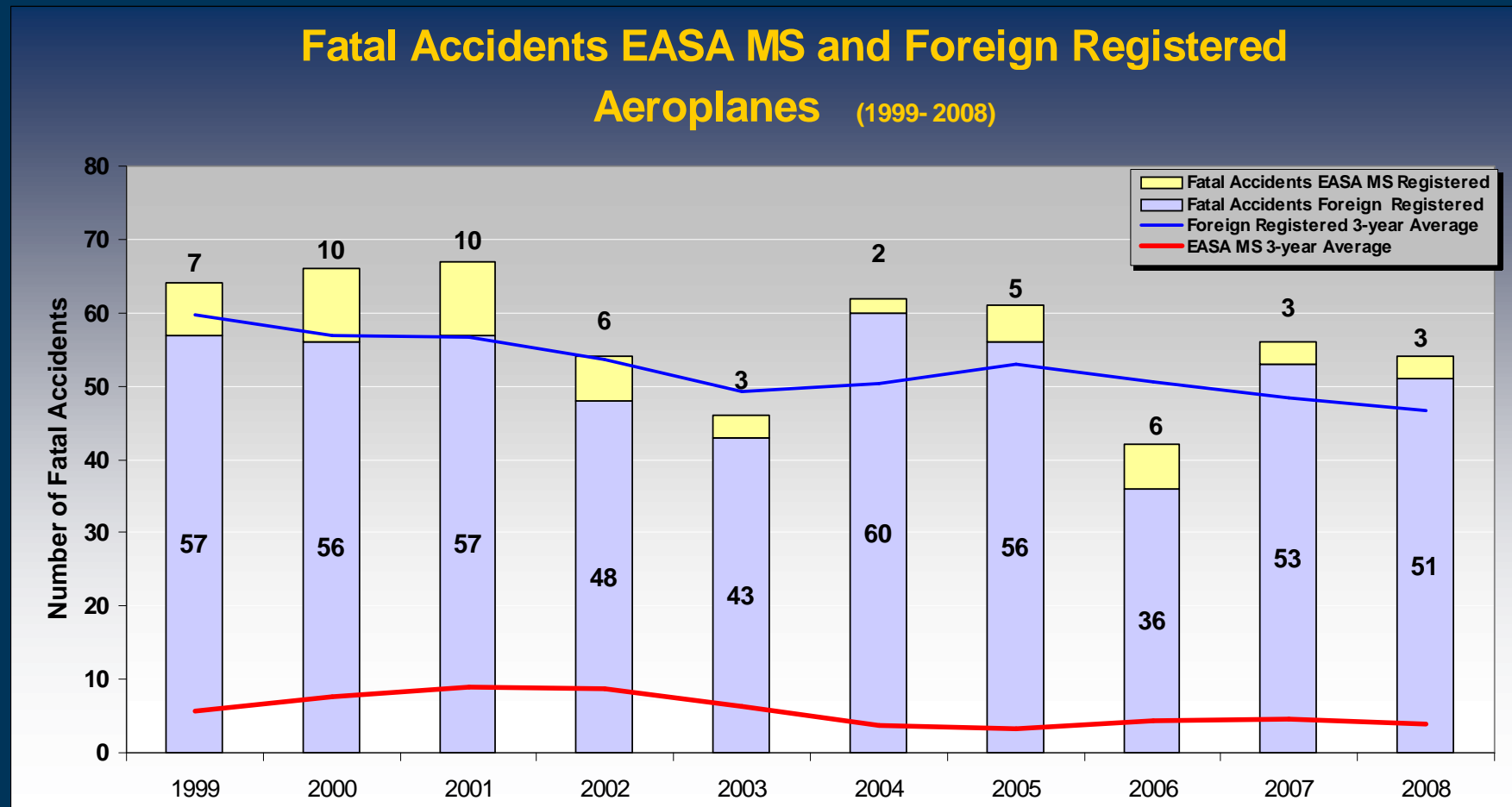
Commercial Air Transport - Aeroplanes



Global passenger fatalities per 100 million passenger miles, scheduled commercial transport operations, excluding acts of unlawful interference (1945-2008)

Preview EASA Annual Safety Review 08

Commercial Air Transport - Aeroplanes



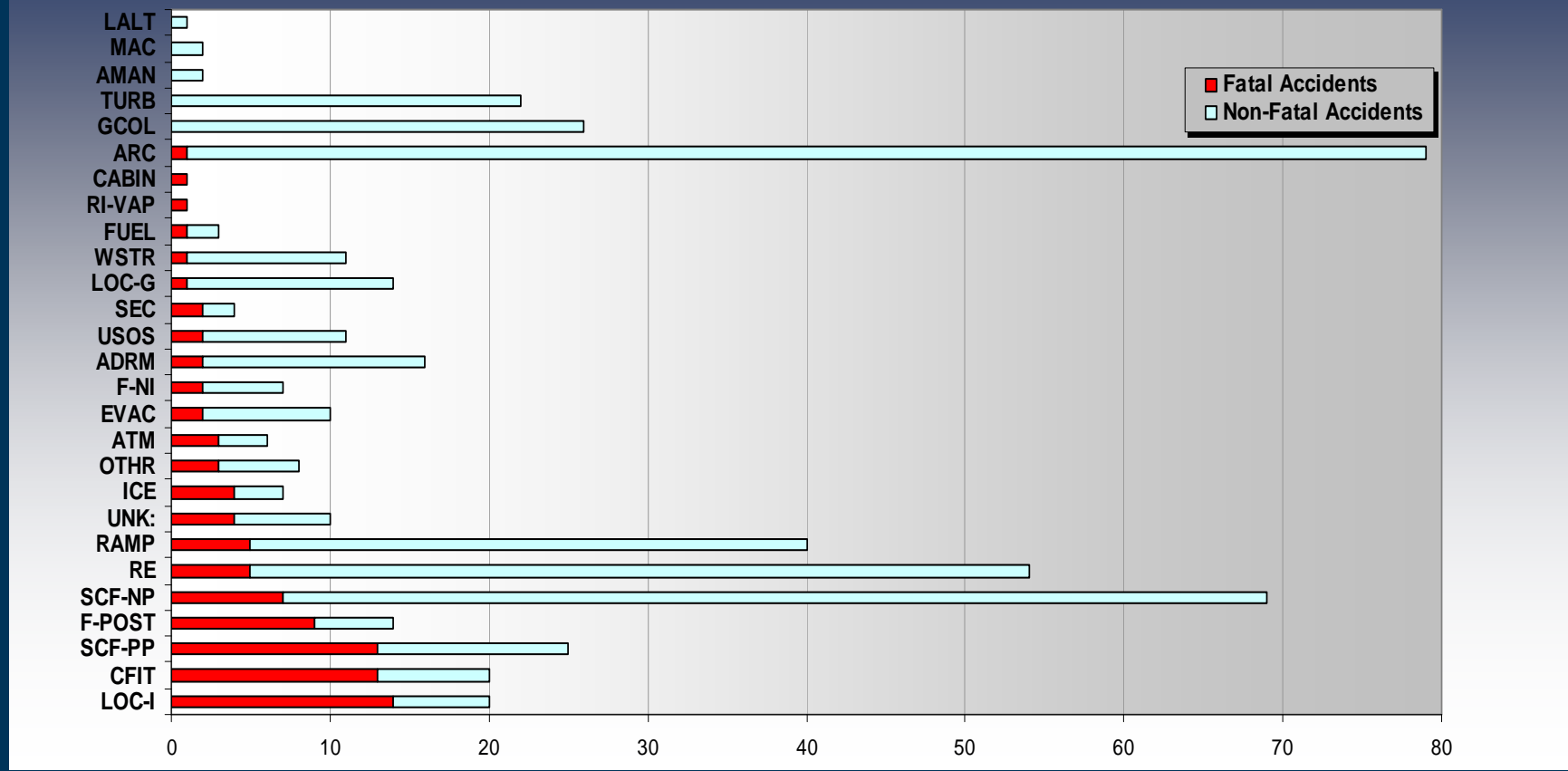
Preview EASA Annual Safety Review 08

Commercial Air Transport – Aeroplanes

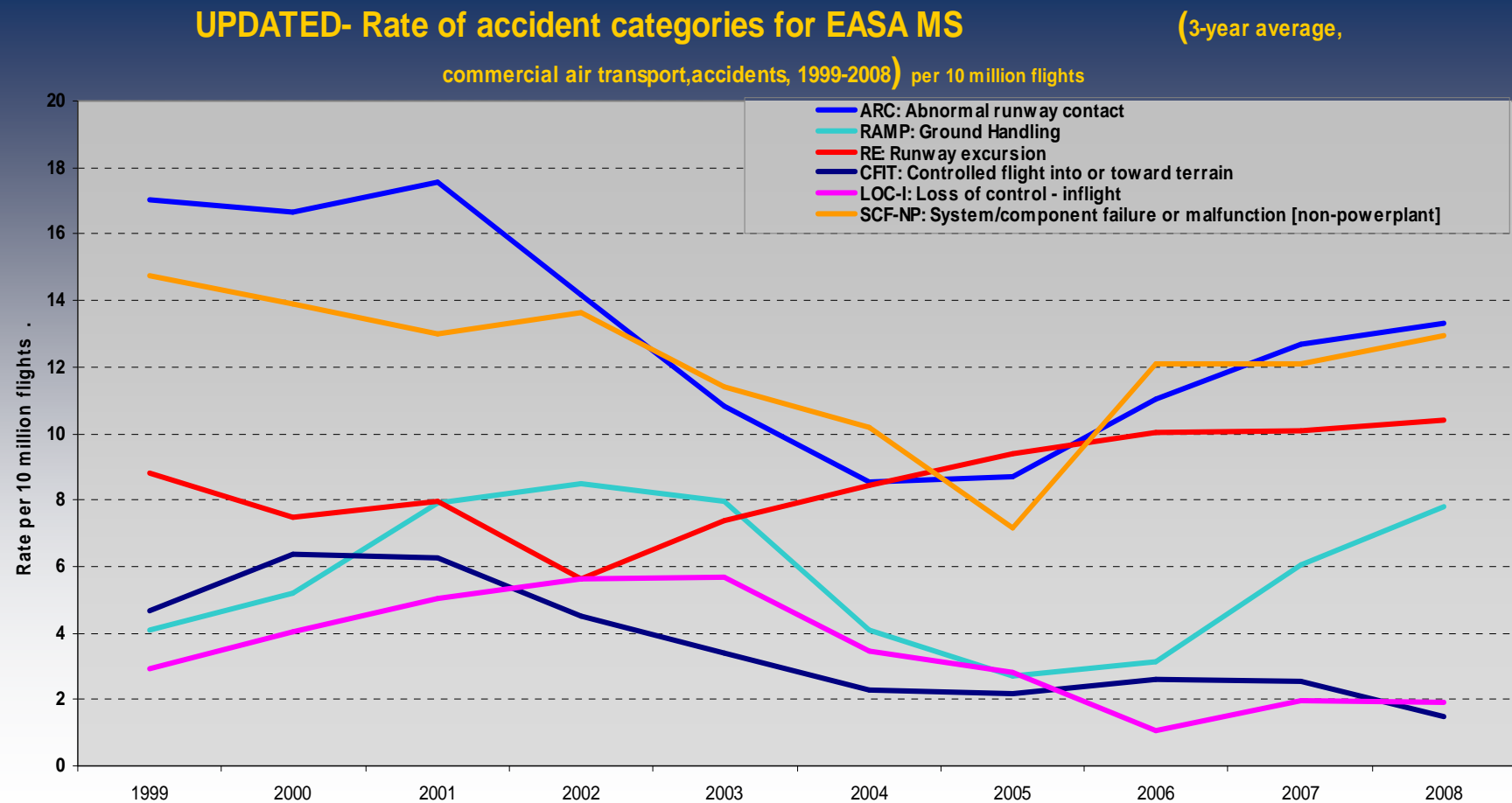
EASA Member States

Accident Categories- EASA MS registered Aeroplanes (1999-2008)

CICTT Cats:



Commercial Air Transport- Accident Categories EASA MS



Focus on ECAST



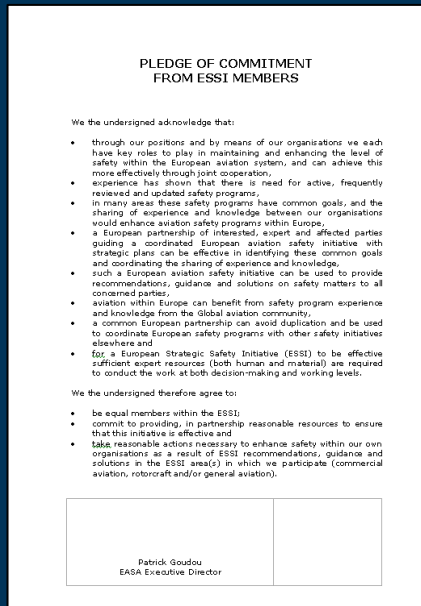


- Regulators-industry partnership
- Co chaired by EASA and IATA
 - ✦ John.vincent@easa.europa.eu
 - ✦ Sorensenp@iata.org
- Coordinates with:
 - ✦ US Commercial Aviation Safety Team (US CAST)
 - ✦ COSCAP under the ICAO Technical Co-Operation Programme
 - ✦ EUROCONTROL European Safety Program (ESP)
 - ✦ Flight Safety Foundation Runway Safety Initiative (RSI)
- Commitment sealed by a pledge

ESSI/ECAST Pledge

- **Represents high-level commitment**
- **Signatory organisations are:**
 - ★ **Equal partners within the ESSI**
 - ★ **Provide, in partnership, reasonable resources to ensure that the ESSI be effective, and**
 - ★ **Take reasonable actions as a result of ESSI recommendations, guidance and solutions in the ESSI area(s) in which they participate**

ESSI/ECAST Pledges registered



- **Airbus S.A.S.**
- **Aircraft Engineers International (AEI)**
- **Alenia Aeronautic S.p.A.**
- **Boeing Commercial Airplanes**
- **Civil Aviation Authority UK**
- **DGAC France**
- **Dutch Ministry of Transport, Public Works and Water Management**
- **Embraer - Empresa Brasileira de Aeronáutica**
- **Ente Nazionale Aviazione Civile Italy**
- **European Transport Safety Council**
- **European Aviation Safety Agency (EASA)**
- **Federal Office of Civil Aviation Switzerland**
- **Fokker**
- **International Air Transport Association (IATA)**
- **International Federation of Airworthiness (IFA)**
- **National Aerospace Laboratory (NLR)**
- **Rolls-Royce plc**

...

More than 50 member and partner organisations in total

ECAST action fields

- 1. ECAST monitors JSSI actions plans heritage adapted from US CAST
- 2. ECAST has defined and is enacting a new safety improvement process

1. ECAST monitors JSSI actions plans heritage adapted from US CAST

- **CFIT, ALAR, LoC action plans**
- **2007-2008 actions:**
 - ✦ *Survey of Action Plans with NAAs: completed*
 - ✦ *Survey of Action Plans with airlines: completed*
- **Current status:** 23 APs; 21 Complete; 2 Underway

CAST “Remaining Risks” Action Plans

- **Several Level 1 subjects:**
 - ✦ **Cargo**
 - ✦ **Icing**
 - ✦ **Maintenance/Systems**
 - ✦ **Mid Air**
 - ✦ **Turbulence**
 - ✦ **Runway incursion**
- **Not accounted by ECAST so far**

Decision to adopt and adapt these RR plans to Europe will depend on the priorities resulting from applying the new ECAST process

Relation to EASA Rulemaking

- **Most APS are expected to be voluntary**
 - ★ **ECAST is partnership**
- **Some APs may target standards and regulations**
 - ★ **EASA Rulemaking process is independent from ECAST**
 - ★ **But ECAST input can, among other input sources, be fed into the EASA Rulemaking prioritisation process**
 - ★ **APs within EASA Rulemaking remit are excluded from ECAST monitoring**

★ **ECAST is not a Rulemaking body!**

Input to EASA Research

- **ECAST, among other sources, can influence research priorities through participation in the European Aviation Research Partnership Group (EARPG) led by EASA**

- **Contact and web links:**
 - ✦ **EASA Research Project Manager, EASA Safety Analysis and Reserach Dpt, EARPG chair:**
werner.kleine-beek@easa.europa.eu
 - ✦ **EASA website research page:**
http://www.easa.europa.eu/ws_prod/g/g_sir_research.php
 - ✦ **EASA website procurement page:**
http://www.easa.europa.eu/ws_prod/g/g_procurement_main.php

2. New ECAST Process – 3 Phases



ECAST

Prioritisation (2006-2007)

- ★ **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

- Kick Off meeting 10 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

Ground Safety Working Group

- **ECAST Ground Safety Working Group kick-off meeting on 10 Feb 09 in EASA**
- **Chaired by UK CAA**
- **Good participation: regulators, industries, associations, etc.**

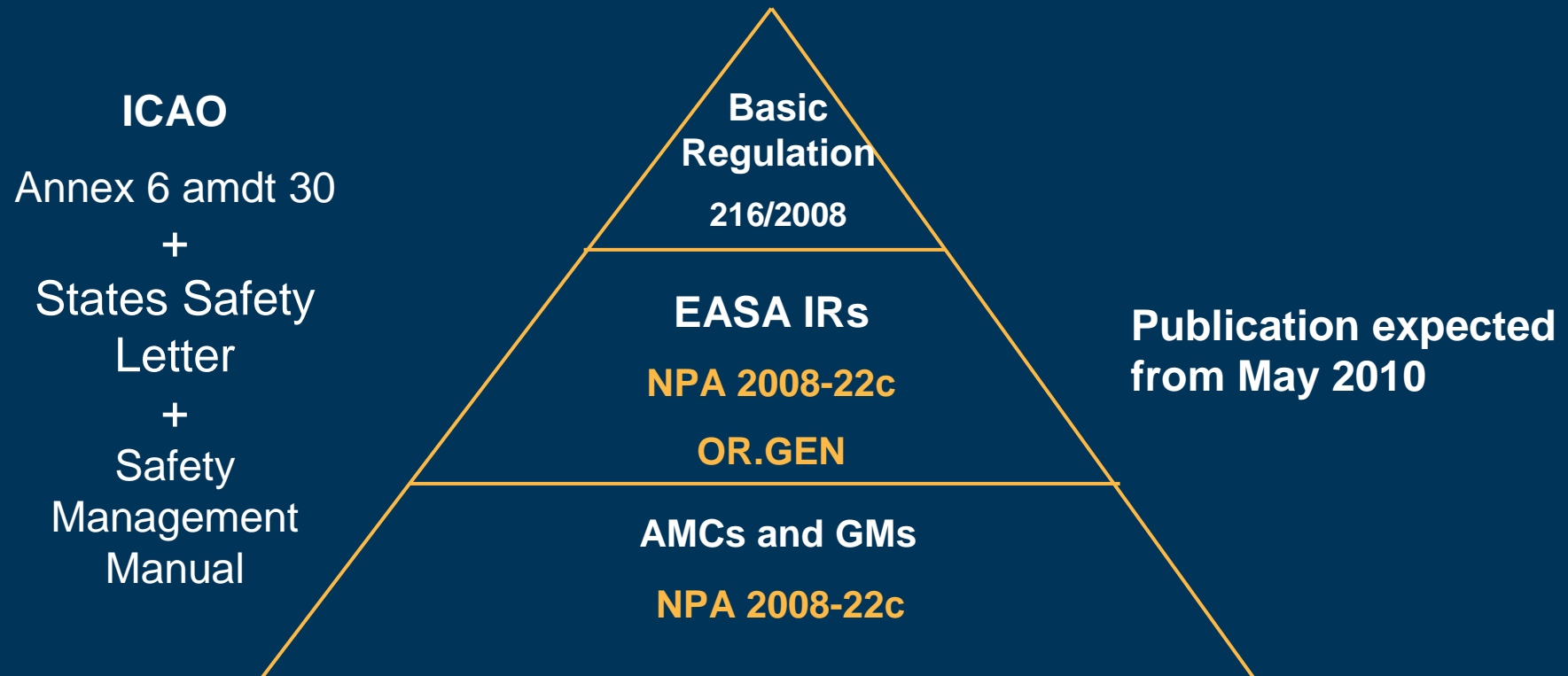
Ground Safety Working Group

➤ Terms of Reference:

- ★ Identify Ground Safety issues in Europe
- ★ Coordinate with existing initiatives and promote implementation in Europe of existing safety enhancement materials and plans
- ★ Develop 'standardised' Ground Handling training concepts and syllabi
- ★ Research the effect of Human Factors involved in ramp safety

ECAST SMS WG

And the regulatory framework



ECAST SMS WG provides (website based) best practices,
(not regulatory materials)

Welcome to the Safety Management and Safety Culture Working Group website



This website is a resource for stakeholders to obtain information about ECAST efforts in the area of Safety Management and to Support for organisations wishing to implement a Safety Management System.

Background on the ECAST SMS/SC Working Group

The establishment of the ECAST Safety Management Systems (SMS) and Safety Culture Working Group is the result of the associated ECAST process and the work of the ECAST Safety Analysis Team. The objective is to provide guidance on safety to help stakeholders to comply with ICAO requirements and future EASA rules for Authority and Organisation Requirements, Part Organisation. (A proposal for future EASA rules for Organisation Requirements is currently the subject of public consultation as part of the EASA Notice of Proposed Amendment *NPA 2008-22c*).

Note: It is emphasised that these best practice materials have no legal status: they are neither Acceptable Means of Compliance (AMC) nor Guidance Materials (GM) but were developed to support the industry in complying with future regulatory requirements. As the final content of legal requirements regarding SMS is still to be determined it may be necessary to substantially adjust the related support material when the final wording is decided.

The work was divided in four Work Packages in areas where guidance was considered as most useful:

	Summary	Guidance
WP 1.1 - Review SMS/Safety Culture initiatives and materials	WP 1.1	
WP 1.2 - Safety Culture framework for ECAST SMS WG	WP 1.2	
WP 2 - Identify best practices and examples of organisations	WP 2	
WP 3 - Guidance on Hazard Identification	WP 3	
WP 4 - Guidance on Risk Assessment	WP 4	

ECAST SMS materials

All materials published on the ECAST website...

http://www.easa.europa.eu/essi/ECAST_SMS.htm

ECAST SMS WPs and materials

...and on SKYbrary

The screenshot displays the SKYbrary website interface. At the top, the logo 'SKYbrary' is prominent, with the tagline 'The single point of reference in the network of aviation safety knowledge'. Navigation options include 'Join SKYbrary / Log in' and 'SKYbrary Forum'. Search bars for 'SKYbrary' and 'ICAO' are visible. The main content area is organized into three portals: 'Operational Issues Portal', 'Enhancing Safety Portal', and 'Safety Regulations Portal'. A grid of 15 icons represents various safety topics: Air Ground Communication, Airspace Infringement, Bird Strike, Controlled Flight into Terrain, Fire, Ground operations, Human Factors, Level Bust, Loss of Control, Loss of Separation, Runway Excursion, Runway Incursion, Wake Vortex Turbulence, Weather, and General. A 'Highlighted Article' section features 'Loss of Separation (LOS)' with a brief description and a 'read more' link. Below this, 'SKYbrary Solutions' and 'Safety Alerts' are listed. The footer includes logos for contributing organizations: EASA, ICAO, Flight Safety Foundation, and UKFSC.

www.skybrary.aero/index.php/Category:Safety_Management

SMS WP 1 – Review of SMS and Safety Culture materials

- References to existing Regulations and Materials related to (Safety) Management Systems
- Safety Management Best Practices in ATM, Airline and Airport Operations
- Safety Culture framework

The screenshot displays the SKYbrary website, which is described as 'The single point of reference in the network of aviation safety knowledge'. The interface includes a navigation menu with three main categories: 'Operational Issues Portal', 'Enhancing Safety Portal', and 'Safety Regulations Portal'. Below these, there is a grid of 18 icons representing various aviation safety topics, such as 'Air Ground Communication', 'Airspace Intrusion', 'Bird Strike', 'Controlled Flight Into Terrain', 'Fire', 'Ground operations', 'Human Factors', 'Level Bust', 'Loss of Control', 'Loss of Separation', 'Runway Excursion', 'Runway Incursion', 'Wake Vortex Turbulence', 'Weather', and 'General'. On the right side, there is a search bar, a 'Join SKYbrary / Log in' button, and a 'Highlighted Article' section titled 'Loss of Separation (LOS)' with a 'read more' link. At the bottom, there are logos for contributing organizations: EASA, FLIGHT SAFETY FOUNDATION, UKFSC, and essi.

SMS WP 2 – Best practices and examples of organisations

➤ Practical guidance on organisation for safety

➤ Method:

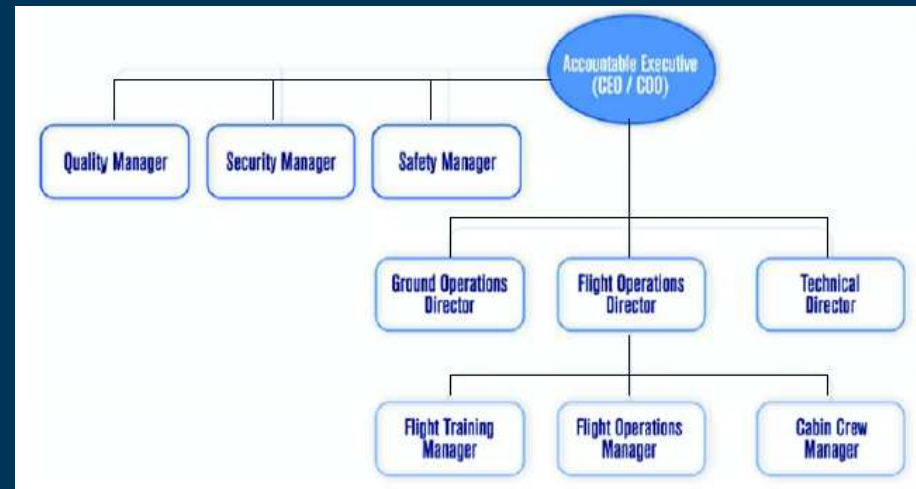
- ★ Questionnaire airlines

- ★ Literature review

➤ Deliverables:

- ★ Guiding Principles

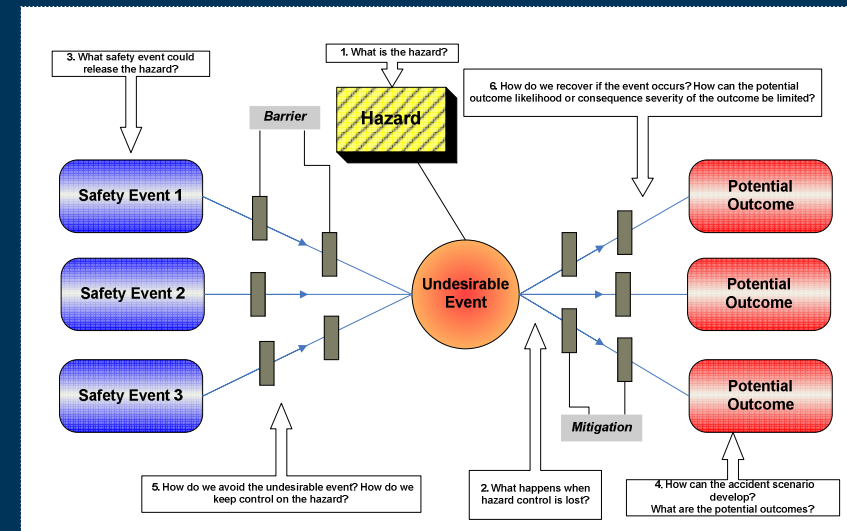
- ★ Example of organisational charts from reference sources



SMS WP 3 – Hazards Identification

Where guidance is probably most needed (Part 1)

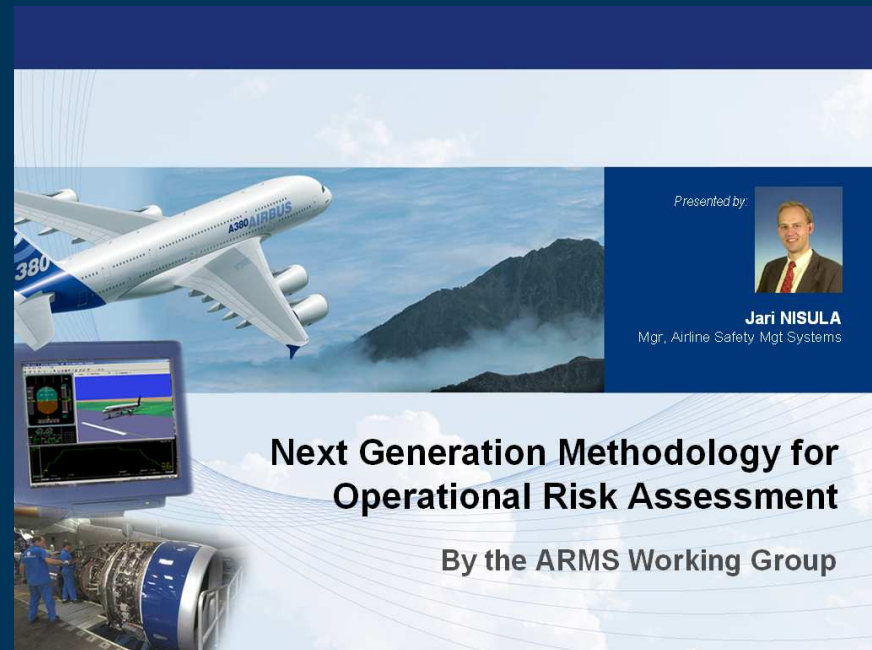
- **Simple, concise and useful materials on:**
 - ✦ **Definitions (hazard, risk, etc.)**
 - ✦ **Bow Tie as concepts organiser**
 - ✦ **Hazards id. process**
 - ✦ **Hazards id. methods**



SMS WP 4 – Risk Assessment

Where guidance is probably most needed (Part 2)

- **A new methodology**
 - ✦ **Developed by the industry**
 - ✦ **ICAO compatible**
 - ✦ **Publicly available**



http://www.skybrary.aero/index.php/ARMS_Methodology_for_Risk_Assessment

European Strategic Safety Initiative



EASA

Ottoplatz 1
D-50679 Köln
PO Box 101253
D-50452 Köln, Germany
Tel: 49-221-89990000

Contact:

essi@easa.europa.eu

Website:

www.easa.europa.eu/essi

John Vincent

EASA Head Safety Analysis and Research, ESSI co-Chair

john.vincent@easa.europa.eu

Michel Masson

EASA Safety Action Coordinator, ESSI Secretary

michel.masson@easa.europa.eu

Clément Audard

EASA Safety Team Support Officer, ESSI co-Secretary

clement.audard@easa.europa.eu

List of abbreviations

AMC	Acceptable Means of Compliance
CAST	Commercial Aviation Safety Team
COSCAP	Cooperative Development of Operational Safety and Continuing Airworthiness team under the ICAO Technical Co-Operation Programme
EASA	European Aviation Safety Agency
ECAST	European Commercial Aviation Safety Team
EGAST	European General Aviation Safety Team
EHEST	European Helicopter Safety Team
ESSI	European Strategic Safety Initiative
EC	European Commission
EU	European Union
GASRM	ICAO Global Aviation Safety Roadmap
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IHST	International Helicopter Safety Team
IR	Implementing Rule(s)
JAA	Joint Aviation Authorities
JSSI	Joint Safety Strategy Initiative
MS	Member State(s)
SMS	Safety Management System
WG	Working Group