European Aviation Safety Agency

Report

European Aviation Safety Plan 2014-2017

Final

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1 Executive Summary

The worldwide rate of fatal accidents for scheduled passenger and cargo flights continued to decrease in 2012, providing a steady improvement in aviation safety. According to the EASA Annual Safety Review 2012 the rate of fatal accidents in EASA MS is comparable with and slightly lower than North America.

Even though this is a great achievement, there is no room for complacency: air traffic is expected to almost double by 2030[1] and the fact that the average annual rate of fatal accidents in scheduled passenger operations[2] in the European Union has remained more or less stable for the past years, makes new approaches necessary to complement the existing and successful safety measures in order to drive further safety improvements in aviation.

The commitment to improve safety is the driver of the **European Aviation Safety Plan** (EASp), our risk portfolio for the European region. The Plan is the documented output of an evidence based, pro-active approach to safety risks and provides the reader with a risk picture of the aviation safety system in Europe. It supports the management of safety at European level by complementing existing safety regulations and investigations.

The Safety Plan encompasses three broad areas: systemic, operational and emerging issues. The risks identified in these areas are mitigated by safety actions that Member States, Eurocontrol, the European Commission, the industry and the Agency take on board. All the partners work together, streamline their activities and add their efforts to drive our accident rate even further down.

An update of the Plan is provided to the EASA Management Board at the end of each year. The present document constitutes the fourth edition of the EASp covering the period between 2014 and 2017. This edition includes an update to the main risk areas of the portfolio by including *fire, smoke and fumes* as one of the categories where new opportunities to improve safety have been identified.

This fourth edition includes a report on the status of the *88 standing actions* identified last year. A progress report with details on individual actions is included in **Annex A**. This has been developed in coordination with the various action owners. Additionally, a brief summary of the progress made in each of the safety areas has been included in the main body of the document (sections 4 to 7).

The document also proposes *18 new actions* for incorporation. These new actions have been reviewed by the European Aviation Safety Advisory Committee (EASAC), States and Industry and are distributed within the existing framework. They take into consideration new safety intelligence acquired and initiatives aimed at mitigating the existing risks.

The following chapter summarises the performance of the Plan in the current year.

[1] EUROCONTROL CND/STATFOR Doc415 of 17 December 2010 - Long-Term Forecast – Flight Movements 2010 - 2030

[2] *Fatal accidents per 10 million flights*, see EASA Annual Safety Review

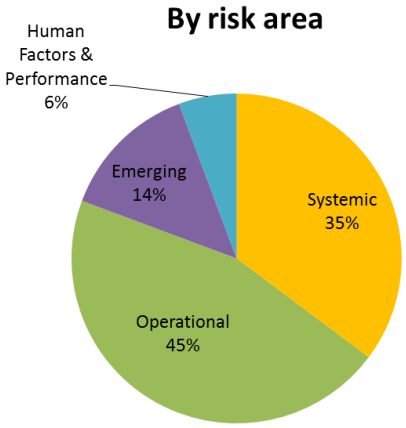
2 2013 Performance at a glance

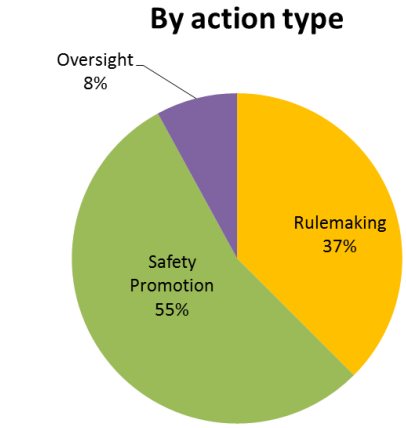
This section focuses on three aspects of the Plan: the type of actions from various perspectives, the Plan performance measured against the original planning established at the beginning of the year and the level of implementation among the various States.

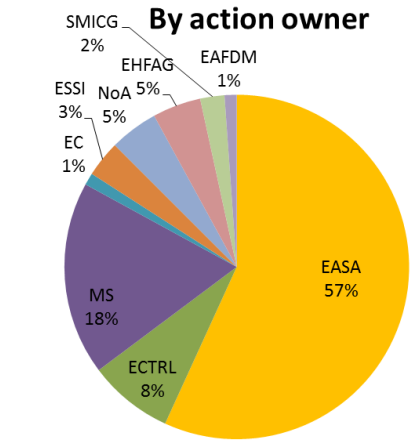
Action types

The third edition of the European Aviation Safety Plan (EASp) contained **88 actions**. Almost half of the actions in the Plan mitigate operational risks, the majority of them being classified as safety promotion actions (55%). These actions include launching promotion campaigns, developing safety videos, training syllabi, leaflets and guidance material, holding specific workshops or financing research projects among others.

The two major owners of EASp actions are the Agency (57% of the actions) and the Member States (18% of the actions). Other EASp stakeholders are Eurocontrol, the Strategic Safety Initiative's (ESSI) Teams, the European Human Factors Advisory Group (EHFAG), the European Commission (EC), the Safety Management International Collaboration Group (SMICG), the European Authorities Coordination Group on FDM (EAFDM) and the Network of Analysts (NoA). An overview of the EASp composition is provided in the right side diagrams.





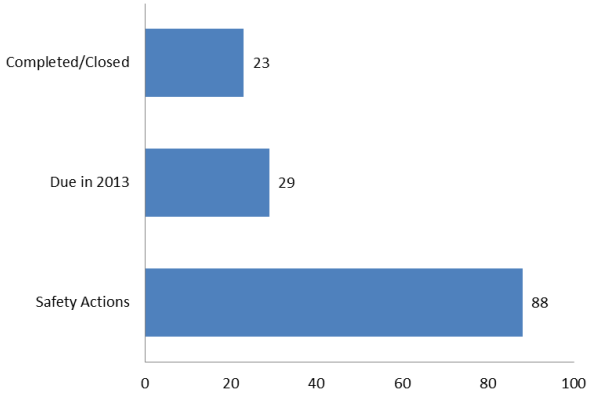


EASp performance

When it comes to delivering results, twenty nine (29) actions were due to be completed in 2013. Twenty three (23) have been delivered during the year including three actions delivered ahead of schedule.

Among the actions finalised in 2013 we find:

- The publication of the opinion requiring aerodrome operators (of such aerodrome that will require certification) to

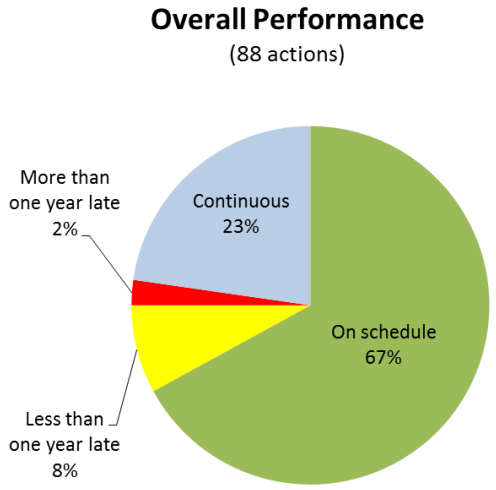


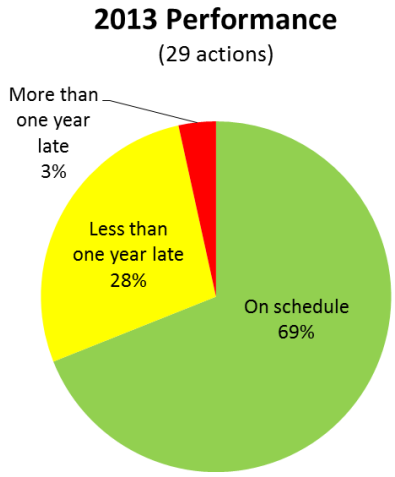
implement and maintain a management system as well as the authorities responsible for their oversight;
- The progress made on paving the way on safety performance measurement: The SMICG has published guidance material for service providers while the NoA has agreed the first SPI definitions with States;
- The collaborative work of the International Committee for Aviation Training in Extended Envelopes (ICATEE) and Loss of Control Aviation Rulemaking Team (LOCART) in which EASA and Member States have taken part. ICATEE recently delivered a draft Upset Prevention and Recovery Manual to ICAO;
- A workshop on loss of control prevention and recovery training was organised on 28 February and 1 March at the Agency. The workshop invited the major stakeholders who discussed on issues like theoretical training, on aircraft upset prevention and recovery training (UPRT), Flight Simulation Training Devices, realistic stall prevention and training scenarios development and manual flying skills. Actions coming out of the workshop have been identified and a follow-up EASp action is proposed in this edition;
- A tool to assess the impact of technologies on mitigating helicopter safety issues developed by the EHEST;
- A safety conference to exchange views on icing – both on ground and in the air - and identify mitigation opportunities organised by the Agency in October;
- The implementation of a uniform, standardisation process for all fields of aviation as covered by the Basic Regulation and related Implementing Rules is now developed;
- The EHFAG has reviewed the rulemaking programme for 2013 to 2016 and identified tasks that have potential HF considerations.

Overall, 67% of the actions are on schedule according to the initial Plan. Significant efforts have been made to deliver results on-time. A number of actions (23%) are continuous activities that are reported every year till the desired results are achieved. They include many actions under the leadership of States.

Among the 29 actions due in 2013, 20 actions have been completed, while 8 actions have been postponed into next year and one has been moved beyond 2014. Three additional actions have been delivered ahead of time.

The below diagrams summarise the overall performance of the Plan and the results achieved in 2013.

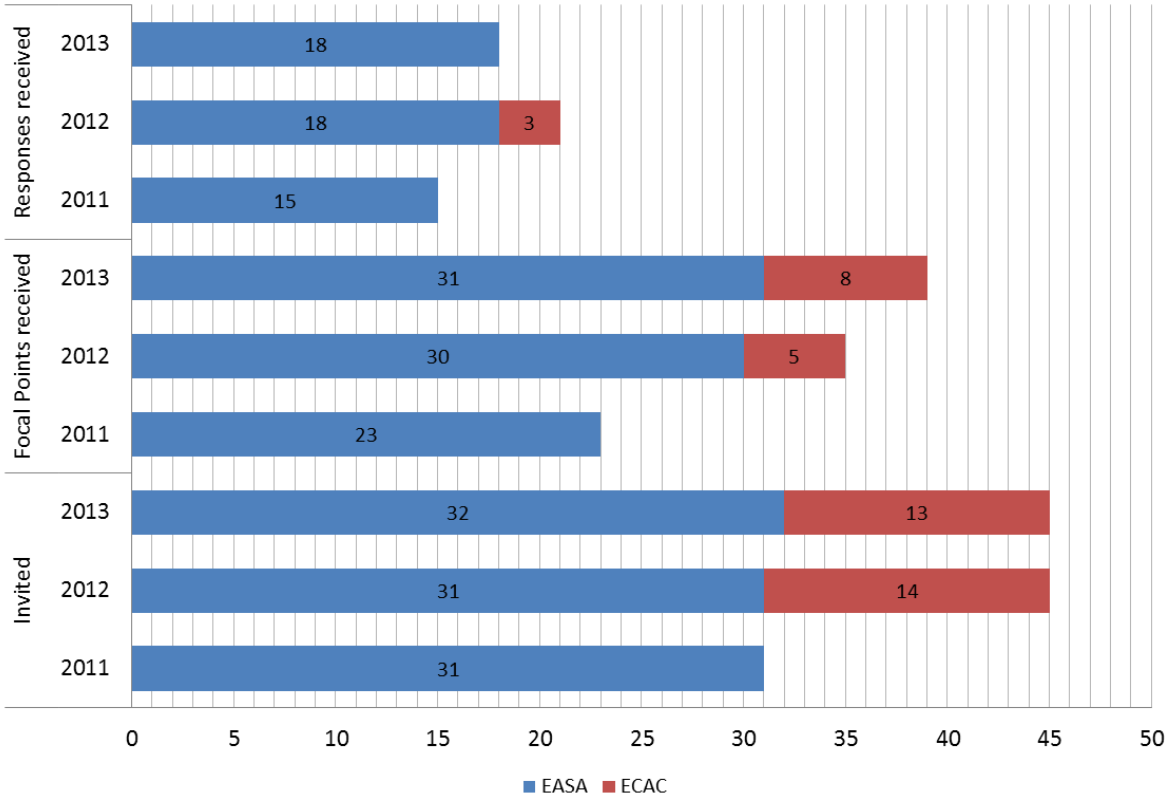




Level of Implementation in the States

The implementation of the EASp is now extended to 45 States: 32 EASA States plus the 13 States outside the EASA system that are members of ECAC. As in previous years, a request was sent out to those States that have nominated a focal point in order to retrieve the status of the various actions under their leadership (15 actions). **Thirty one** (31) EASA States plus **eight** (8) non-EASA States have nominated focal points, thus formalising their commitment to the EASp. This represents an increase of 4 focal points from the previous year. Eighteen (18) action reports have been received in 2013, 3 less than in 2012. The commitment of States over the three years of EASp implementation is summarised in the below graph.

	Focal Points	*Action reports*
Total	39	18
Variation from previous year	+4	-3



In 2013, responses on the status of EASp implementation have been received from Belgium, Bulgaria, Croatia, Finland, France, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Focal points have been received from all EASA States except Cyprus plus Albania, Monaco, Montenegro, Bosnia and Herzegovina, Macedonia, Moldova, Serbia and Turkey.

3 Introduction

Europe has started to implement a *Safety Management System* to become more pro-active in the identification of hazards and with the ultimate goal of further reducing our already good safety record. This system complements the existing system of developing safety regulations, complying with them and investigating accidents and serious incidents when they occur.

One of the key elements of an SMS is managing safety risks, which means identifying hazards, assessing the risks and making decisions on the best course of action to mitigate those risks. Industry organisations and States are also required to do this within the scope of the activities they have to manage.

At the European level this process is carried out in coordination with States and industry because they are part of one aviation system and now documented in a safety plan. That document is the **European Aviation Safety Plan**, the EASp. The Plan starts by identifying those areas in which coordinated action will make a difference in avoiding accidents and serious incidents, which is the ultimate goal that links all the activities together.

The planning activity is followed up by a reporting activity, in which progress on the actions is evaluated and also documented. This feedback loop ensures that the process to manage risks continuously improves.

3.1 Objectives and principles

The main objective of the Safety Plan is to create a common focus on European aviation safety issues as a continuation of the European work to increase aviation safety and to comply with ICAO standards. The fourth edition continues the approach of compiling the on-going work in Europe, hence improving traceability and reinforcing commitment to the current initiatives. This will contribute to avoiding the duplication and overlapping of safety initiatives and competition for resources.

While some safety issues stay at national level and are addressed within State Safety Programmes (SSP) alone, there are other instances where common issues of pan-European scope require a collective action. The latter actions are the scope of the present publication.

The fourth edition of the European Aviation Safety Plan covers the 4-year period between 2014 and 2017. The objective of this edition is twofold: on one hand it informs stakeholders on the progress made on the actions during 2013; on the other hand it also incorporates new actions to mitigate the already identified safety risks. The initial framework has been slightly updated in this edition as explained in section 3.2.1.

The Safety Plan is built on the principle that the planning for the first year (2014) is a commitment and that the planning for the following years (2015-2017) might be subject to changes depending on changing priorities and availability of resources. Following this principle, the present 4-year Safety Plan commits the stakeholders to the actions planned for finalisation in 2014. These actions are highlighted throughout the document. The actions for the following years (2015-2017) will be reviewed in light of experience. The Agency's Rulemaking programme is also based on this principle.

3.2 Main risk areas: the Safety Plan Framework

The first edition of the Safety Plan was developed by taking into account Member States safety concerns. In order to support the timely publication of the Plan, a request was sent to the 31 EASA Member States in the first quarter of 2010. They were asked to provide the top 5 safety concerns in their State as well as the process by which they had determined them. A total of 15 responses were received from Member States in May 2010. Additionally, input was aggregated with safety information from Eurocontrol, ECAST and the Agency since these organisations have a pan-European view on safety. The first results were presented to EASAC in June 2010.

The inputs collected were further analysed and classified into three different areas according to the type of issues they highlighted. All of the responses received were placed into one of the following areas:

a) **Operational Issues**, which are closely related to the events that are reported during operation. The relationship between this type of issues and the final outcomes or end states can be supported by data.

b) **Systemic Issues**, which affect the aviation as a whole. These issues play a role in accident and incident causation. They underlie operational issues; thus their improvement has an implicit effect on operational causes.

The above issues can be considered as the reactive elements of the Safety Plan since they address problems that have already happened and for which data is to some extent available. In order to balance the composition of the Plan with a more proactive or forward looking element, a third category of issues named **emerging issues** was also proposed.

c) **Emerging issues**. This area gives some consideration to safety issues derived from operations or regulations that have not been fully deployed and where data is not always available.

SAFETY PLAN FRAMEWORK		
SYSTEMIC ISSUES	**OPERATIONAL ISSUES**	**EMERGING ISSUES**
Working with States to implement and develop SSPs	**COMMERCIAL AIR TRANSPORT BY AEROPLANES**	**New products, systems, technologies and operations**
Working with States to foster the implementation of SMS in the industry	**Runway Excursions**	**Environmental factors**
Safety Management enablers	**Mid-air Collisions**	**Regulatory considerations**
Complexity of the system	**Controlled Flight Into Terrain**	
Competence of personnel	**Loss of Control In Flight**	
	Runway Incursions	
	Fire, Smoke and Fumes	
	OTHER TYPES OF OPERATION	
	Helicopters	
	General Aviation	
HUMAN FACTORS AND PERFORMANCE		

Finally **human factors and human performance** affect all the safety topics discussed within the above areas and it is important to recognise that addressing human factors will bring safety improvements across all those issues. Due to the fact that they have an effect across all domains and the difficulty of associating them to one of the above broad areas, they will be addressed separately in the Safety Plan.

The proposed approach and list of issues was presented to EASA Management Board in June 2010 and constitutes the **Safety Plan Framework**.

3.2.1 Safety Plan Framework update

In this edition of the EASp, the operational issues affecting commercial air transport by airplanes have been slightly reorganised. Until now the section has been organised in six major accident categories (note that ground collisions include both runway incursions and the safety of ground operations). They represent the various ways in which a CAT aircraft accident can happen.

It has been highlighted that safety of ground operations is not an outcome category as originally intended. However events that occur during ground operations (e.g. inappropriate aircraft loading) can lead to one of the outcome categories already identified (e.g. loss of control) and therefore can be reallocated within the other areas.

Additionally on-board fire was not specifically identified as an outcome category in previous editions. It can be argued that fire on-board has the potential to lead to a loss of control in flight. However it would be also valid to separate this type of accidents into an individual category since the way to address them may benefit from a different approach than in other types of loss of control accidents. The first actions to address on-board fire are proposed in section 5.1

Consequently it is proposed that in the fourth edition of the EASp the safety of ground operations will not appear in the general framework (which does not mean that they will not be addressed in the EASp), while **fire, smoke and fumes** will be incorporated as a new outcome category, hence CAT by airplanes will focus on the following six risk areas:

- Runway Excursions
- Mid-air Collisions
- Controlled Flight Into Terrain
- Loss of Control In Flight
- Runway Incursions
- Fire, Smoke and Fumes

3.3 Continuous update

In collaboration with all the stakeholders, the Safety Plan is reviewed every year. The review consists of two main activities:

a. Firstly, the status of the standing actions is assessed. An action is considered complete when the proposed deliverable is delivered. When the action could not be closed by the due date or a deviation from the Plan is expected, the causes have been recorded and a modification has been proposed. This allows the progress and

effectiveness of the Safety Plan to be measured. A progress report is included in **Annex A**.

b. Secondly, the initial list of actions proposed in the previous edition has been updated with the incorporation of new actions after consultation with all stakeholders. These new actions have been placed within the existing framework. They take into consideration new safety initiatives aimed at mitigating the existing risks.

3.4 The European Aviation Safety Programme

On 26 January 2011, the European Commission organised a conference to discuss the future of European Union's Aviation Safety Management towards 2020 and to hear the views and experiences of the various stakeholders in aviation safety. The conference debated the issues surrounding moving from a largely reactive system towards a proactive system based upon proven safety management.

With the results of the debate, the EC developed a Communication[3] to the Council and the European Parliament called "*Setting up an Aviation Safety Management System for Europe*". The Communication sets the strategy for aviation safety in Europe for the coming years and supports the aim, set out in the Transport White Paper[4], *to raise the EU aviation safety performance to a level that matches or exceeds the best world standard.*

According to the Communication this is achieved by adding a pro-active element to the current EU aviation safety system and publishing annual updates to the European Aviation Safety Plan detailing progress made in addressing identified safety risks at EU level. This is the scope of the present publication.

This Communication is accompanied by a Commission Staff Working Paper[5] describing the current aviation safety framework at European level. It was prepared jointly by the Commission and EASA and is called the European Aviation Safety Programme. The work is based on the manual presented to the EASA MB at the end of 2010.

The Communication, the Commission Staff Working Paper and the present document constitute the main elements of the Safety Management System at European level: a Strategy, a Safety Programme and a Safety Plan.

3.5 Content of the Plan

The Safety Plan is divided in four areas, each one addressing the main safety topics presented in the Safety Plan framework.

- Section 4 addresses *Systemic Issues*
- Section 5 addresses *Operational Issues*
- Section 6 addresses *Emerging issues*

[3] EC COM(2011) 670 final of 25.10.2011 - Setting up an Aviation Safety Management System for Europe.
[4] COM(2011) 144 - WHITE PAPER - Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system
[5] EC SEC(2011) 1261 final of 25.10.2011 – The European Aviation Safety Programme.

- Section 7 addresses *Human Factors and Performance*, which affect all of the above areas.

Within each of the above sections, the following information is provided:

- A table with the actions delivered during 2013.
- A summary of the key achievements made during 2013 together with the main challenges encountered.
- A summary of the actions under the leadership of the States.
- A proposal for new actions to be incorporated on the EASp 2014-2017. Commitments for 2014 are highlighted in yellow.

The present document is complemented by several Annexes:

- ***Annex A*** contains a **status report** on the progress made on the Safety Plan throughout 2013. In this Annex the following information is provided for each action item: a summary of the work done, the leader of the action, an assessment on whether the action is progressing according to the Plan, possible deviations from the Plan should they exist and an identification of the key deliverables.
- ***Annex B*** focuses on the actions owned by States and summarises the feedback provided throughout the year.
- ***Annex C*** contains the results of an SSP Phase Implementation survey aimed at highlighting where States are with SSP implementation.

At the end of the document several attachments clarify the acronyms, define the terms used throughout the document and provide a brief description of the different working groups and initiatives at European level dealing with aviation safety.

3.6 EASp Summits

Coordination with the States participating in the implementation of the EASp is key to keep the risk management exercise relevant. With this aim the *EASp implementation and review summits* have been created. They are a vehicle to consult on the Plan with the States.

They consist of face to face meetings between the States, the European Commission and the Agency, take the pulse of the implementation and discuss safety risks affecting the system. They also allow States to present their work and learn from each other.

The EASp summits are held twice a year. The first two summits took place on 29th May and 16th November 2012 providing with an opportunity to introduce the approach to new delegates of several States. In 2013 two more summits have been held on 18th June and 7th November. The material discussed and main outcomes can be found here.

3.7 Governance

The content of the Safety Plan is developed by EASA under the supervision of EASAC. The Committee created in 2009 brings together safety experts from the Member States, the European Commission, Eurocontrol, the Performance Review Body (PRB), industry and EASA. Their role is to provide advice on how to address the identified safety risks at EU level.

Once it is reviewed and approved by EASAC, the Safety Plan is submitted to the EASA MB for endorsement. After it is endorsed, it becomes a public document that is implemented on a voluntary basis by all the stakeholders.

3.8 Information and Promotion

A dedicated web site (www.easa.europa.eu/sms) has been created to publish the key deliverables and update on the major developments. Inquiries concerning the EASp can be addressed via a dedicated mailbox (easp@easa.europa.eu)

The Agency, in cooperation with all the stakeholders, continues to further disseminate the approach. To this end, a brochure was developed and handed out at various safety events. The brochure briefly explains the key aspects of the EASp and points out where to get the information.

4 Systemic Issues

Systemic issues are system-wide problems that affect aviation as a whole. Their association to a particular safety event or circumstance is not always obvious. In most scenarios, they become evident by triggering factors and play a significant role in the development of safety occurrences. They often relate to deficiencies in organisational processes and procedures.

Completed actions

No.	Issue	Finished action
SYS1.5	Incorporation of SSP in all domains of aviation.	SSPs and enablers have been incorporated in the requirements for aerodrome oversight authorities.
SYS2.3	Incorporation of SMS in all domains of aviation.	SMS and enablers have been incorporated in the requirements for aerodrome operator organisations.
SYS3.5	Lack of a methodology to define SPIs.	A comprehensive model for the measurement of safety performance has been developed by the SMICG including guidance for service providers
SYS3.12	FDM programmes priorities do not consider operational issues identified at the European and national levels.	EASA has fostered actions by States to improving the implementation of FDM programmes by their operators and assisted States in initiating the standardisation of FDM events relevant to SSP top safety priorities.
SYS3.13	Frequency of information to support the management of safety.	EASA publishes a safety dashboard on its website with the intent to provide regular statistics on the state of safety in Europe and worldwide.
SYS3.14	All domains, except ATM, lack indicators and targets on key performance areas in order to achieve and maintain required safety levels.	High-level SPIs for use at European and national level in all domains of aviation safety have been developed by the Network of Analysts (NoA).
SYS5.5	Reduce possible differences in training implementation among States.	A Training Implementation Policy has been developed by the EASA Internal Group on Personnel Training (IGPT)
SYS5.7	Increasing pilot reliance on automation.	EASA, through the IGPT, has studied and promoted possibilities for mitigating the risk of increasing pilot's reliance on automation through the proposals derived from the cockpit automation survey.

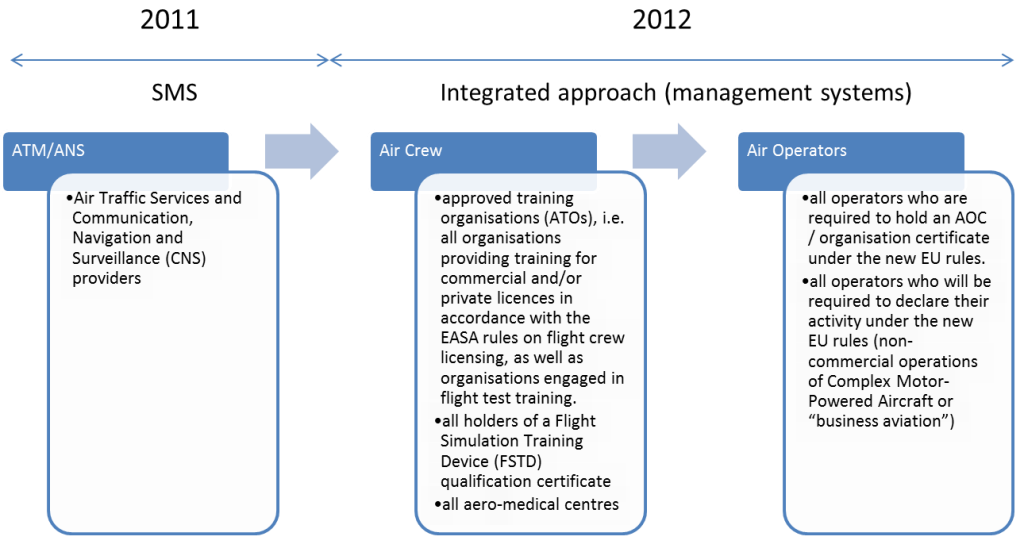
Progress made during 2013

Working with Authorities and Organisations to implement Safety Management

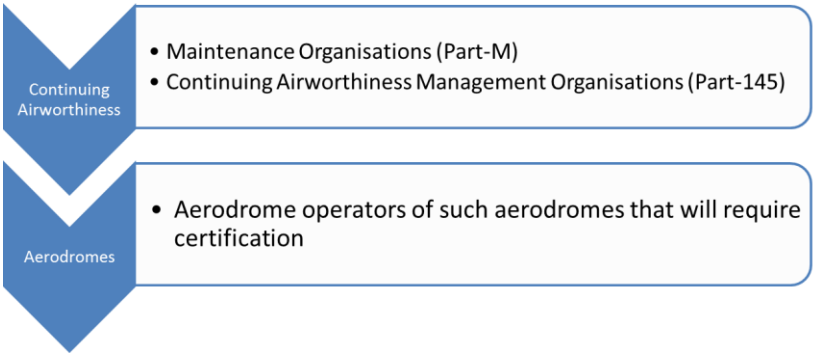
Managing safety in a systematic and proactive way will allow authorities and organisations to act on hazards before aviation accidents occur. This is a global move as the adoption of the new ICAO Annex 19 compiling all safety management provisions reflects.

This move is an integral part of the EASp as the EU is in the process of setting up the regulatory framework that will require organisations and authorities to implement a management system that incorporates safety in it. While the management system that organisations have to implement will address the 14 SMS framework elements contained in Annex 19; the management system to be put in place by the authorities will contain specific provisions to support the implementation of SSP without specifically mandating States to have one such programme.

In 2011 existing SMS requirements in the domain of ATM/ANS were transposed into EU regulation. It was not however until 2012 when the new integrated approach started to be introduced in the domains of air crew and air operations serving as a model for other domains. The adaptation of the management systems of authorities and organisations has started and will take some time.



Similar requirements in the domain of continuing airworthiness and aerodromes have been proposed. In the former domain NPA 2013-01 has been published covering maintenance organisations and continuing management organisations. In the latter domain, Opinion 01/2013 has been issued foreseeing that aerodrome operators of such aerodromes that will require certification shall implement and maintain a management system. Until the entry into force of the corresponding EU Regulation the national rules which are in place at the level of the different Member States will continue to apply.



As actions SYS 1.3b and SYS2.2b reflect, the approach has been extended and now covers Maintenance Training Organisations (Part-147) and Competent Authorities (Part-66) through the publication of NPA 2013-19.

Similar work has been started on initial airworthiness (SYS1.3a and SYS2.2a). In this case two different types of activities are on-going: on one hand the integrated approach to SMS will be extended to Design and Manufacture Organisations. This work will start by launching several pilot projects to acquire experience. On the other hand, the level of involvement (LOI) of the Agency on product certification will be subject to a risk-based regime. The first NPAs on LOI are being finalised.

Additionally, a second regulatory phase seeking to align the ATM/ANS domain with the integrated management approach adopted in air crew and air operations has already started. Opinions are expected in 2014.

Safety Management Enablers

Besides identifying hazards and assessing the associated risks, SMS seeks to close the loop by measuring achievements. In order to do that organisations and States have started to engage in developing safety performance indicators (SPIs). Several EASp activities contribute to pave the way to measure performance.

- The Safety Management International Collaboration Group (SMICG), has published guidelines to assist service providers in the definition and implementation of a set of safety performance indicators (SYS3.5).

- At European level a performance scheme has been made mandatory in Regulation 691/2010 for ATM. The European Commission is getting ready to contract a study (SYS3.7) to explore the possibility of extending the approach beyond ATM. The study is envisioned in 2015.

- Additionally the Network of Analysts (NoA) has already defined high-level SPIs that can be used at European and national level.

Flight Data Monitoring (FDM) is a powerful tool for monitoring operational safety on a day-to day-basis, and a natural component of the SMS of an aircraft operator. The EASp includes two actions (SYS3.11 and SYS3.12) intended to promote that FDM programmes priorities include common operational issues identified at the European and national levels. The European Authorities Coordination Group on Flight Data Monitoring (EAFDM) has already developed guidance for authorities on setting up a national FDM forum with their operators. The group is also working on a list of standardised FDM-based indicators relevant for the prevention of the major risk areas identified in the EASp which is expected to be published this year. Another project of the EAFDM is a guidance document for NAAs on the oversight of FDM programmes. This will be started in 2014.

Competence of personnel

Having the right competencies and adapting training methods is recognised as a key area in the EASp, hence a new systemic threat was created last year to tackle such issues like the increasing pilot reliance on automation, the modernisation of training provisions or the differences in training implementation among States.

In response to the issue of increasing pilot's reliance on automation, EASA has published three SIBs that address manual flight training and operations, stall and stick pusher training and mode awareness and energy state management, thus closing action SYS5.7. The training issues addressed in them are closely related with the EASp activities to address loss of control avoidance and recovery training described in the following section of this report.

Work to develop a training implementation policy to reduce the differences in training implementation among States has concluded (SYS5.5). A training implementation working group was established within the EASA Internal Group on Personnel Training (IGPT) to work on the issue, that was discussed with NAAs in a Workshop on 27 June 2012. The results of the workshop have been the basis to develop the policy that is now available. The resulting training implementation policy addresses the implementation of rules regarding training, testing and checking.

Two actions (SYS5.1 and SYS5.3) focus on modernising training methods and competence provisions across several domains: flight crew licensing, operations, maintenance and ATM/ANS. New training methods like competence based training (CBT), evidence based training (EBT) and distance learning are being evaluated and training standards will be adapted in the coming years as necessary.

Coordination with Member States

In the new ICAO Annex dedicated to safety management, the role played by the State in managing safety at its level has been reinforced, stressing the concept of overall safety performance in all domains, in coordination with service providers.

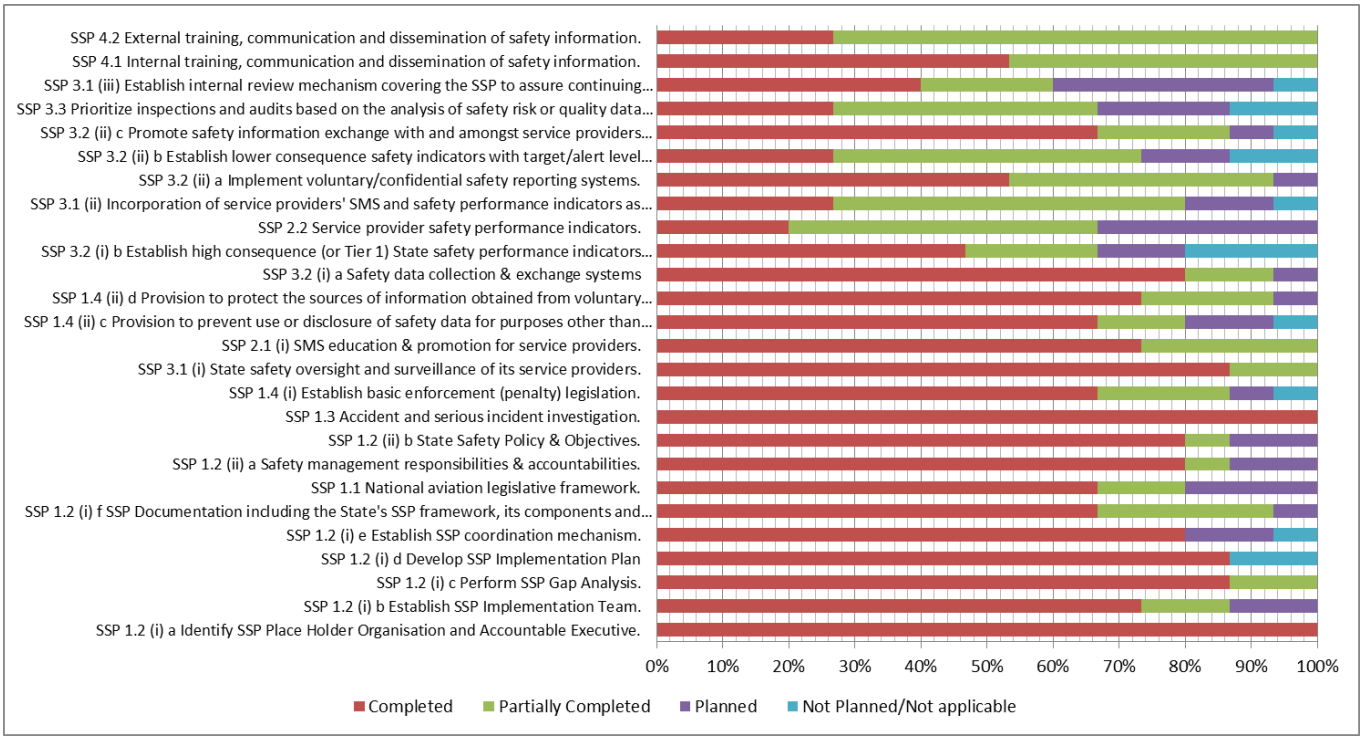
The near-term objectives of the GASP 2013 focus on the implementation of an effective safety oversight system by 2017 in all States. Using the Universal Safety Oversight Audit Programme (USOAP) effective implementation (EI) as an indicator of State safety oversight system maturity, the GASP stipulates that States with an EI above 60% should begin SSP implementation if they have not already. This is the case of the majority of the States implementing the EASp.

Phase I	Phase II	Phase III	Phase IV
SSP element 1.2 (i) a. Identify SSP Place Holder Organisation and Accountable Executive. b. Establish SSP Implementation Team. c. Perform SSP Gap Analysis. d. Develop SSP Implementation Plan e. Establish SSP coordination mechanism. f. SSP Documentation including the State's SSP framework, its components and elements.	**SSP element 1.1** National aviation legislative framework. **SSP element 1.2 (ii)** a. A Safety management responsibilities & accountabilities b. State Safety Policy & Objectives **SSP element 1.3** Accident and serious incident investigation **SSP element 1.4 (i)** Establish basic enforcement (penalty) legislation. **SSP element 3.1 (i)** State safety oversight and surveillance of its service providers. **SSP element 2.1 (i)** SMS education & promotion for service providers.	**SSP element 1.4 (ii)** c. Provision to prevent use or disclosure of safety data for purposes other than safety improvement. d. Provision to protect the sources of information obtained from voluntary confidential reporting systems. **SSP element 3.2 (i)** a. Safety data collection & exchange systems b. Establish high consequence (or Tier 1) State safety performance indicators and target/alert levels.	**SSP element 2.2** Service provider safety performance indicators. **SSP element 3.1 (ii)** Incorporation of service providers' SMS and safety performance indicators as part of routine surveillance program. **SSP element 3.2 (ii)** a. Implement voluntary/confidential safety reporting systems. b. Establish lower consequence safety indicators with target/alert level monitoring as appropriate. c. Promote safety information exchange with and amongst service providers and other States. **SSP element 3.3** Prioritize inspections and audits based on the analysis of safety risk or quality data where applicable. **SSP element 3.1 (iii)** Establish internal review mechanism covering the SSP to assure continuing effectiveness and improvement.
SSP element 4.1 Internal training, communication and dissemination of safety information. **SSP element 4.2** External training, communication and dissemination of safety information.			

Action SYS1.7 encourages States to expedite SSP implementation (due in 2014). Until now **16 SSP documents** and **10 Safety Plans** have been made available to the Agency as part of the implementation of the EASp. Web links to these documents can be found here.

In 2013, a new survey has been distributed to the States in order to assess where they are with SSP implementation. For that purpose the 4 phase approach suggested in the 3rd edition of the Safety Management Manual was used. The survey was tailored to the EASA safety system and accompanied with guidance text. An overview of the various SSP elements included in each phase is provided in the above table.

The aggregated results show that some elements such as identifying the SSP place holder organisation, performing an SSP Gap analysis, developing an implementation plan, establishing an accident and incident investigation body or performing oversight and surveillance of service providers are already in place in at least 80% of the States that provided a response.



On the other hand, SSP elements such as establishing service providers performance indicators, incorporating service providers' SMS and safety performance indicators as part of routine surveillance program, establishing lower consequence safety indicators with target/alert level monitoring, prioritising inspections and audits based on the analysis of safety risk or quality data or providing external training, communication and dissemination of safety information were implemented in less 30% of the States that provided a response.

More details can be found on Annex C – SSP Phase Implementation Survey Results.

Action SYS3.11 encourages States to set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes. Among the States that provided a response, five of them have organised meetings with aircraft operators that promote FDM in 2013 or 2012. Five more States expressed their intention to organise these types of meetings

in the future. Discussions on FDM events relevant for preventing the major operational risks identified in the EASp are held in 5 States. More details can be found on Annex B- *EASp implementation in the States*

New actions

Safety Management Enablers

Lack of experience on FDM-based indicators

After the FDM-based indicators published by EAFDM, an in-depth assessment is needed of their practicalities and of their benefits for the industry and for national aviation authorities. This concept has not been experimented yet, therefore a careful examination of all aspects and possibly small-scale trials are needed at this stage. The EAFDM plans to conduct this assessment.

Desired outcome

Assess the usefulness of FDM-based indicators for addressing national safety priorities.

Proposed actions

EASA should consolidate the results of EASp action SYS3.12, by assessing further, together with Member States, the benefits of FDM-based indicators for addressing national safety priorities.

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
SYS3.16	*Lack of experience on FDM-based indicators*	EASA should assess further, together with Member States, the benefits of FDM-based indicators for addressing national safety priorities.	EAFDM	2015	SP	Report with the results of the assessment

Lack of guidance on the oversight of FDM activities

Improving the implementation of FDM programs requires, besides active FDM promotion, an effective oversight of FDM activities. However there is currently little guidance available to national aviation authorities on how to oversee FDM programs in practice. Therefore the sharing of good practice on this topic is considered priority by the EAFDM.

Desired outcome

Facilitate the oversight of FDM programmes by national authorities.

Proposed actions

EASA should produce, together with Member States, best practice on the oversight of FDM programs.

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
SYS3.17	*Lack of guidance on the oversight of FDM activities*	EASA should produce, together with Member States, best practice on the oversight of FDM programmes	EAFDM	2015	SP	Best practice document

Competence of personnel

Unavailability of adequate personnel in Competent Authorities

The Standardisation Annual Report 2012 (issued in March 2013) highlighted that the availability of adequate staff in NAAs, in terms of qualification and number, is the main reason for some of the difficulties related to the process of granting approvals, licenses or certificates and to the continued surveillance of approved organisations that were encountered in the last campaign. This problem has also been highlighted by some States at the occasion of the EASp summits.

This weakness which has been perceived in most of the domains, but in particular in Air Operations, can have severe safety consequences because authorities risk controls may not be applied properly.

Desired outcome

Facilitate the availability of adequate staff at the NAAs, in terms of both qualification and number available.

Proposed actions

1. **EASA to support Competent Authorities**
   a. **in defining the right competences needed to properly discharge their safety oversight responsibilities, and**
   b. **in providing training to their staff**
2. **Promote the concept of 'pooling' available expertise among NAAs in order to make subject matter experts available in a cost effective way, to those States that need resources**
3. **EASA Standardisation to monitor the availability of staff at the NAAs.**

New Safety Actions

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
SYS5.8	*Unavailability of adequate personnel in Competent Authorities*	EASA to support Competent Authorities a.in defining the right competences needed to properly discharge their safety oversight responsibilities, and b.in providing training to their staff	EASA	Cont.	SP	Description of support activities
SYS5.9	*Unavailability of adequate personnel in Competent Authorities*	Promote the concept of 'pooling' available expertise among NAAs in order to make subject matter experts available in a cost effective way, to those States that need resources	EASA and MS	2015	SP	Report on the concept
SYS5.10	*Unavailability of adequate personnel in Competent Authorities*	EASA Standardisation to monitor the availability of staff at the NAAs	EASA	Annually	O	Standardisation Annual Report

Reduce possible differences in training implementation among States.

A dedicated working group of the EASA Internal Group on Personnel Training (IGPT) developed a Training Implementation Policy (SYS5.5) in 2013 aimed at reducing possible differences in training implementation among States.

Desired outcome

Reduce difference in training implementation among States.

Proposed actions

In order to continue to promote the key issues identified in the policy, a thematic workshop, with the involvement of the NAA and the industry is to be organized in 2014.

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
SYS5.11	*Reduce possible differences in training implementation among States.*	A thematic workshop, with the involvement of the NAA and the industry is to be organized to promote the issues and orientations published in the Training Implementation Policy	EASA	2014	SP	Workshop organised

5 Operational Issues

Operational issues are brought to light by the reporting and analysis of occurrence data. The Safety Plan starts by addressing the main risks that affect commercial air transport operations, especially those carried out by aeroplanes. Additionally an effort has been made to capture actions that address other types of operation; thus acknowledging the existing initiatives at European level.

Issues affecting commercial air transport operations carried out by airplanes are classified in various areas which correspond with the main accident categories. This does not mean that only causes of actual accidents are dealt with in the EASp, but also hazards with the potential to lead to any of the identified categories. The categories represent the various final outcomes that need to be avoided.

It is also important to recognise that certain issues like unstable approaches, the encounter with hazardous weather conditions or inappropriate actions performed by the crew have an impact on more than one risk area. Human factor issues also affect different areas and are addressed in section 7.

Completed actions

No.	Issue	Finished action
AER1.3	Requirements for RE need to be transposed in certain areas.	European requirements addressing RE for aerodrome operators organisations, aerodrome operations and aerodrome design are now published.
AER1.4	Requirements for RE need to be transposed in certain areas.	European requirements addressing RE for ATM/ANS provision are now published. They aim to ensure the provision of safe and efficient air traffic services within the single European sky.
AER2.5	Requirements for MAC need to be transposed in certain areas	European requirements addressing MAC for ATM/ANS provision are now published. They aim to ensure the provision of safe and efficient air traffic services within the single European sky.
AER4.1	Protection From Debris Impacts and Fire.	A new paragraph of CS-25, which would cover the protection of the whole aircraft against the threat of tire/wheel failure has been developed. Identified as a common priority for JAA-FAA-TCCA joint rulemaking
AER4.8	Response to upset conditions in order to prevent LOC-I.	EASA and Member States supported, encouraged and followed up initiatives such as ICATEE to contribute to developing solutions aimed to reduce LOC-I, revising and promoting upset recovery guidance material, and influencing the adoption of future ICAO SARPs.
AER4.10	Response to unusual attitudes in order to prevent LOC-I.	A Workshop to identify and promote requirements and guidance in Part FCL and Part OPS related to the prevention of LoC accidents was organised in 2013 and has allowed to identify needs for future improvements.
AER4.15	Icing	A safety conference to exchange views on the safety issue and identify mitigation opportunities has been organised in October.
AER5.3	Runway incursions.	Implementing rules based on transferred tasks from the JAA and the EUROCONTROL EAPPRI report have been developed and are now going through Comitology.
AER5.6	Transposition of requirements into EU regulation in the domain of Aerodromes to improve safety of ground operations.	Requirements for aerodrome operator organisations and oversight authorities are now published.

Completed actions		
HE1.4	Impact of technologies in mitigating helicopter safety issues.	EHEST has finalised a first version of a tool to assess the impact of technologies on mitigating helicopter safety issues.
GA1.6	Priorities to focus GA work not formally established	Based on data received from EASA Member States, the Agency identified and published in the Annual Safety Review the main accident categories affecting general aviation aircraft below 2250 kg in Europe.

5.1 Commercial Air Transport by Aeroplanes

Progress made during 2013

To mitigate the risk of *runway excursions* a European Action Plan for the Prevention of Runway Excursions (EAPPRE) was delivered at the beginning of 2013. The Plan offers a comprehensive view on the issues that lead to runway excursions and proposes actions for authorities, various industry organisations (operators, service providers, aerodromes) and also for the Agency. Two EASp actions (AER 1.9 and AER 1.10) are aimed at following-up the EAPPRE both at Member State and EASA level. The follow-up is coordinated with Eurocontrol implementation mechanisms.

An opinion proposing European requirements to mitigate Runway Excursions has been published in 2013 and targets aerodrome operators organisations, aerodrome operations and aerodrome design whereas the requirements targeting ATM/ANS provision are already adopted (AER1.4)

The *loss of control* of the aircraft in flight continues to be the category with the major number of fatal accidents in Europe. Among the hazards with the potential to develop into a loss of control addressed in the EASp are: icing, unusual airplane attitudes and erroneous weight and centre of gravity information.

The Agency is now updating its certification specifications with a view to improve safety of large aeroplanes and engines in icing conditions (AER4.2). Icing (both on-ground and in the air) was the subject of the safety conference organised by the Agency in October 2013 (AER4.15). Rulemaking tasks to mitigate the ground contamination of aircraft surfaces are scheduled to start in 2015.

In certain situations, flight crews are faced with *unusual airplane attitudes*, one of the scenarios that has the potential to develop into a loss of control. Training plays a key role in these situations and hence several actions of the EASp address training:

- European-wide requirements that address training of and recovery from unusual attitudes have been published.
- EASA and Member States have taken part in the International Committee for Aviation Training in Extended Envelopes (ICATEE) and Loss of Control Aviation Rulemaking Team (LOCART). ICATEE recently delivered a draft Upset Prevention and Recovery Manual to ICAO.
- A workshop on loss of control prevention and recovery training was organised on 28 February and 1 March at the Agency. The workshop invited the major stakeholders who

discussed on issues like theoretical training, on aircraft upset prevention and recovery training (UPRT), Flight Simulation Training Devices, realistic stall prevention and training scenarios development and manual flying skills. Actions coming out of the workshop have been identified and a new EASp action is proposed in the following section.

Another scenario that has led to loss of control accidents is having *erroneous weight and/or centre of gravity information*. Two actions of the EASp (AER4.11 and AER 4.12) propose mitigation solutions either through regulation (i.e. equipping aircraft with a weight and centre of gravity measuring system) or through research (i.e. EFB applications).

Implementation of mitigation measures proposed in other European Action Plans already available is being followed-up with States in close coordination with Eurocontrol in the areas of runway incursions and airspace infringement risk. More information is available on Annex B.

The second extension rules will incorporate European requirements that will contribute to mitigate the risk of runway excursions, mid-air collisions, runway incursions and will enhance the safety of ground operations.

Eurocontrol is leading the development of guidance material for ground-based safety nets (AER2.2 and AER2.3) like Short Term Conflict Alert, Approach Path Monitoring and Area Proximity Warning.

Coordination with Member States

The responses received from Member States to the request on the status of their actions are included in *Annex B - EASp implementation in the States*. The Annex details to what extent the risk areas proposed in the EASp are also being incorporated in risk portfolios at national level and how coordination should be organised in the future.

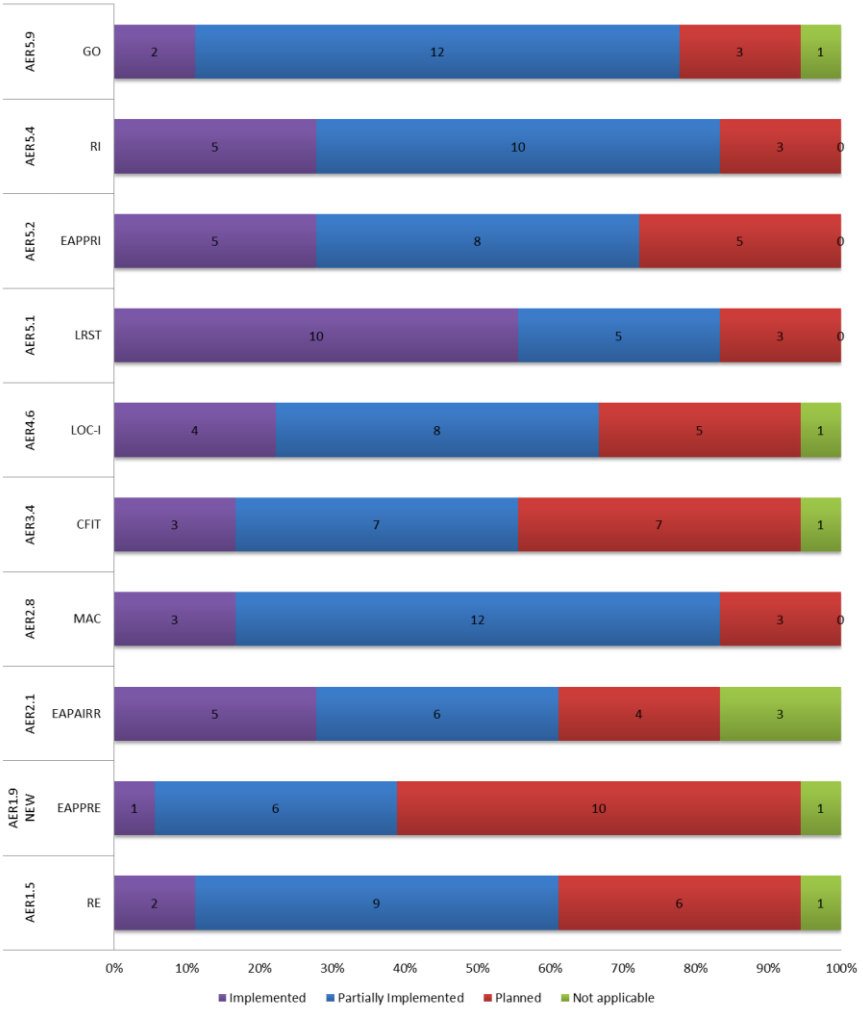
The below diagram summarises the responses received from 18 Member States on the operational risks identified in the EASp. In general the majority of States are also incorporating the EASp risk areas in their risk portfolios and provide useful feedback on the actions taken at their level. When the management system of a State does not justify the incorporation of an area this is also highlighted. This has been the case of States where only a specific type of operation was relevant or where the size of the activity was rather small.

The below table highlights the number of States (out of a total of 18) that reported to be implementing actions to address the areas of the EASp.

Main EASP area	*Number of States working on the issue*
RE	11
LOC-I	12
RI	15
MAC	15
GO	14
CFIT	10

In the majority of cases Local Runway Safety Teams have been set up at the certified aerodromes. They play a key role in addressing runway safety. On the other hand, the implementation of the EAPPRE (issued at the beginning of 2013) is now starting. A list of hazards with the issues being addressed in each of the States is published in Annex B.

Since coordination with States is considered vital, two additional EASp summits have been organised in 2013 (information on the events is available here). More specifically the *4th EASp implementation and review summit* (organised on 7 November) focused on discussing the feedback provided by States as part of the implementation of the EASp.



MAIN EASp AREAS

RI=Runway Incursions;

LOC-I=Loss of Control in Flight;

CFIT=Controlled Flight Into Terrain;

MAC=Mid-air Collisions;

RE=Runway Excursions;

GO = Safety of Ground Operations,

LRST = Local Runway Safety Teams;

EUROPEAN ACTION PLANS

EAPPRI= European Action Plan for the Prevention of Runway Incursions;

EAPPRE= European Action Plan for the Prevention of Runway Excursions;

EAPAIRR= European Action Plan for Airspace Infringement Risk Reduction

New actions

Runway Excursions

Runway overrun during landing

Between 1991 and 2010, EASA Member State operators had on average close to 1 fatality per year due to runway excursions at landing. The number of these occurrences has increased in line with the growth in traffic. As aviation traffic is expected to continue to grow worldwide as well as in Europe (albeit at a lower rate), the number of runway excursions can also be expected to increase further.

According to IATA's 2009 Safety Report, runway excursions represented 25% of all the events that occurred in 2008 and it is notable that the rate of reported accidents and serious incidents involving runway excursions has increased during the last decade. Statistically, around 80% of the occurrences happen during landing and 20% during the take-off phase.

Flying an unstabilised approach, landing too fast, too far down the runway, or conducting an extended flare, delayed or incorrect flight crew action on braking systems, late or no decision to abort landing, are identified as contributing factors to those accidents.

To facilitate the prevention of and recovery from bounced landings, which have led to runway excursion with substantial aircraft damage and injuries to passengers and crews, an SIB (SIB 2013-20) was issued on 19 November 2013.

One of the results of the combined and sustained efforts of authorities and industry organisations to prevent runway excursions is the European Action Plan for Prevention of Runway Excursions (EAPPRE) (Edition 1.0 - January 2013). The document provides recommendations on the use of 'all practicable means available ranging from the design of aircraft, airspace, procedures and technologies, to relevant training for operational staff associated with runway excursion prevention.'

Among the recommendations, the following were issued:

— Ref. 3.5.3 (for aircraft manufacturers):
'On-board real-time performance monitoring and alerting systems that will assist the flight crew with the land/go-around decision and warn when more deceleration force is needed should be made widely available.'

— Ref. 3.7.11 (for EASA):
'Develop rulemaking for the approval of on-board real-time crew alerting systems that make energy based assessments of predicted stopping distance versus landing distance available, and mandate the installation of such systems'.

Safety Recommendations have been issued to 'actively pursue with aircraft and avionics manufacturers the development of technology to reduce or prevent

runway excursions and, once it becomes available, require that the technology be installed' (NTSB recommendation n°A-11-28 to the FAA, 2011).

The subject has been well studied through the past years and aviation stakeholders showed their interest in this topic by cooperating to find solutions that address this safety issue. Today, some systems have been developed, certified and put into service on large aeroplanes to protect against the risk of runway excursion.

On-board means are now capable of performing calculation in real time in order to assess the real time runway overrun risk and aid the flight crews' awareness and subsequent decision making. Moreover, the enhanced awareness provided by such an on-board means allows developing effective avoidance on-board capability in order to help the flight crew to use all required and available retardation means in a timely manner.

Desired outcome
Reduce the number of runway overrun events during landing

Proposed actions

1. **Mandating existing technology to be installed on large aeroplanes (RMT.0047) –newly designed or newly produced.**
    a. **Amending of CS-25 for new designs**
    b. **Amending of CS-26 for already certificated large aeroplanes**

Follow-up actions

2. Installing new technology (Large aeroplane's manufacturers)
3. Train flight crews on the use of the new technologies (Training organisations and air operators)
4. Proactively monitor the number of runway overrun events during landing and the ones that were avoided by the new technology (States)

New Safety Actions

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
AER1.11	*Runway overrun during landing*	Mandating existing technology to be installed on large aeroplanes –newly designed or newly produced	EASA	2017	R (RMT.0047)	Decision

Loss of control in flight

Flight crew are not adequately trained to respond to loss of control.

Globally approximately 20% of all fatal accidents in Commercial Air Transport (CAT) operation with aeroplanes over the past 10 years can be attributed to loss of control in flight. The approximate global rate is 5.4 accidents per 10,000,000 flight movements or 1 fatal accident per year. Within Europe the rate is 1.6 fatal accidents per 10,000,000 flights or 1 fatal accident every 3 years.

According to a SAE Aerospace Information Report (AIR6237) published in April 2013, which reviewed worldwide loss of control accidents between 1981 and 2010, the top 5 primary causes were aerodynamic stalls, spatial disorientation, flight crew handling issues, flight control issues and atmospheric disturbances. Moreover, several safety recommendations have been received in the past years that address loss of control and more specifically improvements in pilot training and checking.

The following table depicts some of the work that has already been done or is on-going to address some of the hazards that contribute to Loss of Control scenarios:

Hazard	Activity
Challenges presented by the increasing reliance on automation	Publication of an EASA Automation Policy (updated on May 2013) – **EASp EME4.4**
Degradation of manual flying skills	Continued promotion of the Automation Policy - **EASp SYS5.6**
	SIB 2013-05 Manual Flight Training and Operations, published on 23 April 2013
Inappropriate reaction to stall indication or stick pusher events	SIB 2013-02 Stall and Stick Pusher Training was published on 22 Jan 2013
Mismanagement of the energy state of the aircraft due to lack of awareness of the automation mode	SIB 2010-33 Flight Deck Automation Policy - Mode Awareness and Energy State Management, published on 18 Nov 2010
Flight crew handling of unexpected and unusual situations	RMT .0411 Update requirements for Crew Resource Management (CRM) Training, initiated in November 2012.
Icing conditions	RMT.0058 Large Aeroplane Certification Specifications in Super-cooled Large Drop, Mixed phase, and Ice Crystal Icing Conditions. – **EASp AER4.2**

In addition, a safety conference (October 2011) and a dedicated workshop (28 Feb and 1 March 2013) were organised in Cologne with the intention to bring stakeholders together and discuss the main issues and progress made so far. Furthermore this year's safety conference focused on icing, which is one of the known precursors to loss of control.

At the global level ICAO has already made substantial progress supported by the Loss of Control Avoidance Recovery (LOCART) and International Committee for Aviation Training in Extended Envelopes (ICATEE) working group initiatives. They have put the focus on preventing and recovering from upset scenarios.

Desired outcome

Pilots have the competencies to prevent and/or recover from a loss of control in flight and successfully apply them.

The proposed set of actions intend to close the loop of the implementation of the mitigation measure with affected stakeholders as follows:

Proposed actions

1. **Develop regulations which ensure that initial and recurrent pilot training and checking is adequate to provide a pilot with the knowledge, skills and attitude to be competent in preventing and, if necessary, recovering from a loss of control in flight situation** (EASA)

Follow-up actions

2. Transfer new competencies introduced in the regulation to pilots (Training organisations + States)
3. Check that new competencies have been acquired (EASA Standardization and States)
4. Proactively monitor situations with the potential to lead to loss of control events in which pilot training was a contributor. (States)

The proposed mitigation measures include an integrated approach addressing initial and recurrent training with increased focus on prevention by specific upset prevention and recovery training (UPRT) covering theoretical, FSTD training and possibly on-aeroplane training. It is also proposed to address instructor qualifications in this context. The Terms of Reference of the rulemaking task are available here.

New Safety Actions

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
AER4.16	*Flight crew are not adequately trained to respond to loss of control..*	Develop regulations which ensure that initial and recurrent pilot training and checking is adequate to provide a pilot with the knowledge, skills and attitude to be competent in preventing and, if necessary, recovering from a loss of control in flight situation.	EASA	2016	R (RMT.0581)	Opinion/Decision

Fire, smoke and fumes

Uncontrolled fire, smoke or fumes on-board aircraft

On-board fire, smoke and fumes is proposed to be added as a new category of accidents in the 4th edition of the EASp and will form an integral part of subsequent EASp editions. Uncontrolled fire on board an aircraft, especially when it is in flight, represents one of the most severe hazards in aviation. Post-crash fire is not addressed in this section.

In-flight fire can ultimately lead to loss of control, either as a result of structural or control system failure, or again as a result of crew incapacitation. Fire on the ground can take hold rapidly and lead to significant casualties if evacuation and emergency response is not swift enough.

Smoke or fumes, whether they are associated with fire or not, can lead to passenger and crew incapacitation and will certainly raise concern and invite a response. Even when they do not give rise to a safety impact, they can give rise to concerns and need to be addressed.

A statistical analysis of commercial jet aircraft accident data shows that in-flight fire was responsible for the fourth highest number of on-board fatalities and was the seventh most frequent cause of accidents in 2005 (Boeing, 2005). Since 2005 there have been two B747 freighter fires that resulted in the loss of the aircraft and flight crews, but no fatal fires aboard passenger airplanes. Consequently, the ranking of in-flight fires has decreased since 2005 due to the reduction in passenger fatalities. Had the freighter fires occurred in passenger aircraft causing fatalities the rankings would certainly have been different.

In addition, data from recent years indicate the probability of passengers experiencing an in-flight smoke event is greater than one in 10,000. In the United States alone, more than one airplane a day is diverted due to smoke (Shaw, 1999).

In addition, there have been three major cargo fire accidents in the past 10 years and a number of serious incidents. All aircraft were carrying large quantities of lithium batteries. Since the early 1990s, there have been dozens of incidents of batteries igniting in flight or during cargo handling. What exactly triggered many of the fires is however not well understood. This issue is being closely monitored.

Several safety recommendations have been addressed to FAA and EASA regarding redesign of transport checklist pertaining to fire, smoke and fumes, review of the cargo fire certification requirements, smoke removal requirements, flight crew training for in-flight fire, standardisation of the battery packaging regulation, research on fire suppression systems.

The Agency is involved in various certification and rulemaking activities regarding the mentioned topic as well as in the ICAO Dangerous Goods Panel, where updates on the ICAO "*Technical Instructions for the Safe Transport of Dangerous Goods by Air", doc. 9284,* are proposed.

Early this year the Flight Operation Groups have published an update of the RAeS's specialist document "*Smoke, Fire and Fumes in Transport Aircraft"*. The paper serves as a reference document on current risk and proposed mitigations for smoke and fire events on commercial transport aeroplanes. The previous version was published in February 2007 and in the 2013 update edition a new section on lithium batteries, composite materials and predictive technologies has

been added together with new recommendations to reflect the current risks.
The recommendations to reduce the severity and effects of in-flight fires focus on:

- Equipment design and airworthiness;
- Protective equipment;
- Maintenance;
- Pilot procedures;
- Flight and cabin crew training.

Desired outcome
Evaluate the latest knowledge with a view to identify new opportunities to mitigate the risk posed by on-board fires.

Proposed actions
EASA will evaluate the latest information available with a view to identify new opportunities to mitigate the risk of on-board fires. In parallel **NAAs should check that regulations related to smoke and fire are being complied with and will include fire as a new area in their risk portfolios**.

At industry level, **ECAST will promote best practice developed by IATA and other industry organisations** to outline mitigations to the risks associated with the carriage of Lithium batteries in passenger and crew baggage and the transport of Lithium batteries as cargo on passenger and cargo aircraft.

New Safety Actions

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
AER6.1	*Uncontrolled fire, smoke or fumes on-board aircraft*	EASA to evaluate new opportunities to mitigate the risk of on-board fires	EASA	2015	R, SP, O	Report on recommendations addressed
AER6.2	*Uncontrolled fire, smoke or fumes on-board aircraft*	Safety Issue shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	Continuous	SP	SSP Publication
AER6.3	*Inadequate transport of lithium batteries on-board aircraft*	Develop industry best practice to outline mitigations to the risks associated with the carriage of Lithium batteries	ECAST	2014	SP	Best Practice Manual

5.2 Helicopter Operations

Progress made during 2013

The European Helicopter Safety Team (EHEST) continuously cooperates with the International Helicopter Safety Team (IHST) to develop risk awareness, safety promotion and training material. The EHEST website contains videos addressing major helicopter specific issues like loss of control in degraded visual environment (DVE), operations in the vicinity of electric infrastructure as well as leaflets with safety considerations for helicopter pilots.

In 2013 the EHEST has finalised the layout of the Technology matrix tool. The tool allows to assess the impact of technologies on mitigating helicopter safety issues (HE1.4). Around 150 technologies in 11 categories have been identified for their capability to mitigate safety issues. In late September about 60 of these had been rated, of which 14 were highly promising and 33 were moderately promising. More technologies will be rated up to the year's end. The status of the work progress was presented at the Avionics Europe event in Munich on 21st February 2013 and at the Safety Workshop during the Helitech Helicopter Expo in London on 24th September 2013.

Coordination with Member States

Action HE1.3 encourages NAAs in partnership with industry representatives, to organise Helicopter Safety events annually or every two years and to promote the EHEST materials. Among the States that provided a response 9 States have organised helicopter safety events. In the majority of cases EHEST material was promoted and distributed. Dedicated helicopters working groups/teams exist in at least 3 States in some cases also addressing general aviation issues.

New actions

Helicopter priority areas not identified in the EASp

While the commercial air transport section of the EASp is organized in six areas within which issues and actions are identified, the helicopter section is lacking a similar structure.

Desired outcome

Establish priorities to focus action to mitigate safety issues affecting helicopter operations in future editions of the EASp

Proposed actions

Make a proposal to arrange the helicopter section of the EASp and seek an agreement with the Helicopter community

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
HE1.5	*Helicopter priority areas not identified in the EASp*	EASA to make a proposal to arrange the helicopter section of the EASp and seek an agreement with the Helicopter community	EASA and EHEST	2014	SP	Working Paper with proposal

5.3 General Aviation

Progress made during 2013

EGAST develops and shares good practices and safety promotion material for the GA pilots and community in Europe. The latest material includes leaflets on issues like bird strikes and piston engine icing or a video on the human factor aspects related to landing gears. They can be found on the EGAST website.

Based on data received from Member States, the Agency has already identified in 2013 the main accident categories affecting general aviation aircraft below 2250 kg in Europe (GA1.6).

The categories have been published in a dedicated section of the Annual Safety Review and will be used to start discussions with the GA community on where to focus further work on General Aviation within the EASp.

Coordination with Member States

Action GA1.5 encourages that national authorities play the leading role in establishing and promoting local implementation priorities and actions to prevent the risk of airspace infringement involving General Aviation. Various States reported airspace infringements involving GA in the past 5 years. 10 States have confirmed that airspace infringement involving GA is a safety concern. The EAPAIRR is being used in 5 States to identify mitigation measures. In one State a national action plan derived from the EAPAIRR has been developed and introduced in the Safety Plan. State level SPIs exist in many States to monitor the situation. More information can be found in Annex B - EASp implementation in the States 2013.

New actions

General Aviation priority areas not identified in the EASp

While the commercial air transport section of the EASp is organized in six areas within which issues and actions are identified, the general aviation section is lacking a similar structure.

Desired outcome

Establish priorities to focus action to mitigate safety issues affecting general aviation operations in future editions of the EASp

Proposed actions

Make a proposal to arrange the general aviation section of the EASp and seek an agreement with the General Aviation community

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
GA1.7	*General aviation priority areas not identified in the EASp*	EASA to make a proposal to arrange the general aviation section of the EASp and seek an agreement with the General Aviation community	EASA and EGAST	2014	SP	Working Paper with proposal

6 Emerging Issues

This section anticipates issues that are emerging or where hazards exist for the immediate or near future. Giving consideration to safety issues derived from operations or regulations that have not been fully deployed incorporates a forward looking element in the Safety Plan, thus complementing the approach illustrated in previous chapters. Developing a possible picture of the future with some of the trends that are more relevant to aviation is one of the actions captured in this section.

The nature of the issues identified in this chapter is twofold: on one hand, it addresses safety aspects of changes and trends that impact aviation; on the other hand, it copes with the introduction of new products, systems, technologies and operations for which safety regulations may need to be updated.

Actions will not only deal with uncertainties at early stages of development but also with gathering data that are lacking from operations. Gaps in safety data can be mitigated by specific research actions either to produce simulation experiments (at different scales) or by gathering operational experts input on safety issues and prioritising them.

Completed actions		
No.	**Issue**	**Finished action**
EME3.1	Well balanced standardisation programme.	A well balanced standardisation programme based on three pillars, regulatory compliance verification, pro-active standardisation and a regulatory feedback mechanism is now established..
EME3.2	One uniform standardisation methodology for all fields of aviation.	One uniform standardisation process for all fields of aviation as covered by the Basic Regulation and related Implementing Rules is now developed

Progress made during 2013

This area is the forward looking element of the EASp. By looking ahead future risks can be anticipated and acted upon.

Action EME1.2 seeks to develop a possible picture of the future by establishing a foresight cell. Such cell could be used at strategic level to evaluate how risks develop with time and identify the kind of expertise needed to be prepared to face the changes. It would bring a more robust basis for this section of the EASp. An agreement has been reached with the consortium developing the ASCOS project to perform an initial test case using the FAST areas of change to develop a picture of the future. The first results are expected in 2014.

Several actions (EME1.3, EME1.4, EME1.5 and EME1.6) encompass pre-regulatory activities leading to the regulation of certain products like Remote Powered Aircraft Systems (RPAS), high-performance aircraft or sub-orbital planes and operations like powered lift pilot licensing operations.

Actions EME2.1 seeks to evaluate the effect of changes in weather hazards in aviation. A survey of all EASA Certification Specification (CS) and related Acceptable Means of Compliance (AMC) and Guidance Material (GM) will be conducted in 2014. It will collect requirements

addressing external hazards such as wind, gust, ice, hail, snow, lightning etc. as well as the certification level if mentioned. This will build out status quo knowledge and allow to identify areas which need further research or rulemaking action to adapt the CS to potential change on external hazard (weather) threats or close gaps in the certification specifications.

A well balanced standardisation programme and a uniform standardisation methodology for all fields of aviation are now fully in place, thus closing actions EME3.1 and EME3.2. The safety improvements put in place so far should be consolidated and further developed.

Developing new competencies to implement safety management on the regulatory side has been identified as one of the emerging issues of the EASp. The SMICG has delivered guidance on the competencies required for inspectors to evaluate SMS effectiveness when they oversee organisations. The issue will be further progressed by the EASAC in 2014.

New actions

Regulatory and oversight considerations

Poor level of responsiveness to ADs

Compliance with Airworthiness Directives (ADs) and other mandatory requirements are critical to ensuring the continued airworthiness of operational aircraft. The level of responsiveness of operators is ensured by actions already implemented by EASA like:

- Simplification and clarification of AD requirements through the use of standardised or commonly recognised wording, and
- Closer matching of ADs to the design approval holder service information (e.g. service bulletins) through the publication of guidance material (ref. *EASA Certification Memorandum CM–21.A–J-001 Issue 01 "Service Bulletins (SBs) related to Airworthiness Directives (ADs)"*),

Experience from regulatory oversight has however shown variable achievement in this regard. In fact, some European aircraft manufacturers are concerned by the level of responsiveness of operators (especially outside Europe) with regards to the implementation of mandatory requirements and the feedback provided to them.

Desired outcome

This action aims to improve the level of responsiveness of operators to the implementation of mandatory requirements in order to ensure continued airworthiness.

Proposed actions

1. **Provide advice to stakeholders** (e.g. design approval holders, operators, maintenance organisations) **on best practice for the management of compliance with mandatory requirements to correct unsafe conditions.**
2. **Conduct continued airworthiness industry seminars and meetings to promote the applicable rules and standards.**

3. **Monitor achievement through oversight** (EASA Standardisation and Industry feedback)
4. **National Authorities to encourage compliance with ADs during meetings with industry** (e.g design approval holders, operators, maintenance organisations) **on a regular basis and monitor level of responsiveness**.

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
EME3.5	*Poor level of responsiveness to Ads*	Provide advice to stakeholders on best practice for the management of mandatory requirements	EASA	2015	R	Publish acceptable means of compliance, guidance material or information.
EME3.6	*Poor level of responsiveness to ADs*	Conduct Continued Airworthiness Industry seminars and meetings to promote the applicable rules and standards	EASA	continuous	SP	Promote bilateral meetings with industry
EME3.7	*Poor level of responsiveness to ADs*	Monitor achievement through oversight	EASA + Industry	continuous	O	Oversight report
EME3.8	*Poor level of responsiveness to ADs*	National Authorities to encourage compliance with ADs during meetings with industry on a regular basis and monitor level of responsiveness.	MS	continuous	SP, O	Report on activities

EASp safety concerns not considered during programming of oversight of Member States

EASA is changing its methodology to oversee Member States and transitioning to a new approach in which risk information will be better used to feed the oversight programme, hence paying more attention to those areas in which greater risks have been identified. The EASp is the risk portfolio for the region and can potentially support the identification of risk concerns.

Desired outcome

Use European-wide risk information contained in the EASp to support oversight of Member States.

Proposed actions

EASA will study possibilities to use the risk picture provided by the EASp to support the transition to a more risk-based oversight approach.

New Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
EME3.9	*EASp safety concerns not considered during programming of oversight of Member States*	EASA will study possibilities to use the risk picture provided by the EASp to support the transition to a more risk-based oversight approach.	EASA	continuous	O	Process to feed the Oversight Programme

7 Human Factors and Performance

A projected increase in passenger numbers over the next decade, the move towards a Single European Sky and next generation aircraft technology, together with constantly shifting political, economic and regulatory frameworks demand that the role of the human in achieving the highest possible standards of safety within the aviation industry is seen as essential.

The entire aviation system, through people, processes and performance, relies predominantly on individuals and teams for safety, efficiency and effectiveness. In practice, people are required to communicate, apply judgments and make decisions and in doing so are constantly exposed to the risk of error. Therefore, human factors and performance of individuals and organisations affect all aspects of aviation and should not be addressed in isolation.

Completed actions

No.	Issue	Finished action
HFP1.2	Action plan development.	An action plan on human factors based on the strategy and evaluation of the results of the questionnaire of December 2009 has been developed. It is updated annually.
HFP1.4	Consideration of HF in rulemaking activities.	The Agency has taken into account HF in rulemaking task that have human factors considerations. EHFAG has reviewed the rulemaking programme for 2013 to 2016 and identified tasks that have potential HF considerations.

Progress made during 2013

The entire aviation system, through people, processes and performance, relies predominantly on individuals and teams for safety, efficiency and effectiveness. Human factors and human performance are an integral part of the EASp.

In 2012 the European Human Factors Advisory Group (EHFAG) finalised a Human Factors Strategy with the intent of endorsing human factors principles across civil aviation activities. The EHFAG has started to transform some of the principles into concrete actions and developed an action plan (HFP1.2) that will be reviewed and updated annually.

In addition, during 2013 the rulemaking programme 2013-2016 has been reviewed in order to identify where rulemaking tasks may need to consider human factor issues (HFP1.4). The 2014-2017 iteration of the rulemaking programme will also be reviewed.

The identification of gaps to address design related pilot error and make recommendation to update AMC for CS 25.130 - Installed Systems for use by flight crews has started while work continues to develop human factor competences for the various functions of regulators, starting with maintenance inspectors (HFP1.6)

Eurocontrol's Safety Team provides support to ANSPs in the deployment of ATM human factors activities (HFP1.3). To that end a work programme has been approved that covers the following strands of work:

- Weak Signals;
- Human Factors in safe ATM Design;
- Human Factors intelligence for all safety actors and all layers of management;
- Human Performance safety culture improvements;
- Safety Human Performance Dissemination and Toolkits;
- Fatigue management;
- Human Factors in Investigation;
- Degraded Modes;
- Critical Incident Stress Management;
- Safety and Team Work Factors.

Among the actions that the Eurocontrol Safety Team has finished we find: the safety culture discussion cards, a paper on safety intelligence, development of an advanced course in human factors for safety actors, review of the occurrence investigator course and a white paper introducing a new safety concept.

Acronyms and Definitions

Acronyms

AER	Aeroplanes
ANS	Air Navigation Service
ANSP	Air Navigation Service Provider
AR	Authority Requirements
AST	Annual Summary Template
ATM	Air Traffic Management
CAST	Commercial Aviation Safety Team (US)
CAT	Commercial Air Transport
CBT	Competence Based Training
CFIT	Controlled Flight Into Terrain
CMA	Continuous Monitoring Approach
CPL	Commercial Pilot License
DVE	Degraded Visual Environment
EACCC	European Aviation Crisis Coordination Cell
EAFDM	European Authorities Coordination Group on Flight Data Monitoring
EAPAIRR	European Action Plan for Airspace Infringement Risk Reduction
EAPPRE	European Action Plan for the Prevention of Runway Excursions
EAPPRI	European Action Plan for the Prevention of Runway Incursions
EASA	European Aviation Safety Agency
EASp	European Aviation Safety Plan
EASP	European Aviation Safety Programme
EBT	Evidence Based Training
EC	European Commission
ECAC	European Civil Aviation Conference
ECAST	European Commercial Aviation Safety Team
ECR	European Central Repository
EFB	Electronic Flight Bag
EGAST	European General Aviation Safety Team
EHEST	European Helicopter Safety Team
EHFAG	European Human Factors Advisory Group
EME	Emerging
ESP+	European Safety Programme for ATM
ESSI	European Strategic Safety Initiative
EVS	Enhanced Vision System
FAA	Federal Aviation Administration
FCL	Flight Crew Licensing
FDM	Flight Data Monitoring
FSTD	Flight Simulator Training Device
GA	General Aviation
GRSS	Global Runway Safety Symposium
HE	Helicopters
HFP	Human Factors and Performance
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
ICATEE	International Committee for Aviation Training in Extended Envelopes
IGPT	Internal Group on Personnel Training of EASA
IHST	International Helicopter Safety Team
IMC	Instrumental Meteorological Conditions
IR	Instrument Rating
LOI	Level Of Involvement
MAC	Mid-air Collision
MS	Member States
NAA	National Aviation Authority
NCC	Non-Commercial operations with Complex motor-powered aircraft
NCO	Non-Commercial operations with Other-than-complex motor-powered aircraft
NextGen	Next Generation Air Transportation System
NGAP	Next Generation of Aviation Professionals
NoA	Network of Analysts
NSA	National Supervisory Authority
O	Oversight
OR	Organisation Requirements
OSC	Operational Suitability Certificate
PPL	Private Pilot License
PRB	Performance Review Body
LOC-I	Loss of Control In Flight
R	Rulemaking
RAT	Risk Analysis Tool
RE	Runway Excursions
RPAS	Remotely Piloted Air System
RRSS	Regional Runway Safety Symposium
SES	Single European Sky
SESAR	Single European Sky ATM Research Programme
SLD	Super-cooled Large Droplets
SMICG	Safety Management International Collaboration Group
SMS	Safety Management System
SP	Safety Assurance and Promotion
SPI	Safety Performance Indicator
SSP	State Safety Programme
SYS	Systemic
TAWS	Terrain Awareness Warning System
VLJ	Very Light Jets
UPRT	Upset Prevention and Recovery Training
URT	Upset Recovery Training

Definitions

Aerial Work
Aerial Work is an aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue or aerial advertisement.

Aeronautical Information Publication
An Aeronautical Information Publication (AIP) is a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation. (ICAO Annex 15 - Aeronautical Information Services)

Airborne safety nets
Airborne Safety nets provide alerts and resolution advisories directly to the pilots. Warning times are generally short, up to 40 seconds. Pilots are expected to immediately take appropriate avoiding action.

Airspace infringement
Airspace infringement occurs when an aircraft penetrates an area into which special clearance is required without having such clearance.

Commercial Air Transport
Commercial air transport operations involve the transportation of passengers, cargo and mail for remuneration or hire.

Controlled Flight Into Terrain
Controlled Flight Into Terrain (CFIT) occurs when an airworthy aircraft under the complete control of the pilot is inadvertently flown into terrain, water, or an obstacle. The pilots are generally unaware of the danger until it is too late.

European Aviation Safety Programme
European regional approach to the ICAO requirements of State Safety Programmes. It contains an integrated set of regulations and activities to improve safety within EASA Member States. It is published as a Commission Staff Working Paper[6] developed jointly by the European Commission and the Agency. The latest version is available at www.easa.europa.eu/sms.

General Aviation
General Aviation means all civil aviation operations other than commercial air transport or an aerial work operation.

Ground-based safety nets
Ground-based safety nets are an integral part of the ATM system. Using primarily ATS surveillance data, they provide warning times of up to two minutes. Upon receiving an alert, air traffic controllers are expected to immediately assess the situation and take appropriate action.

Ice crystal icing conditions
Ice crystal icing condition exists when all of the liquid water particles in the cloud have frozen into ice particles and may be encountered in high concentrations at higher altitudes in the area of convective weather systems.

Non-precision approach
A non-precision approach is an instrument approach and landing which utilises lateral guidance but does not utilise vertical guidance. (ICAO Annex 6) For pilots of older aircraft, in which use of automated systems to assist in flying the approach is limited, a high degree of piloting skill is required to fly such approaches accurately and the frequent practice which many pilots need to achieve this can be difficult to come by if precision approaches are the normal method used.

Mid-air collision
A Mid-Air Collision (MAC) is an accident where two aircraft come into contact with each other while both are in flight.

Mixed phase icing conditions
Mixed phase icing conditions occur when super-cooled liquid water droplets and ice particles coexist in a cloud, often around the outskirts of a deep convective cloud formation.

Loss of separation
Loss of separation between aircraft occurs whenever specified separation minima are breached. Minimum separation standards for airspace are specified by ATS authorities, based on ICAO standards.

Level bust
A *level bust* occurs when an aircraft fails to fly at the level to which it has been cleared, regardless of whether actual loss of separation from other aircraft or the ground results. Level busts are also known as Altitude Deviations.

[6] EC SEC(2011) 1261 final European Aviation Safety Programme.

Local Runway Safety Team
Local Runway Safety Teams (LRSTs) are aerodrome centric, multi-organisational groups of experts providing practical suggestions to resolve runway incursion causal factors. More than 100 LRSTs have been established at European airports, as a consequence of which, the safety of runway operations has increased although incidents continue to be reported.

Loss of Control In Flight
Loss of control usually occurs because the aircraft enters a flight regime which is outside its normal envelope, usually, but not always at a high rate, thereby introducing an element of surprise for the flight crew involved.

Occurrences
Operational interruptions, defects faults, or other irregular circumstances that have or might have influenced flight safety and that have not resulted in an accident or serious incident.

Runway Excursion
According to the definition provided by ICAO, a runway excursion is a veer off or overrun off the runway surface. Runway excursion events can happen on takeoff or landing.

Runway Incursion
A *runway Incursion* is defined as "any occurrence at an aerodrome involving the incorrect presence of an aircraft vehicle or person on the protected area of a surface designated for the landing and take off of aircraft". (ICAO Doc 4444 - PANS-ATM)

Safety Management System
A Safety Management System (SMS) is a systematic approach to manage safety, including the necessary organisational structures, accountabilities, policies and procedures (ICAO). ICAO through various Annexes to the Chicago Convention has incorporated requirements for service providers in various domains of aviation to have an SMS.

Space weather
Space Weather is the travel of solar and galactic radiation and their interaction with the Earth magnetosphere and ionosphere. It is a cyclic phenomenon.

State Safety Programme
According to the ICAO definition it is an integrated set of regulations and activities aimed at improving safety. ICAO requires contracting States to implement SSPs.

System Complexity
Complexity is an attribute of systems or items which makes their operation difficult to comprehend. Increased system complexity is often caused by such items as sophisticated components and multiple interrelationships (EUROCAE/ SAE Doc ED-79/ ARP4754)

Working Groups

EAFDM
EASA and NAAs have formed a group of experts called the European Authorities Coordination Group on FDM (EAFDM). It is a voluntary and independent safety initiative with the following objectives:

a. contribute to improving the implementation of FDM programmes and to making FDM programmes more safety effective,
b. contribute to EASA objective of a high and uniform level of safety in Europe,
c. contribute to a better overview of air transport operational safety in Europe for EASA and NAAs.

Among the topics covered by EAFDM are:
- Development of national FDM forums,
- Oversight of FDM programs by NAAs,
- FDM-based indicators.

Web Link

EASAC
The **European Aviation Safety Advisory Committee** (EASAC) was established by the Executive Director of the Agency in October of 2009. The main objective of the Committee is to advise on a European Aviation Safety Strategy and propose a European Aviation Safety Programme and Plan. The first Plan is the present document, endorsed by the Committee.

The EASAC is chaired by the Executive Director of the Agency and composed of safety experts' ad persona from Member States, the European Commission, Eurocontrol, the PRB, Industry and EASA. The Committee reports regularly to the EASA Management Board.

EARPG
The **European Aviation Research Partnership Group** (EARPG) prepares proposals and suggests priorities for research topics to be funded by relevant sources available. Identification of research needs is based on: certification experts' experience, evidence of accumulation of safety related concerns resulting from safety analysis of incident and accident databases, Safety Recommendations stemming from incident and accident investigations and proposals by the European Strategic Safety Initiative (ESSI) and its safety teams ECAST, EGAST, EHEST.

The research results are expected to lead to recommendations and improvements of safety or environmental protection through changes to requirements, compliance and guidance material.

The EARPG membership consists of the Agency's research focal points, EASA Member States with an interest in research, the European Commission and Eurocontrol. It shares information with authorities from Non-EASA Member States, particularly the FAA and Transport Canada, on on-going research and where appropriate, co-ordinates future research activities. The group interfaces with Industry and Research Institutions on a regular basis through workshops.

Web Link

ECAST
The **European Commercial Aviation Safety Team** (ECAST) is a component of European Strategic Safety Initiative (ESSI). ECAST addresses **large fixed wing aircraft operations**, and aims to further enhance commercial aviation safety in Europe, and for European citizen worldwide. It was launched in October 2006.

ECAST is a partnership between EASA, other European regulators and the aviation industry. ESSI is based on the principle that industry can complement regulatory action by voluntary committing to cost effective safety enhancements. ECAST cooperates with CAST and with other major safety initiatives worldwide, in particular under the Cooperative Development of Operational Safety and Continuing Airworthiness Programme (COSCAP).

Web Link

EGAST
European General Aviation Safety Team (EGAST) is a component of European Strategic Safety Initiative (ESSI). General Aviation (GA) is a high priority for EASA. EGAST creates a forum for sharing best practices, improving data sources, and promoting safety.

EGAST's mission is to promote and initiate for all sectors of General Aviation best practices and awareness in order to improve safety, thereby reducing the accident rates. The team may make non binding recommendations. EGAST will help EASA and the industry focus their resources

on combined safety promotion efforts to reach the goal of reducing accidents

Web Link

EHEST
Launched on November 2006, the **European Helicopter Safety Team** (EHEST) brings together manufacturers, operators, research organisations, regulators, accident investigators and a few military operators from across Europe. EHEST is the helicopter branch of the ESSI, and also the European component of the International Helicopter Safety Team (IHST).

EHEST is committed to the goal of reducing the helicopter accident rate by 80 percent by 2016 worldwide, with emphasis on improving European safety.

Web Link

EHFAG
The **European Human Factors Advisory Group** (EHFAG) is an existing body of human factors expertise drawn from national Aviation Authorities (including the FAA), industry, professional associations and research organisations. This group continues to provide human factors advice and support to EASA and to deliver actions in support of the European Human Factors Strategy.

Web Link

ESSI
The **European Strategic Safety Initiative** (ESSI) is an aviation safety partnership between EASA, other regulators and the industry. ESSI'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. ESSI was launched in June 2006 by EASA as a ten year programme and has three pillars: ECAST, EHEST and EGAST

Web Link

IGPT
The Agency's Internal Group on Personnel Training (IGPT) has been set-up by the Agency to follow-up the EASA International Conference on Pilot Training of 29 Nov 2009. Its first meeting took place on 27 Jan 2010. Building on proven internal expertise and competences, the IGPT bridges Design, Certification, Training, and Operations by creating a forum to address training within the Agency and deliver the official Agency's position on the subject. The IGPT is composed of experts from all operational Directorates and adopts a total system approach in training based on the three pillars Rulemaking, Oversight and Safety Promotion. The IGPT addresses all types of training and checking for all types of personnel and operations. Regarding pilot training, this includes flight and type rating training, including both ab initio and recurrent elements, all categories of aircraft, all types of operations, and pilots with different backgrounds (e.g. those trained on highly automated glass cockpits aircraft and those pilots trained on older generation conventional aircraft).

NoA

The European Aviation Safety Agency has recently established a Network of Analysts (NoA) to provide a formal process to analyse safety data at a European level. The membership of the NoA is drawn from the National Aviation Authorities (NAAs) and Investigation Authorities of all EASA Member States.

The NoA focuses on:

- understanding what barriers exist to the provision of the best possible safety data and developing ways to improve safety data across Europe;
- agreeing the classification of aircraft accidents in EASA MS;
- carrying out analysis of safety data to support the European Aviation Safety Plan (EASp) and State Safety Plans, as well as identifying emerging issues for possible inclusion in the future;
- sharing experiences, good practice and developing safety analysis projects across Europe to enable the European aviation community to exploit the ECCAIRS European Central Repository for the benefit of all and
- providing analysis support to existing EASA groups such as the European Strategic Safety Initiative (ESSI) and the European Human Factors Advisory Group (EHFAG).

Web Link

PRB
On 29 July 2010, the EC adopted a Decision designating Eurocontrol acting through its Performance Review Commission (PRC) supported by the Performance Review Unit (PRU) as the **Performance Review Body** (PRB) until 30 June 2015. The Eurocontrol Organisation accepted to be designated as PRB on 15 September 2010.

Web Link

SM ICG
The **SMS International Collaboration Group** (ICG) created in Feb 2009 is a collaboration activity between aviation authorities in order to promote a common understanding of SMS principles and requirements in different countries, share lessons learned and encourage progress and harmonisation. The ICG consists of a core group and a participant group. The core group is comprised of authorities with resources and expertise for product development. It includes members from the FAA, EASA (supported by FOCA of Switzerland, the DGAC of France, AESA Spain, the CAA of the Netherlands and UK CAA), TCCA, CASA of Australia, JCAB of Japan, CAA of New Zealand and ANAC of Brazil. The participant group tests and reviews the core group's work products and resources.

Web Link

European Aviation Safety Agency

Annex A

EASp Status Report
2013

Final

This document provides the individual details concerning each of the EASp action items. It includes the latest status on the implementation of each action.

How to read the content

This Annex provides the individual details concerning each of the action items, including a status update and a link to the final deliverable when available. An initial identification of likely deviations in time or scope for each action is also provided. A "traffic-light system" (green, yellow and red colours) has been used to track progress against the plan.

Throughout the Annex, the actions have been organised following a comprehensive format illustrated in the example below:

Safety Actions						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
Unique identifier (No.).	Safety issue being addressed.	A brief description of the course of action taken to mitigate the safety issue	The action owner or key stakeholder that will be responsible for its implementation (it does not mean that it is the only one contributing to the action). Being owner of an action means to be able to report on its progress.	As a minimum the year in which the deliverable is expected. When possible the starting year is also provided. Actions due in the year that the plan is issued are highlighted in yellow since the commitment is in this case stronger.	The actions type: rulemaking (R), Oversight (O) or Safety Assurance and Promotion (SP) according to the functional areas that are part of the EASP. When a rulemaking task has been created or a research project has been launched, the reference is provided in brackets (e.g. ATM.001 refers to a rulemaking task as it can be found in EASA's rulemaking programme).	The deliverable that is expected as a result of the actions. It allows evaluating the completion status on a yearly basis and serves as a first measure of progress.

Each action is accompanied by its implementation status according to the following format

Implementation					
Update	**Status**	**Lead**	**According to PLAN**	**Reasons for deviation**	**Deliverables**
Brief description of the progress made on the action	Not started Started Advanced Complete Closed	Organisation/Team leading the development of the action	On schedule Less than one year late More than one year late Not finalised	When there are deviations according to what was initially planned the reasons are recorded here.	A link to the deliverable or relevant website is provided when available

The new actions incorporated in a given year contain a "**NEW**" marker next to the action number in the identifier column

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
1. Working with States to implement and develop SSPs												
SYS1.3a	Incorporation of SSP in all domains of aviation.	Incorporate SSPs and enablers in the IR for initial airworthiness (enablers are supporting tools like system safety analysis, occurrence reporting and human factors).	EASA & EC	2017	R (MDM.060) (RMT.0262 and RMT.0550)	Opinion/Decision	MDM.060 project for initial airworthiness (Commission Regulation (EC) No.748/2012) will focus on introduction of safety management principles into "Part-21" (Annex to Regulation 748/2012). MDM.060 project combines four rulemaking tasks on two subjects: Level of Involvement (LOI) of the Agency in product certification (RMT.0262 (IR) + RMT.0611(AMC/GM)) and Safety Management System (SMS) for Design and Manufacturing organisations (RMT.0550 (IR) + RMT.0612 (AMC/GM)). The MDM.060 project will introduce LOI/MS requirements for competent authorities performing oversight of Design and Manufacturing organisations. Common ToR for MDM.060 project have been published, together with a concept paper, on EASA website on 27/08/ 2013. The LOI part of the project is at the stage of a Notice of Proposed Amendment (NPA) to introduce LOI into Part-21 (RMT.0262 - implementing rules only). Opinion with LOI rules is scheduled for 2014/Q2 and Decision with AMC/GM material for 2015/Q2. The implementation of LOI is supported by a number of pilot projects to test the LOI concept and develop AMC/GM material. The MS part of the project has started with preparation of the pilot projects for introduction of MS requirements into Part-21. Opinion for MS rules is scheduled for 2015/Q4 and Decision for AMC/GM 2016/Q4. The implementation of LOI is supported by a number of pilot projects to test the LOI concept and develop AMC/GM material. Synchronised implementation of LOI and SMS is expected in 2017/2018, depending on a transitional period to be decided.	Started	R.4	On-schedule	No deviation Specific mandate for SSP will not be in the IRs.	ToR and Concept Paper MDM.060
SYS1.3b	Incorporation of SSP in all domains of aviation.	Incorporate SSPs and enablers in the IR for continuing airworthiness (enablers are supporting tools like system safety analysis, occurrence reporting and human factors).	EASA & EC	2014	R (MDM.055) (RMT.0251)	Opinion/Decision	The work on continuing airworthiness (MDM.055) has resulted in publication of the NPA 2013-01 covering Part-M and Part-145. NPA 2013-19 covering Part-66 and Part-147 has been published in October. The first Opinion/Decision is now scheduled for 2014/Q4. In both tasks the provisions in Part-AR designed to support the implementation of SSP (exchange of information, management system and oversight) will be considered for amending the airworthiness rules. However there will be no explicit requirements mandating SSPs/Safety Plans for the Member States.	Advanced	R.4	On-schedule	Specific mandate for SSP will not be in the IRs.	NPA 2013-01 NPA 2013-19
SYS1.4	Incorporation of SSP in all domains of aviation.	Incorporate SSPs and enablers in the requirements on Competent Authorities in ATM/ANS.	EASA & EC	2013	R (ATM.004(a) and (b)) (RMT.0157 and .0158)	Opinion/Decision	Commission Implementing Regulation No 1034/2011 was adopted on 17th of October 2011. The regulation contains some elements that facilitate the implementation of SSP in the field of ATM/ANS. The next phase of the rulemaking task brings further enhancements in this area in order to align with a similar provision existing already in the field of aerodromes, ATCO training organisations, aircraft operations and air crew. NPA on the related IR was issued on 10/05/2013. The subject CRD and subsequent opinion are foreseen accordingly for Q1 and Q2/2014.	Advanced	R5.1	Less than one year late	RMP 2014-2017. Next phase of Rulemaking expected in 2014	Commission Implementing Regulation No 1034/ 2011 NPA 2013-08

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS1.5	Incorporation of SSP in all domains of aviation.	Incorporate SSPs and enablers in the requirements for aerodrome oversight authorities.	EASA & EC	~~2012~~ **2013**	R (ADR.001) (RMT.0139)	Opinion/Decision	Work started in July 2010. NPA 2011-20 was published on 13 December 2011. The NPA contains draft rules for the certification, management, operation and design of aerodromes. The Comment Response Document was published on 26 November 2012.The public and stakeholders were asked to give their reactions on the CRD documents by February 3, 2013. The Agency issued Opinion 01/2013 according to the plan, in 2013/Q1. The Opinion contains the requirements for competent authorities management systems. Decisions on the associated AMC's and GM will be issued after the adoption of the IRs which is expected a by December 2013.	Completed	R5.2	On-schedule	No deviation	NPA 2011-20 CRD 2011-20 Opinion 1/2013
SYS1.6	Safety Management promotion and information.	Organise a workshop with MS to share experience on national implementation of the Authority and Organisation requirements.	EASA	~~2013~~ **2014**	SP	Workshop	An information and promotion plan is being developed. A conference was held in 13 December 2012 focusing on continuing airworthiness (MDM.055) to present the main elements of the NPA 2013-01. Some of the MS mandated SMS already in the area of maintenance and this was a good opportunity to get feedback and to explain the NPA, which builds upon the first extension rule material. Due to budget constraints it was not possible to schedule another workshop in 2013 related to SMS in Reg. 2042 (Part-M/Part-145 and Part-147). A workshop addressing SMS implementation both for initial and for continuing airworthiness organisations is now scheduled for 3Q2014. This will allow gathering additional input for drafting specific guidance for SMS implementation in design, manufacturing, maintenance management, maintenance and maintenance training organisations as well as for deciding on the need for a dedicated 'SMS and airworthiness' group as part of ESSI.	Started	R3	On-schedule	No deviation	Conference: SMS in Part-M and Part-145
SYS1.7	SSPs are not consistently available in Europe.	Member States to give priority to the work on SSPs.	MS	2014	SP	SSP established	In 2013 a survey was launched based on the phased approach proposed in the ICAO SSM (Edition 3). 16 States responded to the survey. Detailed results are available in a separate Annex (Annex C). Work in assessing progress made by States will continue in 2014.	16 responses received	MS	Continuous actions	SSP Phase implementation survey. 16 responses have been received	Published SSPs and Safety Plans Annex C - EASp implementation in the States

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
2. Working with States to foster the implementation of SMS in the industry												
SYS2.2a	Incorporation of SMS in all domains of aviation.	Incorporate SMS and enablers in IR for initial airworthiness (enablers are supporting tools like system safety analysis, occurrence reporting and human factors).	EASA	2017	R (MDM.060) (RMT.0262)	Opinion/Decision	MDM.060 project for initial airworthiness (Commission Regulation (EC) No.748/2012) will focus on introduction of safety management principles into "Part-21" (Annex to Regulation 748/2012). MDM.060 project combines four rulemaking tasks on two subjects: Level of Involvement (LOI) of the Agency in product certification (RMT.0262 (IR) + RMT.0611(AMC/GM)) and Safety Management System (SMS) for Design and Manufacturing organisations (RMT.0550 (IR) + RMT.0612 (AMC/GM)). The MDM.060 project will introduce SMS requirements for Design and Manufacturing organisations. Common ToR for MDM.060 project have been published, together with a concept paper, on EASA website on 27/08/ 2013 . The SMS part of the project has started with preparation of the pilot projects concept for introduction of SMS into Part-21. Opinion for SMS rules is scheduled for 2015/Q4 and Decision for AMC/GM 2016/Q4. Synchronised implementation of LOI and SMS is expected in 2017/2018, depending on a transitional period to be decided.	Started	R.4	On-schedule	No deviation	ToR and Concept Paper MDM.060
SYS2.2b	Incorporation of SMS in all domains of aviation.	Incorporate SMS and enablers in IR for continuing airworthiness (enablers are supporting tools like system safety analysis, occurrence reporting and human factors).	EASA	2014	R (MDM.055) (RMT.0251)	Opinion/Decision	The work on continuing airworthiness (MDM.055) has resulted in publication of the NPA 2013-01 covering Part-M and Part-145 (Jan. 2013) and NPA 2013-19 coverring Part-66 and Part-147 (Oct. 2013). Subparts GEN of Parts ORA/ORO and ARA/ARO formed the basis for amending Regulation 2042/2003. A significant number of comments have been received following publication of the first NPA (2013). Comment analysis and required EASA coordination will delay the publication of the related CRD and subsequently the EASA Opinion (now expected second semester 2014).	Advanced	R.4	On-schedule	No deviation	NPA 2013-01 NPA 2013-19
SYS2.3	Incorporation of SMS in all domains of aviation.	Incorporate SMS and enablers in the requirements for aerodrome operator organisations (part ADR.OR).	EASA & EC	~~2012~~ **2013**	R (ADR.001) (RMT.0139)	Opinion/Decision	Work started in July 2010. NPA 2011-20 was published on 13 December 2011. The NPA contains draft rules for the certification, management, operation and design of aerodromes. The Comment Response Document has been published on 26 November 2012.The public and stakeholders were asked to give their reactions on the CRD documents by February 3, 2013. The Agency issued Opinion 01/2013 according to the plan, in 2013/Q1. The Opinion contains the requirements for aerodrome management systems, containing SMS. Decisions on the associated AMC's and GM will be issued after the adoption of the IRs which is expected a by December 2013.	Completed	R5.2	On-schedule	No deviation	NPA 2011-20 CRD 2011-20 Opinion 1/2013
SYS2.4	Incorporation of SMS in all domains of aviation.	Align requirements with other domains and incorporate enablers in part OR for ANSP.	EASA & EC	2013	R (ATM.001(a) and (b)) (RMT.0148 and .0148)	Opinion/Decision	Commission Implemented Regulation No 1035/2011 was adopted on 17 October 2011. It addresses safety management systems for ANSP. Further enhancements of these requirements more aligned with the relevant ICAO SMS framework are proposed with the issued NPA 2013-08. The subject CRD and subsequent opinion are foreseen accordingly for Q1 and Q2/2014.	Advanced	R5.1	Less than one year late	RMP 2014-2017. Next phase of Rulemaking expected in 2014	Commission Implementing Regulation No 1035/ 2011 NPA 2013-08

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS2.7	Promotion of SMS.	Encourage implementation of promotion material developed by **ESSI Teams** (ECAST, EHEST and **EGAST) and SMICG**.	MS	~~**2012**~~ Cont.	SP	Best Practice published by MS.	10 States have already established a link to the ESSI material on the CAA's website. One more plans to do this in the future . 11 States have distributed or discuss ESSI material with the industry. One State will start doing this in the future. This has been done in various forms like consultative meetings with representatives from various domains, dedicated safety simposiums and other industry safety events, including specific actions in national safety plans, publishing informative notes or via electronic distribution to the industry and using the material to organise SMS courses. 3 States are actively promoting the material developed by EHEST and 3 more promote EGAST material too.The following States are translating ESSI material: FR, SP. In additon the following States have developed and published guidance material on SMS implementation: FI, SW, SP. The ARMS methodology (endorsed by ECAST) is being used and promoted in IR. 4 States are also actively promoting SMICG products. More information can be found in Annex B - EASp implementation in the States 2013	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
SYS2.8	Promotion of SMS.	Develop and promote SMS guidance and best practices for ATM.	ECTRL (DNM/COO/NOM/SAF)	2011-2014	SP	Best Practice	EUROCONTROL Generic Safety Management Manual (EGSSMM) is in Edition 2.0. A full range of guidance on various SMS procedures complements the manual (such as on Safety Surveys, ATM Occurrence Investigation, Safety records, Safety Assessments etc). The promotion is being done through ES2 (Experience Sharing to Enhance SMS) – see SYS2.9.	Advanced	ECTRL	On-schedule	No deviation	EUROCONTROL Generic Safety Management Manual (EGSMM)
SYS2.9	Promotion of SMS.	Support to ANSP SMS implementation; develop a structured approach to the identification of safety key risk areas and to gathering information on operational safety and SMS best practices from the industry; harmonise SMS approaches in FABs.	ECTRL (DNM/COO/NOM/SAF), MS and ANSP	~~2014~~ **2011-2014**	SP (ESP+)	Methodology & Training material	The final ES2 workshop for 2012, "Efficiency Thoroughness Trade Off" was hosted by Slovenia Control 21 March 2013. Participants from more than 30 states attended including 15 ANSP CEOs and over 50 ANSP safety directors/managers. The main discussions were cented around how ANSPs could best tackle safety in operations during RP2 from a local, FAB and network level. The first ES2 workshop for 2013, Software Safety Assurance, was hosted by EUROCONTROL at the IANS premises in Luxembourg in May and was attended by over 60 personnel. The second ES2 workshop, "System Safety & Human Performance – Why Things Go Right?" took place in Dublin in September. Hosted by the IAA, over 140 people attended. The third ES2 workshop, hosted by Aena, "Safety Investigations - how to how to evolve ATM Safety Investigations while preserving just culture" took place in Madrid in November; over 100 people attended. SKYbrary is the main platform to share the safety knowledge with industry. Further developments of various portals are ongoing including the addition of a new "Just Culture" toolkit in March 2013. The outcomes from the EUROCONTROL/FSF/ERA Go-around Safety Forum (June) were also published on SKYbrary and a SKYbrary toolkit to help air traffic controllers have a better understanding of aircraft performance is under construction. EUROCONTROL contributed to a European working paper (WP85) promoting the potential benefits of consolidated aviation safety knowledge management to the 38th ICAO Assembly.	Advanced	ECTRL	On-schedule	No deviation	ES2 - Experience Sharing Enhanced SMS

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS2.10	SMS International cooperation.	Promote the common understanding of SMS principles and requirements in different countries, share lessons learned and encourage progress and harmonisation.	EASA and MS through SMICG	Cont.	SP	SMICG Products	EASA and 5 MS continue to support the SMICG. The products of the group are available on Skybrary. They include a pamphlet with basic principles, an SMS effectiveness assessment tool, a practical guide for senior managers, guidelines for service providers on how to measure safety performance, risk based decision making principles, a common set of safety management related terms or an introduction to a hazard tazonomy that contains examples of specific aviation sector hazards. The group has been considerably expanded and includes 12 authorities across the world. The chair rotates among three authorities: TCCA, FAA and EASA.	Advanced	E2	Continuous action	No deviation	SMICG Skybrary link
3. Safety Management Enablers												
Sharing safety information												
SYS3.2	Comparable risk classification of events across the industry.	Propose a common framework for the risk classification of events in aviation based on existing work.	NoA & MS	~~2013~~ **2014**	SP	Study Report	The work of the NoA Risk Classfication Sub Group continues and the development of a common European Risk Classification Scheme is included in the current draft of the new Occurrence Reporting Legislation. The group met in November 2013 to develop a plan to complete the evaluation of existing methods and will then develop a plan to complete this work as far as possible in 2014.	Started	E2	On-schedule	No deviation	
Development of SPIs with associated data stream												
SYS3.5	Lack of a methodology to define SPIs.	Develop a comprehensive methodology.	EASA and MS through SMICG	~~2012~~ **2013**	SP	Safety Performance Measurement Approach - Phase I	In phase I of the Safety Performance Measuring Approach (SPMA) project, the SMICG metrics working group has defined a model for the measurement of safety performance taking a systems perspective for deriving safety performance indicators and focusing on the aviation system's ability to effectively manage safety. It considers outcomes, as well as aviation system behaviours. Guidance on Safety Performance Measurement for service providers has also been developed and is available on Skybrary. The SPMA concept paper is expected to be concluded in 2013/Q4 (the final product will be published on Skybrary). In phase II the SMICG Metrics project group will develop further guidance on the application of the SPMA concept. This work is expected to be concluded 2014/Q2. Another SMICG project will be initiated to provide guidance on how to establish a risk picture. This is not expected to include explicit risk acceptance criteria.	Completed	R.4	On-schedule	Complexity of the task and need to provide enough time for consultation and reaching consensus. Action (Phase I and Phase II) will be finished in 2013/Q4	SMICG Products
SYS3.6	Continuous monitoring of ATM safety performance.	Develop and populate safety indicators to measure performance on ATM and disseminate general-public information of the ANSPs performance through routine publication of achieved safety levels and trends.	EASA ECTRL MS ANSPs SRC/SRU	2014	SP (ESP+)	Publication of SPIs and safety levels/trends	On-going process of the Annual Summary Template (AST) reporting mechanism provides the main inputs to the deliverables. The public available material is found in the SRC Annual Safety Reports and Performance Review (PRB) reports. For the purpose of developing the next PRB report, the AST data are being used for comparison with data from the European Central Repository (ECR) and EASA data, to allow for enhancement of quality of data and reporting in Performance Monitoring. In addition, the application of the RAT methodology for Safety KPIs occurrence categories SMIs, RIs and ATM Specific (technical) Occurrences, is being monitored through the AST reporting mechanism. The EUROCONTROL Voluntary ATM Incident Reporting (EVAIR) function also provides valuable and alternative insight and data on ATC operations. Two EVAIR Safety Bulletins were issued during 2013.	Advanced	ECTRL	On-schedule	No deviation	EASA Annual Safety Review European ANS Performance Review

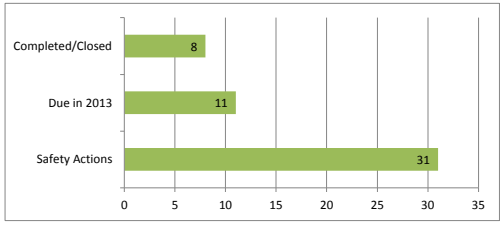
Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS3.7	All domains, except ATM, lack indicators and targets on key performance areas in order to achieve and maintain required safety levels	Develop a roadmap for the introduction of a performance scheme explaining the context and problem definition, the objective, the options, an initial assessment of the impacts, and the consultations conducted	EC	**2015**	SP	Study published	The Commission is in the process of commissioning a study to examine the feasibility of extending a Performance Scheme to other domains. The study will examine how this could be done using the lessons learned from the ATM scheme and taking into consideration the differing characteristics of the other domains whilst ensuring, where possible, a total system approach. It will also examine the issues to be overcome if the Commission decides to proceed, and conduct an impact assessment to gauge the costs and potential benefits of any proposed solutions. The study should be published beginning of 2015.	Not started	EC	On-schedule	No deviation	
SYS3.9	Understanding of European wide operational issues.	The NoA will perform an analysis of the operational issues in the Safety Plan from the National Databases in the EASA Members States. This will be combined with any additional information found in the ECR .	NoA	~~2012~~ **Cont.**	SP	Report will be provided for each operational area	The most recent work was carried out by the NoA in Feb 2013 and is included in the NoA Annual Report 2012. The analysis process has commenced for the 2013 NoA Annual Report period with an initial identification of operational risks of concern to the EASA MS. Analysis will be completed again in February 2014 and will be included in the next NoA Annual Report.	Advanced	E2	Continuous action	No deviation	NoA Annual Report 2012
SYS3.11	FDM programmes priorities do not consider operational issues identified at the European and national levels.	States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes, with the above objectives.	MS	~~2012~~ **Cont.**	SP	Report on activities performed to promote FDM	1. FDM promotion activities: 6 States have organised meetings with aircraft operators to promote FDM in 2013 or 2012 or establish a regular dialogue with operators on the subject. 5 States plan to organise meetings with aircraft operators to promote FDM or to include a dedicated agenda item on their flight ops meetings. 2. Level of participation and topics: In FI all operators with FDM requirements participate in the meetings; about 20 in FR; 5 operators in IR; 3 in LI; 3 in SP and 10 in SW. Discussion on FDM events relevant for preventing Runway Excurions (RE), Mid-Air Collisions (MAC), Controlled Flight Into Terrain (CFIT) or Loss of Control Inflight (LOC-I) have been initiated as part of this dialogue in 5 States . In IR the CAA has developed audit checklists for this purpose. 3. Reporting to the State: In 4 States (FI, IR, SP) aircraft operators reports to the State, on a regular basis, FDM event summaries or FDM-derived data. In two cases this is done to feed SPIs agreed between the operator and the authority. More information can be found in Annex B - EASp implementation in the States 2013	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
SYS3.12	FDM programmes priorities do not consider operational issues identified at the European and national levels.	EASA should foster actions by States to improving the implementation of FDM programmes by their operators and assist States in initiating the standardisation of FDM events relevant to SSP top safety priorities.	EAFDM	~~2012~~ **2013**	SP	Report on activities of the EAFDM	Twelve Authorities of EASA Member States have delegates in the EAFDM. The EAFDM has produced guidance material for NAAs on setting up a national Flight Data Monitoring (FDM) forum with their aircraft operators and a guidance document on FDM-based indicators for the prevention of RE, CFIT, MAC and LOC-I. This documents are published on EAFDM page of EASA website. In 2014, it is planned to produce guidance material for NAAs on FDM programmes' oversight.	Completed	EAFDM	On-schedule	No deviation	Guidance for NAAs in setting up a national FDM forum Developing standardised FDM-based indicators

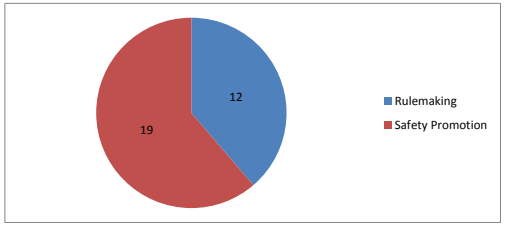
Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS3.13 **NEW**	Frequency of information to support the management of safety.	EASA should publish a safety dashboard on the EASA website with the intent to provide regular statistics on the state of safety in Europe and worldwide.	EASA	2013	SP	Safety dashboard published	A safety dashboard had been published and updated in June 2013 after the publication of the ASR.	Completed	E2	On-schedule	No deviation	Safety dashboard
SYS3.14 **NEW**	All domains, except ATM, lack indicators and targets on key performance areas in order to achieve and maintain required safety levels.	Develop high-level SPIs for use at European and national level in all domains of aviation safety.	NoA & MS	2013	SP	Publications of the high-level SPI definitions	High level SPIs were defined in the February NoA meeting by the SPI subgroup and are available.	Completed	NoA	On-schedule	No deviation	High level SPIs defined by the NoA
SYS3.15 **NEW**	Lack of harmonised barriers models to support organisations in applying SMS.	Define a credible and well accepted safety model easily usable by various commercial aviation related actors for selected types of accidents.	EASA	2013	SP (Research)	Barrier models for various accident scenarios	The ToR of a research project on safety modelling are complete but the project is no longer on the 2013 research plan due to the 50 % budget cut for this year. Proposed as priority 1 project for 2014.	Not started	E2.3	Less than one year late	Project not launched due to budgetary restrictions	
4. Complexity of the system												
SYS4.1	Apportionment of safety budgets across aviation segments.	Develop a methodology based on EUROCAE ED-78A (as part of AMC for ATM systems).	EASA	2014	R, SP	Methodology	WG-91 have completed the initial task foreseen in the TOR and have delivered technical report ER.007 - Recommendations for revision of ED-78A. Further work on the amending ED-78A is dependent on the work currently being undertaken with respect to the safety assessment of changes.	Started	R5	On-schedule	No deviation	
SYS4.4	Fragmentation of European skies.	Assess impact of SESAR in current rulemaking activities.	EASA, EC & ECTRL	2015	R	RP Update	A new Annex I of RMP 2014-2017 has been prepared and published as part of the adopted new rulemaking programme. This Annex is purposed to anticipate the Agency rulemaking actions that would be required to implement the ATM improvements stemming from SESAR deployment processes including those stemming from initial Pilot Common Project Proposal.	Started	R5/E0	On-schedule	No deviation	Rulemaking Programme 2014-2017 - Annex I
SYS4.5	Increasing the number of design interfaces.	Evaluate the safety issues and identify mitigation means to the risk of outsourcing design of significant items.	EASA	~~2012~~ **2014**	SP	Study completed	The first step is to develop a specification for the study. Gathering of information has started to prepare the specification (e.g. GAO reports on delays on the F-35). The study has not been started. Discussions are on-going to asess the feasibility of launching a research project. This is subject to budgetary constraints.	Not started	E6	On-schedule	Study not started	

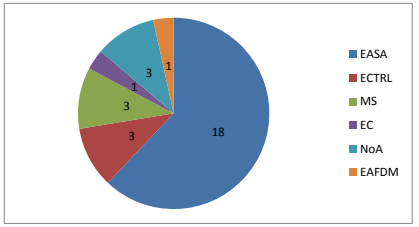
Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
5. Competence of personnel												
SYS5.1	The demand for aviation professionals may exceed supply and aviation personnel have to cope with new procedures and increasingly complex technologies.	Evaluate new training methods such as Competency Based Training (CBT), Evidence Based Training (EBT) and distance learning, and adapt as necessary training standards and rules to ensure that the level of safety can only be positively affected. Priority will be given to the training of pilots but also of certifying staff involved in aircraft maintenance.	EASA	~~2014~~ **2014-2019**	R (RMT.0194 & .0195) (RMT.0599 & .0600)	Opinion/Decision	For Flight Crew Licensing: Based on the agreed prioritisation of tasks it was decided to initiate task FCL.006 in 2014/Q4. The title of this task is: "Extension of competency-based training to all licences and ratings and extension of TEM principles to all licences and ratings". EASA opinion is planned to be published Q1 2017 and the AMC material Q1 2018. The task has been renumbered as RMT.0194, 0195 with no additional changes. Work will be started for maintenance training too. Review of the operational training requirements will be undertaken with RMT. 0599/0600 - Review of ORO.FC. The review will include the following items: - Evidence-based training taking into account recent ICAO amendments - ATQP taking into account experience gained in CAT aeroplane operations and extension to CAT helicopter operations (for the latter former RMT.0386/0387) - Concurrent operations of aeroplanes and helicopters in CAT operations (former RMT.302/303) - transferred task from the JAA on unexpected runway changes to possibly include additional GM to train on late arrival scenarios (former RMT.0298/0299) - Development of additional AMC/GM for non-commercial and specialised operations. The task will be initiated in 2015, Q2, the EASA Opinion is planned for 2018, Q2 and the EASA Decison for 2019, Q2.	Not started	R3/R4	On-schedule	Possibility to delay this task.	
SYS5.3	Modernise training and competence provisions in ATM and ANS.	Develop provisions for air navigation service providers to ensure that their personnel are suitable and qualified for the tasks and that procedures are established in respect of their training and continuing competence.	EASA	~~2014~~ **2016**	R	Opinion/Decision	Several activities are envisaged as follows: 1) NPA 2013-08 (published 10/05/2013) proposes training and competence requirements for Air Traffic Safety Electronic Personnel (ATSEPs) amending Commission Implementing Regulation No 1035/2011 on Organisation Requirements for Air Navigation Service Providers (timeframe: 2014) 2) Based on a study performed, the regulatory framework for other safety critical personnel groups could be further enhanced through the on-going Rulemaking tasks (timeframe: 2016) 3)NPA 2012-18 (published 12/11/2012) has further developed and enhanced the ATCO (including trainers and assessors) competence scheme framework. The subject Opinion is foreseen to be issued by Q4/2013.	Started	R5.1	On-schedule	No deviation	NPA 2013-08 NPA 2012-18
SYS5.5	Reduce possible differences in training implementation among States.	Develop a Training Implementation Policy.	EASA (IGPT)	2013	SP	EASA Policy	A dedicated WG of the EASA Internal Group on Personnel Training (IGPT) identified a top ten issue list. This list has been discussed with NAA Ops and FCL experts in the Workshop organised by EASA, S Directorate, on 27 June 2012. The results of the Workshop are served as the basis to develop the EASA Training Implementation Policy, which is now avaiable..	Completed	E2/S1	On-schedule	No deviation	

Systemic Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
SYS5.7 **NEW**	Issue of increasing pilot reliance on automation.	EASA, through the IGPT, will study possibilities for mitigating the risk of increasing pilot's reliance on automation through the proposals derived from the cockpit automation survey.	EASA (IGPT)	2013	SP	Mitigation proposals developed	The action is closed with the publication of three SIBs (two in 2013) and three rulemaking tasks. A revision of the EASA Automation Policy was issued in May 2013, and presented at the European Airline Training Symposium (EATS) in Oct in Berlin. EASA published on 23 April a Safety Information Bulletin (SIB) on Manual Flight Training and Operations: SIB 2013-05 encourages manual flying during recurrent simulator training and also, when appropriate, during flight operations. A similar recommendation has been issued through other publications, such as the FAA SAFO 13002 of 4 Jan 2013. The overall aim is to reach an appropriate balance between the use of automation and the need to maintain pilot manual flying skills, needed in case of automation failure or disconnection, or when an aircraft is dispatched with an inoperative auto-flight system. The airlines have an important role to play here: operators should develop operational principles and include these in their Automation Policy, in accordance with Commission Regulation (EC) No 859/2008 of 20 August 2008 Subpart P 8.3.18. Since 2012, EASA also published SIB 2013-02 on Stall and Stick Pusher Training and SIB 2010-33 on Flight Deck Automation Policy - Mode Awareness and Energy State Management. Beside, three EASA rulemaking tasks address the training aspects: RMT.0411 on Crew Resource Management (CRM) and RMT.0581 and 0582 on Loss of Control avoidance and recovery training. More information is available in the EASA Rulemaking Programme.	Completed	E2	On-schedule	No deviation	SIB 2013-05 SIB 2013-02 SIB 2010-33

SUMMARY







Operational Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
Commercial Air Transport by Aeroplanes												
1. Runway Excursions (RE)												
AER1.3	Requirements for RE need to be transposed in certain areas.	Development of European requirements for aerodrome operators organisations, aerodrome operations and aerodrome design.	EASA & EC	~~2012~~ **2013**	R (ADR.001, ADR.002 & ADR.003) (RMT.0139, RMT.0140 & RMT.0144)	Opinion/ Decision	NPA 2011-20 was published on 13 December 2011. The NPA contains draft rules for the certification, management, operation and design of aerodromes. These proposals are closely based on ICAO requirements which are already in place and to which EASA MS adhere. The Comment Response Document was published on 26 November 2012.The public and stakeholders were asked to give their reactions on the CRD documents by February 3, 2013. The Agency issued its Opinion according to the plan, in 2013/Q1. Decisions on the associated AMC's, GM and CS will be issued after the adoption of the IRs, which is expected by December 2013. They will propose mitigation measures to the risk factors contributing to the RE.	Completed	R5.2	On-schedule	Extention of the comment period	NPA 2011-20 CRD 2011-20 Opinion 1/2013
AER1.4	Requirements for RE need to be transposed in certain areas.	Development of European requirements for ATM/ANS provision	EASA & EC	2013	R (ATM.001)	Opinion/ Decision	Commission Implementing Regulation (EU) No 923/2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation was published on 26/09/2012. The provisions are based upon Standards and recommended practices of the International Civil Aviation Organisation (ICAO), and seek to harmonise the application of the ICAO airspace classification, with the aim to ensure the seamless provision of safe and efficient air traffic services within the single European sky.The proposals for the provision of ATS and other services defined in Chapter 2 of Annex Vb of the EASA BR are foreseen on 2015/Q1 and beyond and will be captured in a separate action item.	Completed	R5.1	On-schedule	No deviation	Regulation EU No 923/2012
AER1.5	Include RE in national SSPs.	Runway excursions should be addressed by the MS on their SSPs in close cooperation with the aircraft operators, air traffic control, airport operators and pilot representatives. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP publication	Except in very few cases, most of the precursor events monitored by States in the last 5 years were not considered high-risk events. 10 States are addressing RE at national level in the following ways: 5 States in Safety Plans, 3 States in SSPs and 2 States are measuring precursors and assessing the consequences. One State has established safety performance indicators and targets for all operators. The achievement of this targets is monitored during the oversight process. One State encourages service providers to evaluate risk factors and then monitors compliance through oversight activities. 5 States have plans to address the issue in the future. More information can be found in Annex B - EASp implementation in the States 2013	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER1.8	Wind shear.	Develop regulations to require predictive wind shear warning systems in CAT operations.	EASA	2013-2016	R RMT.0369 and RMT.0370	Opinion	RMT.0369, 0370 planned to start in 2013/Q4, with Opinion due 2016 (AMC/GM in 2017). The objective of this rulemaking proposal is to reduce the number of accidents and serious incidents caused by wind shear in commercial air transport operations of aeroplanes by establishing the regulatory conditions to install and use predictive on-board wind shear systems.	Started	R	On-schedule	No deviation	ToRs

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No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
AER1.9 **NEW**	Runway excursions	Member States should address the recommendations made by the EAPPRE via their SSPs in coordination with service providers and industry organisations.	MS	Per Plan	SP	Report on progress	EAPPRE is known by the majority of States. Work is underway to implement the recommendations contained in the EAPPRE. 7 States have already included the EAPPRE recommendations as new action in their Safety Plans or SSPs. 3 States plan to incorporate the actions in future updates. EAPPRE recommendations are also being addressed through oversight activities like the aerodrome certification process or through SMS oversight. Various States will start measuring the effectiveness of the relevant measures as part of oversight activities through participation in LRST. More information can be found in Annex B - EASp implementation in the States 2013	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER1.10 **NEW**	Runway Excursions	EASA should study possibilities for mitigating the risk of runway excursions through regulation, starting by evaluating the proposals made by the EAPPRE.	EASA	Per Plan	R	Report on progress	The Agency has evaluated the proposals contained in the EAPPRE, in order to identify if there are areas which are not being covered by the regulatory material that were prepared in the context of the relevant rulemaking tasks (ATM.001) which led to Opinion 05/2011 and NPA 2013-08 and (ADR.001, ADR.002 and ADR.003) which led to Opinion 01/2013. The Agency will present the identified issues to its consultative bodies before determining the way forward.	Advanced	R5.1	On-schedule	No deviation	
2. Mid-air Collisions (MAC)												
AER2.1	Airspace infringement risk.	MS should implement actions of the European Action Plan for Airspace Infringement Risk Reduction.	MS	Per Plan	SP	SSP Publication	The majority of States reported that Airspace Infringements involved mainly General Aviation or military aircraft and are not a concern for CAT. EAPAIRR is already being implemented in 11 States. This is being done through publication of relevant action in SSPs , the publication of dedicated plans to address the risk or by including the recommendations in Safety Plans. 2 States plan to implement the EAPAIRR in the future. One State participates in projects concerning airspace infringement under the umbrella of ICAO NAT SPG. One State has established an Airspace Infringement Working Group that analyses local data to identify hotspots and critical issues. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	ESSIP Report 2012 Annex B - EASp implementation in the States 2013
AER2.2	Ground-based ATM Safety Nets.	Develop high level specifications completed by guidance material for System Safety Defences (Short Term Conflict Alert, Approach Path Monitoring and Area Proximity Warning).	ECTRL, EASA	2014	R	Guidance material	The high level specifications complemented by comprehensive guidance material are completed. The SPIN (Safety nets Performance Improvement Network) Sub-Group that developed the documentation now meets twice per year to maintain and where necessary complement the documentation. A European action paper for ICAO AN-Conf/12 has resulted in in a recommendation to promulgate relevant parts of the available documentation into an ICAO Manual for Safety Nets.	Advanced	ECTRL	On-schedule	No deviation	Ground-based Safety Nets website

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No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
AER2.3	Ground-based ATM Safety Nets.	Create an awareness campaign to promote and support, where appropriate, Europe-wide deployment of ground-based safety nets.	ECTRL	2014	SP	Leaflets, training modules.	The following general awareness creation resources are available: • A dedicated safety nets web site: http://www.eurocontrol.int/safety-nets • The NETALERT newsletter that is published three times per year: http://www.skybrary.aero/index.php/NetAlert_Newsletter_-_EUROCONTROL • The SPIN (Safety nets Performance Improvement Network) Sub-Group that meets twice per year The following dedicated awareness creation resources are made available on request: • Safety nets seminars tailored to the needs of specific ANSPs or FABs (so far nine seminars were conducted, and a recent survey indicated a demand for seven additional seminars) • Independent safety nets performance assessments and optimisation assistance (so far provided to ten ANSPs, and a recent survey indicated interest from nine additional ANSPs) • An application, PolyGen (Polygon Generator), which allows MSAW surfaces to be defined more accurately and with less effort using digital terrain data as an input	Advanced	ECTRL	On-schedule	No deviation	Ground-based Safety Nets website
AER2.4	Airborne ATM Safety Nets.	Prepare studies to further evolve airborne safety nets. These studies will collect information on the current performance of safety nets and forecast their performance for possible future operational environment, as well as assessing the performance implications of envisaged changes to the safety nets.	ECTRL	2014	SP	Study report published.	The work in this area is done in close coordination with the related SESAR projects. A priority area of study is the compatibility of safety nets with each other and with other conflict management layers. The results of the related PASS project (completed in 2011) are available. A specific topic in compatibility of safety nets is ACAS RA display to controllers. With the increasing use of Mode S surveillance the number of early adopters is also increasing (four identified so far). A specific drafting group was created to achieve two objectives: • Create awareness of open issues amongst early adopters • Develop and validate a harmonised concept of operations The early adopters are also offered dedicated support (so far provided to three ANSPs). Furthermore a dedicated tool, InCAS (Interactive Collision Avoidance Simulator), is available and maintained. Support for TCAS version 7.1 has been implemented). Finally work is ongoing to bring compatibility issues to the attention of relevant standardisation bodies.	Advanced	ECTRL	On-schedule	No deviation	PASS project
AER2.5	European ATM requirements.	Requirements on ATM/ANS provision	EASA & EC	2013	R (ATM.001) (RMT.0148 and RMT.0150)	Opinion/ Decision	Commission Implementing Regulation No 1035/2011 was published on 17 October 2011. It lays down common requirements for the provision of air navigation services. Commission Implementing Regulation (EU) No 923/2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation was published on 26/09/2012 . The provisions are based upon Standards and recommended practices of the International Civil Aviation Organisation (ICAO), and seek to harmonise the application of the ICAO airspace classification, with the aim to ensure the seamless provision of safe and efficient air traffic services within the single European sky.The proposals for the provision of ATS and other services defined in Chapter 2 of Annex Vb of the EASA BR are foreseen on 2015/Q1 and beyond and will be captured in a separate action item.	Completed	R5.1	On-schedule	No deviation	Commission Implementing Regulation No 1035/ 2011 Commission Implementing Regulation No 923/2012

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No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
AER2.6	European ATM requirements.	Requirements on Competent Authorities in ATM/ANS.	EASA & EC	~~2012~~ **2015**	R (ATM.004) (RMT.0156)	Opinion/ Decision	Commission Implementing Regulation No 1034/2011 was published on 17 October 2011, transposing existing EU requirements. The next phase of the rulemaking task brings further enhancements. NPA 2013-08 on the related IR is issued on 10/05/2013. The subject CRD and subsequent opinion are foreseen accordingly for Q1 and Q2/2014.	Advanced	R5.1	On-schedule	No deviation	Commission Implementing Regulation No 1034/ 2011 NPA 2013-08
AER2.7	European ATM requirements.	Requirements for ATM/ANS systems and constituents and ADR equipment.	EASA & EC	~~2012-2015~~ **2014-2017**	R (ATM.005 a) and b)) (RMT.0161 and RMT.0162)	Opinion/ Decision	A concept paper has been developed. RMT.0161 & 0162 will be launched in 2014 (e.g. publication of ToR).	Not started	R5	On-schedule	No deviation	
AER2.8	Include MAC in national SSPs.	Mid-air collisions shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication	Most States reported several high-risk events in the past five years. The majority of States are addressing MAC at national level. Some examples: 4 States include specific actions in Safety Plans, 1 State in SSPs. The French ANSP has set up a specific action plan to reduce the risk of MAC. The use of ground based safety nets plays a key role in managing the risk (e.g. STCA, APW). Other States focus on specific contributing factors like prolonged loss of commjunication or an increase in the number of ATCOs. One State encourages service providers to evaluate risk factors and then monitors compliance through oversight activities. 3 States have plans to address the issue in the future. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER2.10 **NEW**	Loss of separation/Airprox	Develop a set of actions to mitigate MAC and processes to measure their effectiveness for use by the MS in their SSPs.	NoA	2013	SP	Report by NoA with actions and processed.	Following the initial work carried out by the NoA MAC/ Airprox Sub Group it has been agreed that an Airborne Conflict Task Force should be established as a joint partnership between the NoA and ESSI to develop a European Level Plan for this issue. The Task Force will be established in early 2014.	Started	NoA	More than one year late	Airborne Conflict Task Force to be created in 2014	
3. Controlled Flight Into Terrain (CFIT)												
AER3.4	Include CFIT in national SSPs.	Controlled flight into terrain shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication	Many States reported that the precursor events monitored in the last 5 years were not considered high-risk events. 11 States are taking mesasures to address CFIT at national level. 3 States identify these in Safety Plans, 2 States in SSPs. 2 States are measuring precursors and establishing mitigating measures on a case-by-case basis. Two States mitigate the risk through oversight activities. One State has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER3.6	Certain turbine powered aircraft are not equipped with TAWS.	Make TAWS equipment mandatory for aircraft of less than 5700 kgs MTOM able to carry 6 to 9 passengers.	EASA	2013-2016	R (RMT.0371 & .0372)	Decision	RMT.0371, 0372 planned to start in 2013, Opinion due in 2016 (AMC/GM in 2017). The specific objectives are: - The validation of the need for a regulatory requirement for TAWS to be installed in turbine powered aeroplanes of less than 5700kg maximum take-off weight and with a MOPSC of more than five, - The improvement of the TAWS efficiency in reducing CFIT.	Started	R3	On-schedule	No deviation	

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No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
4. Loss of Control In Flight (LOC-I)												
AER4.1	Protection From Debris Impacts and Fire.	Develop a new paragraph of CS-25, which would cover the protection of the whole aircraft against the threat of tire/wheel failure. Identified as a common priority for JAA-FAA-TCCA joint rulemaking	EASA	2013	R (25.028) RMT.0048	Decision	NPA 2013-02 has been published. CRD and ED Decision amending CS-25 planned by December 2013.	Completed	R4	On-schedule	No deviation	NPA 2013-02
AER4.2	Protection of aircraft and engines in icing conditions.	Upgrade the existing CS-25 and CS-E certification specifications to ensure that Large Aeroplanes and engines safely operate in icing conditions including Super cooled Large Drop (freezing drizzle, freezing rain), mixed phase and ice crystal.	EASA	~~2012~~ **2014**	R (25.058) RMT.0058 RMT.0179	Decision	Task 25.058 was started and NPA 2011-03 was published on 22 March 2011 and was open to comment until 05 August 2011. A companion NPA 2011-04 was published for CS-E on the same date with the same period for comment. The task was due to finish during 2012/Q1. A second NPA for CS-25 proposing AMC materials was published in Dec 2012 (NPA 2012-22). FAA rulemaking was delayed (publication expected in 2013/Q1-Q2), hence the Agency decided to take the lead on the rulemaking process. The review of comments on NPA 2012-22 is on-going. The Agency still cooperates with FAA. The FAA final rule will not be published before Feb 2014. EASA Decision amending CS-25 is now foreseen by 2014/Q2.	Advanced	R4	On-schedule	No deviation	NPA 2011-03 NPA 2011-04 NPA 2012-22
AER4.6	Include LOC-I in national SSPs.	Loss of control in flight shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication	Many States reported exposure to operational scenarios that preceed LOC-I in the past 5 years, some of them leading to high-risk events. 12 States are taking mesasures to address LOC-I at national level. 4 States identify these in Safety Plans, 2 States in SSPs. One State includes several items related to LOC-I in the SSP including a leaflet related to stall recovery. 4 States are measuring precursors and establishing mitigating measures on a case-by-case basis. One State has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER4.8	Response to upset conditions.	EASA and Member States to support, encourage and follow up initiatives such as ICATEE to contribute to developing solutions aimed to reduce LOC-I, revising and promoting upset recovery guidance material, and influencing the adoption of future ICAO SARPs.	EASA and MS	2013	SP	Report on initiatives such as ICATEE	ICATEE has delivered the draft Manual on Aircraft Upset Prevention and Recovery to ICAO which has been circulated to member states and discussed at a LOC-I symposium in Montreal. EASA involvement has been reduced due to budgetary constraints. The Agency has initiated Rule Making Tasks 0581 and 0582 to address Loss of Control Prevention and Recovery Training. The RMT group will review the ICATEE, LOCART and ICAO recommendations.	Completed	C.2	On-schedule	No deviation	ICATEE website

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AER4.10	Response to unusual attitudes.	Organise a Workshop to identify and promote requirements and guidance in Part FCL and Part OPS related to the prevention of LoC accidents and identify needs for future improvements.	EASA	~~2012~~ **2013**	SP and R	Workshop on Part FCL and OPS	Scope has been extended to OPS (not only FCL). A meeting with the ICATEE group and the LOCART group was held in Cologne in September 2012. This was the first step for preparing an EASA workshop on this issue. A Workshop on Loss of Control Prevention and Recovery Training was organised by R3.1 on 28 Feb/01 March 2013. The major stakeholders were invited and participated: ICAO, FAA, TCCA, UK-CAA, DGAC, Boeing, Airbus, NASA, Lufthansa, KLM, Alitalia, Easyjet, DGAC, CAE and individual experts. During the first day, various presentations were given to get perspectives from all sides. On the second day, a joint presentation by LOCART and ICATEE served as a basis for further sub-group and group discussions. The main discussions points were: Theoretical training/Academics, On aircraft Upset Prevention and Recovery Training (UPRT), FSTD, realistic stall prevention and training scenarios development and manual flying skills. The workshop has been used to clarify the main objectives for the recently created rulemaking task RMT.0581, which will deal with loss of control and recovery training and will be initiated by the Agency in spring 2013.	Completed	R3	On-schedule	No deviation	
AER4.11	Unclear maintenance responsibilities.	Review and update CAMO and Part-145 responsibilities.	EASA	2012-2014	R RMT.0217	Opinion & Decision	The task has been started in March. The specific objective of this rulemaking task is to mitigate the risks linked to a faulty assessment and coordination of the responsibilities of CAMOs and Part-145 organisations, especially in complex, multi-tier and subcontract maintenance. Opinion is now expected in 2017. First meeting of the rulemaking group took place in September.	Started	R4	More than one year late	Late start	ToR RMT .0217
AER4.12 **NEW**	Erroneous weight or centre of gravity.	Study the feasibility of proposing an amendment to certification specifications for Large Aeroplanes (CS-25) to require that the aeroplane is equipped with a weight and centre of gravity measuring system.	EASA	2017	R (RMT.0116)	Feasibility study	EUROCAE WG-88 feasibility study report, approved in April 2013, recommended going forward with the drafting of a standard for on-board Weight and Balance Systems. Two years of work are stimated for developing such a standard. Afterwards the EASA rulemaking task would start based on this new standard. The regulatory scope will be determined during the rulemaking task, especially aspects related to requirements toward existing A/C types.	Started	R	On-schedule	No deviation	
AER4.13 **NEW**	Erroneous weight or centre of gravity.	Perform a survey of approval processes for the use of the Electronic Flight bag (EFB) with a focus on applications for performance calculations including weight and balance and identify best practices.	EASA	2013	SP (Research)	Research project report	The research project "EFB (mass and balance – T/O and LDG performance calculation)" was proposed / requested by C.2.14 - Experts Department - Special OPS Evaluations Section, approved by the ISC in September 2012 as one project of the 2013 Research Plan, and kept as priority 1 project by the ISC in their Feb 2013 meeting (contingency plan due to 50 % research budget cut). A call for tender was launched but none of the 2 received proposals met the criteria sufficiently. Subject to budget availability, the tender will be relaucnhed in 2014.	Not started	E2.3	Less than one year late	No succesful proposal received	
AER4.14 **NEW**	Ground contamination of aircraft surfaces.	Study the feasibility of proposing an amendment to CS-25 to require applicants to perform an assessment of the effect of on-ground contamination of aircraft aerodynamic surfaces on take-off performance and on aircraft manoeuvrability and controllability.	EASA	2015	R (RMT.0118)	Feasibility study	This rulemaking task is scheduled to start in 2015.	Not started	R	On-schedule	No deviation	
AER4.15 **NEW**	Icing	Organise a safety conference to exchange views on the safety issue and identify mitigation opportunities.	EASA	2013	SP	Conference outcome	The 2013 EASA conference touched upon the topic ICING: on ground and in-flight. The conferences was organised by EASA in Cologne on 15th and 16th October and provided the opportunity to collect relevant comments from stakeholders. These inputs will feed a foreseen EASA Icing plan that will identify actions to mitigate risks caused by ice.	Completed	R4	On-schedule	No deviation	

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No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
5. Ground Collision												
Runway Incursions												
AER5.1	Runway safety.	MS should audit their aerodromes to ensure that a local runway safety team is in place and is effective. Member States will report on the progress and effectiveness.	MS	~~2012~~ **Cont.**	O	Audit plan included in SSPs. Progress Report.	LRST have been set up at the certified aerodromes in 15 States. 11 States verify their effectiveness on a regular basis. One State does not formally monitor effectiveness, but examines it through the oversight of the incident management process of the airport as well as of the ANSP. One State monitors the effectiveness of LRST via Annual Safety Oversight Plan and also via the trend of the occurrences related to runway safety (mainly runway incursions and runway excursions). One State checks that all representatives from the three main groups associated with manoeuvring area operations (Aerodrome Operator, ANSP, aircraft operators/local pilot associations) are a part of the LRST,the frequency of the meetings, the documentations and actions taken from the meetings. In various cases States are active members of LRST in order to provide regulatory support and monitor effectiveness. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER5.2	Runway incursions.	MS should implement actions suggested by the European Action Plan for the Prevention of Runway Incursions.	MS	Per Plan	SP	SSP Publication	12 States reported to be inmplementing the recommendations of EAPPRI in order to mitigate the risk of RI. In various States EAPPRI implementation is part of the Safety Plan or SSP . One State has published a national action plan based on EAPPRI. In one State implementation of EAPPRI is planned to start in the future. 7 States reported to be following-up the implementation of the EAPPRI recommendations on a regular basis through oversight activities. One State will start in the future. In one States a dedicated SPI to measure the level of EAPPRI implementation has been created. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
AER5.3	Runway incursions.	Development of Implementing Rules based on transferred tasks from the JAA and the EUROCONTROL EAPPRI report.	EASA	2011-2014	R (MDM.085) (RMT.0416 and RMT.0417)	Opinion/ Decision	The aim of the tasks is to prevent runway incursions through the introduction of operational procedures and best practices for the taxi phase, including sterile flight deck procedures. The Opinion will mitigate the risks linked to errors due to disturbance or distraction of the flight crew during phases of flight where the flight crew must be able to focus on their duties. It proposes to introduce the concept of a sterile flight deck, to consider the taxi phase of aeroplanes as a safety-critical activity, and to introduce procedures for taxiing to enhance runway safety. The Opinion has been issued and is in Comitology.	Completed	R	On-schedule	Completed ahead of schedule	Opinion 5/2003
AER5.4	Include RI in national SSPs.	Runway incursions should be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication	Many States reported exposure to RI in the past 5 years, including several high-risk events. 13 States are taking mesasures to address RI at national level. 5 States identify these in Safety Plans, 2 States in SSPs. One State organised a safety symposium on RI in 2007. 4 States are measuring precursors and establishing mitigating measures through oversight activities. In addition to the measures adopted by the Runnway Safety Team one State has established a Runway Incursions Action Group to analyse the occurrence reports of RI and quickly identify any immediate or local safety trends and to follow up with necessary mitigation measures. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013

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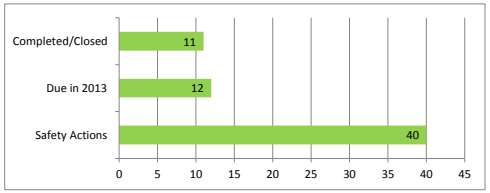
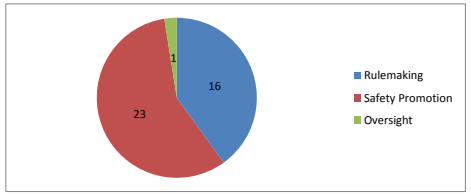
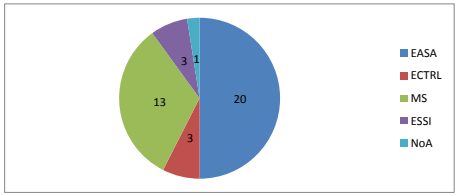
Safety of Ground Operations												
AER5.6	Transposition of requirements into EU regulation in the domain of Aerodromes.	Requirements for aerodrome operator organisations and oversight authorities.	EASA & EC	~~2012~~ **2013**	R (ADR.001) (RMT.0136)	Opinion/ Decision	NPA 2011-20 was published on 13 December 2011. The NPA contains draft rules for the certification, management, operation and design of aerodromes. These proposals are closely based on ICAO requirements which are already in place and to which EASA MS adhere. The original comment period has been extended by 1 month. The Comment Response Document was published on 26 November 2012.The public and stakeholders were asked to give their reactions on the CRD documents by February 3, 2013. The Agency issued its Opinion according to the plan, in 2013/Q1. Decisions on the associated AMC's, GM and CS will be issued after the adoption of the IRs, which is expected by December 2013. They will propose mitigation measures to the risk factors encountered in Ground Operations.	Completed	R5.2	On-schedule	Extention of the comment period	NPA 2011-20 CRD 2011-20 Opinion 1/2013
AER5.9	Include Ground Operations in national SSPs.	Risks to ground operations should be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication	Most of the States reported exposure to ground operation events in the past 5 years, with very few high-risk events. 14 States are taking mesasures to address the safety of ground operations at national level. 4 States identify these in Safety Plans, 2 States in SSPs. 7 States are measuring precursors and establishing mitigating measures through oversight activities.One State reported that the Aerodrome Operator (AO) has in place an effective monitoring system to monitor Ground Handling Service Providers. One State will grant a certificate of recognition in the course of 2014 to ground handling service providers and self-handlers when all requirements in the dedicated Ministerial Decrees are met. The BCAA will create a questionnaire for self-handlers to obtain a clear view on their organizational structure, equipment, activities, etc. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
Other types of operation												
1. Helicopters												
HE1.1	Improve Helicopter Safety in Europe through risk awareness and safety promotion.	In cooperation with the IHST, promote safety by developing risk awareness and training material	ESSI - EHEST	cont.	SP	Leaflets and training material	EHEST develops risk awareness, safety promotion and training material and disseminate EHEST and IHST material to the helicopter community in Europe. This is a continuous action.	Advanced	EHEST	Continuous action	No deviation	EHEST training
HE1.3	Further implement EHEST recommendations.	NAAs in partnership with industry representatives, to organise Helicopter Safety events annually or every two years. The EHEST materials could be freely used and promoted.	MS and Industry	~~2012~~ **Cont.**	SP	Number and frequency of events organised	10 States have organised helicopter safety events. In the majority of cases EHEST material was promoted and distributed. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
HE1.4	Impact of technologies in mitigating helicopter safety issues.	Finalise a first version of a tool to assess the impact of technologies on mitigating helicopter safety issues.	ESSI- EHEST	2013	SP	First version of tool developed	The layout of the ST Technology matrix tool has been finalized. Around 150 technologies in 11 categories have been identified for their capability to mitigate safety issues. In late September about 60 of these had been rated, of which 14 were highly promising and 33 were moderately promising. More technologies will be rated up to the year's end. The status of the work progress was presented at the Avionics Europe event in Munich on 21st February 2013 and at the Safety Workshop during the Helitech Helicopter Expo in London on 24th September 2013.	Completed	EHEST	On-schedule	No deviation	EHSIT ST Technology

Operational Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
2. General Aviation												
GA1.1	Improve quality of General Aviation safety data	Improve the collection and analysis in Europe of data on accidents involving light aircraft.	~~EGAST~~ MS	cont.	SP	Report on light aircraft data contained in the ASR	Every year a letter and a form are sent to the National Aviation Authorities to collect data on light aircraft. The level of reporting and quality differs by State. In 2013, the only country that did not report anything was Lichtenstein – which can be understandable since Switzerland is taking care of their aviation activities. The improvement can be said to in the form of everyone returning the data in Eccairs format. A lot of work on the data quality needs to be done (on-going task).	Advanced	MS	Continuous action	Action re-allocated to Member States	EASA Annual Safety Review
GA1.2	Improve General Aviation Safety in Europe through risk awareness and safety promotion.	Contribute to improve risk awareness, sharing of good practices and safety promotion among the European general aviation community	ESSI- EGAST	cont.	SP	Leaflets and training material.	EGAST develops and disseminates good practices and safety promotion material for the GA pilots and community in Europe. This is a contiuous action.	Advanced	EGAST	Continuous action	No deviation	EGAST website
GA1.5	Airspace infringement risk in general aviation.	National authorities should play the leading role in establishing and promoting local implementation priorities and actions.	MS	~~2013~~ Cont.	SP	List of local implementation priorities and actions for GA	Various States reported airspace infringements involving GA in the past 5 years. 10 States have confirmed that AI involving GA is a safety concern. The EAPAIRR is being used in 5 States to identify mitigation measures. In one State a national action plan derived from the EAPAIRR has been developed and introduced in the Safety Plan. State level SPIs exist in many States to monitor the situation. 3 States reported that airspace infringements by GA is not identified as a specific issue in their State. More information can be found in Annex B - EASp implementation in the States 2013.	18 responses received	MS	Continuous actions	Status request sent to 39 focal points. 18 responses have been received	Annex B - EASp implementation in the States 2013
GA1.6 NEW	Priorities to focus GA work not formally established	Based on data received from EASA Member States, the Agency will identify and publish the main accident categories affecting general aviation aircraft below 2250 kg in Europe.	EASA	2013	SP	Main priorities identified	Using data received from EASA Member States, the Annual Safety Review identifies the main accident categories affecting general aviation aircraft below 2250 kg in Europe. The ASR was published in June 2013.	Completed	E2	On-schedule	No deviation	EASA Annual Safety Review

SUMMARY







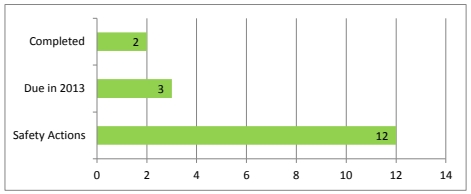
Emerging Issues							Implementation				
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
1. New products, systems, technologies and operations												
EME1.2	Common possible picture of the future.	Adapt or create a methodology to develop a common possible picture of the future. Such methodology should envisage cooperation with other bodies such as EUROCONTROL, SAE or ACARE.	EASA with ECTRL, SAE & ACARE	~~2012~~ **2013**	SP	Methodology	A proposal to establish a foresight cell is under consideration internally. Such cell could be used at strategic level to evaluate how risks could develop with time and identify what kind of expertise is needed to face changes. In addition, contacts have been established with the ASCOS project and an agreement has been reached to use the areas of change developed by the FAST team as a first picture. The trials developed by the ASCOS project will allow to prove the concept proposed in EME1.1 + EME1.2	Started	E6	Less than one year late	In cooperation with the ASCOS project	
EME1.3	~~UAS~~ RPAS regulation.	Development of **amendments to Basic Regulation, new RPAS IRs and AMC/GM** for the **airworthiness and** operations of RPAS, **and involved personnel and organisations.**	EASA	~~2012-2014~~ **2014-2017**	R RMT.0229 (MDM.030(a)), RMT.0230 (MDM.030(b)), RMT.0235 (MDM.030(c)), RMT.0614,RMT.0615, RMT.0616, RMT.0617, RMT.0618, RMT.0619 & RMT.0620	Opinion/Decision	Task RMT.0229, is due to start in 2014 after publication of the EC Communication announcing the intention to extend the Agency's mandate for rulemaking to RPAS of any mass. The integrated project 'IniRPAS' comprises up to 10 RMTs, to end in 2020. IniRPAS includes developing an opinion to extend the mandate of EASA below 150 Kg, as well as to align the Basic Regulation with amendment 43 to ICAO Annex 2. The activity is synchronised with the activities of other key players in this area, in particular ICAO and JARUS. IRs and AMC/GM will be developed with priority to licensing of remote pilots, requirments for organisations and for operations.	Started (pre-rulemaking phase)	R.3	On-schedule	No deviation	
EME1.4	Operations with ~~VLJ~~ high-performance aircraft~~.~~	**Gap analysis** in relation to ***regulating*** the operation of ~~Very Light Jets~~ high-performance aircraft~~.~~	EASA	~~2012-2015~~ **2015**	R (OPS.066) (RMT.0414 and RMT.0415)	~~Opinion/Decision~~ **Study finalished**	Preparatory work started in 2013 with a tender for a study to review the OPS rules and receive appropriate recommendations for changes. Rulemaking task scheduled to start 2015, ending 2018 (2019 for AMC/GM). Rulemaking task MDM.064 has been replaced by task OPS.066 and renumberd as RMT.0414, 0415. RMT title changed to 'Operations and equipment for high performance aircraft'	Started (pre-rulemaking phase)	R.3	On-schedule	No deviation	
EME1.5	Powered Lift (Tilt rotor) pilot licensing and operations.	Review of Implementing Rules for pilot licensing and operations in relation to the experience gained in the BA 609 certification process	EASA	~~2012-2015~~ **2013-2016**	R MDM.070 RMT.0266	Opinion/Decision	For the time being there is one application for validation using special conditions. The action is dependant on the certification progress and possible entry into service. 2 meetings were held with Agusta Westland to remind them to prepare the RMT. So far no feedback.	Started (pre-rulemaking phase)	R.3	On-schedule	Start delayed due to delayed from certification side and resources.	
EME1.6	Suborbital planes regulation.	~~Regulate~~ S***tudy the feasibility of regulating*** sub-orbital planes.	EASA	2012-2014	R MDM.098 RMT.0396	~~Opinion/Decision~~ **Feasibility Study**	Pre-RIA and ToR drafted, submittal to SSCC put on hold due to a new directive from the Commissioner's Cabinet to investigate a lighter process, similar to FAA-AST "Launch Licensing". Sub-orbital Working Group (SoWG) is subsequently currently drafting possible amendments to the BR to accommodate for this lighter approach, however 3 European stakeholders confirmed their demand for full certification (EADS, Booster, REL-Skylon). To meet their application times and allow them to design according to the rules, task MDM.098 started in 2012 and should end in 2014. The Commission is now in the process of drafting new policy. Action is now on-hold.	Started (pre-rulemaking phase)	R4	On-schedule	Waiting for new policy from the European Commission	

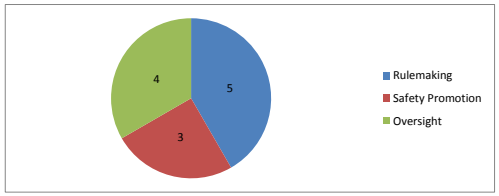
Emerging Issues							Implementation					
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)	Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
2. Environmental factors												
EME2.1	Effect of climate change on aviation.	Establish a network to increase awareness and provide dissemination, coordinate research and avoid duplication. Establish roadmaps and identify precursors (data bank).	EASA	~~2012~~ **2013**	SP	Network ToR.	Atmospheric risks including climate change was the subject of one panel at the EU/US safety conference held in Vienna on June 14-16 2011. The main conclusion was that there was no consensus yet on the impact of climate change on safety but highlighted that the development of new operations was raising concerns about the assumptions made at aircraft certification. Research was necessary to address these and in the mean time avoidance (despite its limitations) and training were the most effective mitigation means. Slides outlining the general intentions were prepared for the WEZARD (Weather hazards for aeronautics) workshopn 30 May / 1 June 2012. A network was finally not created. A survey of all EASA Certification Specification (CS) and related Acceptable Means of Compliance (AMC) and Guidance Material (GM) will be conducted. It will collect requirements addressing external hazards such as wind, gust, ice, hail, snow, lightning etc. in a matrix "external hazard vs CS/AMC/GM requirement" and the certification level if mentioned.This will build out status quo knowledge and allow to identify areas which need further research or rulemaking action to adapt the CS to potential change external hazard (weather) threats or close gaps in the CS.	Started	E6	Less than one year late	Netwotk not created Action has been re-scoped	
EME2.2	Effect of climate change on aviation.	Take regulatory action as appropriate to cover well identified issues like icing (in particular ice crystals). Develop rules as identified by the network.	EASA	Depending on outcome of network	R	Opinion/Decision	This action is dependant on the findings of the network.	Not started	E6	On-schedule	No deviation	
EME2.3	Effect of climate change on aviation.	Complement activities by development of Standards and special conditions.	EASA	Depending on outcome of network	R, O	Special Condition	This action is dependant on the findings of the network.	Not started	E6	On-schedule	No deviation	
3. Regulatory and oversight considerations												
EME3.1	Well balanced standardisation programme.	Establish a well balanced standardisation programme based on three pillars, regulatory compliance verification, pro-active standardisation and a regulatory feedback mechanism.	EASA	2014	O	Standardisation Inspection Annual Programme + Annual Report	A new process is in place since 2012 enabling the development of a Standardisation Inspections' Annual Programme (SIAP) that includes the risk assessment of each Member State to be inspected, per scope against its inspection history. This approach was used in defining the SIAP 2013 and ensures not only a balanced programme, but also a focus at risks and more targeted deployment of resources. Pro-active standardisation activities, including the organisation of regular standardisation meetings and the involvement of seconded NAA Team members in the EASA inspection teams, are on-going. The regulatory feedback provided in the Standardisation Annual Report has been significantly expanded. Feedback is also ensured on a regular basis through direct involvement of Rulemaking officers in Findings Classification Committees and in Standardisation meetings. This action fully in place, and will be closed.	Completed	S.1	On-schedule	No deviation	

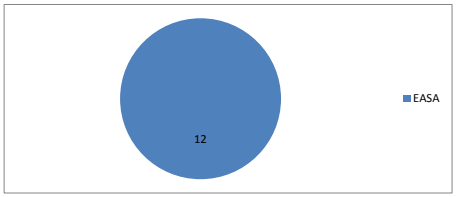
Emerging Issues						
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
EME3.2	One uniform standardisation methodology for all fields of aviation.	Develop and implement one uniform standardisation process for all fields of aviation as covered by the Basic Regulation and related Implementing Rules.	EASA	2014	O	Updated methodology
EME3.3	Implement CMA.	Develop and implement a Continuous Monitoring Approach involving a risk based targeting based on a confidence model and a series of safety relevant indicators.	EASA	2014	O	Confidence model + safety indicators developed
EME3.4	New regulatory competences in risk based regulation.	Based on guidance developed by the SM ICG and experience from ECTRL SRC, a roadmap will be developed describing how regulatory competence in risk based regulation, risk based oversight and oversight of SMS will be developed in the EU.	EASAC	~~2012~~ **2013**	SP	Roadmap developed

Implementation					
Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
Regulation No. (EC) 736/2006 was amended by Regulation (EU) No. 90/2012 on 2 February 2012 and entered into force the day after. This amendment extended the applicability of the working methods for conducting standardisation inspections, in addition to initial and continuing airworthiness, to the fields of Air operations, Ramp inspections (SAFA inspections), Aircrew, Air traffic controllers, Air traffic management and air navigation services. In this way Standardisation Inspections in all domains are now performed in accordance to the same legal basis and to the same working methods. Standardisation department already started in 2010 the convergence of all inspection domains towards the same methodology, hence no adaptation in procedure was required further to the publication of Regulation (EU) No. 90/2012. This action fully in place, and will be closed.	Completed	S.1	On-schedule	No deviation	Regulation (EU) 90/2012
The new Standardisation Regulation, which encompasses the Continuous Monitoring approach, has been published and will become applicable on 01.01.2014. The Model has been finalised, data sources have been identified, and a data collection campaign is on-going by means of a newly developed web-based interface.	Advanced	S.1	On-schedule	No deviation	
The SMICG has developed work on the competencies required for inspectors to evaluate SMS effectiveness when they oversee organisations. The product is available on the SMICG Skybrary website. The EASAC has discussed the subject extensively and recognised the need to continue the work on new competencies. Work on this issue will continue in 2014.	Started	E2	Less than one year later	Roadmap not created. Guidance from SMICG available.	SMICG Products

SUMMARY







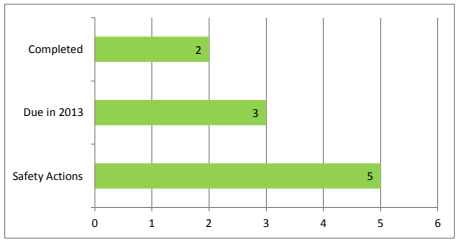
Human Factors and Performance

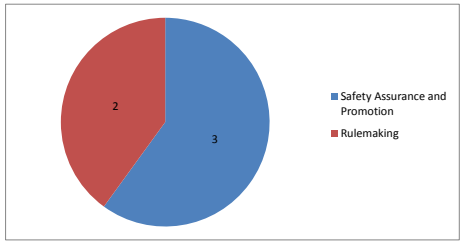
No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
HFP1.2	Action plan development.	Develop an action plan on human factors based on the strategy and evaluation of the results of the questionnaire of December 2009.	EHFAG	~~2012~~ 2013	SP	Action Plan
HFP1.3	Support ATM human performance.	Support to ANSP in the deployment of ATM human factors activities.	ECTRL, ANSPs	2011-2014	SP (ESP+)	Best Practices
HFP1.4 NEW	Consideration of HF in rulemaking activities.	The Agency to take into account HF in any rulemaking task that may have human factors considerations. EHFAG will review the rulemaking programme for 2013 to 2016 and identify tasks that have potential HF considerations.	EASA / EHFAG	September 2013	R	Report on RT with HF considerations
HFP1.5 NEW	Room for improvement on HF guidance to address design related pilot errors.	Identify gaps or areas to improve the AMC for CS25.1302 Installed Systems for use by the Flight crew in order to better address design-related pilot error and recommend that the material is updated and harmonized.	EHFAG	November 2013	R	Report with identified improvement areas
HFP1.6 NEW	HF competencies for regulatory inspectors are not developed.	Development of human factors competencies for the various functions of regulators, initially for maintenance inspectors.	EHFAG	March 2014	SP	Report with HF competencies for regulatory inspectors

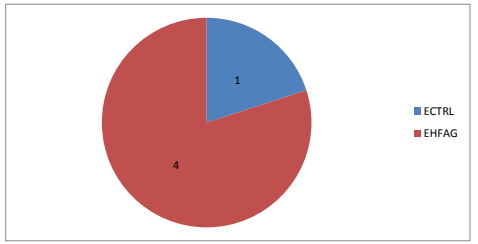
Implementation

Update	Status	Lead	According to PLAN?	Reasons for deviation	Deliverable(s)
An action plan was delivered in October 2013. The action plan will become a dynamic action plan with an annual update that will include additional items added to the EASp. Three initial actions have been incorporated in EASp 2013-2016 (see below).	Completed	EHFAG	On-schedule	Strategy (HFP1.1) was delivered in 2012. Transforming it into an action plan requires some time.	
Safety Team has approved in June 2011 the SHP SG (Safety Human Performance Sub Group) work programme for the period 2011-2014. The work programme covers 10 strands of work: 1. Weak Signals 2. Human Factors in safe ATM Design 3. HF intelligence for all safety actors and all layers of managemen 4. HP safety culture improvements 5. Safety HP Dissemination and Toolkits 6. Fatigue management, etc. 7. Human Factors in Investigation 8. Degraded Modes 9. Critical Incident Stress Management 10. Safety and Team Work Factors	Advanced	ECTRL	On-schedule	None	Human Performance in ATM
The EHFAG has been reviewiing the EASA 2013-16 Rulemaking programme to identify where rulemaking tasks may need to consider HF issues. This will be shared with EASA and result in greater collaboration between EASA rulemaking and the EHFAG. In addition the 2104-2017 Rulemaking Programme will also be reviewed.	Completed	EHFAG	On-schedule	None	
Ongoing review of CS25.1302 and the results of a recent FAA study on 1302 are being used to consider further AMC and GM development. Report with identified improvement areas has been initiated.	Started	EHFAG	Less than one year late	None	
Work continues to devlop an HF competency framework for Competent Authorities to use	Started	EHFAG	On-schedule	None	

SUMMARY







Statistical Summary

COMPOSITION

By risk area

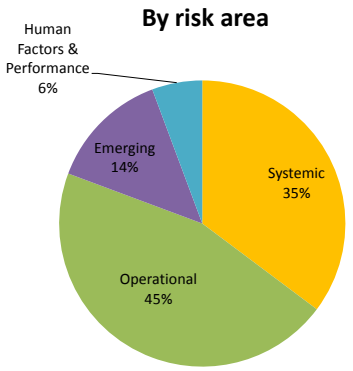
Systemic	31
Operational	40
Emerging	12
Human Factors & Performance	5
Total	88

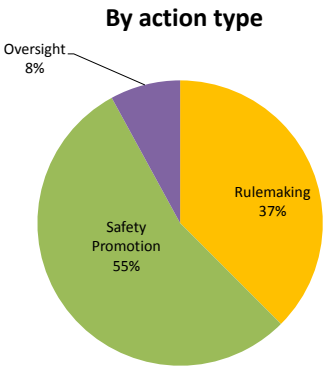
By type

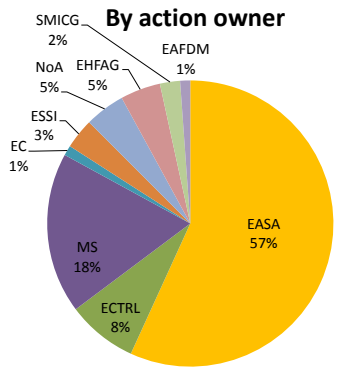
Rulemaking	33
Safety Promotion	48
Oversight	7
Total	88

By owner

EASA	50
ECTRL	7
MS	16
EC	1
ESSI	3
NoA	4
EHFAG	4
SMICG	2
EAFDM	1
Total	88







PERFORMANCE

At a glance

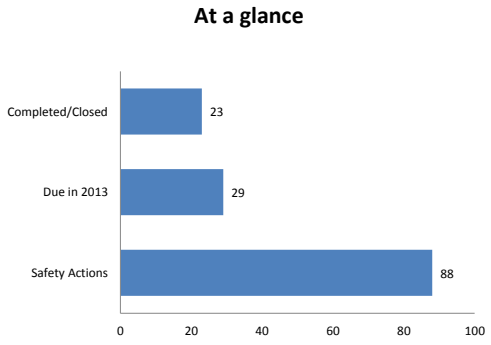
Safety Actions	88
Due in 2013	29
Completed/Closed	23

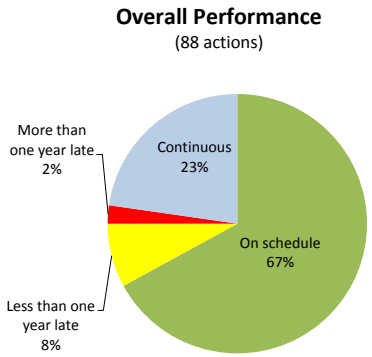
Overall Performance

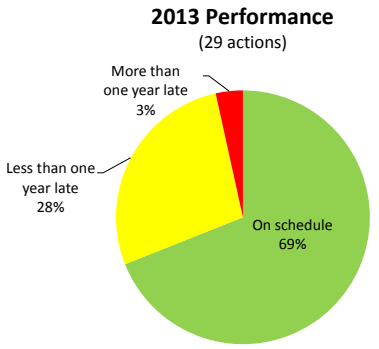
On schedule	59
Less than one year late	7
More than one year late	2
Continuous	20
Total	88

2013 Performance

On schedule	20
Less than one year late	8
More than one year late	1
Continuous	0
Total	29







European Aviation Safety Agency

Annex B

EASp implementation in the States
2013

Final

This document provides a summary of the action reports provided by various States as part of the implementation of the European Aviation Safety Plan (EASp).

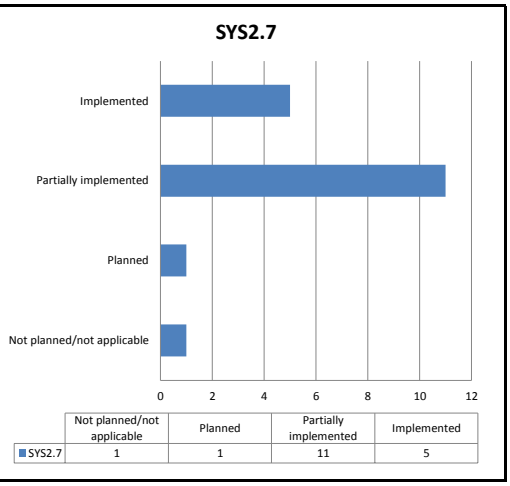
Systemic Issues						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
2. Working with States to foster the implementation of SMS in the industry						
SYS2.7	Promotion of SMS.	Encourage implementation of promotion material developed by ECAST and EHEST.	MS	~~2012~~ Cont.	SP	Best Practice published by MS.

Guidance	
	Please provide examples on how SMS material developed by ECAST and EHEST is being promoted within your State. Which products are you promoting? Examples of implementation: - Establish a link to the ESSI material on the CAA's website. - Distribute ESSI material to the industry via safety bulletins, dedicated seminars, presentations at the appropriate fora, through oversight activities, dedicated working groups, electronic distributions, training, etc. - Translate ESSI material into national language.

Implementation Reports		
State	**State's update**	**Status of the action**
Belgium (BE)	The Belgian CAA (BCAA) has periodic consultative meetings with representatives of the ANS Service Provider, the aircraft operators and the certified airports to communicate and debate the achievements related to the Belgian Safety Plan. ESSI leaflets and SMS material are also promoted during these meetings. The BCAA has also established a direct link to the ESSI material (EHEST and EGAST leaflets and ECAST SMS material) on the BCAA's website.	Partially implemented
Bulgaria (BU)	Establish a link to the ESSI material on the CAA's website.	Implemented
Croatia (CR)	link to the ESSI material is on the CCAA website	Implemented
Finland (FI)	A Finnish helicopter safety team has been established and is a part of EHEST which among other actions promotes nationally the material developed by EHEST. There is a dedicated section for this at CAA website: http://www.trafi.fi/ilmailu/lentoturvallisuus/helikopterit. A link to ESSI website will be established on the CAA's website. Trafi has established guidance material on SMS implementation on its website at http://www.trafi.fi/ilmailu/easa/hallintojarjestelman_%28sms-osa%29_implementointi	Partially implemented
France (FR)	In 2012, the DGACannual safety symposium (november 14th 2012) was dedicated to helicopter safety and EHEST leaflets, translated in french were distributed on this occasion. Links to the acts of the symposium, the posters, the leaflets in french and in english are availabe on this page http://www.developpement-durable.gouv.fr/14-novembre-2012-Securite.html A general link to ESSI is available under "external links" of the DGAC SSP webpage http://www.developpement-durable.gouv.fr/Liens-externes-utiles.html The page includes some indications in french on the content of ESSI publications. Information on publications related to EGAST material are made available during meetings with representatives of general aviation users.	Implemented
Iceland (IC)	ICAA has promoted EHEST/ECAST material and implementad numerous actions since 2009. ICAA SMS course and Risk Management course for Operators. Guidance Material sent to Operators, implementation has progressed well and all the large operators have implemented SMS fully. All operators are doing risk assessment for managment of change and are expected by April 2014 to have full implmentation.	Partially implemented
Ireland (IR)	The IAA has included a specific action item to address the promotion of SMS material developed by ECAST and EHEST in the State Safety Plan (ref SSp 2013-2016 - M.004). The IAA is an active participant in both ECAST and EHEST and uses the associated guidance to promote SMS best practice and organise SMS courses for Irish industry particularly in the area of air operations. On-going SMS promotional work will continue as EASA SMS requirements are rolled out in all domains over the forthcoming years. A link to the dedicated European Strategic Safety Initiative website http://www.easa.eu.int/essi/ is provided from the IAA website. The IAA has adopted the ARMS methodology for Operational Risk Assessment and is promoting it's use by Irish Industry.	Partially implemented
Italy (IT)	ECAST and EHEST material has been promoted through the publication of the Nota Informativa NI-2012-015 "INIZIATIVE PER LA SICUREZZA LA EUROPEAN STRATEGIC SAFETY INITIATIVE (ESSI)", dated on 12/11/2012, available at http://www.enac.gov.it/La_Regolazione_per_la_Sicurezza/Note_Informative/info-64344313.html.	Implemented
Latvia (LT)	In 2013, annual helicopter safety event was held, in which the EHEST materials were distributed and presented.	Partially implemented
Lithuania (LI)	Established a link on the CAA's website. Ref. to 12. Nuorodos, Europos strateginė saugos iniciatyva (ESSI), http://www.caa.lt/index.php?467881435. We indend to promote the ESSI material to the industry through the seminars and safety bulletins in the future.	Partially implemented
Luxemburg (LU)	Promotion of SMS is being done, however not on the base of ESSI material.	Not applicable
Malta (ML)	1) All relevant material is circulated especially SM ICG products. 2) Material is sent to all unit heads within the CAD for their perusal and distribution to the relevant organisations they oversee. 3) Download links to products are available on the CAD safety page. 4) SMS courses are organised for local aviation organisations and also foreign. 4) Safety Bulletins will be sent to organisations highlighting SMS best practices.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
The Netherlans (NL)	• A direct link to ESSI on the CAA's website has been established. • EASPPRI is applied on Amsterdam Airport	Partially implemented
Portugal (PO)		Planned
Spain (SP)	Spain promotes SMS material developed by ECAST and EHEST through different via: - AESA translated SM ICG products into Spanish and such documents are available to industry via web at: http://www.seguridadaerea.gob.es/lang_castellano/g_r_seguridad/actividades_grupos/default.aspx - There is a link to the ESSI material on AESA's website. Please visit our webpage: http://www.seguridadaerea.gob.es/lang_castellano/g_r_seguridad/actividades_grupos/default.aspx - AESA distributes ESSI material to the industry via e-mail (electronic distributions) and dedicated working groups with Industry. We have established two working groups: "Comisión de Estudio SMS" that is devoted to CAT operators and "GHETA" that is dedicated to helicopter operators/aerial works companies. And we plan to set up another working group to deal with General Aviation issues. - Moreover, we plan to translate EGAST material into Spanish. Additionally guidance material on SMS, FDM, Occurrence reporting can be found at http://www.seguridadaerea.gob.es/lang_castellano/g_r_seguridad/drgi/default.aspx. Eurocopter is also translating EHEST material into Spanish.	Partially implemented
Sweden (SE)	We will establish a link to the ESSI material on our website. ESSI material is also promoted at seminars with industry. ISMCG guides are also being promoted to industry and also being used internally as guidance within our SMS oversight.	Partially implemented
Switzerland (SW)	Reference to ESSI and SMICG activities & products are provided on FOCA website http://www.bazl.admin.ch/experten/regulation/03086/03092/index.html?lang=en Further promotion provided through Safety Oversight Committee, Swiss Aviation Safety Conference, and other industry related safety events throughout the year.	Partially implemented
United Kingdom (UK)	The UK CAA have developed their own promotion material and considered ECAST and EHEST material as part of the promotion.	Implemented

Summary	
	• 10 States (BE, BU, CR, FI, FR, IR, LI, NL, SP, SW) have already established a link to the ESSI material on the CAA's website. One more (SE) plans to do this in the future . • 11 States (BE, FI, FR, IC, IR, IT, LT, LI, ML, SP, SW) have distributed or discuss ESSI material with the industry. One State (LI) will start doing this in the future. This has been done in various forms like consultative meetings with representatives from various domains, dedicated safety simposiums and other industry safety events, including specific actions in national safety plans, publishing informative notes or via electronic distribution to the industry and using the material to organise SMS courses. • 3 States (FI, FR, LT) are actively promoting the material developed by EHEST and 3 more (BE, FR, SP) promote EGAST material too. • The following States are translating ESSI material: FR, SP • In additon the following States have developed and published guidance material on SMS implementation: FI, SW, SP, UK. • The ARMS methodology (endorsed by ECAST) is being used and promoted in IR. • 5 States (SP, SW, SE, ML, UK) are also actively promoting SMICG products.



Systemic Issues						
No.	**Issue**	**Actions**	**Owner**	**Dates**	**Type**	**Deliverable (Measure)**
1. Working with States to implement and develop SSPs						
SYS3.11	FDM programmes priorities do not consider operational issues identified at the European and national levels.	States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes, with the above objectives.	MS	~~2012~~ **Cont.**	SP	Report on activities performed to promote FDM

Guidance

Note: The action is a safety promotion initiative and should not be confused with inspections conducted in the framework of operators oversight.

1. Please indicate:
• If your State has organised meetings with aircraft operators to promote FDM in 2013 or 2012, or
• If your State has organised or contributed to any other type of activity to promote FDM in 2013 or 2012, or
• If your State plans to organise regular meetings with aircraft operators or any other initiative to promote FDM, and if applicable, when.
When appropriate indicate the type of initiative/activity.

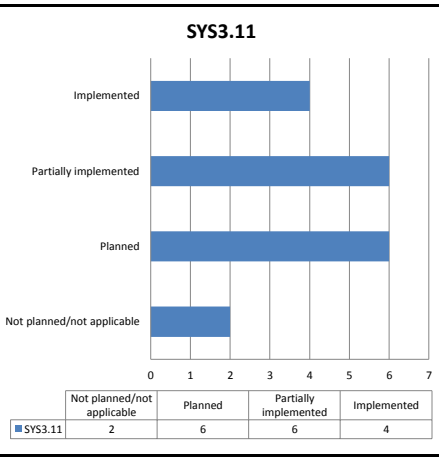
2. In the case where your State has already engaged into a dialogue with aircraft operators on FDM promotion, please indicate:
• How many operators are taking part on average, and
• If discussion on FDM events relevant for preventing Runway Excurions (RE), Mid-Air Collisions (MAC), Controlled Flight Into Terrain (CFIT) or Loss of Control Inflight (LOC-I) has been initiated as part of this dialogue. Please sum up the conclusions of the discussions, if applicable.

3. Please indicate:
• If aircraft operators reports to your State, on a regular basis, FDM event summaries or FDM-derived data. If applicable, please sum up what type of information is collected and by what means.

Implementation Reports		
State	**State's update**	**Status of the action**
Belgium (BE)	Operators are audited twice a year on the subject of SMS under EU-OPS 1.037. In that audit a FDM section is foreseen. Operators may freely report events in their Safety reviews and these are communicated to the BCAA. BCAA plans to have yearly a FDM specific audit and a general SMS audit. The BCAA plans to organise meetings with aircraft operators to promote FDM in the first quarter of 2014. As the audit mentioned above are done under EU-OPS 1.037, operators are seen one at a time. Operators who are volontarily implementing FDM are then also audited. When FDM detects an unreported event, the operator will make a retrospective occurence report.	Planned
Bulgaria (BU)	All Bulgarian airlines operating aircraft over 27,000kg, have implemented FDM programs and they are part of Safety audits. We plan to organised FDM meeting with Aircraft operators on the October -2013.	Partially implemented
Croatia (CR)	At this moment, no planned activites related to this issue.	Not planned
Finland (FI)	1. National operators gather twice annually to discuss FDM programmes. Meetings started in 2010, next meeting scheduled for 22nd October 2013. 2. All the operators with FDM requirements are participating in meetings. RE, MAC, CFIT, LOC-I are all SPIs and prevention of those events is a major issue also in FDM gatherings. 3. FDM event summaries are regularly presented in FDM meetings to CAA. Also prior and during CAA audits to operators, FDM data availability and analysis based on FDM data are checked. Some operators report regularly their FDM event summaries categorised based on SPI classes. These are sent via e-mail and in excel form.	Implemented
France (FR)	Until mid 2013, FDM matters were discussed as agenda items during meetings with safety officers of the major and medium size airlines in France (about 20 airlines). Numerous presentations were focused on unstabilised approaches ; as far as runway excursions are concerned, there were some discussions on how to enhance the detection of near RE. Starting autumn 2013, meetings dedicated only to FDM with representatives of airlines processing FDM data will take place, in addition to the before mentionned meetings. Considering that there is no requirement to exchange FDM programme safety results, these meetings aim at facilitating exchanges on a collaborative basis. Such exchanges are a prerequisite to feed discussions on operational issues with FDM data.	Partially implemented
Iceland (IC)	ICAA has had meetings with the operators involved in FDM, only 3 in Iceland, and use them to promote, educate, learn and distribute information between them. The expected FDM guidance material is being worked on by an ops inspector from Iceland.	implemented
Ireland (IR)	All Irish airlines operating aircraft over 27,000kg have implemented flight data monitoring programmes and are actively utilising the data to identify risk precursors and implement mitigating action. 1) The IAA, in conjunction with the operators, has reviewed the FDM programmes in all Irish AOCs to confirm they are monitoring the main key risk areas identified in the State Safety Plan particularly RE, MAC, CFIT and LOC-I. The results of this review also established the needs for continuous monitoring of the FDM and the IAA has developed a specific audit checklist for this purpose. The IAA conducts annual high level reviews with Operators on Annual Safety Perfomance. This identifies key risk areas for the operators which are then monitored under the FDM. More detailed follow up reviews are conducted for certain operators. 2) All five main operators are involved 3) Reporting of FDM is either by submission of reports (eg weekly) by an operator or via regular (eg monthly) SMS/FDM review meetings. This is in addition to the mandatory occurrence reporting system but obviously MOR's are reviewed at the same time. In addition the FDMS is audited during the oversight audit of the Safety Management System. Typically the operators FDMS will collect and analyse events (including corrective actions) and provide trends analysis of higher risk events. Some operators are working on developing target levels for certain high risk events. Information is normally summarised in a regular report (eg weekly, monthly, quarterly or annually).	implemented
Italy (IT)	At this stage there is not yet a regular dialogue with national aircraft operators on flight data monitoring (FDM). However ENAC plans to start in 2014 to organize some meetings with aircraft operators to promote FDM.	Planned
Latvia (LT)	LV CAA takes part in European Authorities coordination group on FDM (EAFDM) activities, with the objective to foster actions, which contribute to improving the implementation of FDM Programmes and to making FDM programmes more safety effective. EAFDM offers a set of standardised FDM-based safety indicators that an NAA can promote to its operators. These safety indicators are focused on the prevention of four categories of occurrence, namely runway excursions, controlled flight into terrain, loss of control in flight and mid-air collisions, as they have been recognised as a high priority by the European Aviation Safety Plan. Regular communications were established to foster the programming by aircraft operators of FDM-based safety indicators that are meaningful for the monitoring of operational risks identified at the national or European level. It is expected that the standardised FDM-based indicators will bring all operators to: (a) monitor common operational risks that they would otherwise not necessarily consider as priority; (b) ensure that for those common risks, operators have in place relevant indicators; (c) allow voluntary reporting of FDM summaries in a standardised way to an NAA, for the benefit of a national FDM forum (sharing between operators) and for the benefit of the State Safety Programme (national safety reference level, national safety trends, identification of risk areas, etc.)	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Lithuania (LI)	The meetings were organised with the 3 air carriers UAB "Avion Express", UAB "Aurela and UAB "Small Planet Airlines" in 2012. The discussed issues were RE, MAC, CFIT and LOC-I. Conclusions: the representatives of the air carriers understood the importance of the FDM programmes according SYS3.11. They willingly accepted to cooperate with the CAA on this issue. The FDM issue is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435, Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.: įsakymas, planas, No. 8. Presently the operators report accoding to the mandatory reporting requirements (not on a regular basis, e.g. FDM summaries).	Planned
Luxemburg (LU)	No promotion of FDM monitoring of specific issues has been done. DAC is verifying that operators develop own safety indicators based on FDM data, in a manner consistent with their SMS.	Not applicable
Malta (ML)	**Flight Ops:** Every six months the operators are required to attend a meeting, Flight Operations Consultation Group. A formal agenda is issued to all Post holders, discussing various subjects of interest including Safety that require immediate attention. No formal discussion takes place on FDM incidents due to the fact that very few operators utilise FDM as they are not legally bound. Attendance is quite high where the operators make it a point to send a representative if any of the Post Holders are unable to attend. With immediate effect a item for FDM discussion shall be included in the agenda.	Planned
The Netherlans (NL)		Planned
Portugal (PO)	1. Planned for 2014 2. Working with major operators 3. Occurrence report data base	Planned
Spain (SP)	1. AESA plans to set up a National FDM working group equivalent to EOFDM in Spain. We have sent invitations to air operators to join this National FDM working group. The draft ToR of the National FDM working group are based in the EAFDM "Guidance for National Aviation Authorities on setting up a national FDM forum" document. The kick-off meeting of the National FDM working group will be 21st October 2013. 2. Spain has already engaged into a dialogue with aircraft operators on FDM promotion: • In particular, we have contacted Iberia, Air Europa and Vueling. These three companies are part of ACETA (an important airlines association) and also participates in EOFDM. These companies support us to set up a national FDM working group. • ACETA's FDM working group uses FDM data to analyse in depth safety issues. Currently they are analysing TCAS alerts among other events. 3. In the scope of the Safety Performance Indicators Programme that AESA established with air operators, some safety indicators are derived from the FDM data. These SPIs are provided monthly by the air carriers via AESA web-site.	Partially implemented
Sweden (SE)	1. The AOC oversight section has recently started an initiative to inform the relevant AOCs. This will be followed up by individual dialogues, and by a special session at seminars with Nominated Post Holders later this year. 2. No such dialogues have taken place yet. 3. There is currently no dedicated FDM reporting done to the authority.	Partially implemented
Switzerland (SW)	A regular dialogue with the national aircraft operators on flight data monitoring (FDM) programmes is established. The chairman (Serge Heiniger) is also a member of the EASA FDM working group (Lead: Guillaume Aigoin). Regular meetings with the industry are held. A fourth meeting will be held in November 2013. 10 Swiss AOC-holders are participating the meetings. Discussion on FDM events relevant for preventing Runway Excurions (RE), Mid-Air Collisions (MAC), Controlled Flight Into Terrain (CFIT) or Loss of Control Inflight (LOC-I) are discussed in the meetings. Aircraft operators do not report on a regular basis so far. In the future we will get FDM event summaries or FDM-derived data, based on standardized safety indicators .	Partially implemented
United Kingdom (UK)	1) Meetings with aircraft operators are organised every 6 months, on a voluntary basis. We are also involved with EAFDM and EOFDM working groups and provide training on FDM at various courses in the UK. We are also supporting special project to promote adoption of FDM in light (<27000kg) aircraft operations. 2) The meetings involve 10 to 20 operators. Work has been conducted to develop standardized FDM events, in cooperation with FDM software developers and aircraft operators. The focus has been initially targeted at runway excursions. It became clear that complex events such as unstable approaches are difficult (or even impossible) to standardize both in terms of algorithms and event thresholds. To overcome this issue, the approach consisted in defining algorithms and thresholds to identify only the most generic events. These events are not necessarily tailored to each operator and are meant to be collected in addition to the operator-specific events. In many cases, this effectively represents an overhead to operators with less than desirable benefits for them. Based on the lessons learned from this initiative, we are planning different strategies to promote FDM more effectively. 3) Regular FDM-derived statistic are collected. These include: number of flight movements captured by FDM operators and count of events: TCAS, GPWS, flaps not set below 500ft, stalls, go-rounds, hard landings, in-flight engine shutdowns/failures	Implemented

Summary	
	1. FDM promotion activities: • 6 States (FI, FR, IC, LI, SW, UK) have organised meetings with aircraft operators to promote FDM in 2013 or 2012 or establish a regular dialogue with operators on the subject. • 5 States (BE, BU, IT, ML, SP) plan to organise meetings with aircraft operators to promote FDM or to include a dedicated agenda item on their flight ops meetings. • 1 State (IR) conducts annual high level reviews with operators. • 1 State (SE) has started to inform AOCs and plans to follow-up with individual dialogues and special sessions at seminars. • 1 State (LT) has established regular communications with aircraft operators to foster the programming of FDM-based safety indicators. • 2 States (CR, LU) have no plans to organise meetings with aircraft operators to promote FDM. • IC is working on guidance material on FDM for its operators. **2. Level of participation and topics:** • In FI all operators with FDM requirements participate in the meetings; about 20 in FR; 5 operators in IR; 3 in LI; 3 in SP and 10 in SW; 10-20 in UK. • Discussion on FDM events relevant for preventing Runway Excurions (RE), Mid-Air Collisions (MAC), Controlled Flight Into Terrain (CFIT) or Loss of Control Inflight (LOC-I) have been initiated as part of this dialogue in 6 States (FI, FR, LI, SP, SW, UK). In IR the CAA has developed audit checklists for this purpose. The UK has focused initially on RE. **3. Reporting to the State:** • In 4 States (FI, IR, SP, UK) aircraft operators reports to the State, on a regular basis, FDM event summaries or FDM-derived data. In two cases this is done to feed SPIs agreed between the operator and the authority (e.g. SP and FI). • In LI this is done when a reportable occurence is detected through FDM-derived data (not on a regular basis). • In SW FDM event summaries based on standardised indicators will be sent to the authority in the future.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
1. Runway Excursions (RE)						
AER1.5	Include RE in national SSPs.	Runway excursions should be addressed by the MS on their SSPs in close cooperation with the aircraft operators, air traffic control, airport operators and pilot representatives. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP publication

Guidance

Some of the operational scenarios that preceed a RE are situations in which the aircraft lands outside of stable landing criteria, high-speed/deep touch downs or rejected take offs at high speed. Has your State been exposed to these type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working?

Examples of measures:
• Runway excursion and overrun events.
• Unstable/de-stabilised approaches: all and proportion that continue to landing.
• Deep landing events.
• High-speed touchdown events.
• High-speed rejected take-off events.

Based on specific actions being undertaken:
• Proportion of air traffic controllers to have completed unstable approach awareness training.

Are you measuring any of the above? Have you implemented other measures related to RE?

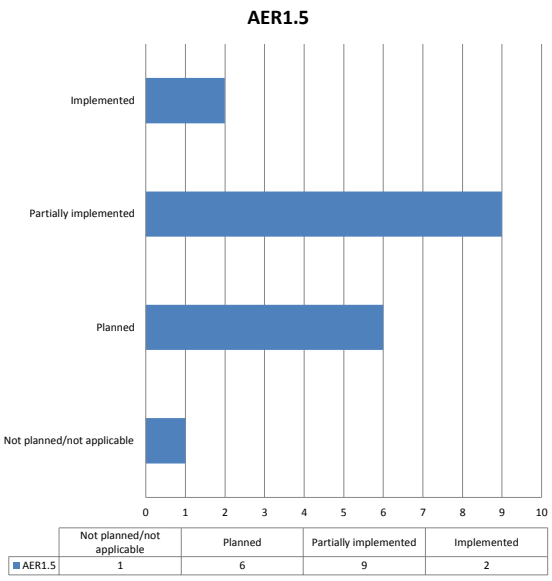
Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Reported Occurrences: • Runway excursion and overrun events. 2010:4, 2011:5, 2012:2 • Unstable/de-stabilised approaches: all 2010:42, 2011:71, 2012:52...and proportion that continue to landing. 2010:13, 2011:41, 2012:26 • Deep landing events.2010:0, 2011:1, 2012:2 • High-speed rejected take-off events. 2010:3, 2011:2, 2012:1 None of these events were considered high risk events. Unstable/ De-stabilised approaches are the main factor that contributed to the risk. The BCAA considers to take risk mitigation actions against unstablized approaches and to implement recommendations from the new European Action Plan for the prevention of Runway Excursions. These actions will be published in one of the future updates of the safety plan. Mechanisms to address corresponding actions are described in the BCAA Safety Policy and in a number of detailed risk management processes and procedures.	Planned
Bulgaria (BU)	RE is included in the Bulgarian SSPlan 2013-2015. All airports have a Local Runway Safety team in action.	Partially implemented
Croatia (CR)	CCAA is measuring RE since 2012. Until June 2013 we had 6 occurrences related to RE. We did not consider any of these events like high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According to Croatian SSP hazardous conditions are: - impossibility of performance go-around (go around); - back / side wind, reduced visibility or a rapid change; - lack of updated information on weather; - contamination of the runway, - inability to stop the aircraft in case of interrupted takeoff, - problems with the aircraft undercarriage, - unstabilised approach, etc.	Partially implemented
Finland (FI)	During the last 5 years, there has been ca 100 rejected take off occurrences (about 90 of these in CAT operations), of these four were classified as serious incidents. Main factors to these were flight crew errors and FOD. Among others, these type of events are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. The achievement of these targets is monitored during the oversight process. Relating to runway excursions, Finland also monitors the number of runway excursion, unstable approaches, abnormal runway contact events, number of landing gear and revers faults, runway condition, landings and takeoffs performed over the approved wind component, high-speed rejected take-off events as part of safety performance indicators.	Implemented
France (FR)	Although there are a lot of RE involving general aviation aircraft (some of them remaining undeclared), those events do not lead to casualties most of the time, therefore GA RE are not a priority for DGAC. There were four significant commercial runway excursions (french airlines or french airfields) during the last 5 years (with damage to the aircraft but fortunately not with casualties). There are numerous reports (many hundreds a year) on precursors of RE, and data available through FDM suggest that only a small part of them are indeed reported. Runway excursions are also addressed within SSP through following action plans : - the non stabilised approaches; - met conditions during approach; - transmission of the information of runway surface condition and contamination to the flightcrew. France considers that EAPPRE provides an adequate list of recommendations to addres this issue. Those recommendations have been assessed during the april 2013 national SSP safety review, and priorities amongst them have been established taking also into account pre existing action plans. DGAC has attempted to develop indicator based on the number of incident reports. However results were found difficult to use considering the variability of the reporting rate and the mixture in a single indicator of events of different nature (commercial vs general aviation, big vs small airports for instance) DSAC is still working on the project to use ground radar including mode S data at CDG airport in order to measure the decceleration profile of each airplane and thus to help identify near runway excursions. This study may lead to the development of tools for airport operators helping real time detection of degradation of runway friction condition.	Partially implemented
Iceland (IC)	ICAA is addressing this issue as follows: (i) Approvals. Service providers will are encouraged to cover/evaluate risk factors relating to RE in their SMS systems. (ii) Through ICAA's continuous oversight; with analysis of findings and reported occurrences that may be interlinked with RE . (iii) Promotion: ICAA will promote information from initiatives and studies e.g. conducted by EASA on this topic.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Ireland (IR)	Runway Excursions do not feature highly in the analysis of mandatory and voluntary occurrences reported to the IAA but nevertheless due to the broader European and Worldwide experiences reported by ICAO/EASA RE is included in the IAA SSp 2013-2016 in action item FOD.002. The IAA collects, classifies and analyses Runway Excursion events. The IAA currently does not have measures in place for the precursors to RE events however safety analysis of the causal factors for RE events can identify them. The IAA has recorded three RE events per year for the past three years (mostly light aircraft), which were minor excursions from the runway due to GA pilot handling errors. Only one RE report was considered high risk (using ARMS RM Score > 10) and this was related to an RE by a large transport aircraft following heavy landing and nose gear collapse during landing in high cross winds.	Partially implemented
Italy (IT)	RE are included in ENAC Safety Plan 2012-2015 as action TOP 1.1.1. The safety action is: to determine national RE indicators and a measuring plan. The RE report is already completed and should be published by the end of 2013.	Implemented
Latvia (LT)	SSP is not implemented yet. In last 5 years - 6 rejected take offs at high speed. Operators should have in place relevant FDM-based indicators to focus on the prevention of RE occurrence. The FDM programme should allow an operator to identify areas of operational risk and quantify current safety margins. Operator's safety manager should be responsible for the identification and assessment of issues and their transmission to the managers responsible for the processes concerned. LV CAA is responsible for the establishing and maintenance an oversight programme covering oversight activities, including assessment of associated risks. Deciding the depth and frequency of oversight activity, each case involves review of the Organisation Risk Profile (including both the overall rating, and the ratings for each individual indicator).	Planned
Lithuania (LI)	There were no RE in the past 5 years. The EAPPRE is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435 Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.: įsakymas, planas, No. 11. To start to implement the EAPPRE actions the appropriate detailed CAA plan for Prevention of Runway Excursions will be issued in November 2013.	Planned
Luxemburg (LU)	Due to the configuration of Luxembourg airport (runway 4000x60m, no significant obstacles), runway excursions are rare and of low severity. In the last 3 years, 4 runway excursions were recorded, all by single engine aircraft and all without damage to aircraft or injury to persons. DAC considers that no specific action for runway excursions is required and does not plan to include this topic in the SSP.	Not applicable
Malta (ML)	ANS: All ATCOs validated for Tower do the required training on unstable approaches as part of th refresher training for the unusual situations at Skyguide. From an awarness point of view . The european action plan was distributed to all ATCOs on the 29th of January 2013 we have not measured the effectivness because fortunately the problem of RWY excursions is very low Flight Ops: 5 incidents occurred during the last five years. As the amount of occurences are few and apart, all incidents are discussed with the individual operators and identify the root cause of the incidents. To strenghten the process of reporting and safety action taken, a formal group within the state authority shall be established to identify possible hazards within the whole aviation system. Aerodromes: The airport operator has been advised to set up the Local Runway Safety Team according to the established terms of reference. Operator agreed and is in the process of setting up this group.	Planned
The Netherlans (NL)	Runway excursions don't belong to the indicated risks in the Netherlands. It will be taken into account in the next SSP.	Planned
Portugal (PO)	None of this SPI are from our top safety concerns. Concerning RE we have a Workshop planned for December 2013 in cooperation with Eurocontrol.	Planned
Spain (SP)	1.- RE has not been identified as a major concern in Spain, however in order to be aligned with EASp, we have included RE in Spain's risk portfolio and in Spanish Aviation Safety Plan. AESA has analysed in depth the RE occurrences in Spanish territory that are registered in our Spanish MORS during 2009-2012 period. The main conclusions of this analysis are: • There are 50 REs in 2009-2012 period. 7 are accidents, 14 are serious incident, 13 are major incident and 16 significant incidents. • 64% of RE occurrences (or 32 RE) are landing veeroff • In 70% of RE occurrences (or 35 RE), the MTOW < 2.250 Kg • In 50% of RE occurrences (or 25 RE) the operation type is General Aviation • Taking into account the Eurocontrol document "A Study of Runway Excursions from a European Perspective", we have analysed if the causal factors of the landing veeroffs identified by Eurocontrol (crosswind, wet/contaminated runway, nose wheel steering problems,...) have been the precursors of the RE in Spain. In our landing veeroffs, we have identified these causal factors: crosswind in 5 occurrences, aircraft handing in 5 occurrences and main landing gear in 3 occurrences. The other causal factors have been identified in only 1 or 2 occurrences. 2.- Regarding the examples of measures that are proposed, our results are: • a.- Runway excursion and overrun events. Please see above results. • b.- Unstable/de-stabilised approaches: all and proportion that continue to landing. It is not possible to compute the proportion of unstable/de-stabilised approaches that continue to landing. However we have monitored all the unstable/de-stabilised that are registered in our Spanish MORS from 2009-2012 period. There were 75 in 2009, 184 in 2010, 175 in 2011, 222 in 2012 and 223 in 2013 (only 6 months period). Therefore, the number of reported unstable/de-stabilised approaches is growing partially due to a better open-reporting culture. • c.- Deep landing events. Regarding "aircraft landed long" events, there are only 5 occurrences in Spanish MORS from 2009-2012 period. • d.- High-speed touchdown events. There are not occurrences in Spanish MORS. • e.- High-speed rejected take-off events. There are not occurrences in Spain. 3. Regarding the mitigation actions, our intention is to promote EAPPRE recommendations. Moreover, in aerodrome domain, AESA will require Spanish airports to comply with EAPPRE recommendations. In fact, AESA has defined the next plan: i. EAPPRI/EAPPRE high-level compliance analysis in Spanish airports. ii. EAPPRI/EAPPRE initial compliance map in Spanish airports based on previous inspections iii. EAPPRI/EAPPRE compliance questionnaire iv. EAPPRI/EAPPRE advanced compliance map in Spanish airports based on questionnaire responses and inspections v. EAPPRI/EAPPRE advanced compliance map is continuously updated based on: Regulatory and Certification Inspections and Requested documentation vi. AESA has designed a report form for additional information in case of runway incursions and runway excursions The effectiveness of EAPPRE recommendations will be monitored using the trend of RE occurrences reported to the Spanish MORS.	Partially implemented
Sweden (SE)	RE:s have a dedicated SPI and are followed up by the Aviation Safety Analysis Forum at monthly meetings. Results are communicated to the AOC:s.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 - RE: 5, 3 high risk - Unstabilzed approaches: 40, 1 high risk - AC landed fast: 0 - High speed rejected takeoff: 28, 4 high risk	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
United Kingdom (UK)	The UK SSP is currently being redrafted for publication in Dec 2013. The SSP will specifically highlight runway excursions as one of the UK CAA's significant seven priorities. UK CAA Safety improvement activities to mitigate the risk of Runway Excursion will continue to focus on the following three areas: • Reducing unstable/de-stabilised approaches. • Improving information to pilots on expected braking action on contaminated runways. • Improving safety areas around runways. Key Performance Metrics Runway Excursion mitigation actions will be tracked using the following key performance metrics: • Runway Excursion and overrun events. • Unstable/de-stabilised approaches that continue to a landing. • Runway events where runway contamination is a contributory or causal factor. • Proportion of UK aircraft operators to have implemented and actively monitored Runway Excursion precursor measures. • Proportion of UK licensed aerodromes using 'new reporting criteria' for runway surface condition.	Partially implemented

Summary	
	Except in very few cases, most of the precursor events monitored by States in the last 5 years were not considered high-risk events. Two States (FR, SP) reported that the majority of events involved General Aviation operations and/or light aircraft. One State (FI) ca 100 rejected take off occurrences (about 90 of these in CAT operations) during the last 5 years. Only four were classified as serious incidents. In FR there were four significant commercial runway excursions (french airlines or french airfields) during the last 5 years ending in damage to the aircraft but fortunately not with casualties. 10 States are addressing RE at national level in the following ways: 5 States (BU, IR, SP, SW and IT) in Safety Plans, 3 States (UK, FI and FR) in SSPs and 2 States (CR, SE) are measuring precursors and assessing the consequences. One State (FI) has established safety performance indicators and targets for all operators. The achievement of this targets is monitored during the oversight process. One State (IC) encourages service providers to evaluate risk factors and then monitors compliance through oversight activities. 5 States (BE, LT, LI, PO, ML) have plans to address the issue in the future. Among the occurrences being monitored by States due to the potential to lead to a RE are: - Lateral excursions - Overrun events - Unstable/de-stabilised approaches - Deep landing events - high-speed rejected take-off events - Adverse weather during approach - Runway surface condition and contamination - Braking action by flight crew - Problems with the landing gear or thrust reversers - Abnormal runway contacts - Landings and takeoffs performed over the approved wind component - Flight crew errors - FOD. Various States (LT, FR) are promoting FDM programmes that allow operators to identify risk areas and quantify safety margins The recommendations provided in EAPPRE are found a good way to mitigate the risk in the majority of States.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
1. Runway Excursions (RE)						
AER1.9 **NEW**	Runway excursions	Member States should address the recommendations made by the EAPPRE via their SSPs in coordination with service providers and industry organisations.	MS	Per Plan	SP	Report on progress

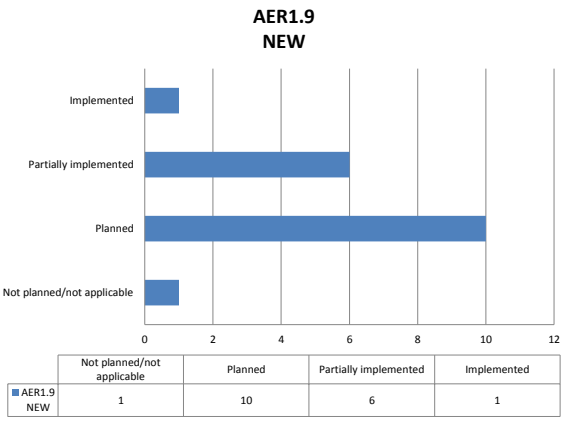
Guidance	The European Plan for the Prevention of Runway Excursions (EAPPRE) was published at the beginning of 2013 (http://www.skybrary.aero/bookshelf/books/2053.pdf). Please indicate if you have already started to take the EAPPRE recommendations into consideration and how you are doing it in the various domains: authority's oversight activities, aircraft operations, ANSP, aerodrome operators, aeronautical information service providers, aircraft manufacturer. How do you measure/plan to measure effectiveness?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The BCAA has not yet started to take the EAPPRE recommendations into consideration. The BCAA considers to take risk mitigation actions against unstablized approaches and to implement recommendations from the new European Action Plan for the prevention of Runway Excursions. These actions will be published in one of the future updates of the safety plan.	Planned
Bulgaria (BU)	RE is a new action in the Bulgarian SSPlan. European Action Plan for the Prevention of RE (EAPPRE) 2013 being adopted and implemented. RE is a part of authority's oversight activities.	Partially implemented
Croatia (CR)	In accordance with Croatian SSP activities related to the imlementation of recommendation of EAPPRE will start by the end of this year.	Planned
Finland (FI)	EAPPRE will be included in the Finnish Aviation Safety Plan. Number of runway excursions are measured continuously as one of the tier 2 SPIs.	Planned
France (FR)	The EAPPRE recommendations have been assessed during the april 2013 SSP safety review, and priorities amongst the recommandations have been established. Those priorities are included in the French SSP action plan. As far as the recommandations to the operators are concerned, people in charge of operators oversight discuss with them how they intend to implement the EAPPRE recommendations relevant for their operations in the framework of their SMS. DGAC considers it is not appropriate to impose on operators to implement such recommendations provided they justifiy this position in the framework of their SMS.	Partially implemented
Iceland (IC)	EAPPRE has been promoted to Isavia the service provider. The use of the material is being evaluated at this stage.	Partially implemented
Ireland (IR)	The IAA State Safety Plan SSP 2013-2016, action item FOD.002 addresses the implementation of the recommendations for regulatory authorities contained in the EAPPRE. Some of the actions contained in EAPPRE (eg Runway Safety Teams, Inclusion of RE in Safety Oversight) have already been completed and other actions (including the dissemination of EAPPRE to all industry stakeholders) are planned for the next two years. Due to the statistically low number of occurrences no specific statistical measures are planned but the effectiveness of these EAPPRE measures will be reviewed via Runway Safety Teams and Safety Oversight activities.	Partially implemented
Italy (IT)	This issue should be included in the edition 2013-2016 of ENAC Safety Plan.	Planned
Latvia (LT)	SSP is not implemented yet.	Planned
Lithuania (LI)	The EAPPRE is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435 Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.: įsakymas, planas, No. 11. To start to implement the EAPPRE actions the appropriate detailed CAA plan for Prevention of Runway Excursions will be issued in November 2013 We intend to start to measure effectiveness in the 2014.	Planned
Luxembourg (LU)	Due to the configuration of Luxembourg airport (runway 4000x60m, no significant obstacles), runway excursions are rare and of low severity. In the last 3 years, 4 runway excursions were recorded, all by single engine aircraft and all without damage to aircraft or injury to persons. DAC considers that no specific action for runway excursions is required and does not plan to include this topic in the SSP.	Not applicable

Implementation Reports		
State	**State's update**	**Status of the action**
Malta (ML)	ANS:We have not yet started to measure the effectiveness. Flight Ops: Flight operations Inspector conducting simulator session inspections, brings to the attention of the crew the recommendations envisaged in the EAPPRE. Aerodromes: The airport operator has been advised to set up the Local Runway Safety Team according to the established terms of reference. Operator agreed and is in the process of setting up this group. The NAA plans to measure its effectiveness by being present at LRST meetings and monitoring its activities.	Planned
The Netherlans (NL)	It will be taken into account in the next SSP.	Planned
Portugal (PO)	The planned Workshop for December is an initial step for the implementation of EAPRE. However some service providers may have some actions implemented already.	Planned
Spain (SP)	The European Plan for the Prevention of Runway Excursions (EAPPRE) document has been internally distributed and its recommendations are being analysed by AESA staff. In aerodrome domain, AESA has decided to require Spanish airports to comply with EAPPRE recommendations. (Please see previous answer for details). In other domains EAPPRE recommendations will be promoted via safety oversight inspections and dedicated working groups. The progress in this area will be provided in the next LSSIP due to the last LSSIP version did not include this objective. Regarding the plan to measure its effectiveness, AESA will monitor the trend of these type of occurrences.	Planned
Sweden (SE)	The Swedish Transport Agency has published a national action plan, based on EAPPRE, with recommendations to Aerodrome Operators, Air Navigation Service Providers, Aircraft Operators and the National Authority. During the oversight the actions taken by the different actors will be reviewed.	Implemented
Switzerland (SW)	EAPPRE is known and under consideration. FOCA Safety Divisions are reviewing Authority activities for potential applicability in Switzerland. Currently, all authority related actions are being addressed either through aerdrome certification process, the Swiss State Safety Program, oversight activities and SMS oversight activities. Not all recommendations have been implemented in relation to the other domains. Those that have been implemented are measured for effectiveness through oversight and surveillance checklists. - Based on FOCA initiative the implementation of EAPPRE recommendations is discussed in every local Runway Safety Team for all addressed domains. - Effectiveness of taken measures is monitored by FOCA through participation in LRST and oversight activities (audits, inspections), if required.	Partially implemented
United Kingdom (UK)	The UK CAA has issued an Information notice to UK industry promoting EAPPRE (Feb 2013) to encourage organisations to review and implement appropriate recommendations. The UK CAA is planning follow-up regulatory action regarding key recommendations contained in EAPPRE.	Partially implemented

Summary	
	EAPPRE is known by the majority of States. Work is underway to implement the recommendations contained in the EAPPRE. 7 States have already included the EAPPRE recommendations as new action in their Safety Plans (BU, IR, LI, SE, SP) or SSPs (FR, SW). 3 States (BE, FI, IT) plan to incorporate the actions in future updates. EAPPRE recommendations are also being addressed through oversight activities like the aerodrome certification process or through SMS oversight. Various States will start measuring the effectiveness of the relevant measures as part of oversight activities through participation in LRST. 1 State (FR) reported that people in charge of operators oversight discuss with operators how they intend to implement the EAPPRE recommendations relevant for their operations in the framework of their SMS. They consider that it is not appropriate to impose on operators to implement such recommendations provided they justifiy this position in the framework of their SMS.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
2. Mid-Air Collisions (MAC)						
AER2.1	Airspace infringement risk.	MS should implement actions of the European Action Plan for Airspace Infringement Risk Reduction.	MS	Per Plan	SP	SSP Publication

Guidance
Have there been any airspace infringements in the past 5 years (please exclude the ones that involved GA since they are addressed in GA1.5)? If so, how many of them were considered high-risk events? what are the main factors that contributed to them? Where is your State with the implementatation of the European Action Plan for Airspace Infringement Risk Reduction? The progress of your State against the European Action Plan for Airspace Infringement Risk Reduction is reported within the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report. The latest available report includes the activities carried out in 2011. Please indicate whether any progress has been made towards the objective in 2012 and 2013 and what is the expected situation at the end of the year. Consider the situation at both State and Service Provider Level

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Reported Occurrences Airspace Infringement Commercial Aviation: 2010:6 2011:4 2012:1 None of these events were considered high-risk events. The main factor is the complexity of the Belgian airspace and the complex airspace of our neighbouring countries. Belgium has established a national action plan derived from the European Action Plan for Airspace Infringement Risk Reduction. The Belgian Airspace Infringement Reduction Plan focuses mainly on General Aviation VFR traffic as well as on pilot training organizations, in an effort to reduce the risk of infringements in the future (see GA1.5).	Not applicable
Bulgaria (BU)	Airspace infringement risk is one of the Key Safety indicators. The Bulgarian CAA is committed to implement all actions assigned to regulatory authorities contained in the EAPlan for EAPAIRR.	Planned
Croatia (CR)	Implementation of the European Action Plan for Airspace Infringement Risk Reduction has been started during this year. In March 2013 Croatian State Safety Program has been published, to ensure general framework for Airspace infringement LSSIP SAF 10 implementation. In August 2013, Croatian Civil Aviation Agency published Air Safety Information Letter ASIL 2013-001 to facilitate further implementation.By the end of 2013 it is expected that all stakeholder's (ANSP, Training Organisation, Airspace Users, and Regulatory Authority) implementation plans will be in place.	Partially implemented
Finland (FI)	During last 5 years there has been ca 20 airspace infringements involving other than general aircraft. Most of these have been caused by coordination problems within ATC units. Several cases have happened to commercial helicopter operators when they have accidentally penetrated P, R or D-areas. None of the cases have been considered high-risk events, though several airspace infringements conducted by general aviation aircraft have been categorised as serious incidents. According to LSSIP report, the actions in European Action plan have been implement by the regulator and ANSP in 12/2011. The monitoring of the implementation of these actions are part of continuous oversight process. European Action Plan for Airspace Infringement Risk Reduction will also be considered in Finnish Aviation Safety Plan. Airspace infringements involving other that GA aircraft are very rare, if nonexistent.	Implemented
France (FR)	Airspace infringement not involving GA are very marginal. EAPAIRR focuses on GA ; see response GA1.5	Not applicable
Iceland (IC)	ICAA has not followed the European Action Plan for Airspace Infringement Risk Reduction - Iceland is not a member of Eurocontrol nor part of ICAO EUR region. Further the traffic pattern within these areas is different, where the NAT region traffic consists mainly. heavy a/c. Iceland is participating in projects concerning airspace infringement under the umbrella of ICAO NAT SPG. However due to Iceland's special position it will have to monitor the development of the European Action Plan and apply actions / best practices if deemed necessary and not adequately covered within the scope NAT SPG. SPIs have been developed within the NAT SPG and being worked on within ICAA, infringement is monitored on a continous bases, and no specific actions have been taken recently.	Implemented
Ireland (IR)	The IAA Annual Safety Review 2012 reports 81 cases of airspace infringements in Irish Airspace over the period 2009-2012. This includes infringements by large transport aircraft, military aircraft and general aviation aircraft. None of these were classified as high risk Severity A or B, per ESARR 2 Severity Classification, but 26 of these were Severity C. There is no detailed breakdown currently available but the vast majority of airspace infringements (~90%) involve infringements by general aviation or military aircraft. The small proportion of airspace infringements by large transport aircraft are mainly found in oceanic operations due to communication difficulties. The IAA has completed twelve of the thirteen recommended and proposed actions for regulation authorities included in the European Action Plan for Airspace Infringement Risk Reduction with the remaining action due for completion in 2013. This includes full consultation with airspace users for any proposed changes to airspace as well as an Annual Review Meeting with users under the FUA Level 1 activity.	Partially implemented
Italy (IT)	ENAC introduced the adoption of the Airspace Infringement Plan of Eurocontrol in the ENAC Safety Plan for 2012. All regulatory actions have been completed. ENAV has put into practice the reccomendations and actions listed in the European Action Plan for Airspace Infringement Risk Reduction. See LSSIP (Italy 2012) - ESSIP Objective SAF 10	Implemented
Latvia (LT)	SSP is not implemented yet. In last 5 years - 11 CAT airspace infringements by Latvian operators, and 39 by foreign operators in Latvian airspace. Current airspace infringements by the commercial aviation do not generate safety risks, as they are related to the infringement of noise sensitive area restriction in very close proximity to the SIDs and STARs. Number of noise sensitive area infringments have decreased doe to redesign of the airspace. For setting the local airspace infringement risk reduction strategies and for development the most appropriate and effective actions the following risk factors shall be considered and appropriately mitigated:- Complexity of the airspace structure; - Scale of military flying activity; - Scale and maturity of both commercial and general aviation sectors; - Scope and nature of air traffic service provision; and - State's regulatory and legislative frameworks. Hazard identification and risk assessment was performed concerning the General Aviation aircraft flights. Following actions were proposed for Airspace Infringement Risk Reduction: - Ensure updated maps and charts are made available to flying clubs and schools; Promote membership of flying clubs and federations among private pilots; - Establish provisions for correct GPS equipment installation and maintenance; - Harmonise provisions of flights by ultra-lights, micro-lights and gliders (including hang-gliders and para-gliders).	Planned
Lithuania (LI)	There were not any airspace infringements in the past 5 years. The EAPAIRR is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435 Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.: įsakymas, planas, No. 12. To start to implement the EAPAIRR actions the appropriate detailed CAA plan for Prevention of Airspace infringement risk will be issued in December 2013	Planned

Implementation Reports		
State	**State's update**	**Status of the action**
Luxemburg (LU)	The majority of airspace infringements in 2011 and 2012 were due to one specific cause that has been successfully adressed at the operational level (deviation from the agreement between two ANSPs, after airspace restructuring). Airspace infringements by CAT aircraft are not a concern.	Not applicable
Malta (ML)	ANS: We did not experience Airspace infringements in the last 5 years. We do not consider this as a problem for us and we have not planned any activity. If on the other hand we will have IFR airspace infringements we will then reconsider.	Planned
The Netherlans (NL)	The EAPAIRR is applied. Military traffic management is involved to. Where necessarily airspace was adjusted. Reports have been submitted to ESSIP/LSSIP. A reduction in infringements is established.	Implemented
Portugal (PO)	Most of our airspace infringements are concerned with traffic going inside military areas, and militar traffic going outside military space areas. Workshop planned for December 2013	Partially implemented
Spain (SP)	AI has been identified as a major concern in Spain, therefore we have included AI in Spain's risk portfolio and in Spanish Aviation Safety Plan. AESA analysed airspace infringements in which GA is not involved for the 2008-2012 period. The results are: • There were 64 AI in which GA was not involved and there were 472 AI in total, in Spanish territory and during 2008-2012 period. Tjerefore, in 14% of AI occurrences there were not GA involvement. • There were 7 AI occurrences with serious or major severity. Therefore, 11% of AI occurrences had high severity. • The main factors that contributed to AI were: pilot-ANS communications (in 15 occurrences), ATM coordination failures in adjacent civil units (in 4 occurrences) and deviation from clearance (in 3 occurrences). • Spain is implementing the European Action Plan for Airspace Infringement Risk Reduction. The EAPAIRR recommendations will be promoted via safety oversight inspections and dedicated working groups. For details, please see the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report. AESA plans to monitor AI occurrences each 6 months.	Partially implemented
Sweden (SE)	The Swedish action plan for reduction of airspace infringements was published June 2012. Actions have been distributed to responsible parties. Follow up will be done during 2014.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 276, 57 high risk An Airspace Infringement Working Group analyses local data to identify hotspots and critical issues. The majority of the EAPAIRR relevant for Switzerland has been implemented. SB & SRM analyize pilot reports obtained during AI investigations. State level SPI have been identified and are being monitored.	Partially implemented
United Kingdom (UK)	See atached REG, ASP and MIL responses to ESSIP/LSSIP SAF10. The CAA: a) Undertakes regular monitoring of the number of airspace infringements. Assessment of the effectiveness of infringement awareness and reduction activity is undertaken through analysis of infringement data and through feedback from pilots involved in airspace infringements. b) Is currently considering how Human Factors (HF) influence infringements and their outcomes, and the extent to which the AIWG Action Plan needs to evolve to better reflect HF concerns. c) Has introduced a questionnaire for pilots who have infringed controlled airspace to it to better understand infringement causal factors (including airspace design) and take action where appropriate. this is based upon a similar questionnaire used by NATS. (August 2013) d) Developing an online infringement awareness package for pilots. e) Identifying the means to better target awareness material towards pilots of high risk infringements. f) Has developed a standard infringement awareness briefing that can be tailored to suit all sectors of the industry. g) Developing future infringement reduction/prevention initiatives. DfT is funding research into lightweight transponders and position broadcasting technologies. (March 2015)	Implemented

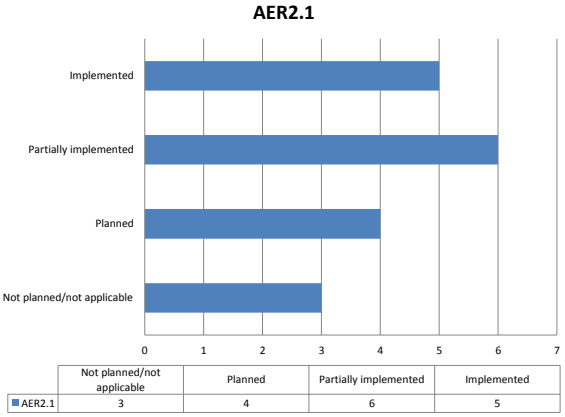
Summary

The majority of States reported that Airspace Infringements involved mainly General Aviation or military aircraft and are not a concern for CAT. One State (IR) reported that the small proportion of airspace infringements by large transport aircraft were mainly found in oceanic operations due to communication difficulties. However at least 2 States (SP, SW) reported a number of high risk events in the past years affecting CAT. One State (SP) reported that during 2008-2012, 11% of AI occurrences in which GA was not involved had high severity.

EAPAIRR is already being implemented in 11 States (BE, CR, IR, FI, IT, LI, NL, SP, SE, SW, UK). This is being done through publication of relevant action in SSPs (CR), the publication of dedicated plans to address the risk (BE, SE) or by including the recommendations in Safety Plans (IT, LI, SP).
2 States (BU, LT) plan to implement the EAPAIRR in the future. One State (IC) participates in projects concerning airspace infringement under the umbrella of ICAO NAT SPG. One State (SW) has established an Airspace Infringement Working Group that analyses local data to identify hotspots and critical issues.

Airspace Infringement risk is a safety indicator in various States (BU, SP, SW). The EAPAIRR recommendations will be promoted via safety oversight inspections and dedicated working groups in SP.

Among the factors that contribute to AI mentioned by the States we find:
- airspace complexity
- coordination problems within ATC units
- pilot-ANS communications
- deviation from clearance



ESSIP Report 2012

SAF10 Implement measures to reduce the risk to aircraft operations caused by airspace infringements
Compared to the previous report, significant progress has been made in the deployment of this objective. 15 States declared this objective as completed which constitutes around 36% of all ECAC States. Comparing to 2011 when only 6 States declared fullcompletion of this objective.
Even though progress has been made in the implementation of this objective, there is still a vast amount of States who declared this as Late which constitutes around 55%. One State (SW) has declared this objective as partially completed.
Furthermore, 2 States (LU and MT) declared that airspace infringements are not an issue in their State and therefore there is no need for the implementation of the related action plan.

Link: http://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/essip-report-2012.pdf

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
2. Mid-Air Collisions (MAC)						
AER2.8	Include MAC in national SSPs.	Mid-air collisions shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication

Guidance	
	One of the operational scenarios that preceeds a MAC is a loss of minimum separation (e.g. involving a TCAS alert in the most critical cases). Has your State been exposed to these type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working? Examples of measures: • Loss of communication events • Level busts events • ACAS RAs: all genuine RAs and proportion involving incorrect pilot response • Airspace Infringement events • Separation minima infringements/risk-bearing airprox Are you measuring any of the above? Have you implemented other measures related to MAC?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The Belgian CAA is measuring the main factors contributing to MAC. Reported Occurrences: • Loss of communication events 2010:2 2011:28 2012:24 • Level busts events 2010:8 2011:15 2012:22 • ACAS RAs: all genuine RAs and proportion involving incorrect pilot response 2011:21 2012:6 • Airspace Infringement events 2010: 61 2011:126 2012:127 • Separation minima infringements/risk-bearing airprox 2010:9 2011:28 2012:52 There were 3 SMI events that were considered as high-risk in 2012. Implementation of other measures related to MAC are: • The reduction of Prolonged Loss of Communication. The Belgian Defense together with the Belgian Civil Aviation Authority are commited in a safety action to decrease the number of prolonged loss of radio contact in Belgian airspace. • An analysis of the technical ATM occurrences has identified the presence of broadband interferences caused by a particular aircraft type and operator. The Belgian CAA will therefore establish a taskforce to develop risk mitigating measures.	Partially implemented
Bulgaria (BU)	MAC is a new for Bulgarian SSPlan. Potential consequences of a MAC are serious. Prevention and mitigation of these events is a part of continuous oversight activities.	Partially implemented
Croatia (CR)	CCAA is measuring MAC since 2012. Until June 2013 we had 23 occurrences related to MAC. We did not consider any of these events high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According to Croatian SSP hazardous conditions are: Severe collisions between aircraft in flight;- failure to follow the prescribed speed reduction- failure to comply with air traffic control instructions, etc.Since January 2013. we have started to monitor Level Bust as separate risk.	Partially implemented
Finland (FI)	In total there's been 160 separation minima infringements in Finland during the last five years. Seven of these were categorised as serious incidents. Contributing factors were level busts, airspace infringements and ATCO human errors. Among others, MAC and separation minima infringements are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. The achievement of these targets is monitored during the oversight process. Relating to MACs and airproxes Finland measures level busts, TCAS Ras, Airspace infringements, lateral deviations from clearance and separation minima events and airprox-cases as safety performance indicators.	Implemented
France (FR)	Regarding controlled airspace : Many low risk losses of separation occur in French airspace, especially around the busy airports (order of magnitude 100 a year). High risk en-route events are exceptional (0 within the French ACC's in 2012). However there are events around busy airports and a specific monitoring is in place (notably at CDG). One of the tools used to control the risk is to limit the maximum allowed traffic rate. The French ANSP considers MAC prevention at the highest priority. It has set up a specific action plan which is considered adequate. The French ANSP has an efficient incident management on this matter, uses ground based safety nets (short term conflict alert (STCA) and airspace proximity warning (APW)) for airspace infringement prevention). Those ground based safety nets are widely implemented and are used as a standard tool to control and monitor this risk. The ANSP makes analysis of any loss of communication event, any RA reported event and any separation minima infringements/risk-bearing airprox. The ANSP derives detailed Statistics from these analyses. It should be noted that all STCA events are recorded for the purpose of analysis and statistics. Regarding non controlled airspace : Declared losses of separation between civil aircraft are addressed on a case by case basis. Events between civil and military aircraft are addressed by a specific civil/military commission that publishes safety recommendations. DGAC develop action plans to address these recommendations.	Implemented
Iceland (IC)	ICAA is addressing this issue by: (i) Approvals. Service providers (ANSP) and aircraft operators will be encouraged to cover/evaluate risk factors relating to MAC in their SMS systems. (ii) Through ICAA's continuous oversight; with analysis of findings and reported occurrences that may be interlinked with MAC e.g. loss of separation occurrences . (iii) Promotion: ICAA aims to further promote for initiatives and studies conducted at international level; in particular relating to NAT and ER region. ICAA flight OPS oversight raises this issue with air operators relating to the training of pilots. Within the NAT SPG framework and cooperation 8 SPIs have been developed, formalised and now monitored.	Partially implemented
Ireland (IR)	The IAA State Safety Plan 2013-2016 action item ASD.001 addresses MAC. The following key safety indicators are seperately monitored by the IAA in this regard; MAC, MAC-TCAS (RA's), Level Busts, Airspace Infringements, Separation Minima Infringements The IAA Annual Safety Review 2012 shows that 180 MAC and MAC-TCAS events were reported in 2012, over 80% of which were considered low or no accident risk events using ARMS classification (ARMS Score <20). Although a detailed analysis of the main causal factors has not yet been aaccomplished a high proportion of MAC events are found to be due to TCAS RA on converging aircraft levelling off on proximate flight levels where the risk of collision was minimal. There were 168 reported level busts in the period 2009 to 2012. In the last three years the vast majority of level bust reports are classificed Severity E (ref ESARR 2) with only three higher risk events in 2012 (Severity C). Analysis of the number of these level busts that are associated with a MAC event is currently not available. There were 58 reports of seperation minima infringements in the period 2009-2012 almost all of which were classified as higher risk (Severity Level C or higher). The IAA has implemented the recommended actions for regulatory authorities in EAPAIRR as noted in AER 2.1 above. In addition mitigation actions are targeted in specific area to address concerns arising from the safety performance reviews. The trend analysis of the safety indicators provides a measure of the success of these actions. Ongoing work includes the further development of precursor identifiers in the risk assessment process to facilitate better safety analysis of the causal factors for MAC/MAC-TCAS events.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Italy (IT)	MAC is included in ENAC Safety Plan 2012-2015 as action TOP 1.2.1. The safety action is: to determine national MAC indicators and a measuring plan. Separation minima reduction is used as indicator. Note: Italian ATC service provider (ENAV) submit a report to ENAC every three months.	Implemented
Latvia (LT)	SSP is not implemented yet. In last 5 years - 50 TCAS alerts. In the uncontrolled Class G airspace it is planned by the nationally designated ANSP to provide AFIS coverage by the end of 2015 in order to facilitate more safe operations for the general aviation aircraft. In the controlled airspace, the ANSP has implemented the requirement to increase the number of ATCOs at the working stations at all times. After implementation of reduced runway seperation and 3 nm seperation in Riga TMA, the SMI has been of particular interest and subject to monitoring action by the CAA through inspections and audits. Guidance on development of safety improvement action plan APP 3.1, from 13.07.2012, was developed to manage safety in flight operations area. AOD Implements actions according to the European Action Plan for Airspace Infringement Risk Reduction. During the year in close cooperation with the aircraft operators and pilot representatives AOD shares the actions that have to be taken to address the issue as well as the measures that are in place to monitor their effectiveness. This will include performance of safety oversight tasks by operations inspectors according to the programme and activities on the implementation of SMS by operators to identify the hazards and perform risk management. Indicators of severity, such as, duration of the TCAS/ACAS RA, pressure altitude difference with the selected altitude, are to be established. High vertical speed values and high speed values can indicate that the aircraft trajectory is not fully under control or a loss of situation awareness (CFIT). It could also increase the risk of a mid-air collision. It is planned in the beginning of 2014 to establish an agreement between the NAA and several aircraft operators to produce FDM data summaries in a standardised manner (for example, using a common template), aggregation into statistics will be possible, for the benefits of participating operators and of the SSP.	Planned
Lithuania (LI)	All information concerning minimum separation infringement and. 1 occurrence took place during the last 5 years. Risk level - A4. The main factors: (a) decision taken by pilot (to significantly increase vertical speed) without informing the ATCO; (b) low level reaction to the TCAS RA by the ATCO; (c) uneffective decision taken by ATCO to reduce the risk. The preventive action taken: dissimination of lessons learned, improvement of the ATCOs training programme. Effectiveness of the implemented preventive actions were verified by the CAA during annual ongoing oversight activities.	Planned
Luxemburg (LU)	An improvement after establishment of a TMZ in the most affected area has been confirmed by a decrease in the number and severity of occurrences.	Partially implemented
Malta (ML)	ANS: We experienced loss of separations in the last 5 years. This is all statistically recorded. In the last year all loss of separations were subjected to a RAT tool exercise. All investigations are available and the feedback process of the ANSP is completely tracked and controlled by a dedicated form. Flight ops: 11 TCAS RA incidents occurred in the last five years. As previously stated, all incidents were individually discussed with the operator involved. A formal group meeting shall be established within the Authority to discuss the relevant incidents and evaluate the risk involved.	Planned
The Netherlans (NL)	MAC is a risk in the Netherlands to. The airspace is adapted to prevent MAC en AI.	Partially implemented
Portugal (PO)	All precursors are being measured.	Partially implemented
Spain (SP)	In Spain we have identified two areas of major concern or two safety risk areas that precedes a MAC in our Safety Plan: TCAS RA alerts and airspace infringement events. 1.- TCAS RA issue has been analysed in ad-hoc Spanish TMA group (formed by AENA -Air Navigation- and AESA): • In the case of TCAS RA produced by an aircraft in evolution without loss of separation, the causes were identified. Mitigation measures: 1) ATC staff awareness by AENA Air Navigation; 2) a recommendation to air operators to reduce vertical speed (ROD/ROA) during ascent or descent phase before reaching flight level; and 3) AESA is also considering making the latter mandatory in the busiest TMAs such as LEMD TMA. • For the rest of TCAS RA, we identified the points/procedures in which they took place. The mitigation measures were: 1) ATC staff awareness by AENA Air Navigation; 2) Modification of LEMD missed approach procedures; and 3) we are also studying to improve South Configuration instrument approach procedures to LEMD RWY's 18 L/R. 2.- Airspace Infringement. AESA analysed AI in depth using the reported occurrences in our Spanish MORS during 2008-2012 period. The main conclusions are: • There were 472 AI in Spanish territory during 2008-2012. 51 were serious and major incidents. Therefore, 11% of AI occurrences were high severity occurrences. • Mitigation measures: take into account European Action Plan for Airspace Infringement Risk Reduction's recommendations. Regarding the other measures: • Loss of communication events. AESA analysed communication failures using occurrences registered in our Spanish MORS during 2008-2012 period: There were 771 communication failures. 1 was serious and 20 were major incidents. Therefore, 3% of communication failures were high severity. • Level busts events. AESA analysed level busts events using occurrences registered in our Spanish MORS during 2008-2012 period. We have distinguished between level bust lower or higher than 300 ft. In case of level busts higher than 300ft, there were 104 occurrences, 1 was a serious and 11 were major incidents, therefore 11% of level bust were high severity. In case of level bust less than 300 ft., there were 255 occurrences, 4 were serious and 24 were major incidents, therefore 11% of level bust were high severity. The 3 main factors that contributed to a level bust were: pilot/ANS communications, operational issues and conflict detection/resolution. • Separation minima infringements/risk-bearing airprox. During 2008-2012 period, there were 530 SMIs. 29 SMIs were serious incidents, 148 were major incidents and 340 were significant incidents. Therefore, 33% of the SMI were high severity. The 3 main factors that contributed to SMI occurrences were: conflict detection/resolution, separation provision and wrong-altitude clearance. AESA plans to monitor TCAS RA alerts and airspace infringement each 6 months	Partially implemented
Sweden (SE)	There is an SPI for airspace infringements that is being followed by the Aviation Safety Analysis Forum at monthly meetings. There is also the national actions plan airspace (see above). Currently no dedicated measurements of precursors for airspace infringements are being performed.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 SMI: 357, 55 high risk The main contributing factors to SMI are: • Coordination between or within ATC facilities (missing, non-standard phraseology etc.): ca. (16%) • Deviation from clearances (incl. Level Bust, ROC/ROD/spd instructions): ca. (16%) • Communications between ATC and aircraft (readback/hearback, misunderstandings, non-standard phraseology…): ca. (8%) • Airspace Infringements: < 8% State level SPI have been identified and are being monitored (Rate of SMI Class A/B). VFR/IFR mixed traffic in various airspace category has been adressed specifically. Several actions were taken (awareness campaing, airspace structure, publication, ec.).	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
United Kingdom (UK)	The number of loss of separation occurrences in UK airspace has remained fairly consistent since March 2010. The method for monitoring correct and incorrect responses to Airborne Collision Avoidance Systems Resolution Advisories (ACAS RAs) has not yet been determined although work is ongoing to improve this data capture. There has not been a statistically significant reduction in the total number for ACAS RAs over the five year period 2008-2012. However, the number of level busts has significantly reduced over this five year period, and continues to reduce to less than 60% of those experienced in 2008. Work continues to focus on initiatives to ensure correct responses to ACAS warnings to reduce the risk of mid-air collisions. ACAS guidance material has been published to improve responses to RAs. Work is also underway on reducing AIRPROX in the Visual Circuit and in Class G Airspace. Key Performance Metric improvements will support measure of the reduction of collision risk. A new Airborne Conflict Action Group (ACAG) is acting as a coordinating body for the work being done to minimise airborne conflict for all types of air operations within and outside of UK airspace. The ACAG has been formed to identify current potential hazards, establish on-going activities to mitigate the hazards and to develop new initiatives where key hazards are not being adequately mitigated.	Partially implemented

Summary

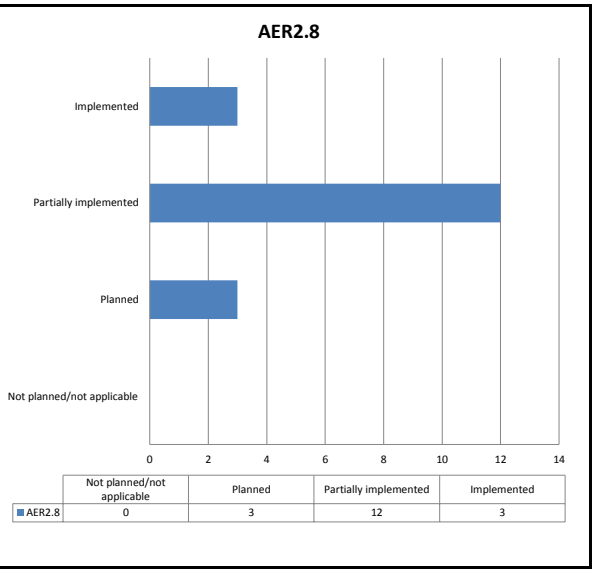
Most States reported several high-risk events in the past five years. One State (FR) reported that while high-risk en-route events are exceptional, some events have been reported around busy airports. One of the tools that they used to control the risk in these cases is to limit the maximum allowed traffic rate. Several States (FR, LT, SW) also follow-up the risk outside of controlled airspace due to the mixed VRF/IFR traffic

The majority of States are addressing MAC at national level. Some examples: 4 States (BU, IR, SP and IT) include specific actions in Safety Plans, 1 State (FI) in SSPs. The French ANSP has set up a specific action plan to prevent MAC. The use of ground based safety nets plays a key role in managing the risk (e.g. STCA, APW). Other States focus on specific contributing factors like prolonged loss of commjunication (BE) or an increase in the number of ATCOs (LT). One State (IC) encourages service providers to evaluate risk factors and then monitors compliance through oversight activities. In the UK a new Airborne Conflict Action Group (ACAG) is acting as a coordinating body for the work being done to minimise airborne conflict for all types of air operations within and outside of UK airspace. The ACAG has been formed to identify current potential hazards, establish on-going activities to mitigate the hazards and to develop new initiatives where key hazards are not being adequately mitigated.

3 States (LT, LI, ML) have plans to address the issue in the future.

State level SPI have been identified and are being monitored in the majority of States. One State (FI) has established safety performance indicators and targets for all aviation stakeholders involved. The achievement of this targets is monitored during the oversight process.

Among the occurrences being monitored by States due to the potential to lead to a MAC are:
- Coordination between or within ATC facilities (missing, non-standard phraseology etc.)
- Deviation from clearances (incl. Level Bust, ROC/ROD/spd instructions, lateral deviations)
- Communications between ATC and aircraft (readback/hearback, misunderstandings, non-standard phraseology, loss of communication)
- Airspace Infringements
- ACAS RAs: all genuine RAs and proportion involving incorrect pilot response
- Separation minima infringements/risk-bearing airprox
- ATCO human errors



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
3. Controlled Flight Into Terrain (CFIT)						
AER3.4	Include CFIT in national SSPs.	Controlled flight into terrain shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication

Guidance	One of the operational scenarios that preceeds a CFIT is a loss of separation with terrain, water or obstacles (e.g. scenarios in which the Ground Proximity Warning System alert is triggered). Has your State been exposed to this type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working? Examples of measures: • (E)GPWS warnings (by mode and whether genuine, nuisance or false). • Unstable/de-stabilised approaches: all and proportion that continue to landing. • Significant deviation below glideslope events. • Gross position error events. • Deviation below minimum safety altitude events/MSAW alerts. Based on specific actions being undertaken: • Proportion of relevant fleet approved for APV-type approaches • Proportion of approaches flown by operators, which have some form of vertical guidance. Are you measuring any of the above? Have you implemented other measures related to CFIT?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The Belgian CAA is measuring the main factors contributing to CFIT but has not yet implemented specific measures. Reported Occurrences: • (E)GPWS warnings genuine 2010:92, 2011:91, 2012:62 • (E)GPWS warnings nuisance 2010:14, 2011:11, 2012:18 • Unstable/de-stabilised approaches: all 2010:42, 2011:71, 2012:52 and proportion that continue to landing. 2010:13, 2011:41, 2012:26 None of these events were considered high-risk events.	Planned
Bulgaria (BU)	Potential consequences of a CFIT are serious. Prevention and mitigation of these events is a part of continuous oversight activities. European Action Plan for the Prevention of CFIT being adopted and implemented.	Partially implemented
Croatia (CR)	CCAA is measuring CFIT since 2012. Until June 2013 we had 30 occurrences related to CFIT. We did not consider any of these events high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According to Croatian SSP hazardous conditions are:- Fatigue and disorientation pilots;- Misunderstanding in communication with the controller;- The impact of weather conditions (eg. rain, turbulence or icing)- Unclear approach procedures;- ICAO Aerodrome Obstacle Charts type "B" and the Aerodrome Terrain and Obstacle Chart not published;- Unstabilized approach, etc. No operators approved for APV- type approaches.	Partially implemented
Finland (FI)	There has been some cases where the separation between an aircraft and an obstacle has been lost. One high risk event occurred only last year, where a foreign commercial operator descended very significantly below glideslope. Main factors in this case were problems and misunderstandings in the pilot's actions. Among others, CFIT and losses of separation are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. The achievement of these targets is monitored during the oversight process. Relating to CFIT, Finland also monitors the number of GPWS warnings, unstable approaches, navigation errors, incorrect pressure settings and reported errors in aviation charts as safety performance indicators.	Implemented
France (FR)	Numerous report on precursors of CFIT are made available to DGAC (order of magnitude 2 GPWS warning each week and 4 MSAW alerts each week). However the risk involved is often very low since VMC conditions were present. CFIT is addressed through the non stabilised approach action plan launched since 2006. The non stabilised approach is still considered at the highest level in the French SSP portfolio. Local indicators for GPWS alerts (airlines) and MSAW alerts (ANSP) are used but no national SPI is anticipated in 2013. See answer to issue SYS3.11 for discussion on the use of FDM data at SSP level. Thus only tier 3 SPI are available on this matter. It appears that the ultimate way to minimize non stabilised approaches is to work on the flight conditions when approachinf the Final approach point. This leads DGAC to develop an action plan to monitor and control so called ANC ("non-compliant approach"), see EAPPRE pages 37-38 (appendix C). The ANC action plan is also a tool to minimize RE and LOC-I events.	Partially implemented
Iceland (IC)	ICAA has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. ALAR is addressing CFIT, LOC, landing overrun, Runway excursion and Unstablised approach etc. As the most common types of Approach and landing Accidents.	Implemented
Ireland (IR)	The IAA State Safety Plan 2013-2016 action item FOD.003 addresses CFIT. The IAA occurrence reporting database shows that 50 reports of CFIT event have been reported in the past three years. 17 of these events were categorised as high risk (ie ARMS Score >10). The main causal factor for these events were EGPWS warnings (Sink Rate or Terrain warnings), with a small number of large G/S deviations (in blustery conditions). Ongoing work includes the further development of precursor identifiers in the risk assessment process to facilitate better safety analysis of the causal factors for CFIT events. The IAA plan to introduce APV approaches for all current NPA approaches in the next few years. Most of the large transport fleet in Ireland are APV capable although formal approval for APV approaches is not yet completed for all main operators. The IAA currently does not have data on the ratio of APV approaches flown by Irish operators.	Partially implemented
Italy (IT)	CFIT is included in ENAC Safety Plan 2012-2015 as action TOP 1.3.1. The safety action is to determine national CFIT indicators and a measuring plan. The report is completed and should be published in a short time.	Implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Latvia (LT)	Currently, both general aviation CFIT events (2004-2012 august) have occured in uncontrolled Class G airspace. Guidance on development of safety improvement action plan APP 3.1, from 13.07.2012, was developed to manage safety in flight operations area. During the implementation of the safety oversight programme operations inspectors were guided on the consideration the risk factors such as: - Fatigue and disorientation. - Misunderstanding in communication with controllers. - Weather related (e.g. rain, turbulence or icing). - Unclear approach procedures. Operators have been asked to perform appropriate activities to identify the existing defences to control safety risks and further actions to reduce safety risks. Indicators relevant for the prevention of Loss of Control in Flight and indicators of the severity are to be established. Such as weather conditions (OAT, Wind speed and direction, visibility), UTC time, clearance (visual approach or IFR) should be included in FDM data summaries on a regular basis, to provide information for further identification of potentially safety trends.	Planned
Lithuania (LI)	The State did not expose these type of scenarios in the past 5 years.	Planned
Luxemburg (LU)	CFIT is not a significant concern by number and severity of occurrences.	Planned
Malta (ML)	NIL Incidents	Not applicable
The Netherlans (NL)	CFIT is not an indicated risks in the Netherlands. There have been accidents and events, mainly related to general aviation. GA will be addressed.	Planned
Portugal (PO)		Planned
Spain (SP)	CFIT has not been identified as a major concern in Spain, however in order to be aligned with EASp, we have included CFIT in Spain's risk portfolio or in Spanish Safety Plan. AESA has analysed the CFIT occurrences in Spanish territory that are registered in our Spanish MORS during 2009-2012 period. The main conclusions of this analysis are: • There are 12 CFITs in Spain territory in 2009-2012 period. 9 are accidents, 1 is serious incident and 1 is major incident. • In 8 CFITs, the MTOW < 2.250 Kg • In 2 CFITs, the 2.250 kg < MTOW < 5.700 Kg. • In 1 CFITs, the 5.700Kg < MTOW < 27.000 Kg • In 1 CFITs, the 27.000 kg < MTOW Has your State been exposed to this type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working? In addition to that, we have measured the next CFIT-related occurrences: • (E)GPWS warnings (by mode and whether genuine, nuisance or false). The reported ground proximity occurrences are: 57 in 2009, 202 in 2010, 234 in 2011, 264 in 2012 and 211 in 2013 (6 months period) • Unstable/de-stabilised approaches: all and proportion that continue to landing. Please see previous answer. • Regarding the deviation from flight path, the reported occurrences are: 8 in 2009, 16 in 2010, 9 in 2011, 12 in 2012 and 4 in 2013 (6 months period). AESA plans to monitor CFIT each 6 months	Partially implemented
Sweden (SE)	No special activities regarding this has taken place. However a session of the AOC NPH-meeting will be held where the accident investigator for a recent military CFIT accident will give information.	Planned
Switzerland (SW)	Occurrences: 2009-2013 Collision with terrain: 11, 10 high risk Near Collsion: 13, 4 high risk	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
United Kingdom (UK)	Safety improvement activities to mitigate the risk of CFIT will focus on the following areas: • Risk associated to non-precision approaches. - examples of UK CAA actions to mitigate this are Global Navigation Satellite System (GNSS) approaches or overlay procedures. • Loss of situational awareness. - examples of UK CAA actions to mitigate this are minimum safe altitude (MSA) minimum safe altitude awareness campaign • Mis-setting of altimeters. - examples of UK CAA actions to mitigate this are awareness campaigns and the NATS BAT tool (Barometric Altimeter Tool). Latest Standards of Enhanced Ground Proximity Warning System (EGPWS) and Standard Operating Procedures (SOPs) to check QNH when radio altimeter alive. • Unstable approaches. - example of UK CAA actions to mitigate this are airline SOPs minimum stabilisation height (rate of decent, speed and configuration profile). CFIT mitigation actions will be tracked using the following key performance metrics: • Reported EGPWS alerts. • Unstable/de-stabilised approaches. • Significant deviation below glide slope events. • Gross position error events. • Deviation below minimum safety altitude events. • Proportion of UK aircraft operators to have implemented and actively monitored CFIT precursor measures. • Number of APV-type approaches published in the UK Aeronautical Information Publication (AIP) compared with traditional NPAs. • Number of APV-type approaches at EU and third-country aerodromes, which are UK operator destinations. • Proportion of relevant UK fleet approved for APV-type approaches. • Proportion of approaches flown by UK operators, which have some form of vertical guidance.	Partially implemented

Summary

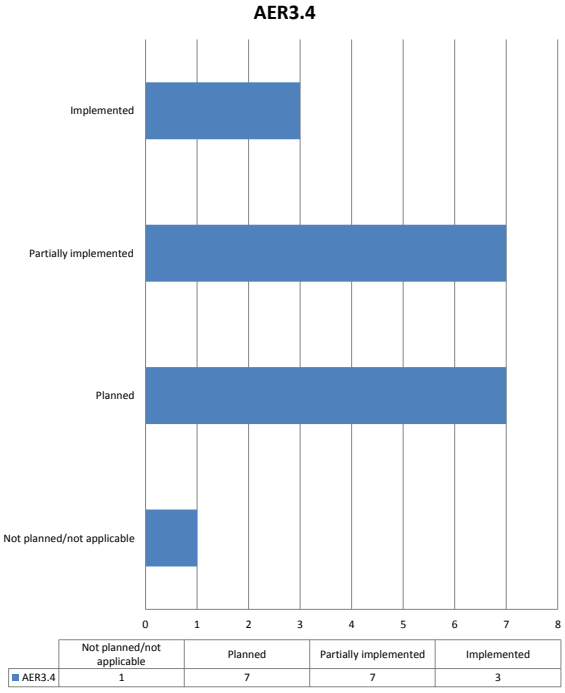
Many States reported that the precursor events monitored in the last 5 years were not considered high-risk events. However, one State (FI) reported that one high risk event occurred only last year, where a foreign commercial operator descended very significantly below glideslope. Main factors in this case were problems and misunderstandings in the pilot's actions. One State (IR) reported that 17 of these events were considered high-risk in the past 3 years. One State (SW) reported 10 high-risk collisions with terrain and 4 high-risk near collision events. One State (FR) reported an order of magnitude of 2 GPWS warning each week and 4 MSAW alerts each week, most of them in VMC conditions.

11 States are taking mesasures to address CFIT at national level. 3 States (IR, SP, UK and IT) identify these in Safety Plans, 2 States (FI and FR) in SSPs. 2 States (BE, CR) are measuring precursors and establishing mitigating measures on a case-by-case basis. Two States (BU, LT) mitigate the risk through oversight activities. One State (IC) has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. ALAR is addressing CFIT, LOC, landing overrun, Runway excursion and Unstablised approach as the most common types of Approach and landing Accidents.

In the majority of cases States have established safety performance indicators. One State (FI) has also established targets for all aviation stakeholders The achievement of this targets is monitored during the oversight process.
As a means to mitigate the risk APV approaches are being introduced in one State (IR). One State (FR) suggests to work on the flight conditions when reaching the final approach point in order to minimise non stabilised approaches. This has lead them to develop an action plan to monitor and control "non-compliant approaches" [see EAPPRE pages 37-38 (appendix C)].

5 States (LT, LI, LU, ML, NL) have reported no exposure to these type of scenarios in the past five years.

Among the occurrences being monitored by States due to the potential to lead to a CFIT are:
- Fatigue and disorientation of pilots;
- Misunderstanding in communication with the controller;
- Weather conditions (eg. rain, turbulence or icing)
- Unclear approach procedures;
- Reported errors in aviation charts (e.g. ICAO Aerodrome Obstacle Charts type "B" and Aerodrome Terrain and Obstacle Chart not published)
- Unstabilised approach
- Navigation errors
- GPWS warnings (Operators - Sink Rate or Terrain warnings)
- MSAW alerts (ANSP)
- Incorrect pressure settings/Mis-setting of altimeters.
- Large G/S deviations
- Risk factors associated to non-precision approaches
- Loss of situational awareness



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
4. Loss of Control In Flight (LOC-I)						
AER4.6	Include LOC-I in national SSPs.	Loss of control in flight shall be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ Cont.	SP	SSP Publication

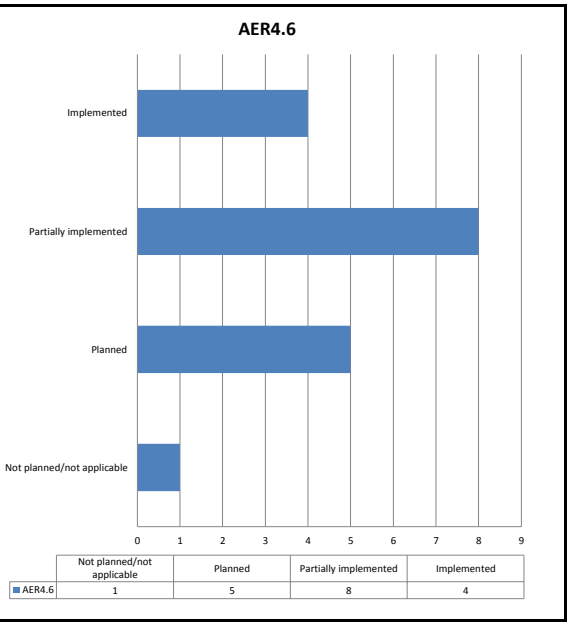
Guidance	
	Some of the operational scenarios that preceed a LOC-I are deviations from the flight path, unusual aircraft attitudes (e.g. stall, angle of attack/speed outside limits). Has your State been exposed to this type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working? Examples of measures: • Loss of control events (e.g. number of occurrence reports). • Stick-shake and alpha floor events. • Take-off configuration warnings. • Low speed during approach events. • Low speed during cruise events. • Number of occurrence reports related to loading events. Are you measuring any of the above? Have you implemented other measures related to LOC-I?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The BCAA considers to take risk mitigation actions against unstablized approaches and to implement recommendations from the new European Action Plan for the prevention of Runway Excursions. These actions will be published in one of the future updates of the safety plan. Mechanisms to address corresponding actions are described in the BCAA Safety Policy and in a number of detailed risk management processes and procedures. Reported occurrences: • Deviations from the flight path 2010:8, 2011:15 2012:22 • Stall 2010:2, 2011:0, 2012:1 All of the stall events are considered high risk events. The Belgian CAA is measuring the main factors contributing to LOC-I. Implementation of other measures related to LOC-I are: • Annual investigation of the reliability of flight controls for commercial aircraft (among others improved de-icing an greasing procedures); • The prevention of collision with animals (bird and wildlife strikes).; • Mitigating measures against targetting of aircraft with laser.	Partially implemented
Bulgaria (BU)	LOC-I is in included in Bulgarian SSPlan 2012-2015. The risk was identified trought review of EASA/ECAST analysis and EASP. As part of mitigation actions Bulgarian CAA will perform detailed safety oversight analysis.	Partially implemented
Croatia (CR)	CCAA is measuring LOC since 2012. Until June 2013 we had 85 occurrences related to LOC. We did not consider any of these events high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According to Croatian SSP hazardous conditions are:- Dangerous weather conditions (icing, wind shear, turbulence, lightning strike, etc.) that can cause damage to the aircraft or loss / malfunction of any essential function;- Defective aircraft associated with the flight controls and operating groups- Mismanagement of automated aircraft (FCU, EFIS, ECAM etc.)- Deviations from the planned Flightpath, etc	Partially implemented
Finland (FI)	There has been ca 20 cases during the last five years relating to deviation from flight path. Two of these were classified as serious incidents and they both involved a foreign operator which descended below vertical flight path during approach. Main factors contributing were an unserviceable ILS system and flight crew errors. There has only been a few unusual aircraft attitude events in CAT, none of which were categorised as serious incidents. Among others, LOC-I events are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. The achievement of these targets is monitored during the oversight process. Relating to LOC-Is, Finland also measures level busts, TCAS Ras, Airspace infringements and separation minima events, laser interference, wake turbulence events, fire and smoke events in aircraft, de-icing and anti-icing flaws, ground handling errors, aircraft flight control system faults and airprox-cases as safety performance indicators.	Implemented
France (FR)	There are numerous reported events which are related to the examples given ; (order of magnitude : several low speed events every week, one alpha floor or stick shaker event every month). However, no aggregated safety indicator has been set up in this domain for the time being. Note that amongst LOC-I precursors which might be under-estimated there is the mismanagment of a go-around (several precursors available in France during the last five years, with scenarii comparable to the A330 accident in Tripoli) ; see also the french AIB study : http://www.bea.aero/etudes/parg/parg.php LOC-I is identified in the national Safety Plan as needing actions. Abnormal position of the aircraft (attitude, bank angle, configuration, speed...) is considered as the major undesirable event leading to LOC-I. The SSP action plan includes several items related to LOC-I, including the follow-up of AF447 accident and other incidents. Amongst these actions, DGAC has recently published a Safety information bulletin on this subject : http://www.developpement-durable.gouv.fr/IMG/pdf/IS2013_05_prevention_pertes_controle.pdf A leaflet related to stall recovery has also been produced http://www.developpement-durable.gouv.fr/IMG/pdf/de_crochage-livret-web.pdf These information material aimed specifically at French operators, give a greater emphasis to safety precautions and good practices that have discussed and agreed in international or European fora.	Partially implemented
Iceland (IC)	ICAA has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. ALAR is addressing CFIT, LOC, landing overrun, Runway excursion and Unstablised approach etc. As the most common types of Approach and landing Accidents. Currently alot of emphasis on high altitude, high speed stalls following AF 447. .	Implemented
Ireland (IR)	The IAA State Safety Plan 2013-2016 action item FOD.001 addresses LOC-I. The IAA has received reports of 450 LOC-I events over the past three years of which 19 events (ie ~4%) were classified as higher risk (ARMS >10). The vast majority of the reports concern momentary airspeed limitation exceedences typically in turbulent conditions. The small number of higher risk events typically related to speed exceedences to such an extent that stick shaker activation ensued. As part of mitigation actions IAA will perform detailed safety oversight analysis of mitigating measures adopted by each airline in Ireland. Ongoing work includes the further development of precursor identifiers in the risk assessment process to facilitate better safety analysis of the causal factors for LOC-I events. The IAA participates in EASA initiatives to improve understanding of LOC-I and possible mitigating actions and implement EASA endorsed initiatives, such as ICATEE revising and promoting upset recovery guidance material.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Italy (IT)	LOC-I has been included in ENAC Safety Plan 2012-2015 as action TOP 1.4.1. The action is: to determine national LOC-I indicators and a measuring plan. The LOC-I report is already completed and should be published by the end of 2013r.	Implemented
Latvia (LT)	In last 5 years - 4 events with stall warning triggered. Operators have been asked to perform appropriate activities to identify the existing defences to control safety risks and further actions to reduce safety risks. Excessive roll angle or roll rate, stall protection trigger, excessive speed or excessive vertical speed, insufficient energy at high altitude, low go-around /rejected landing, including indicators of severity should be specified in FDM summaries for further safety trends identification.	Implemented
Lithuania (LI)	The State did not expose these type of scenarios in the past 5 years.	Planned
Luxemburg (LU)	LOC-I is not a significant concern by number and severity of occurrences. Among potential causes, weight and balance issues have been identified as a risk.	Planned
Malta (ML)	NIL Incidents	Not applicable
The Netherlans (NL)	LOC-I is not an indicated risks in the Netherlands. There have been accidents and events, mainly related to general aviation. GA will be addressed.	Planned
Portugal (PO)		Planned
Spain (SP)	Spain is monitoring laser interference due to the increasing number of occurrence received.	Partially implemented
Sweden (SE)	The subject will be brought up at industry seminars during this year.	Planned
Switzerland (SW)	Yes - Switzerland has been exposed to operational scenarios that preceed a LOC-I in the past 5 years. Due to the low number of events, specific trends are difficult to identify. Single events are investigated by the responsible safety division within FOCA. Occurrences: 2009-2013 Deviation from altitude: 5, 1 high risk Deviation from approach: 20, 6 high risk Deviation flight level/altitude: 326, 26 high risk Stall:0 During inspections, focus was also set on emergency training and the related procedures (e.g. a/r training, night training). Amended authorisations for off airport landings, especially authorisation for landings above 1100 AMSL (off load of PAX in hover flight, dimensions of landing sites, clearence of obstacles).	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
United Kingdom (UK)	The UK CAA safety improvement activities to mitigate the risk of Loss of Control focuses on the following areas: • Training and assessment of pilot monitoring skills. • The understanding and appropriate use of aircraft automation. • Instructor and Examiner standardisation. • Maintenance and competence of manual flying skills. Loss of Control mitigation actions will be tracked using the following key performance metrics: • Loss of control events. • Stick-shake and alpha floor events. • Take-off configuration warning events. • Low speed during approach events. • Low speed during cruise events. • Proportion of UK aircraft operators to have implemented, embedded and actively monitored Loss of Control precursor measures. • Proportion of UK AOC holders to have implemented and firmly embedded within their recurrent training programs pilot monitoring skills training as detailed in CAA document 'Monitoring Matters'. • Proportion of pilots employed by UK AOC holders that have received initial and recurrent pilot monitoring skills training as detailed in CAA document 'Monitoring Matters'.	Partially implemented

Summary	Many States reported exposure to operational scenarios that preceed LOC-I in the past 5 years, some of them leading to high-risk events. One State (IR) reported that 19 out of 450 of these events were considered high-risk in the past 3 years. The vast majority of the reports concern momentary airspeed limitation exceedences typically in turbulent conditions. The small number of higher risk events typically related to speed exceedences to such an extent that stick shaker activation ensued. 12 States are taking measures to address LOC-I at national level. 4 States (BU, IR, UK and IT) identify these in Safety Plans, 2 States (FI and FR) in SSPs. One State (FR) includes several items related to LOC-I in the SSP including a leaflet related to stall recovery. 4 States (BE, CR, LT, SW, SP) are measuring precursors and establishing mitigating measures on a case-by-case basis. One State (IC) has been following and supporting the ALAR (Approcah and Landing Accidents Reduction) at the operators lever. ALAR is addresses CFIT, LOC, landing overrun, Runway excursion and Unstablised approach as the most common types of Approach and landing Accidents. In the majority of cases States have established safety performance indicators. One State (FI) has also established targets for all aviation stakeholders. The achievement of this targets is monitored during the oversight process. 4 States (LI, LU, ML, NL) have reported no significant exposure to these type of scenarios in the past years due to the low number of events registered Among the occurrences being monitored by States due to the potential to lead to a LOC-I are: - Unstabilised approaches - Laser interference - Wake turbulence events - Fire and smoke events in aircraft - De-icing and anti-icing flaws - Ground handling errors (e.g. weight and balance) - Aircraft flight control system faults - Mismanagment of a go-around - Abnormal state of the aircraft (attitude, bank angle, configuration, speed, etc) - Dangerous weather conditions (icing, wind shear, turbulence, lightning strike, etc.) that can cause damage to the aircraft or loss / malfunction of any essential function; - Mismanagement of automation (FCU, EFIS, ECAM etc.) - Deviations from the planned flight path, One State (LT) referred to the need for operators to develop FDM summaries to monitor the above.	

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
5. Ground Collision						
Runway Incursions						
AER5.1	Runway safety	MS should audit their aerodromes to ensure that a local runway safety team is in place and is effective. Member States will report on the progress and effectiveness.	MS	~~2012~~ **Cont.**	SP	Audit plan included in SSPs. Progress Report.

Guidance	
	Are local runway safety teams (LRST) set up at the certified airports in your State? Is their effectiveness being monitored as part of the safety oversight scheme of the CAA? If so, briefly describe how. Example of Measure: What is the proportion of certified aerodromes with a Local Runway Safety Team (LRST) that have been audited for success? Are you measuring the above? Good practices: - Oversight audits to require that LRSTs implement the actions of EAPRRI 2, - Require (some) non-certified aerodromes to also set up a LRST. States report on progress to Eurocontrol, within the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report.

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Local Runway Safety Teams are in place at the Belgian certified airports. The SMS audits performed by the BCAA verify their existance and effectiveness. The BCAA is an active member of those teams. All the 6 certified aerodromes with a LRST have been audited for success. Good practices:The BCAA Airports Department already organizes audits on the six certified aerodromes to check their compliance with the EAPPRI2 aerodrome operator recommendations.	Implemented
Bulgaria (BU)	LRST's are set up in certified airports. Oversight audits to require that LRST's implement the actons of EAPRRI 2.	Partially implemented
Croatia (CR)	Local runway safety teams are set up at certified airports in Croatia, and their are monitored through regular oversight audits.	Partially implemented
Finland (FI)	There is a named LRST at Helsinki-Vantaa airport, and other airports have a similar function established. CAA monitors the functioning of these teams as part of safety oversight and they have all been audited within the last two years.	Implemented
France (FR)	Completed in 2012 with the following status : A local safety team -including runway safety- is required for any certified airport. This point has already been audited in the framework of the initial certification of each airport. Its effectiveness is not formally monitored, but is examined through the oversight of the incident management process of the airport as well as of the ANSP. In addition, some non certified airports have set up a local safety team.	Implemented
Iceland (IC)	Runway safety team is already an item in ICAA'a main checklist for airport auditing. The runway safety team is active at BIKF and was established for BIRK, BIAR and BIEG few years ago but activity has been lower. Is being enforced.	Partially implemented
Ireland (IR)	Local Runway Safety teams have been set up at all certified airports in Ireland which come under the EASA certification applicability criteria, 10 in total. All the above 10 airports have been audited in relation to the operation of the LRST, i.e. 100%. Each airport is audited on a yearly basis, including the operation of the LRST, implementation of EAPRRI 2 and the effectiveness of the LRST including follow-up on any reported runway incursions and measures put in place to prevent re-occurrence.	Implemented
Italy (IT)	The establishment of Local Runway Safety teams is required by ENAC Circular APT-30. Measure of effectiveness of LRST is not yet part of the oversight activities.	Partially implemented
Latvia (LT)	SSP is not implemented yet. The LRST is set up at the IFR/VFR airport "Riga". Inspection plan includes verification whether the LRST is in place. Meetings are regular and are also attended by CAA.	Implemented
Lithuania (LI)	The LRST are established at all 4 certified aerodroms in Lithuania (International Airports). Their effectiveness is monitoring during inspections also during participation of the CAA's inspectors in the LRST meetings. There is one LRST of four which have been audited for success.	Planned

Implementation Reports		
State	**State's update**	**Status of the action**
Luxemburg (LU)	An LRST (GT-SAM) is set up at Luxembourg airport with DAC as a member. Auditing of the GT-SAM by DAC is not planned as it would be inconsistent with the current setup.	Implemented
Malta (ML)	Aerodromes: The airport operator has been advised to set up the Local Runway Safety Team according to the established terms of reference. Operator agreed and is in the process of setting up this group.	Planned
The Netherlans (NL)	RST Amsterdam Airport is completed. Reports have been submitted to ESSIP/LSSIP. In other airports the RST activities are addressed in the management system of the airport.	Implemented
Portugal (PO)		Planned
Spain (SP)	In Spain, local runway safety teams (LRST) were established at certified airports. Their effectiveness is being monitored via Spanish Annual Safety Oversight Plan and also via the trend of the occurrences related to runway safety (mainly runway incursions and runway excursions). Oversight audits require to implement the actions of EAPRRI version 2 and EAPPRE in airport domain. Moreover, non-private airports (including non-certificated airports) have to set up a Local Safety Team. These Local Safety Team includes the LSRT functions. States report on progress to Eurocontrol, within the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report.	Implemented
Sweden (SE)	Sweden has 48 certified instrument aerodromes. In every aerodrome a LRST are established. During the oversight of the aerodromes the implementation and effectiveness of the LRST are reviewed. During the review we check that all representatives from the three main groups associated with manoeuvring area operations (Aerodrome Operator, ANSP, aircraft operators/local pilot associations) are a part of the LRST. We also check the frequency of the meetings, the documentations and actions taken from the meetings.	Implemented
Switzerland (SW)	RST are established at certified airports and activities are monitored by the FOCA. - LRST are required for all certified aerodromes. Currently certified aerodromes include Zürich, Geneva, Lugano, Bern, Sion, St.Gallen-Altenrhein, Les Eplatures, Samedan. Aerodromes which are still in the certification process include Grenchen, Lausanne, Birrfeld, Bressaucourt, Ecuvillens. - FOCA is member of every LRST (observer role) in order to provide regulatory support and monitor effectiveness	Partially implemented
United Kingdom (UK)	The UK CAA has included a runway incursion awareness chapter to its Licensing of Aerodromes publication. This chapter provides information about EAPPRI 2 and recommends that airports form Local Runway Safety Teams. The Aerodrome Oversight Inspectors have visited all the larger UK aerodromes and observed how the recommendations have been implemented. The UK CAA does not believe that it can audit an LRST for success and so chooses to promote the recommendations during its oversight.	Implemented

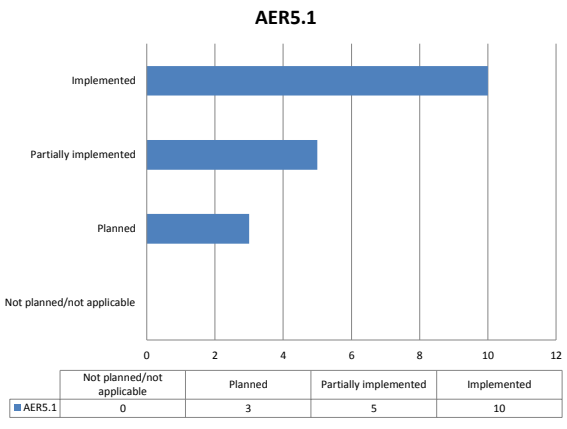
Summary

LRST have been set up at the certified aerodromes in 15 States (BE, BU, CR, FI, FR, IC, IR. LT, LI, LU, SP, SE, SW, NL, UK) . 11 States (BE, CR, FI, FR, IC, IR, LI, SP, SE, SW, UK) verify their effectiveness on a regular basis. One State (FR) does not formally monitor effectiveness, but examines it through the oversight of the incident management process of the airport as well as of the ANSP. One State (SP) monitors the effectiveness of LRST via Annual Safety Oversight Plan and also via the trend of the occurrences related to runway safety (mainly runway incursions and runway excursions). One State (SE) checks that all representatives from the three main groups associated with manoeuvring area operations (Aerodrome Operator, ANSP, aircraft operators/local pilot associations) are a part of the LRST,the frequency of the meetings, the documentations and actions taken from the meetings.

In various cases States are active members of LRST in order to provide regulatory support and monitor effectiveness.

In one State (IT) the establishment of LRST is a requirement. Measure of effectiveness is not yet part of oversight activities. In one State (ML) the aerodrome operator is in the process of setting up a LRST.

In 3 States (IR, SP, UK) oversight audits require that LRST's implement the actions of EAPRRI 2. This will be required in the future in BU.
In FR and SP some non-certified aerodromes have set up a local runway safety team.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
5. Ground Collision						
Runway Incursions						
AER5.2	Runway incursions.	MS should implement actions suggested by the European Action Plan for the Prevention of Runway Incursions.	MS	Per Plan	SP	SSP Publication

Guidance

The progress of your State against the European Action Plan for the Prevention of Runway Incursions (EAPPRI) is reported within the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report.

The latest available report includes the activities carried out in 2011. Please indicate whether any progress has been made towards the objective in 2012 and 2013 and what is the expected situation at the end of the year. Please report the completion status (Completed/Partially Completed/Planned/No Plan) in the Authority, ANSP, Airport Operator and the Military when applicable.

Example of Measure:
What is the proportion of certified aerodromes that have implemented recommendations from and/or audited themselves against EAPPRI2?

Are you measuring the above? Have you implemented other measures related to EAPPRI implementation?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The implementation of the EAPPRI has been introduced in the Belgian Safety Plan 2010-2014. One of the SPI's measures the proportion of EAPRRI recommendations implemented. In the course of September-October 2013 the BCAA will organize an EAPRRI meeting. The Belgian CAA will then have a complete overview of the EAPRRI recommendations already implemented. All EAPRRI airport related recommandations are already implemented and followed-up.	Partially implemented
Bulgaria (BU)	Runway incursions is one of the risk areas. According to the LSSPI, monitoring of the implementatin of these actions are part of continuous oversight process.	Partially implemented
Croatia (CR)	In accordance with Croatian SSP activities related to the imlementation of recommendation of EAPPRI will start by the end of this year.	Planned
Finland (FI)	According to the LSSIP, Finland has implented all the requirements in EAPPRI by the regulator and ANSP in 12/2011. Monitoring of the implementation of these actions are part of continuous oversight process. The "example of measure" mentioned is not specifically measured.	Implemented
France (FR)	The Runway Incursion part of the SSP safety action plan has been established in the framework of EAPPRI (including its second version). The status of the implementation within authorities, ANSP abd Military is found in the 2012 french LSSIP (partially completed). As far as aircraft operators and airports are concerned, the way the EAPPRI plan is managed is assessed during SMS audits.	Partially implemented
Iceland (IC)	Work on this started few years ago and continued for airport operators and ANSP. Main actions are planned to be specified by end of year 2012 using the European Action Plan for the Prevention of RWY safety as a reference. The SMS is the key together with safety teams.	Partially implemented
Ireland (IR)	The IAA has implemented seven of the nine recommendations for regulators included in Section 1.7 of the EAPPRI A detailed report on the effective implementation of the EAPPRI2 is being completed by the IAA in 2013 in conjunction with the review of the effectiveness of the Runway Safety Teams.	Partially implemented
Italy (IT)	RI are included in ENAC Safety Plan 2012-2015 (see action TOP 1.5.2). See LSSIP (Italy 2012) for progress made.	Implemented
Latvia (LT)	SSP is not implemented yet. 3 main factors that contributed to the risk were: - Loss of communication and runway incursions - Aerodrome Control Phraseologies-READ-BACK - Familiarisation with the airport is not adequate SOPs should include appropriate procedures that clearly specify the crew working technology on the ground, such as, familiarisation with the airport, briefing, taxiing – navigating on the ground, communication, crossing or entering a runway. SOPs should be supported by the sterile cockpit for safety concept (the taxi phase should be treated as a "critical phase of flight"). Operator's safety manager facilitates hazard identification, risk analysis and management. LV CAA conducts organisation risk profile review and proposes improvement actions.	Planned
Lithuania (LI)	A-SMGCS level 2 (SMR and MLAT) is installed at EYVI - VILNIUS/International and approved by the CAA. The EAPPRI2 is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435 Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.:įsakymas, planas, No. 18. The appropriate detailed CAA action plan for Prevention of Runway Incursions will be issued in November 2013. We intend to start to measure the effectiveness of implemented actions from 2014.	Planned

Implementation Reports		
State	**State's update**	**Status of the action**
Luxemburg (LU)	Preventive actions at Luxembourg airport: - some safety recommendations applicable for runway incursion prevention are being implemented, most notably a single frequency for aircraft and vehicles on the runway - access permits for runway and taxiway are only issued after safety training - driving permit will be changed to a "penaltypoints" system with more training	Partially implemented
Malta (ML)	Flight Ops: This process is in the planning stage. Aerodromes: The airport operator has been advised to set up the Local Runway Safety Team according to the established terms of reference. Operator agreed and is in the process of setting up this group.	Planned
The Netherlans (NL)	EAPPRI Amsterdam Airport is completed. Reports have been submitted to ESSIP/LSSIP. In other airports the EAPPRI activities are addressed in the management system of the airport.	Implemented
Portugal (PO)		Planned
Spain (SP)	Spain is implementing the European Action Plan for the Prevention of Runway Incursions. The EAPPRI recommendations will be promoted via safety oversight inspections and dedicated working groups. For details about the progress of Spain against the European Action Plan for the Prevention of Runway Incursions (EAPPRI), please take a look at the reported progress within the European/Local Single Sky Implementation (ESSIP/LSSIP) process at the following website http://www.eurocontrol.int/articles/essip-report. Regarding the proportion of certified aerodromes that have implemented EAPPRI2 recommendations, as mentioned before, in airport domain, AESA decided to require airports to comply with EAPPRI and EAPPRE recommendations.	Partially implemented
Sweden (SE)	The Swedish Transport Agency has published a national action plan, based on EAPPRI, with recommendations to Aerodrome Operator, Air Navigation Service Provider, Aircraft Operator and National Authority. During the oversight shall the actions taken by the different actors been reviewed.	Implemented
Switzerland (SW)	The majority of recommendations in relation to the Authority, are currenty part of the surveillance of the aerodrome certification process. Currently have RST at Zurich, Genf, Lugano, Altenrhein, Sion, Bern, Grenchen and Samedan. Project SARPS (Compliance Management for Standards and Recommend Practices) is carried out by certified aerodromes - Based on FOCA initiative the implementation of EAPPRE recommendations is discussed in every local Runway Safety Team for all addressed domains - All EAPPRI 2.0 recommendations to regulators have been addressed by FOCA (all items completed)	Partially implemented
United Kingdom (UK)	The UK CAA continues to monitor runway incursion prevention techniques during its oversight of aerodromes. Inspectors assess the measures applied by the aerodrome and suggest best practise where necessary.	Implemented

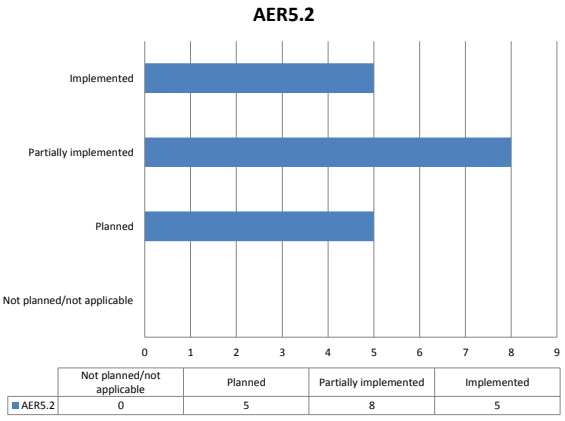
Summary

12 States (BE, BU, FI, FR, IC, IT, LI, SP, SE, SW, NL, UK) reported to be inmplementing the recommendations of EAPPRI in order to mitigate the risk of RI. In various States EAPPRI implementation is part of the Safety Plan (BU, IT, LI) or SSP (FR). One State (SE) has published a national action plan based on EAPPRI. In one State (CR) implementation of EAPPRI is planned to start in the future.

7 States (BE, BU, FI, FR, SP, SE, SW) reported to be following-up the implementation of the EAPPRI recommendations on a regular basis through oversight activities. One State (LI) will start in the future.

In one States (BE) a dedicated SPI to measure the level of EAPPRI implementation has been created.

In various cases all certified airports are required to implemente EAPPRI and EAPPRE recommendations. LRST play a key roles in discussing and facilitating implementation.



ESSIP Report 2012

AOP03 Improve runway safety by preventing runway incursions

The overall implementation status at European level reflects the stagnated implementation of European Action Plan for the Prevention of Runway Incursions (EAPPRI) in 2012. Although majority of States report that this objective will be implemented on time, there is a reasonable doubt that this will be achieved as planned (3 States have already reported delays in theimplementation and additional 6 still report "planned" although there is less then a year until objective reaches its FOC date).

The overall assessment of progress shows that around 30 % of States have implemented the provisions of the Action Plan at their national airports (FI, TR, AT, AZ, SE, PL, BG, DE, CY, IE, MT, DK, EE). Almost 40% of the States have reported the "partially completed" status (CH, HR, ES, FR, AL, LT, LU, LV, CZ, BE, GE, GR, IT, NL, NO, RO, PT, UK, SK). This is because all these States have implemented some of the parts of the Action Plan. Some of the States have even reported "partially completed" status although they have implemented all recommendations appropriate to their local operating environment (e.g. CH). In these cases the objective could have been considered as "completed". Only three (3) States havereported "late" implementation (ME, HU, RS).
Comparing to last years, there is a marginal progress in implementation comparing to 2011. However, it should be taken into account that the new version of European
Action Plan for the Prevention of Runway Incursions (EAPPRI 2.0) came out in 2011 adding significant number of recommendations to already existing Action Plan. This is the main
reason that implementation was hampered and progresses slowly.

Link: http://www.eurocontrol.int/sites/default/files/content/documents/official-documents/reports/essip-report-2012.pdf

No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
5. Ground Collision						
Runway Incursions						
AER5.4	Include RI in national SSPs.	Runway incursions should be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication

Guidance	
	Have there been any runway incursions in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working? Example of measure: • Runway incursions at State aerodromes or involving State operators broken down by severity grade. Are you measuring the above? Have you implemented other measures related to RI?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Reported Occurrences: RI 2010:29 of which 8 with high risk RI 2011:21 of which 4 with high risk RI 2012:19 of which 3 with high risk The main factors that contributed to the risk are deviation from ATC clearance and miscommunication with ATC. Mechanisms to address corresponding actions are described in the BCAA Safety Policy and in a number of detailed risk management processes and procedures.	Partially implemented
Bulgaria (BU)	Runway Incursions is included in the Bulgarian State Safety Plan 2012 - 2015. Potential consequences of a RI are serious. Prevention and mitigation of these events is a part of continuous oversight process.	Partially implemented
Croatia (CR)	CCAA is measuring RI since 2012. Until June 2013 we had 11 occurrences related to RI. We did not consider any of these events high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According Croatian SSP hazardous conditions are: - Weather conditions; - Design of airports; - ATC phraseology and phraseology of the crew; - More places to enter the runway; - (Wild) animals on the runway etc.	Planned
Finland (FI)	There has been well over 300 runway incursions during the last five years. 13 have been categorised as serious incidents. Contributing factors have been ATCO human errors, pilot's misunderstanding between a taxi clearance a take-off clearance and poor flight preparation. Among others,runway incursions are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. In 2013 Trafi sent a letter to all holders of any Finnish aviation license (including ATCOs, UPL, GPL as well as PPL, CPL, ATPL etc), which highlighted the severity of potential consequences of runway incursions to draw the attention of aviation community into this issue. So far during 2013 the number of runway incursions has decreased compared to 2012.	Implemented
France (FR)	There are numerous incursions reported each year (about 150 involving aircraft, 40 involving vehicles and 20 involving persons). RI risk is monitored and controlled by the French ANSP or by AFIS providers at non controlled airports. Each runway incursion is analysed, classified and leads to actions if needed. Although aggregated national statistics are published in the annual DGAC safety report, it is considered that relevant conclusions are only possible in checking the data airport by airport. Runway incursions appear within the SSP risk-portfolio as requiring actions at the national level. A DGAC safety symposium on this matter has been organised in 2007; see http://www.developpement-durable.gouv.fr/Securite-les-incursions-sur-piste.html Local runway safety teams are in place at every significant airport.	Implemented
Iceland (IC)	See item AER5.2 / Addressed as relevant in the SSP.	Partially implemented
Ireland (IR)	The IAA State Safety Plan Action Item M.007 addresses Runway Incursions. The IAA Annual Safety Review for 2012 shows that 112 runway incursions were reported in the period 2009 to 2012. 40 of these occurrences (~36%) were considered higher risk (ESARR 2 Severity Level A to C) although thankfully the annual trend for higher risk events during this period is downwards. The main causal factors noted were stopbar/holding point violations, taxi clearance confusion and go around on landing due to occupied runways. In addition to the measures adopted by the Runnway Safety Team (ref AER 5.1 and AER 5.2 above) the IAA has established a Runway Incursions Action Group to analyse the occurrence reports of RI and quickly identify any immediate or local safety trends and to follow up with necessary mitigation measures.	Implemented
Italy (IT)	See AER5.2	Implemented
Latvia (LT)	SSP is not implemented yet. In the last 5 years - 14 runway incursions. Annual safety review is published outlining significant safety concerns. Since all of the airports in Latvia (IFR/VFR and VFR), have each one runway, the risk of runway incursions is not high. Currently, one case was reported in 2008 during airport "Riga" runway extension construction, and one case reported in 2012 related to aerodrome security perimeter breach. Planned airport reconstruction activities are very closely coordinated between the airport and the ANSP, including development of the colaborative safety case for reconstruction activities during varios stages at airport "Riga". The safety assessment also covers the risk mitigation for RI. Guidance on development of safety improvement action plan APP 3.1, from 13.07.2012, was developed to manage safety in flight operations area. Aircraft Operators are invited to review the materials put in the EAPPRI, and where necessary, amend their Standard Operating Procedures with regard to ground operations. The oversight activities of LV CAA are to be incorporated in LV CAA plan for actions actively supporting and promoting the EAPPRI activities. LV CAA should ensure that to the issue on RI is given a continuous priority in its oversight activities wherever possible by: - Conducting a gap analysis to ensure that all recommendations are implemented where possible; - Ensuring that runway safety and the prevention of runway incursions are addressed in regular safety audits; - Ensuring that the recommendations arising from the audits are implemented wherever possible.	Planned

Implementation Reports		
State	**State's update**	**Status of the action**
Lithuania (LI)	1 RI took place during the past 5 years. The military aircraft had crossed the STOP line and fully stopped. Another aircraft which was on final was directed by the ATC to go around as the military aircraft was standing too close to the RWY. The level of risk C3 according the ESARR 2. The main factor which contributed to the risk was the misscommunication between the flight crew and the ATC. The preventive action taken: dissimination of lessons learned, improvement of the ATCOs training programme, installation of SMR (implementation of the A-SMGCS). Effectivenes of the implemented preventive actions were verified by the CAA during the annual ongoing oversight activities.	Planned
Luxemburg (LU)	12 safety recommendations have been issued in Dec. 2012 with the final investigation report re. A serious incident, 21.1.2010, aircraft landed on a vehicle in LVP. The recommendations are being reviewed and/or implemented.	Partially implemented
Malta (ML)	ANS: From an ANSP point of view the same investigative process applied to losses of separation is being applied. This process is the same as declared in no 26. Flight Ops: 10 Runway incursions were made by Aircraft during the last five years. Only 2 required intervention from other aircraft (go-around). As previously advised, the operators involved were contacted on individual basis. Aerodromes: Runway incursions have been relatively few and mostly involved light aircraft. The Aerodrome Operator has always investigated and applied mitigating actions where necessary. The airport operator has been advised to set up the Local Runway Safety Team according to the established terms of reference. Operator agreed and is in the process of setting up this group.	Partially implemented
The Netherlans (NL)	All EAPPRI activities have been taken care of.	Implemented
Portugal (PO)	We are measuring the number of RI	Partially implemented
Spain (SP)	RI has been identified as a major concern in Spain, therefore we have included RI in Spain's risk portfolio or in Spanish Aviation Safety Plan. AESA analysed in depth this issue by means of the occurrences registered in our Spanish MORS during 2010-2012 period. The main conclusions are: • There were 457 RI in Spanish territory during 2010-2012. There were 7 serious incidents, 44 major incidents and 368 significant incidents. Therefore, 11% of RI occurrences were high severity. • AESA analysis includes the number and rate of runway incursions at Spanish aerodromes and also the number and rate of runway incursions involving Spanish and foreign operators. • The main factors that contribute to RI were: ATC clearance infringement (80%), ATC procedures (30%) and pilots read back (20%). • Mitigation measures: follow European Action Plan for the Prevention of Runway Incursions' recommendations. We know if EAPPRI's recommendations are being implemented by means of airports on-site inspections. Regarding recommendations efectiveness, we analyse RI trends. AESA plans to monitor RI each 6 months	Partially implemented
Sweden (SE)	Runway incursions are currently measured with a specific SPI and is followed up by the Aviation Safety Analysis Forum at monthly meetings.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 RI: 64, 11 high risk - main reason clearance not followed or obtained A national level SPI has been identified for RI and is being monitored (Rate of RWY Incursions Class A/B/C).	Partially implemented
United Kingdom (UK)	Runway incursions have occurred in the UK during the past 5 years. Mandatory Occurrence Reports for these events are investigated by the UK CAA to identify trends and to decide whether national action is necessary. The UK CAA has formed a Runway Incursion Steering Group which is made up of representatives from airports, airlines safety organisations and the UK CAA. This group meets twice a year to discuss runway incursion and to develop ways to reduce its risk. A sub group meets regularly to assess runway incursions by severity and grade. Activities for the group this year have included the standardisation of UK runway radio phraseology with ICAO, the development of leading and lagging indicators to assess the runway incursion prevention measures at aerodromes and the promotion of new technology trials. The work of the group is ongoing and new priorities will be developed in the years ahead.	Partially implemented

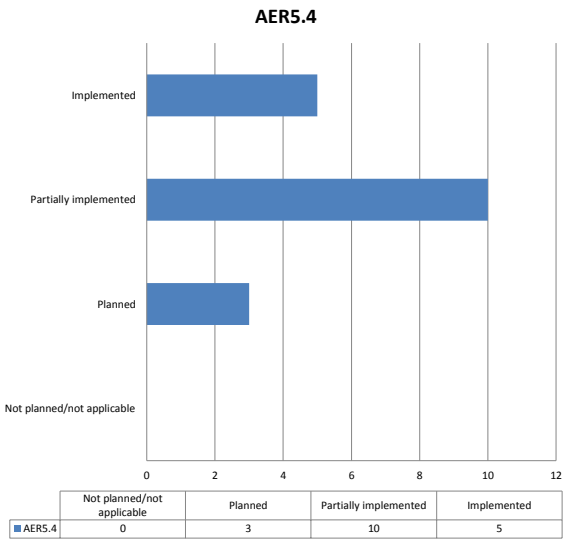
Summary

Many States reported exposure to RI in the past 5 years, including several high-risk events. One State (FI) reported that there has been well over 300 runway incursions during the last five years. 13 have been categorised as serious incidents. One State (FR) reported that there are numerous incursions reported each year (about 150 involving aircraft, 40 involving vehicles and 20 involving persons). One State (SP) reported that there were 457 RI in Spanish territory during 2010-2012, which translated into 7 serious incidents, 44 major incidents and 368 significant incidents. Therefore, 11% of RI occurrences were high severity in SP.

13 States are taking mesasures to address RI at national level. 5 States (BU, IR, SP, IT and SW) identify these in Safety Plans, 2 States (FI and FR) in SSPs. One State (FR) organised a safety symposium on RI in 2007. 4 States (BE, SE, CR, LT) are measuring precursors and establishing mitigating measures through oversight activities. In addition to the measures adopted by the Runnway Safety Team two StateS (IR, UK) has established a Runway Incursions Action Group to analyse the occurrence reports of RI and quickly identify any immediate or local safety trends and to follow up with necessary mitigation measures.

In the majority of cases States have established safety performance indicators (e.g. Rate of RWY Incursions Class A/B/C). One State (FI) has also established targets for all aviation stakeholders. The achievement of this targets is monitored during the oversight process.

Among the occurrences being monitored by States due to the potential to lead to a RI are:
- deviation from ATC clearance/ pilot's misunderstanding between a taxi clearance and a take-off clearance/taxi clearance confusion
- miscommunication with ATC (ATC phraseology and phraseology of the crew, pilots read back)
- Weather conditions;
- Design of airports;
- Several places to enter the runway;
- (Wild) animals on the runway etc.
- ATCO human errors,
- poor flight preparation.
- stopbar/holding point violations,
- go around during landing due to occupied runways
- ATC procedures



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
5. Ground Collision						
Safety of Ground Operations						
AER5.9	Include Ground Operations in national SSPs.	Risks to ground operations should be addressed by the MS on their SSPs. This will include as a minimum agreeing a set of actions and measuring their effectiveness.	MS	~~2012~~ **Cont.**	SP	SSP Publication

Guidance

Some of the operational scenarios that stem from Ground Operations are for example loading errors, aircraft wing contamination with ice or near collisions between aircraft on the ground. Has your State been exposed to these type of scenarios in the past 5 years? If so, how many occurrences did take place? How many of those were considered high risk events? What are the 3 main factors that contributed to the risk? What mechanisms are in place to address corresponding mitigation actions? How do you know if they are being implemented? How do you know if they are working?

Examples of Measures:
• Normalized number of high risk bearing airside events.
• Ramp occurrences broken down by process during which they occurred and their outcome.
• Collisions involving vehicles and parked aircraft at MS reporting aerodromes.
• Collisions, near-collisions and conflicts involving vehicles and taxiing aircraft at MS reporting aerodromes.
• Loading errors: all reported and those resolved before departure.
• Late aircraft type changes.
• Late turn-arounds or turn-arounds in less than the minimum scheduled time
• Dedicated SPI for ground handling services at major airports.

Are you measuring the above? Have you implemented other measures related to safety of Ground Operations?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	The Belgian CAA is measuring the main factors contributing to ground handling occurrences: • Collisions involving vehicles and parked aircraft at MS reporting aerodromes. 2010:39, 2011:53, 2012:54 • Collisions moving aircrafts: 2010:1, 2011:0, 2012:0 • Near-collisions and conflicts involving vehicles and taxiing aircraft at MS reporting aerodromes: 2010:5, 2011:10, 2012:3 • Loading errors: 2010:7, 2011:6, 2012:5 There were 4 high risk events for the collision involving vehicles and parked aircraft. There was 1 high risk event for the near collision involving vehicles and taxiing aircraft. The 2012 risk analysis of the reported occurrences confirms that ground operations remain a safety concern in Belgium. The risk analysis has demonstated that especially problems related to ground handling are common (incorrect loading procedures, near-collisions between aircraft and ground vehicles, filling up fuel without the necessary autorizations etc.). Risk mitigation actions are already introduced in the Belgian Safety Plan 2010-2014. The BCAA will grant a certificate of recognition in the course of 2014 to ground handling service providers and self-handlers when all requirements in the dedicated Ministerial Decrees are met. The BCAA will create a questionnaire for self-handlers to obtain a clear view on their organizational structure, equipment, activities, etc.	Partially implemented
Bulgaria (BU)	Ground operations is a new risk for the Bulgarian SSPlan. The risk was identified through analysis of occurrence reports.	Planned
Croatia (CR)	CCAA is measuring GO since 2012. Until June 2013 we had 70 occurrences related to GO. We did not consider any of these events high risk event. Mechanisms to mitigate risks have been established on a case-by-case basis. Implementation and effectiveness of mitigating measures are monitored by assigned inspectors and for overall overview by CCAA Safety Board- trend monitoring. According Croatian SSP hazardous conditions are: - The physical characteristics of the aerodrome: inadequate runway inspections / nearby structures - Malfunction of aircraft - Activities on the ground (eg boarding error during refueling); - Activities regarding maintenance (eg error in maintenance, repair aircraft on the ground) - Coordination with ATC, etc.	Partially implemented
Finland (FI)	During the last five years, there has been over 200 loading error reports. None of these have been categorised as serious incidents. In addition in 2013 there has already been over 100 cases categorised as loading errors, so this is a rising risk area. Factors in these cases are often improper attachment of cargo in aircraft cargo hold and incorrect weight calculations. Among others, ground operations-related events are part of Finnish SSP as Safety performance indicators, for which targets are set for all aviation operators to assess the risk of each SPI in their operations and conduct appropriate mitigating actions. Loading errors, de-icing errors, pushback and taxi interference, inappropriate or missing apron control, FOD-issues, ground handling errors, and ground collisions are measured as safety performance indicators. Trafi has launched a campaign in co-operation with the ANSP Finavia aimed at personnel working in ground operations. The campaign included holding seminars at various airports and a set of posters highlighting various risk areas in ground operations.	Implemented
France (FR)	There are numerous incident reports related to ground operations and to the examples given (order of magnitude 20 a day). However, there is, for the time being, no attempt to aggregate all these data issued by different type of operators (airport operator, ground handling, airlines) to assess a corresponding Safety level. De-icing/anti-icing activity has been considered among all types of ground operations to be of the highest priority in the French SSP. Loading errors may also impact safety ; the other type of events, may induce important costs to the operators, but are considered as impacting safety with a low probability.	Partially implemented
Iceland (IC)	ICAA is addressing this issue as follows: (i) Approvals. Airport- and aircraft operators arel be encouraged to cover/evaluate risk factors relating to ground operations in their SMS systems. (ii) Through ICAA's continuous oversight; with analysis of findings and reported occurrences that may be interlinked with ground operations, e.g. relating to incorrect loading and flight preparation . (iii) Promotion: ICAA will promote the issue for operators e.g. material issued by EASA on the subject.	Partially implemented
Ireland (IR)	The IAA State Safety Plan 2013-2016 Action Item FOD.004 addresses Safety of Ground operations. The IAA has two seperate classification for Ground safety occurrences; RAMP and RAMP-LOADING. The IAA Annual Safety Review 2012 shows that over 600 reports of these occurrences were received in 2012, however less than 3% of these reports were considered high risk (ARMS Score >10). The main risk factors identified by ECAST including loading errors (loading procedures and loadsheets), ground damage and inadequte de-icing procedures are found in the occurrence reports to the IAA as well. The IAA has implemented a detailed audit schedule with focus on the three key risk factors: loading error, undetected/unreported aircraft damage and inadequate de-icing procedures. Ongoing work includes the further development of precursor identifiers in the risk assessment process to facilitate better safety analysis of the causal factors for ground safety events.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
Italy (IT)	GO are included in ENAC Safety Plan 2012-2015. as action TOP 1.5.1. The GO report is already completed and should be published by the end of 2013.	Implemented
Latvia (LT)	SSP is not implemented yet. In last 5 years - 1 collision between aircraft on ground. Regular oversight actions are in place over airport's training process and how they supervise ground operations. Agreed set of actions between the operator and Authority are to be incorporated in LV CAA plan for safety activities in ground operations involving all aspects of aircraft handling at the airport as well as aircraft movement around the aerodrome except when on active runways. During the implementation of SMS Authority's inspectors should be aware that operator has established and maintained safety risk management process in ground operations area ensuring existing defences to control safety risks and further actions to reduce safety risks when accepting ground handling facilities. The following issues shall be considered: - Aircraft are not involved in collisions with other aircraft when moving and that the jet efflux from large aircraft does not hazard small ones; - Aircraft are not damaged by debris left on the aircraft manoeuvring areas; - Safe parking and docking of aircraft; - Impact damage to parked aircraft and ensuring that any such impact, however apparently minor, is reported and subject to maintenance inspection as appropriate prior to any further flight operation; - Maintaining adequate surface friction on manoeuvring areas; - Provision of adequate signage, markings and lighting so that aircraft are able to follow their taxi clearances properly; - Providing ATM capability which matches the complexity of ground operational movements; - Correct loading of the aircraft, and especially of its cargo and baggage, including any Dangerous Goods; - Correct communication of aircraft loading information to the aircraft commander; - Sufficient and verified fuel of adequate quantity and quality; and - Correct use of ground de/anti icing facilities where appropriate; - Effective Quality Assurance systems are used by both the Aircraft Operator and the various service providers.	Planned
Lithuania (LI)	The State did not expose these type of scenarios in the past 5 years.	Planned
Luxemburg (LU)	Specifically, vehicle traffic is considered a risk and is being treated by the LRST (GT-SAM). Introduction of a driving permit with "penalty points" is planned.	Partially implemented
Malta (ML)	Aerodromes: The Aerodrome Operator (AO) has in place an effective monitoring system, whereby Ground Handling Services Providers (GHSP) are continously overseen. Daily inspections and at least two major audits annually are performed and documented, based on Safety Management, Quality Assurance, and Risk Management programs as agreed upon granting of concession. Safety inspections refer to the IATA Ground Handling manual for guidance and all incidents/accidents are reported and documented in a computerized system. Each incident/accident is investigated by an appointed Safety Board and its findings and recommendations are disseminated to all concerned including the NAA. The NAA is kept in the loop through all the stages of incident/accident investigation process and it can be safely declared that the system is functioning. Nevertheless, there is room for improvement especially in voluntary reporting. Both the AO & GHSP need to promote further a just culture and enhance safety oversight activity. The NAA intends to get actively involved in monitoring GSHPs in conjuction with the AO.	Partially implemented
The Netherlans (NL)	All parties involved in the oversight of safety and environment, have agreed with Amsterdam Airport Authority to improve safety and environment. To this extent an agreement has been signed which allocates responsibilities and accountabilities to the Airport Authority. As a result of this agreement oversight is now taking place 24/7. Ground operations will also be taken into account in the next SSP.	Partially implemented
Portugal (PO)	We have very few occurences on ground operations.	Not applicable
Spain (SP)	Ground Operations, in particular, collisions involving handling vehicles and aircraft, have been identified as a major concern in Spain. Therefore, we have included them in Spain's risk portfolio and in Spanish Aviation Safety Plan. AESA analysed this issue by means of the occurrences registered in our Spanish MORS during 2008-2012 period. The handling occurrences are classified in the following types below: • Aircraft dispatch. There were 236 occurrences. There were not serious incidents. There were 11 major incidents. Therefore, 5% of aircraft dispatch occurrences were high severity. • Handling equipment (maintenance and availability). There were 47 occurrences. There were not high severity incidents. • Collisions/damages by handling equipment. There were 553 occurrences. There were not serious incidents. There were 11 major incidents. Therefore, 2% of this type of occurrences were high severity. • Dangerous goods. There were 92 occurrences. There were not serious occurrences. There were 10 major incidents. Therefore, 11% of dangerous goods were high severity. • Improper handling vehicle movement. There were 1179 occurrences. There were 1 accident, and 18 major incidents. Therefore, 2% of this type of occurrences were high severity. • Handling/Parking/Pushback procedures. There were 757 occurrences. There was 1 accident, 1 serious and 20 major incidents. Therefore, 3% of this type of occurrences were high severity. Regarding the handling operators, the mitigation actions are: 1.- AESA elaborated a handling safety technical instruction that includes handling procedures and SMS requirements. Therefore, handling operators are required to implement a SMS. 2.- In addition to that, AESA produced a Handling Inspection Plan to inspect handling operators. 3.- The next step is to organize a Working Group with handling operators in order to know their major safety concerns. AESA plans to monitor ground operations occurrences each 6 months.	Partially implemented
Sweden (SE)	The oversight section has held internal training on ground ops issues. This area will also be brought up at industry seminars during this year.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 Deicing: 7, 0 high risk Loss of Separation both aircraft on ground: 3, 2 high risk Incorrect loading: 8, 2 high risk No State level SPI have been identified, however FOCA does monitor ground ops occurrences as part of normal SRM analysis & reporting.	Partially implemented

Implementation Reports		
State	**State's update**	**Status of the action**
United Kingdom (UK)	Ground Handling Operations Safety Team (GHOST) is a group whose aim is to work with global partners to develop strategies to mitigate ground handling and support activity safety risks. With the exception of dangerous goods, ground-handling activities are currently not directly regulated in the UK. The majority of occurrences classified under the ground-handling criteria are classified as low risk. However, those with the potential to cause the greatest harm to aircraft safety are: • Loading errors. • Serious collisions between vehicles and aircraft undetected prior to flight. The majority of GHOST's activity this year is geared towards fostering a just reporting culture, and reducing loading errors, so as to reduce the potential incidents that may cause greatest harm to aircraft safety. Ground Handling mitigation actions will be tracked using the following key performance metrics: • The number of loading errors by error type, including dangerous goods events. • Collisions involving vehicles and parked aircraft at UK reporting aerodromes. • Collisions, near-collisions and conflicts involving vehicles and taxiing aircraft at UK reporting aerodromes. • Number of de-icing related occurrences. • Number of loading errors involving dangerous goods.	Partially implemented

Summary

Most of the States reported exposure to ground operation events in the past 5 years, with very few high-risk events. One State (FI) reported t over 200 loading error reports in the last five years. None of these have been categorised as serious incidents. In addition in 2013 there has already been over 100 cases categorised as loading errors in FI, so this is a rising risk area. One State (FR) reported that there is an order of magnitude of 20 incident reports related to ground operations a day. One State (IR) reported that the Annual Safety Review 2012 showed that over 600 reports of these occurrences were received in 2012, however less than 3% of these reports were considered high risk.

14 States are taking mesasures to address the safety of ground operations at national level. 4 States (BE, IR, SP and IT) identify these in Safety Plans, 2 States (FI and FR) in SSPs. 7 States (BE, SE, CR, LT, LU, SW, UK) are measuring precursors and establishing mitigating measures through oversight activities.One State (ML) reported that the Aerodrome Operator (AO) has in place an effective monitoring system to monitor Ground Handling Service Providers. One State (BE) will grant a certificate of recognition in the course of 2014 to ground handling service providers and self-handlers when all requirements in the dedicated Ministerial Decrees are met. The BCAA will create a questionnaire for self-handlers to obtain a clear view on their organizational structure, equipment, activities, etc.

One State (UK) has established a Ground Handling Operations Safety Team (GHOST), which is a group whose aim is to work with global partners to develop strategies to mitigate ground handling and support activity safety risks.

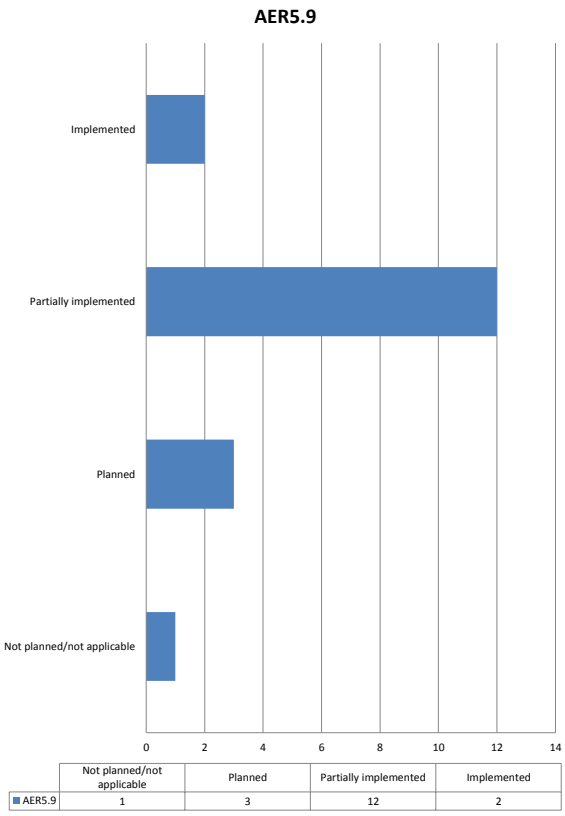
One State (SP) has implemented the following mitigation actions regarding the handling operators,
1.- AESA elaborated a handling safety technical instruction that includes handling procedures and SMS requirements. Therefore, handling operators are required to implement a SMS.
2.- In addition to that, AESA produced a Handling Inspection Plan to inspect handling operators.
3.- The next step is to organize a Working Group with handling operators in order to know their major safety concerns.

One State (BU) plans to incorporate the risk in the Safety Plan. Two States (LI, PO) reported that they were not exposed to these type of scenarios in the past 5 years due to the low number of occurrences.

In the majority of cases States have established safety performance indicators. One State (FI) has also established targets for all aviation stakeholders. The achievement of this targets is monitored during the oversight process.

Among the occurrences being monitored by States related to ground operations are:
- filling up fuel without the necessary autorizations/boarding error during refueling
- The physical characteristics of the aerodrome: inadequate runway inspections / nearby structures
- Activities regarding maintenance (eg error in maintenance, repair aircraft on the ground)
- Coordination with ATC,
- Loading errors (incorrect loading procedures/loadsheets, improper attachment of cargo in aircraft cargo hold and incorrect weight calculations)
- inadequate de-icing procedures,
- inappropriate or missing apron control/Handling/Parking/Pushback procedures (e.g. pushback and taxi interference)
- FOD-issues,
- ground handling errors (e.g. Improper handling vehicle movement)
- ground collisions (e.g. near-collisions between aircraft and ground vehicles)
- undetected/unreported aircraft damage (Collisions/damages by handling equipment)
- Aircraft dispatch.
- Handling equipment (maintenance and availability).
-Dangerous goods.

One State (FR) reported that de-icing/anti-icing and loading errors may impact safety ; whereas the other type of events, may induce important costs to the operators, but are considered as impacting safety with a low probability.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
1. Helicopters						
HE1.3	Further implement EHEST recommendations.	NAAs in partnership with industry representatives, to organise Helicopter Safety events annually or every two years. The EHEST materials could be freely used and promoted.	MS and Industry	~~2012~~ **Cont.**	SP	Number and frequency of events organised

Guidance	
	EHEST has published the following recommendation in 2011: EHEST recommends the NAAs in partnership with industry representatives, to organise Helicopter Safety events annually or every two years. The EHEST materials could be freely used and promoted. What type of helicopter safety events have you organised in 2012/2013 or plan to organise? Do you plan to do it frequently?

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Upon request from the BCAA, representatives from EHEST, the Aviation Safety Department of Defence (ASD), Belgocontrol, the Belgian Air Accident Investigation Unit and the BCAA held a helicopter safety seminar for pilots and industry representatives in Brussels (27th June 2012). The topics covered included the presentation of the EHEST safety leaflets, the analysis of helicopter accidents and recommendations, the BCAA occurrence reporting system, safety considerations of a defaulting paperwork, the relationship between accidents and human factors and finally the increasing safety awareness by means of flight preparation. The BCAA has the intention to continue with the periodic organization of these useful seminars. The BCAA will most probably organize an new helicopter safety event in the course of 2014.	Implemented
Bulgaria (BU)	The DG CAA established link to EHEST materials. Helicopter Safety meeting is planed to be organised in the end of the 2013.	Partially implemented
Croatia (CR)	At this moment, no planned activites related to this issue.	Not applicable
Finland (FI)	Please see SYS 2.7 A Finnish helicopter safety team has been established and is a part of EHEST which among other actions promotes nationally the material developed by EHEST. There is a dedicated section for this at CAA website: http://www.trafi.fi/ilmailu/lentoturvallisuus/helikopterit. A link to ESSI website will be established on the CAA's website. Trafi has established guidance material on SMS implementation on its website at http://www.trafi.fi/ilmailu/easa/hallintojarjestelman_%28sms-osa%29_implementointi	Implemented
France (FR)	In 2012, the DGAC annual safety symposium (november 14th 2012) was dedicated to helicopter safety. See the corresponding webpage. The action plan following the safety symposium are currently being developped.	Partially implemented
Iceland (IC)	There are 4 Helicopters operators in Iceland and they have all been approached with EHEST material by the ICAA and encouraged to use it. Iceland will also participate in EHEST meetings at EASA.	Partially implemented
Ireland (IR)	IAA State Safety Plan 2013-2016 Action Item FOD.015 addresses Helicopter Safety. In addition to promulgating EHEST (and IHST) information to the helicopter community the IAA is working closely with the General Aviation Safety Council of Ireland to organise annual Safety Seminars for the General Aviation Community (including General Aviation Helicopter Operators). The first of these events is planned for September 2013. The intention is that the EHEST material will be promulgated at these events and presentations will be facilitated on specific areas of interest or concern by both IAA and Industry representatives (ie both EGAST and EHEST material). The Commercial Helicopter Industry in Ireland is considered too small to merit a specific event and the EHEST information is promulgated to these organisations as part of normal safety oversight activities. It is noted that some personnel involved in Commercial Helicopter operations are also involved in the Helicopter GA community.	Implemented
Italy (IT)	No events performed in 2012. For 2013 no events have been yet planned.	Planned
Latvia (LT)	In 2013, annual helicopter safety event was held, in which the EHEST materials were distributed and presented.	Partially implemented
Lithuania (LI)	Not applicable as the activity of the helicopters operations is very low currently. However, the Helicopter Safety events certainly will be organised in the future if the activity of the helicopters operations increase.	Not applicable
Luxemburg (LU)	No helicopter safety event planned as Luxembourg has only 1 helicopter operator.	Not applicable

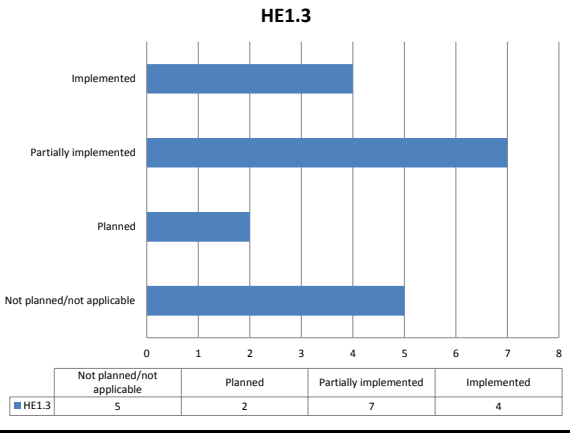
Implementation Reports		
State	**State's update**	**Status of the action**
Malta (ML)	N/A	Not applicable
The Netherlans (NL)	European Rotorcraft Forum 2012 http://erf2012.nlr.nl/	Implemented
Portugal (PO)		Not applicable
Spain (SP)	In March and in April 2003, AESA organised Fire Fighting Safety Conferences in several Spanish locations in order to promote safety. Fire Fighting is the aerial work of greater safety risk concern in Spain. The agenda of these Conferences can be checked at the following link: http://www.seguridadaerea.gob.es/lang_castellano/g_r_seguridad/jornadas_seg_operac.aspx	Partially implemented
Sweden (SE)	Meetings are held with all operators every year, first part of December. The agenda is focused on safety. EHSAT publications are distributed at the meetring. In addition we are in the process of constituting a new national safety forum in cooperation with the industry, as done in Norway.	Planned
Switzerland (SW)	FOCA organizes 3 yearly events for the helicopter industry: - ERFA (Erfahrungsaustausch, exchange of expertise and experiences for helicopter GND crews, information about materials, tools, techniques and safety relevant issues) - Air Operators Conference, which addresses various topics (change in regulations, safety issues etc.) - SASCON (Swiss Aviation Safety Conference), addressing exclusively safety related topics for the whole Swiss aviation community.	Partially implemented
United Kingdom (UK)	The UK CAA will continue to participate in the European Helicopter Safety Team (EHEST) and will also publish a comprehensive analysis of offshore helicopter reportable accidents (publication of CAP) as part of the current UK CAA review of offshore helicopter operations in the UK.	Partially implemented

Summary

10 States (BE, BU, FR, IC, LT, IR, SP, SE, SW, NL) have organised helicopter safety events. In the majority of cases EHEST material was promoted and distributed.
A few examples:
- BE: helicopter safety seminar for pilots and industry representatives in Brussels (27th June 2012)
- FR: DGAC annual safety symposium (november 14th 2012) was dedicated to helicopter safety.
- IR: Annual Safety Seminars for the General Aviation Community (including General Aviation Helicopter Operators) - Sept. 2013
- LT: Annual helicopter safety event (2013)
- NL: European Rotorcraft Forum (2012)
- SP: Fire Fighting Safety Conference in April 2013.
- SW: FOCA organizes 3 yearly events for the helicopter industry: ERFA (Erfahrungsaustausch, exchange of expertise and experiences for helicopter GND crews, information about materials, tools, techniques and safety relevant issues), Air Operators Conference, which addresses various topics (change in regulations, safety issues etc.) and SASCON (Swiss Aviation Safety Conference), addressing exclusively safety related topics for the whole Swiss aviation community.

A helicopter safety team has been established in FI and is part of EHEST. SE is in the process of constituting a new national safety forum in cooperation with the industry.
FI has established guidance material on SMS implementation (http://www.trafi.fi/ilmailu/easa/hallintojarjestelman_%28sms-osa%29_implementointi).

3 States reported a small commercial helicopter industry (e.g. IR, LI, LU) and 4 States (CR, IT, ML, PO) reported no planned helicopter activities.



No.	Issue	Actions	Owner	Dates	Type	Deliverable (Measure)
1. General Aviation						
GA1.5	Airspace infringement risk in general aviation.	National authorities should play the leading role in establishing and promoting local implementation priorities and actions.	MS	~~2013~~ **Cont.**	SP	List of local implementation priorities and actions for GA

Guidance

Have there been any airspace infringements involving GA in the past 5 years? If so, how many of them were considered high-risk events? what are the main hazards that contribute to it? Where is your State with the implementatation of the European Action Plan for Airspace Infringement Risk Reduction?

The progress of your State against the European Action Plan for Airspace Infringement Risk Reduction is reported within the ESSIP process at the following website http://www.eurocontrol.int/articles/essip-report. The latest available report includes the activities carried out in 2011. Please indicate whether any progress has been made towards the objective in 2012 and 2013 and what is the expected situation at the end of the year. Consider the situation at both State and Service Provider Level

Implementation Reports

State	State's update	Status of the action
Belgium (BE)	Reported Occurrences for airspace infringements committed by GA: 2010:34 2011:93 2012:109 None of these events were considered high-risk events. The BCAA 2012 risk analysis confirms that Airspace Infringement is a safety concern in Belgium. Belgium has therefore developed a national action plan derived from the European Action Plan for Airspace Infringement Risk Reduction. The implementation of this national action plan has been introduced in the 2012 update of the Belgian Safety Plan. The analysis of the reported occurrences clearly indicates that the majority of infringements is committed by General Aviation VFR flights. Therefore the national action plan mainly contains general aviation recommendations like the improvement of the general aviation pilot training (among others improvement of the communication and navigation skills & better knowledge of the Belgian airspace) and the publication of a leaflet to inform pilots about specific problems with regard to the Belgian airspace. The airspace infringement leaflet has already been published on the BCAA website and sent to the Belgian ANS service provider, the Belgian Air Force, Belgian airfields and ATO's, the civil aviation authorities, airfields and ATO's of our neighbouring countries. A current SPI measures the proportion of the national action plan recommendations implemented. In the course of September- In the course of September-October 2013 the BCAA will organize a meeting about the reduction of airspace infringements. The Belgian CAA will then have a complete overview of the national action plan progress.	Partially implemented
Bulgaria (BU)	Airspace infringements by GA aircraft has not been identified as a specific issue in the state.	Not applicable
Croatia (CR)	Croatian SSP recognise safety indicator related to general aviation operations. According to Croatian SSP hazardous conditions are: flights without two-way communication with ATC, flights without Flight Plan, formation flying etc. Some of the measures planned for 2103/2014 : regulation revision, intensive oversight, workshops with industry, safety promotion etc.	Partially implemented
Finland (FI)	There has been ca 550 airspace infringements involving GA during the last five years. Four of these were classified as serious incidents. Main hazards were VFR pilots getting lost and not being aware of the different airspace boundaries. According to LSSIP report, the actions in European Action plan have been implement by the regulator and ANSP in 12/2011. The monitoring of the implementation of these actions are part of continuous oversight process. European Action Plan for Airspace Infringement Risk Reduction will also be considered in Finnish Aviation Safety Plan. In 2012 Trafi sent a letter to all aviation license holders highlighting the severity of potential consequences of airspace infringements. In 2013 an aviation regulation OPS M1-31 was published which requires all aircraft operating to or from the Helsinki-Malmi airport (which is the hotspot in airspace infringements since the bigger Helsinki-Vantaa is only a few miles away) to have and operate a C-mode transponder. This requirement was established to enable air traffic control to notice possible intruders into Helsinki-Vantaa airspace before a MAC or airprox situation can occur between the intruder and other traffic. The regulation will take effect 14th November 2013.	Implemented
France (FR)	Airspace infringement by general aviation is indeed a safety concern in French airspace. User information, disciplinary measures, an extended use of transponder are seen as the most efficient way forward. Detailed action plan is being considered. Within the ANSP SMS risk scheme, airspace infringement has a high priority, the European Action Plan for Airspace Infringement Risk Reduction has been assessed, and relevant actions have been included in the ANSP's plan.	Planned
Iceland (IC)	The airspace infringment in general aviation is generally in lower altitudes than airspace infringement in CAT terms is. ICAA has identified this as a potential hazard as new more lighter aircraft are becomming much more capable than in the past and new types of incidents have often followed. The rules for operations in and out of areas have been refined recently due to the incidents that occured in the past.	Partially implemented
Ireland (IR)	The IAA Annual Safety Review 2012 reports 81 cases of airspace infringements in Irish Airspace over the period 2009-2012. This includes infringements by large transport aircraft, military aircraft and general aviation aircraft. None of these were classified as high risk Severity A or B, per ESARR 2 Severity Classification, and 26 of these were Severity C. There is no breakdown currently available but the vast majority of airspace infringements (~90%) involve infringements by general aviation or military aircraft. Many of these infringements may be considered minor infringements and airspace hotspot areas are constantly under review for specific action. The IAA has completed twelve of the thirteen recommended and proposed actions for regulation authorities included in the European Action Plan for Airspace Infringement Risk Reduction with the remaining action due for completion in 2013. This includes full consultation with airspace users for any proposed changes to airspace as well as an Annual Review Meeting with users under the FUA Level 1 activity.	Partially implemented
Italy (IT)	There have been some space infringements involving GA. For action performed see See LSSIP (Italy 2012) - ESSIP Objective SAF 10. However, ENAC believes that EASA should provide specific guidance on the use of GPS in GA.	Implemented
Latvia (LT)	In last 5 years - 33 airspace infringements involving GA. In the uncontrolled Class G airspace it is planned by the nationally designated ANSP to provide AFIS coverage by the end of 2015 in order to facilitate more safe operations for the general aviation aircraft. With the implementation of the AFIS in the western part of the Latvian airspace in the Riga FIR, review of the existing published IFR and VFR flight procedures in the Class G airspace were reviewed and updated. Airspace Infringement Prevention activities included in LV CAA plan for actions considering best practices for General Aviation (GA) in the following areas: - Pre-flight planning; - En-route flight planning; - Contact with ATC; - Use of transponder; - Use of GPS; - Pilot refresher training.	Partially implemented
Lithuania (LI)	There were 3 air airspace infringements involving GA in the past 5 years. They were not considered as the high-risk events. The EAPAIRR is included in the CAA Safety Plan (2013-2016), ref. to http://www.caa.lt/index.php?467881435 Civilinės aviacijos administracijos aviacijos saugos planas 2013-2016 m.: įsakymas, planas, No. 12. To start to implement the EAPAIRR actions the appropriate detailed CAA plan for the Prevention of Airspace infringement risk including GA will be issued in December 2013.	Planned

Implementation Reports		
State	**State's update**	**Status of the action**
Luxemburg (LU)	No significant issue with airspace infringement by local GA aircraft up to 2012 included. The situation is being monitored by DAC.	Not applicable
Malta (ML)	ANS: The period 2011 during the Libyan war was the period when we had some airspace infringements outside IFR traffic. Again the airspace infringement action plan was not considered for implementation due to the fact that we do not have the problem. General Aviation: In the past 5 years the TM-CAD received 4 reports of Airspace Infringement to which none were considered high risk. The main hazards that contribute to these infringements are Lack of proper Radio Phraseology, a lack of sufficient knowledge of aeronautical information publications (AIP) and Notams, a low level of English Language Proficiency, complicated arrival and departure routes with reduced navigational skills, and unnecessary cluttered aeronautical charts. The CAD has organized various meetings with Heads of Training do discuss issues relating airspace infringements and navigational issues and is planning in the pipeline to issue safety sense bulletins with regards to airspace infringements and the better practice of avoiding being a statistic. In addition the CAD will offer guidance as to what to do and who to contact if an infringement has occurred. As all the infringements occurred where under VFR discussions are under way with ATO's to see if possible to offer regular refresher courses for licensed VFR pilots.	Partially implemented
The Netherlans (NL)	The EAPAIRR is applied. Military traffic management is involved to. Where necessarily airspace was adjusted. Reports have been submitted to ESSIP/LSSIP. A reduction in infringements is established. Hotspots are identified: http://www.ilent.nl/Images/Trendanalyse%20airspace%20infringements_tcm334-331587.pdf	Implemented
Portugal (PO)		Implemented
Spain (SP)	AI has been identified as a major concern in Spain, therefore AI are included in Spain's risk portfolio and in Spanish Aviation Safety Plan. AESA analysed in depth this issue by means of occurrences registered in our Spanish MORS during 2008-2012 period. The main conclusions are: • There were 408 AI in Spanish territory during 2008-2012 with GA involvement. 44 were serious and major incidents. Therefore, 11% of AI occurrences were high severity. In fact, the most common occurrence was: small and non-pressurized aircraft (including helicopter, airplane, ultralight, sailboat, paraglide) following visual flight rules, inappropriately entering in app or arrival (low level) in controlled areas • The main factors that contributed to AI were: pilot/ANS communications(in 99 occurrences), ATM procedures (19 occurrences) and ATM coordination failures in adjacent civil units (in 17 occurrences). • One of the mitigation measures that we plan is to organise a Workshop with General Aviation operators in order to make them aware of this safety issue. The progress of Spain against the European Action Plan for Airspace Infringement Risk Reduction is reported within the ESSIP process at the following website http://www.eurocontrol.int/articles/essip-report. AESA plans to monitor AI each 6 months.	Partially implemented
Sweden (SE)	Airspace infringements is one of our SPIs and it is followed up continuously in our Aviation Safety Analysis Forum. There are a number of issues identified in our Swedish Action Plan which will be followed up next year. This year our priority in this respect has been infringements by ballons in controlled airspace, and meetings have been held by the authority, ATS and the ballon operators to improve the situation.	Partially implemented
Switzerland (SW)	Occurrences: 2009-2013 Airspace Infringement: 1259, 145 high risk Main hazards concerning General Aviation AI's are: • Inattention • Excessive demands • Complex airspace structure (temporary activated airspaces) • Narrow airspace boundaries • Weather (rapid changes in the Alps) An Airspece Infringement Working Group analyises local data to identify hotspots and critical issues. SB & SRM analyze pilot reports obtained during AI investigations. State level SPI have been identified and are being monitored	Partially implemented
United Kingdom (UK)	See AER2.1 and responses to ESSIP/LSSIP SAF10. CAA has done work to improve • Safety Notice published on Integrating Traffic in the Vicinity of an Aerodrome. New projects to develop mitigation against the Airborne Conflict risk are: •Improving the clarity and communication of aerodrome circuit joining procedures. (December 2013) •DfT funded research into lightweight transponders and position broadcasting technologies. (March 2015)	Implemented

Summary

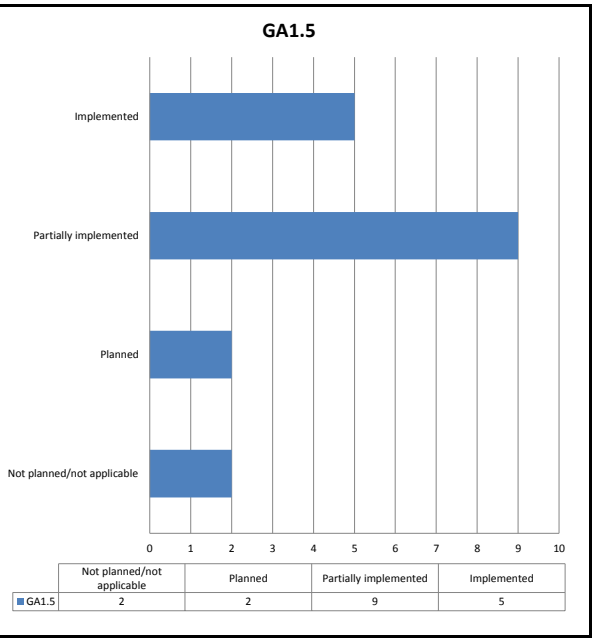
Various States reported airspace infringements involving GA in the past 5 years. One State (FI) reported ca 550 airspace infringements involving GA during the last five years. Four of these were classified as serious incidents. One State (IR) reported that the vast majority of airspace infringements reported (~90%) involve infringements by general aviation or military aircraft. Many of these infringements may be considered minor infringements and airspace hotspot areas are constantly under review for specific action. One State (SP) reported 408 AI in Spanish territory during 2008-2012 with GA involvement. 44 were serious and major incidents. Therefore, 11% of AI occurrences were high severity.

10 States (BE, CR, FI, FR, IC, IT, LT, SP, SE, SW) have confirmed that AI involving GA is a safety concern. FR reported user information, disciplinary measures and extended use of transponder as the most efficient risk mitigation strategies. In LT the nationally designated ANSP will provide AFIS coverage by the end of 2015 in order to facilitate safer operations for the general aviation aircraft in uncontrolled Class G airspace. In SP a Workshop with General Aviation operators will be organised in order to make them aware of this safety issue. In SE, the priority this year are infringements by ballons in controlled airspace. Meetings have been held by the authority, ATS and the ballon operators to improve the situation.

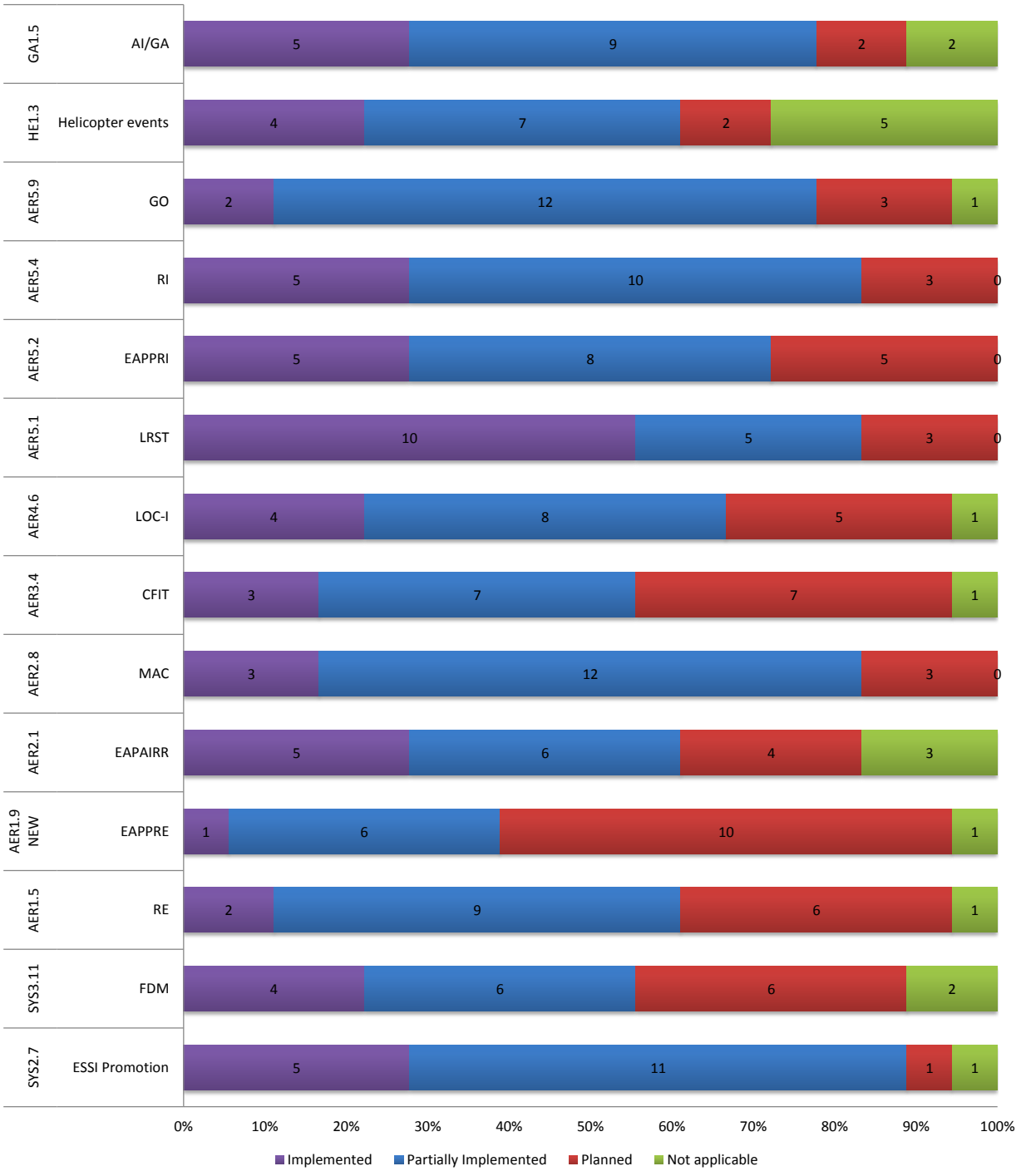
The EAPAIRR is being used in 5 STates (BE, FI, FR, IR, LI) to identify mitigation measures. In BE a national action plan derived from the EAPAIRR has been developed and introduced in the Safety Plan. State level SPIs exist in many State to monitor the situation.

3 STates (BU, LI, LU) reported that airspace infringements by GA is not identified as a specific issue in their State.

Reported hazardous conditions with the potential to cause an airspace infringement are:
- flights without two-way communication with ATC,
- flights without Flight Plan,
- formation flying
- pilot/ANS communications,
- ATM procedures
- ATM coordination failures in adjacent civil units
- Inattention/VFR pilots getting lost and not being aware of the different airspace boundaries/small and non-pressurized aircraft (including helicopter, airplane, ultralight, sailboat, paraglide) following visual flight rules, inappropriately entering in app or arrival (low level) in controlled areas.
- Excessive demands
- Complex airspace structure (temporary activated airspaces)
- Narrow airspace boundaries
- Weather (e.g. rapid changes in the Alps)



SUMMARY OF IMPLEMENTATION of EASp ACTIONS



SUMMARY OF HAZARDS REPORTED BY STATES

Runway Excurions - AER1.5

Among the occurrences being monitored by States due to the potential to lead to a RE are:
- Lateral excursions
- Overrun events
- Unstable/de-stabilised approaches
- Deep landing events
- high-speed rejected take-off events
- Adverse weather during approach
- Runway surface condition and contamination
- Braking action by flight crew
- Problems with the landing gear or thrust reversers
- Abnormal runway contacts
- Landings and takeoffs performed over the approved wind component
- Flight crew errors
- FOD

Airspace Infringement (CAT) - AER2.1

Among the factors that contribute to AI mentioned by the States we find:
- airspace complexity
- coordination problems within ATC units
- pilot-ANS communications
- deviation from clearance

Mid-Air Collisions - AER2.8

Among the occurrences being monitored by States due to the potential to lead to a MAC are:
- Coordination between or within ATC facilities (missing, non-standard phraseology etc.)
- Deviation from clearances (incl. Level Bust, ROC/ROD/spd instructions, lateral deviations)
- Communications between ATC and aircraft (readback/hearback, misunderstandings, non-standard phraseology, loss of communication)
- Airspace Infringements
- ACAS RAs: all genuine RAs and proportion involving incorrect pilot response
- Separation minima infringements/risk-bearing airprox
- ATCO human errors

Controlled Flight Into Terrain - AER3.4

Among the occurrences being monitored by States due to the potential to lead to a CFIT are:
- Fatigue and disorientation of pilots;
- Misunderstanding in communication with the controller;
- Weather conditions (eg. rain, turbulence or icing)
- Unclear approach procedures;
- Reported errors in aviation charts (e.g. ICAO Aerodrome Obstacle Charts type "B" and Aerodrome Terrain and Obstacle Chart not published)
- Unstabilised approach
- Navigation errors
- GPWS warnings (Operators - Sink Rate or Terrain warnings)
- MSAW alerts (ANSP)
- Incorrect pressure settings/Mis-setting of altimeters.
- Large G/S deviations
- Risk factors associated to non-precision approaches
- Loss of situational awareness

Loss of Control In Flight - AER4.6

Among the occurrences being monitored by States due to the potential to lead to a LOC-I are:
- Unstabilised approaches
- Laser interference
- Wake turbulence events
- Fire and smoke events in aircraft
- De-icing and anti-icing flaws
- Ground handling errors (e.g. weight and balance)
- Aircraft flight control system faults
- Mismanagment of a go-around
- Abnormal state of the aircraft (attitude, bank angle, configuration, speed, etc)
- Dangerous weather conditions (icing, wind shear, turbulence, lightning strike, etc.) that can cause damage to the aircraft or loss / malfunction of any essential function;
- Mismanagement of automation (FCU, EFIS, ECAM etc.)
- Deviations from the planned flight path

Runway Incursions - AER5.4

Among the occurrences being monitored by States due to the potential to lead to a RI are:
- deviation from ATC clearance/ pilot's misunderstanding between a taxi clearance and a take-off clearance/taxi clearance confusion
- miscommunication with ATC (ATC phraseology and phraseology of the crew, pilots read back)
- Weather conditions;
- Design of airports;
- Several places to enter the runway;
- (Wild) animals on the runway etc.
- ATCO human errors,
- poor flight preparation.
- stopbar/holding point violations,
- go around during landing due to occupied runways
- ATC procedures

Safety of Ground Operations - AER5.9

Among the occurrences being monitored by States related to ground operations are:
- Filling up fuel without the necessary autorizations/boarding error during refueling
- The physical characteristics of the aerodrome: inadequate runway inspections / nearby structures
- Activities regarding maintenance (eg error in maintenance, repair aircraft on the ground)
- Coordination with ATC,
- Loading errors (incorrect loading procedures/loadsheets, improper attachment of cargo in aircraft cargo hold and incorrect weight calculations)
- inadequate de-icing procedures,
- inappropriate or missing apron control/Handling/Parking/Pushback procedures (e.g. pushback and taxi interference)
- FOD-issues,
- ground handling errors (e.g. Improper handling vehicle movement)
- ground collisions (e.g. near-collisions between aircraft and ground vehicles)
- undetected/unreported aircraft damage (Collisions/damages by handling equipment)
- Aircraft dispatch.
- Handling equipment (maintenance and availability).
-Dangerous goods

Airspace Infringements in General Aviation - GA1.5

Reported hazardous conditions with the potential to cause an airspace infringement are:
- flights without two-way communication with ATC,
- flights without Flight Plan,
- formation flying
- pilot/ANS communications,
- ATM procedures
- ATM coordination failures in adjacent civil units
- Inattention/VFR pilots getting lost and not being aware of the different airspace boundaries/small and non-pressurized aircraft (including helicopter, airplane, ultralight, sailboat, paraglide) following visual flight rules, inappropriately entering in app or arrival (low level) in controlled areas.
- Excessive demands
- Complex airspace structure (temporary activated airspaces)
- Narrow airspace boundaries
- Weather (e.g. rapid changes in the Alps)

European Aviation Safety Agency

Annex C

SSP Phase Implementation Survey Results 2013

Final

This document provides a summary of the results of the SSP Phase implementation survey completed by 16 States as part of the implementation of the European Aviation Safety Plan (EASp).

SSP Phase Implementation Survey

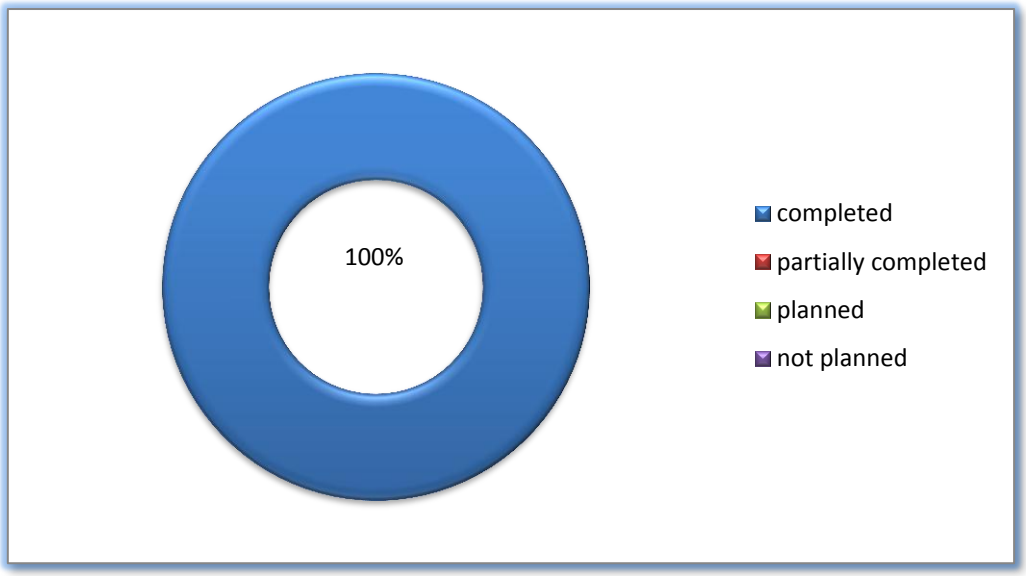
SUMMARY OF RESPONSES

(Results are based on 16 responses, received from the following States: Croatia, Finland, France, Iceland, Ireland, Italy, Malta, Monaco, Montenegro, Portugal, the Netherlands, Spain, Sweden, Switzerland, Turkey and United Kingdom)

PHASE 1

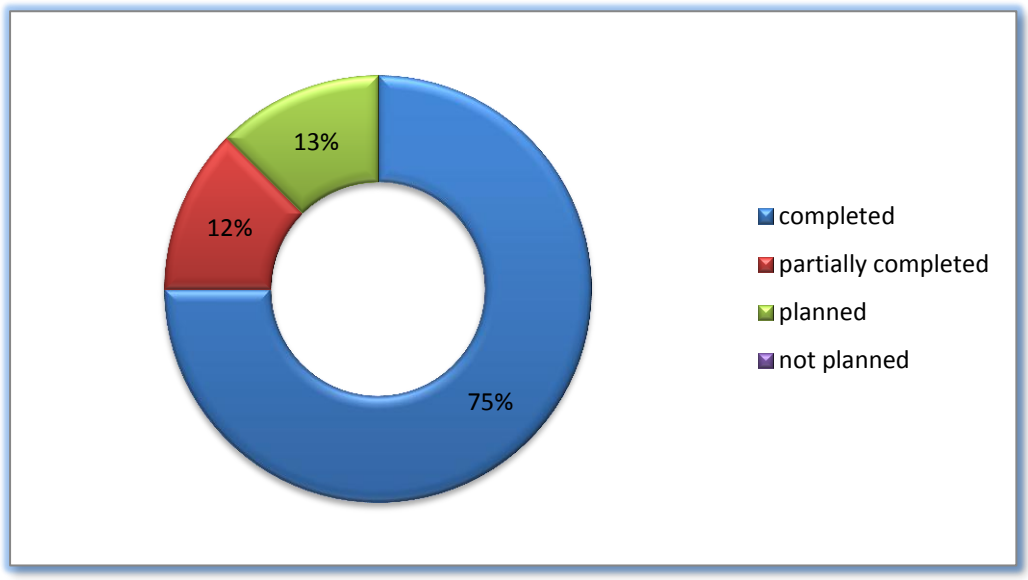
1. SSP element 1.2(i):

a. Identify SSP Place Holder Organisation and Accountable Executive



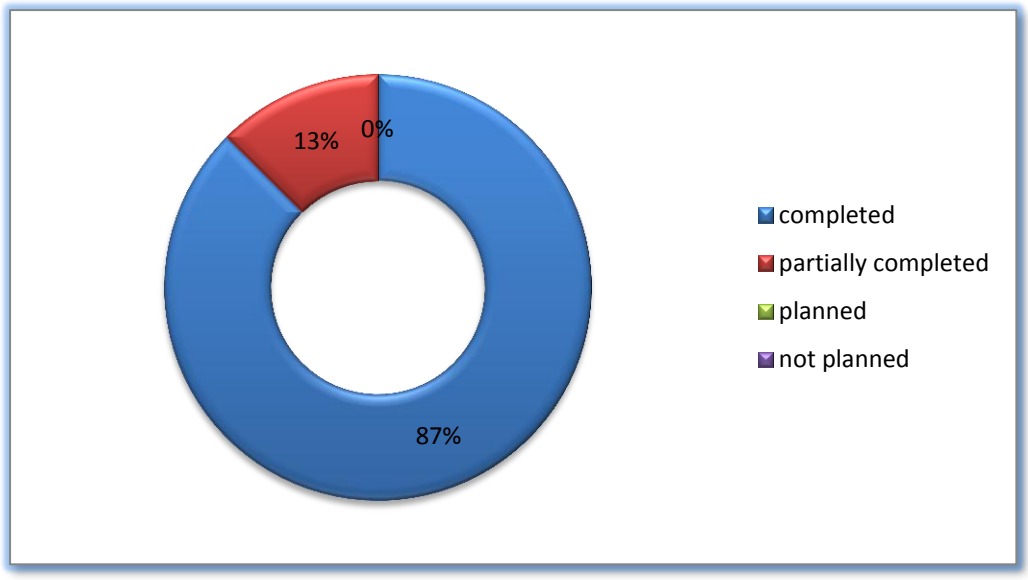
Summary
All States (16) that responded to this survey have identified an SSP place holder organization and have nominated an accountable executive for the SSP implementation process.
Additional Observations
Finland (C): SSP Place Holder Organisation in Finland: Finland`s CAA Trafi (Transport Safety Agency) Accountable Executives: Director general Mr Kari Wihlman/Trafi and Director General of Civil Aviation Mr Pekka Henttu/Trafi Spain (C): Place Holder Organization: AESA Accountable Executive: Identified by a Royal Decree (to be published in October) Switzerland (C): The FOCA; the DG

b. Establish SSP Implementation Team.



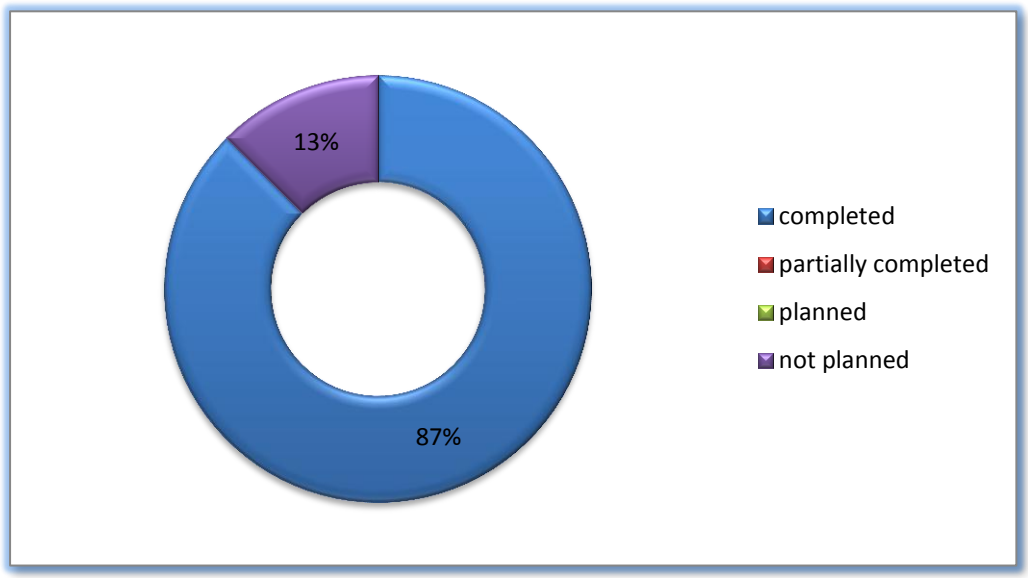
Summary
12 States have established an SSP Implementation Team, two States are in the process of setting up the team and two States plan to do it in the near future.
Additional Observations
Monaco (C): Due to the size of the Civil Aviation, the particularity is that Monaco CAA is assisted by Bureau Veritas for the SSP. Thus, an external consultant has the role of "SSP manager" and work in close cooperation with the DG of the CAA. Finland (C): Work is done: First SSP for Finland (FASP, Finnish Aviation Safety Programme) was published 8th Apri 2012. Second version on 8th April 2013. Spain (C): SSP implementation team is part of DESATI. DESATI is one of the AESA's Directorate Ireland (C): Further refinement due in 2013. Switzerland (C): The FOCA Board.

c. Perform SSP Gap Analysis.



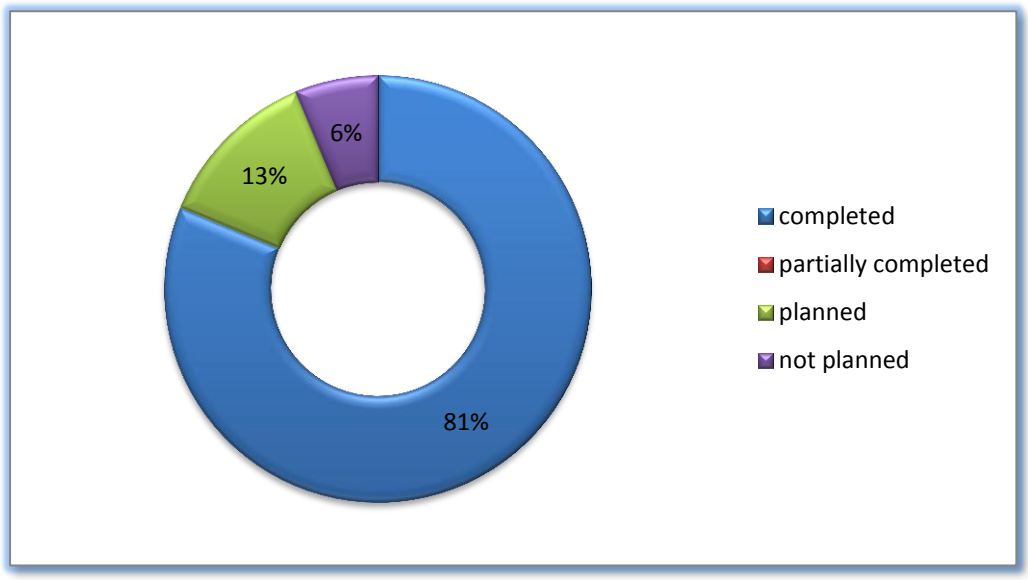
Summary
14 out of 16 States have completed SSP Gap Analysis.
Additional Observations
Sweden (C): A gap analysis was performed in 2008 when the first SSP was issued. No subsequent gap analyses have been performed. Ireland (C): Plans to update it in line with Doc SMM Ed 3. Switzerland (C): Conducted by the SRM Office; approved by the Board.

d. Develop SSP implementation plan



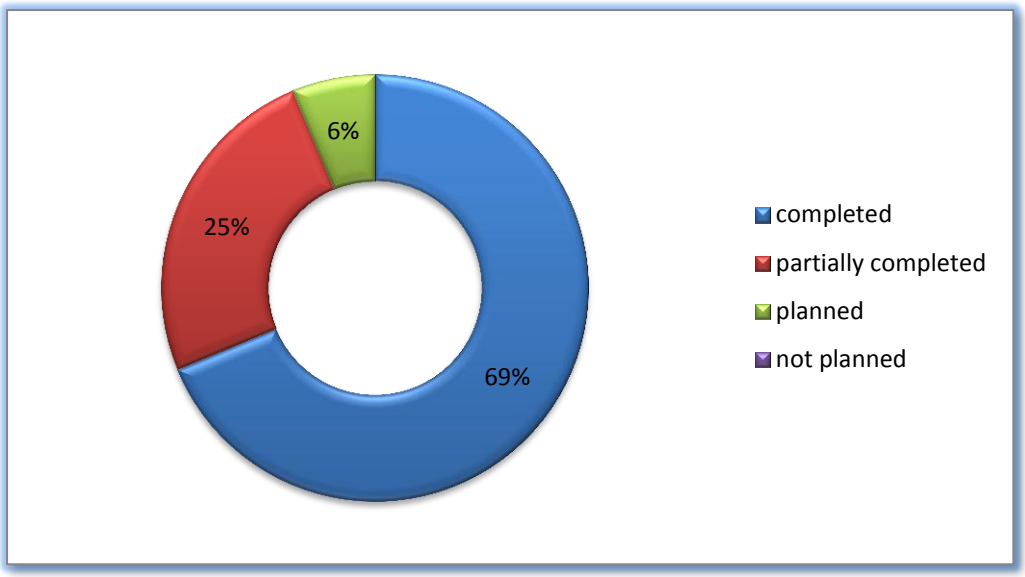
Summary
14 out of 16 States have developed SSP implementation plan. Two States (Sweden, Italy) do not plan to implement and follow such plan.
Additional Observations
Monaco (C): Actions for implementation were included in the first State Safety Action Plan. A second version of this action plan is being finalized, to list the last actions for implementation and then the actions for improvement. Sweden (NP): This work is done by adding tasks to the yearly general business plan of the authority. Spain (C): Included in the SSP Gap Analysis document Ireland (C): Update planned for 2013 in line with Annex 19 and SMM Ed 3. Switzerland (C): Already implemented; plan was a mandate by the Board.

e. Establish SSP coordination mechanism.



Summary
Thirteen (13) States established an SSP coordination mechanism, two States plan to do it and one State (Sweden) doesn't plan to establish an SSP coordinating mechanism.
Additional Observations
Monaco (C): Initially we conducted a yearly meeting, held by the DG,to discuss the results of the oversight perform during the year. The role of this annual meeting has been extended to also discuss the yearly results of the SSP / safety performance. In addition, safety meetings are organized internally, at least 3 times a year. Sweden (NP): We have judged that there is no need to establish an SSP coordinating mechanism. Spain (C): Included in the SSP Royal Decree (to be published in October). Italy (C): A "Safety Committee" has been nominated including CAA, Accident Investigation Body, Minister of Transportation, Air Force, ATC provider and National Flying Clubs Association. Switzerland (C): SRM Office functions as the coordinating body.

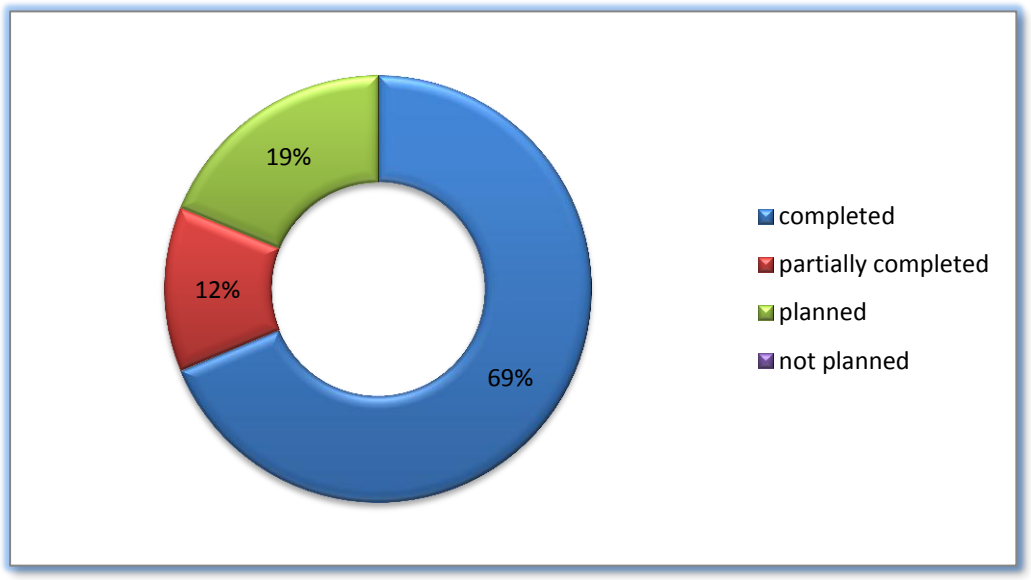
f. SSP Documentation including the State's SSP framework, its components and elements.



Summary
Eleven (11) States have established SSP Documentation System. Four (4) States are currently working on this and one State plans to establish the documentation system in the near future.
Additional Observations
Monaco (C): 2nd version of the SSP will be published soon. Finland (C): First SSP for Finland (FASP, Finnish Aviation Safety Programme) was published 8th April 2012. Second version on 8th April 2013 (FASP can be found: www.trafi.fi, also attached to this survey). Sweden (C): Third revision published June 2013. Spain (PC): We have a draft version that will be published in an Agreement of the Council of Ministers. Ireland (C): SSP documentation to be updated in line with Annex 19. Switzerland (C): http://www.bazl.admin.ch/themen/sicherheit/00295/03663/index.html?lang=en

PHASE 2

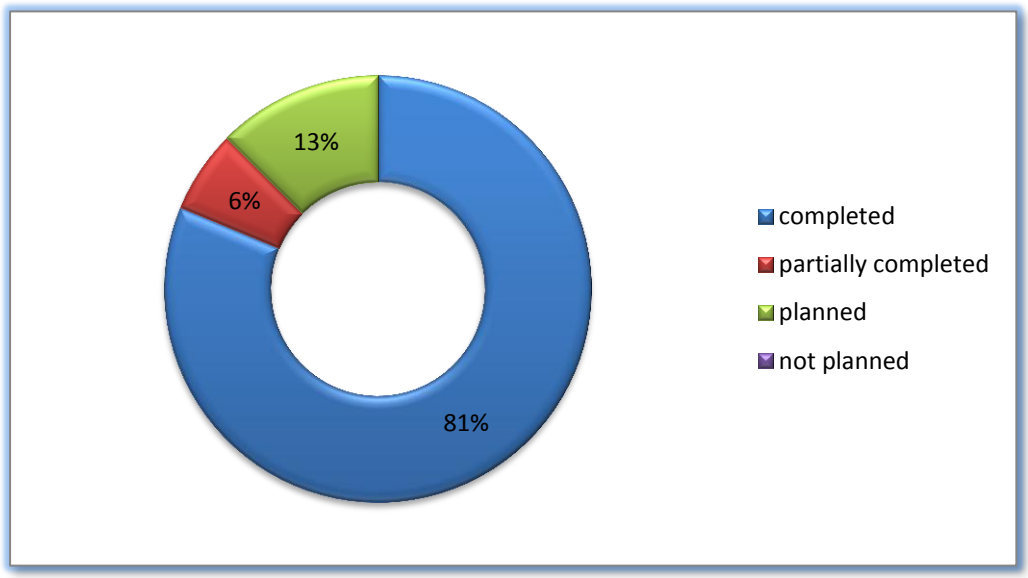
1. SSP element 1.1: National aviation legislative framework



Summary
Eleven (11) States have promulgated the necessary national aviation legislative framework. Two States (Finland, Spain) haven't finished this task yet and three more States (Portugal, Turkey, Montenegro) are in the planning phase at the moment.
Additional Observations
Monaco (C): SMS requirements are in place. This should be completed by provisions on SSP to be implemented in the primary law, under revision. Finland (PC): Finnish Aviation Act is under revision process (now as a draft) and SSP (FASP) implementation to Aviation Act will be ready on fourth quartal of 2014. Spain (PC): We have published a Law, that will be completed with a Royal Decree and an Agreement of the Council of Ministers. Portugal (P): In the government - Expecting decision/publication in the official gazette.

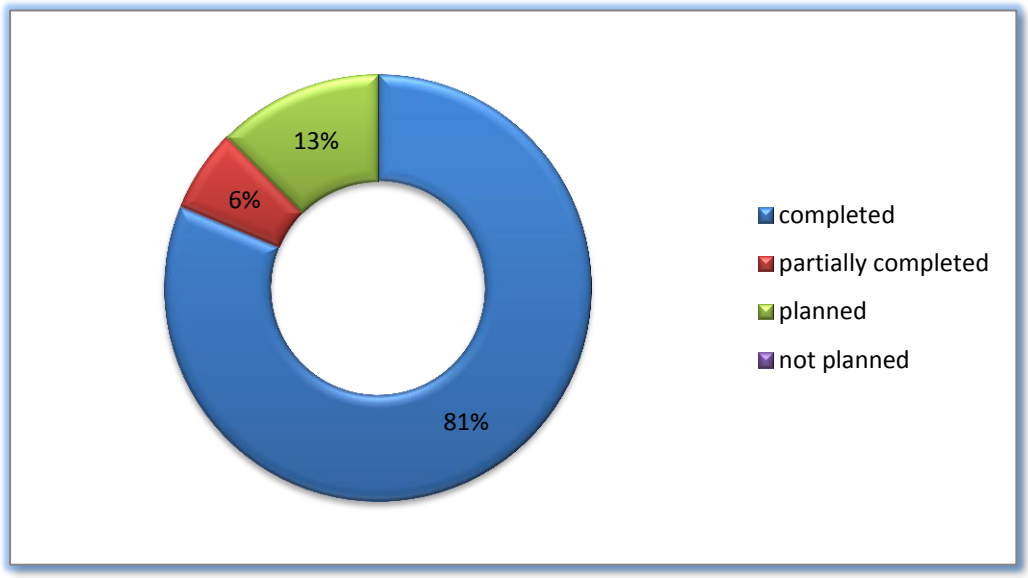
2. SSP element 1.2(ii):

a. Safety management responsibilities & accountabilities



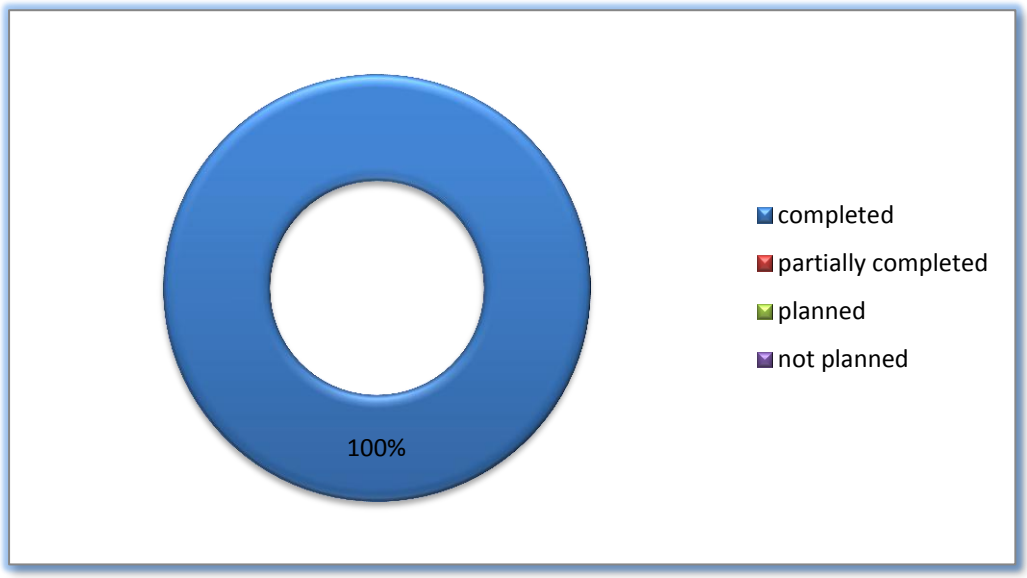
Summary
Thirteen (13) States already defined and established management responsibilities and accountabilities of the respective regulatory organizations. Malta has partially completed this task, Portugal is about to implement it and Turkey plans to do so in the future.
Additional Observations

b. State Safety Policy & Objectives



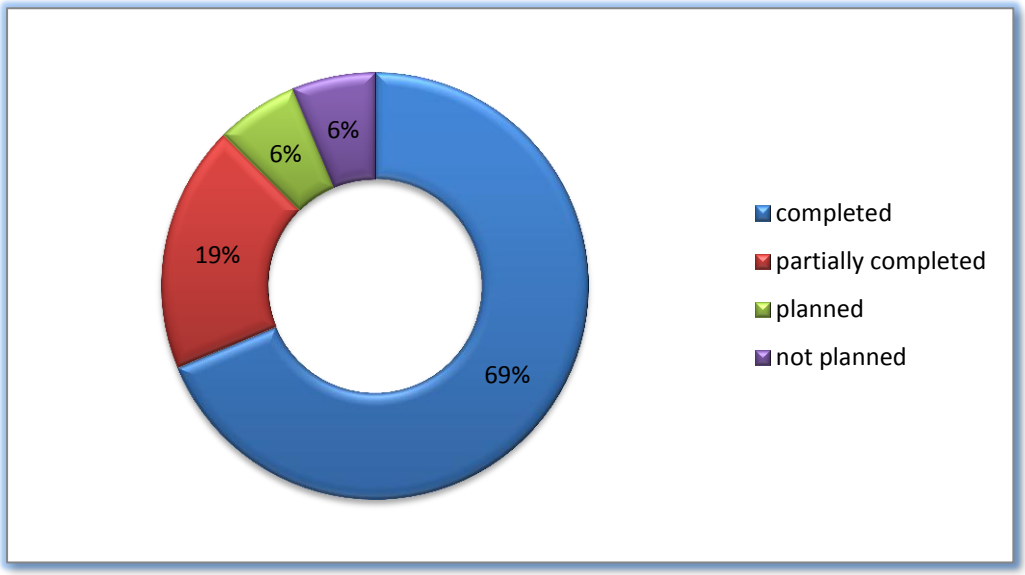
Summary
Thirteen (13) States have developed and implemented State safety policy and set safety objectives. Spain has a draft of the policy and objectives that will be part of the Agreement of the Council of Ministers. Turkey and Portugal haven't adopted the State safety policy and objectives yet.
Additional Observations
Monaco (C): Evolution of the safety objectives in the 2nd version of the State Safety Action Plan, to be published before the end of the year. Spain (PC): We have a draft version of the policy and the objectives. They will be part of the Agreement of the Council of Ministers

3. SSP element 1.3: Accident and serious incident investigation



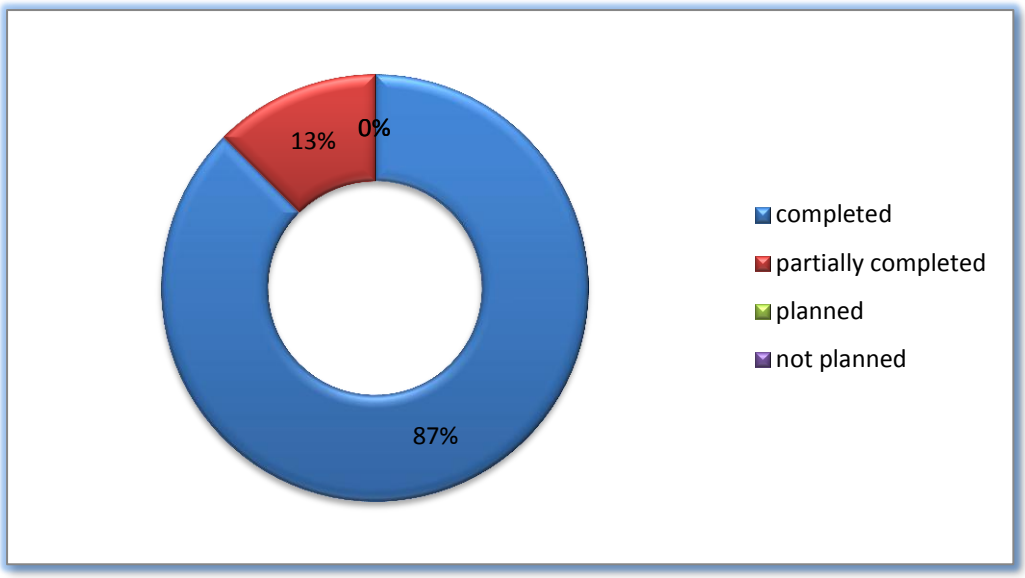
Summary
All States have established the mechanism to ensure that all accidents and serious incidents are investigated in order to prevent from such incidents in the future.
Additional Observations

4. SSP element 1.4(i): Establish basic enforcement (penalty) legislation



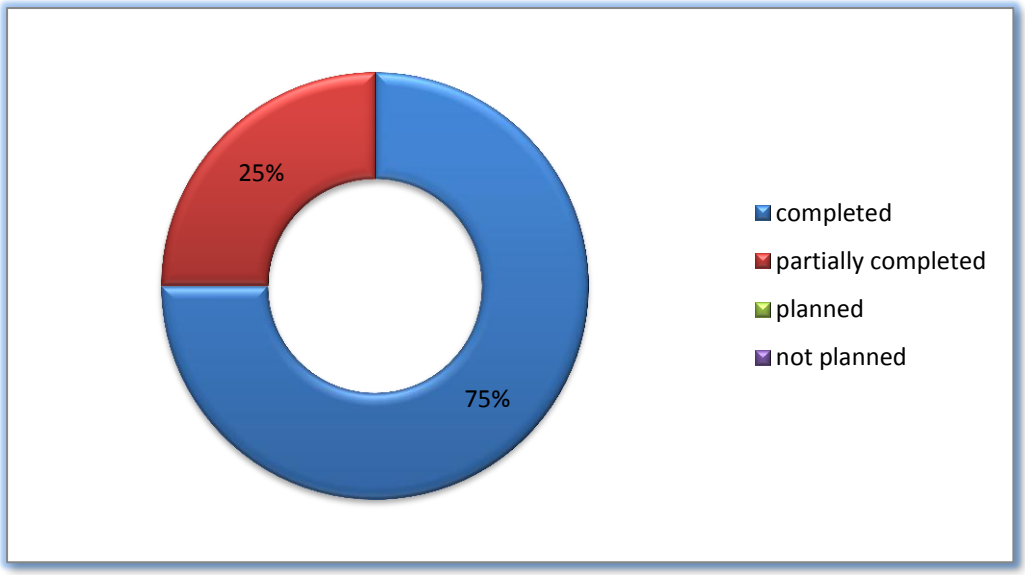
Summary
Eleven (11) States have established enforcement legislation. Three (3) States (Monaco, Malta, Portugal) stated that penalty legislation had existed before SMS & SSP but it needs to be reviewed.
Additional Observations
Monaco (PC): Partially existing before SMS & SSP but needs to be review for the sake of clarity. Malta (PC): The CAD is working to improve the penalty system with regards to the Basic Regulation. Ireland (C): Provisions for penalties for infringements of aviation legislation (including fines and imprisonment) are established in National legislation. Italy (P): A draft of a Law Decree is close to be submitted to the Government. Portugal (PC): Necessary to review the actual legislation.

5. **SSP element 3.1(i): State safety oversight and surveillance of its service providers**



Summary
Fourteen (14) States have safety oversight programme in place, Turkey and Malta have partially completed this element.
Additional Observations
Spain (C): CAA will meet the safety oversight and surveillance requirements established by EU. EU is responsible to establish these requirements. Please clarify this question.

6. **SSP element 2.1(i): SMS education & promotion for service providers**

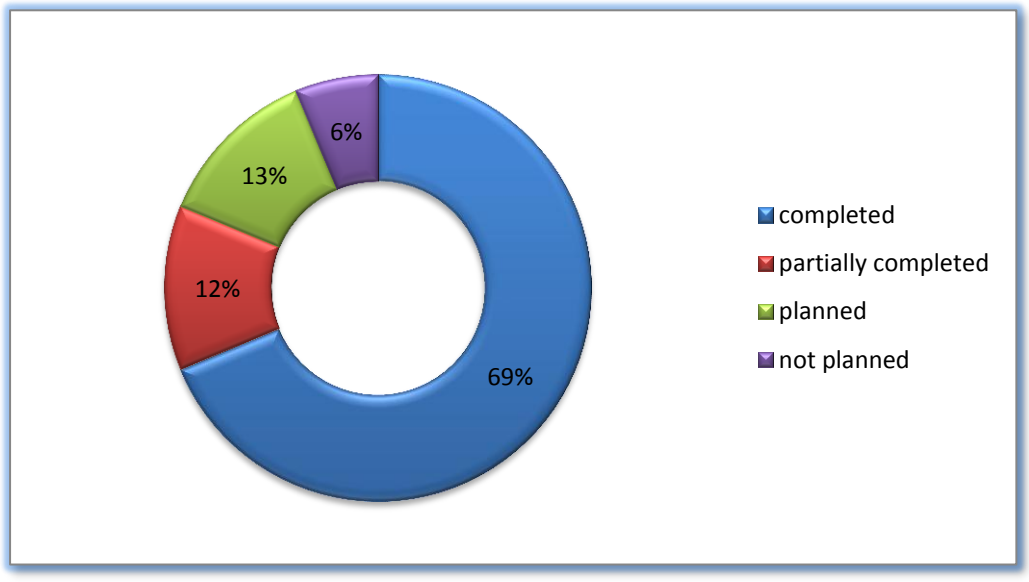


Summary
All States have already started to implement SMS educational and promotional activities for service providers into their SSPs. Twelve (12) States have already set their activities while the remaining four (4) States are still in the process of its implementation.
Additional Observations
Monaco (C): One initial meeting was held to present the SMS requirements and now safety committee are organized by the CAA DG every 3 months. Finland (C): Trafi has put SMS-guidance material, instruction and schedule on Trafi`s web pages. Sweden (C): SSP and SMS promotion is made at annual meetings with the service providers in each of the oversight areas (OPS, AIR, AGA, ATM etc.) Spain (C): We have established several mechanisms to promote SMS between the service providers: Conferences, Working Groups....It is a continuos task. Italy (PC): SMS guidelines have been recently issued for operators (Regulation 965/2012). Instead SMS guidelines for Certified Aerodromes and ATC providers must be revised since they were issued in past years. For remaining organisations guidelines should be issued.

PHASE 3

1. **SSP element 1.4(ii): Enforcement Policy/Legislation to include:**

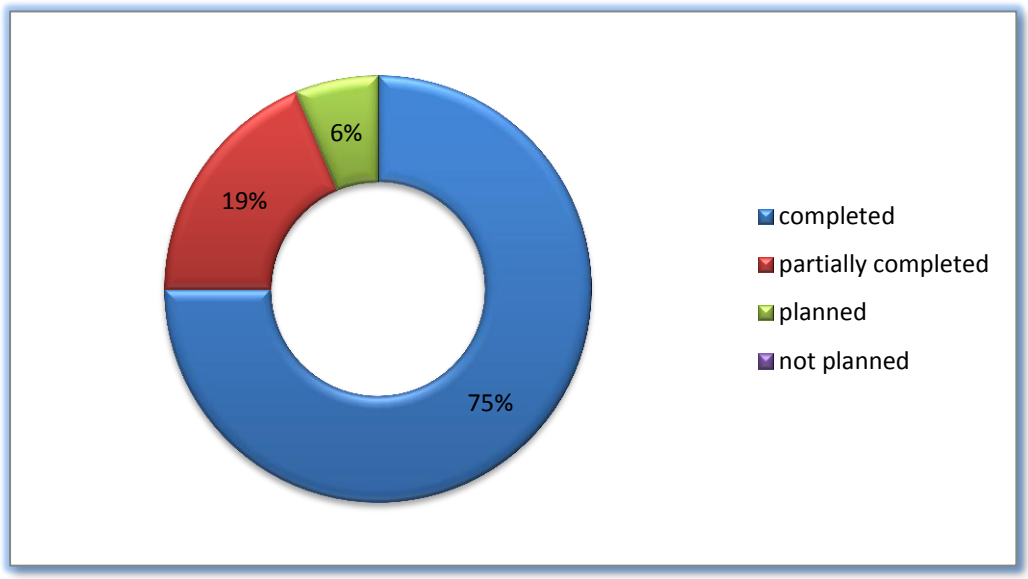
a. **Provision to prevent use or disclosure of safety data for purposes other than safety improvement**



Summary
Eleven (11) States have particular provisions for safety data prevention already in place. Some of them had this provision already in national law before implementing SSP. Ireland and Montenegro are in the middle of the implementation, Monaco and Turkey haven't started yet but are planning to do so and Italy doesn't plan to

implement such provisions.
Additional Observations
Monaco (C): Relevant provisions should be added in the primary law, if accepted by the ministry. But legislation process is taking time. Finland (C): Protection of the safety data and reporter is already implemented in Finnish Aviation Act and in the Act that is about data publicity. Sweden (C): Occurrence reports are protected from disclosure through national law. Ireland (PC): Internal policy in place. Formal promulgation of policy to industry is outstanding. Portugal (C): Need to redefine the provisions according to the new legislation.

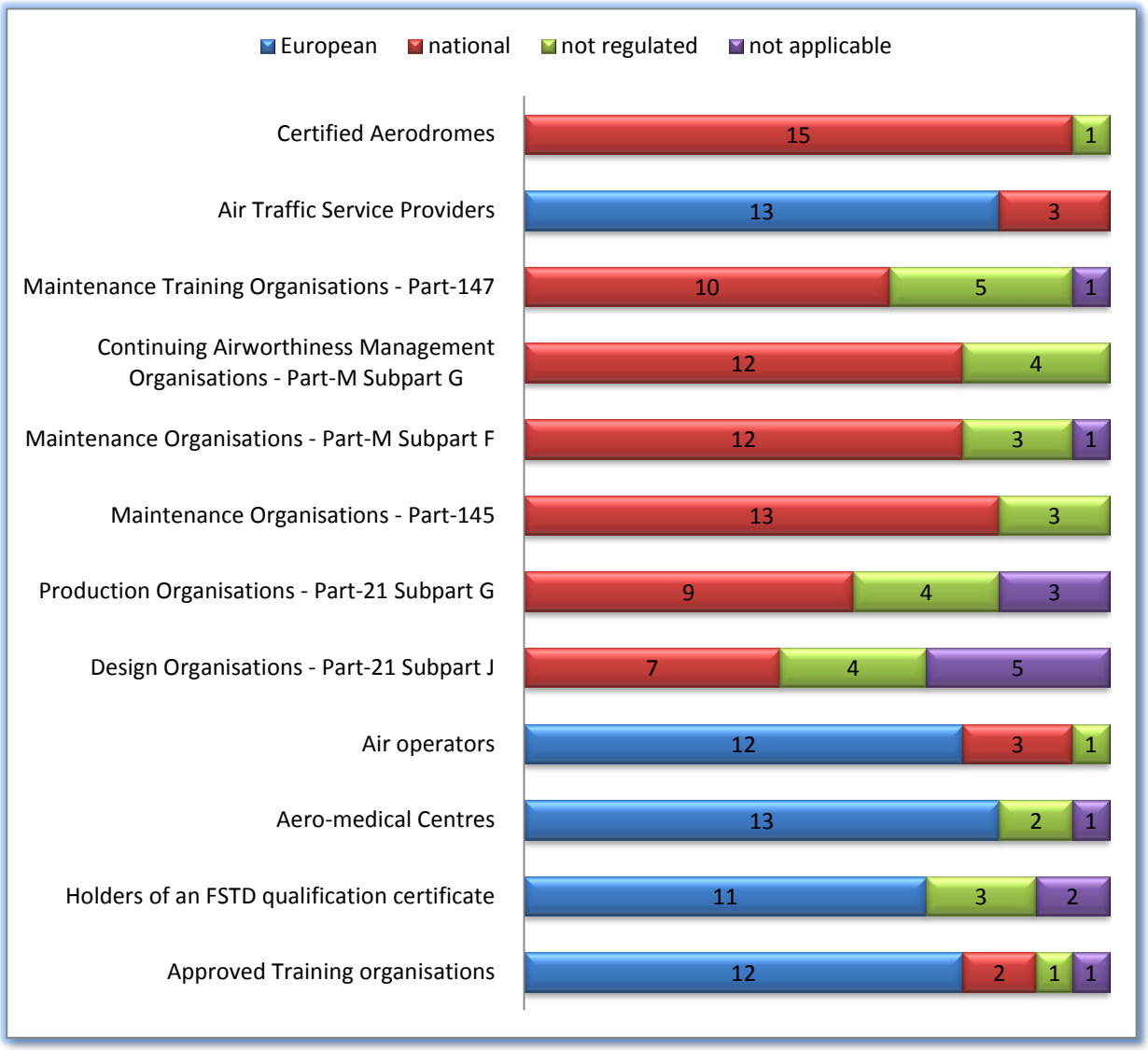
b. Provision to protect the sources of information obtained from voluntary confidential reporting systems



Summary
Twelve (12) States have particular provisions for protection of the sources of safety information already in place. Three States (Sweden, Ireland, Montenegro) are partially finished with this task. Monaco plans to implement such provisions and stated that it is not easy to ensure confidentiality in small size of the civil aviation.
Additional Observations
Monaco (P): Related to the comment to previous question. Confidentiality is not easy to ensure due to the size of the Civil Aviation, gathered in one heliport. Finland (C): Finland has had voluntary reporting system since 1st April 2011. Finland has also had a very good mandatory reporting system via which Trafi gets about 4200 reports / year. Sweden (PC): Voluntary reports are handled in the same system as the mandatory, but disidentified. All occurrence reports are protected from disclosure through national law.

Ireland (PC): Internal policy in place. Formal promulgation of policy to industry is outstanding.

2. SSP element 2.1(ii): Harmonized regulations requiring SMS implementation.



Summary

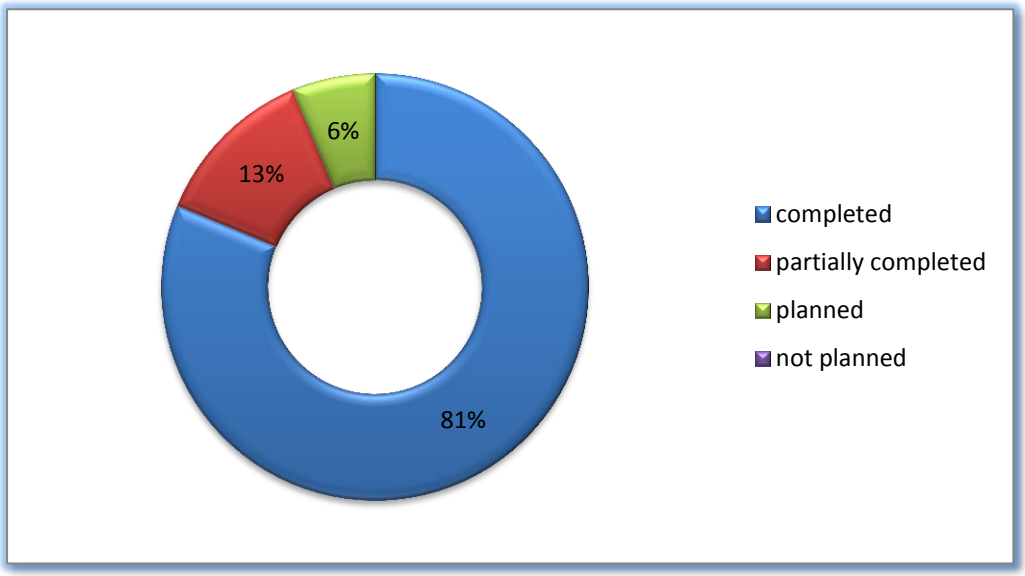
The table above shows the numbers of States and the type of regulation requiring SMS implementation they apply in different aviation domains.

Most of the States that responded to the survey apply European legislation in the domains of ATM, Air Crew and Air Operations.

In the domains of Aerodromes, Initial and Continuous Airworthiness European Legislation requiring SMS implementation had not been promulgated when the survey was conducted and hence the majority of States apply national legislation.

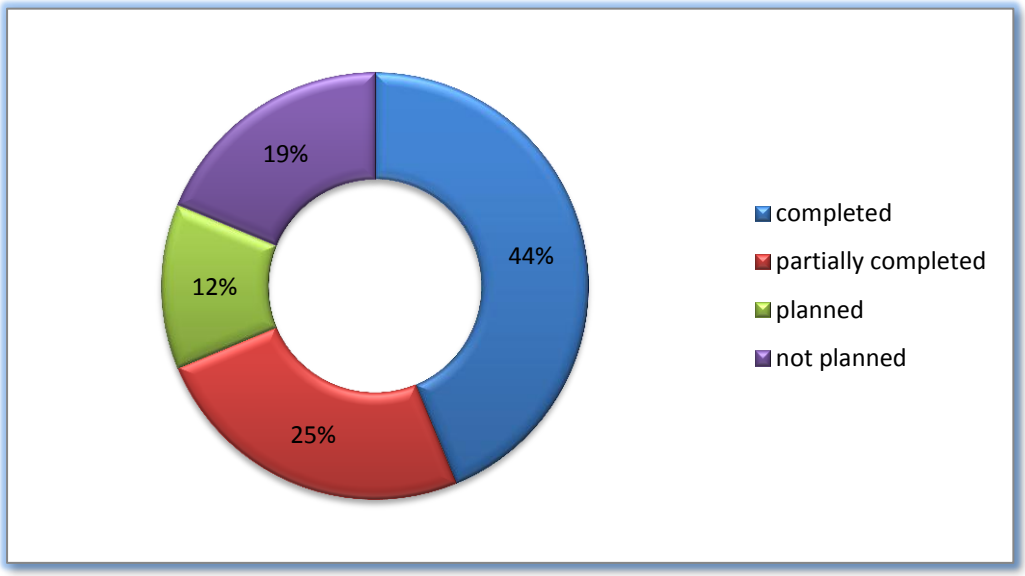
3. **SSP element 3.2(i):**

a. **Safety data collection & exchange systems**



Summary
Thirteen (13) States that have this task completed have mostly adopted the Directive's 2003/42/EC safety data collection and exchange systems requirements. Monaco and Malta are working on that and Turkey plan to do so in the future.
Additional Observations
Monaco (PC): Provisions are disseminated in the requirements for the different agreement/certificate but there is a lack of consistency and it is planned to gather the relevant requirements in one text.

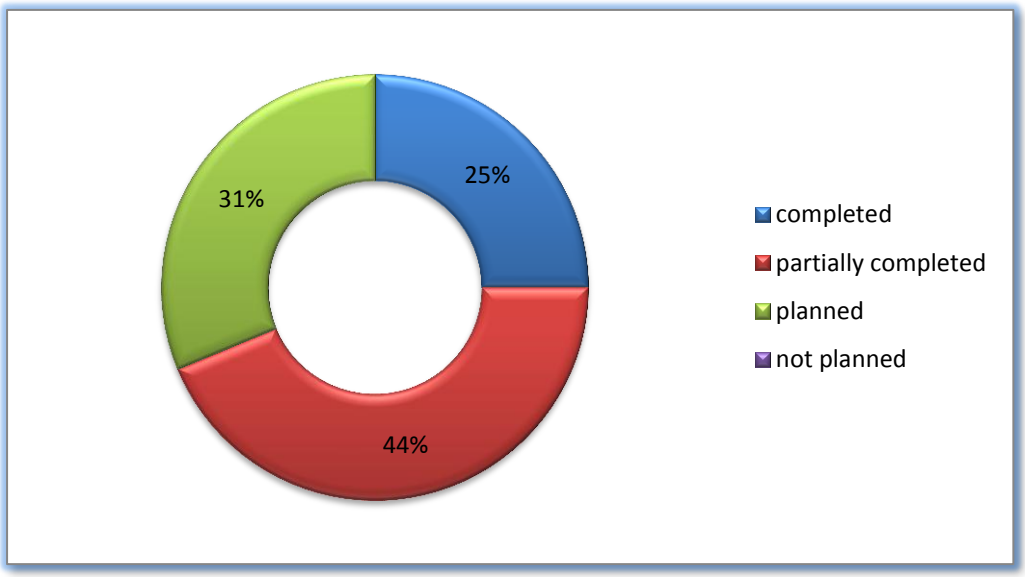
b. **Establish high consequence (or Tier 1) State safety performance indicators and target/alert levels**



Summary
Seven (7) States established State safety performance indicators. Four (4) are partially finished, two (2) plan this step and three (3) States don't plan to establish the State safety performance indicators and target levels.
Additional Observations
Finland (C): First version of SPIs and SPTs were published in 8th April 2012 and the second version 25th March 2013. Sweden (C): Accident statistics are collected and published regularly on our public website. Indicators are shown e.g. for runway excursions/incursions, airspace infringements, laser occurrences. Ireland (C): Tier 1 and Tier 2 indicators are published in Annual Safety Review and on website. Switzerland (PC): Presently only monitoring (no targets). UK (PC): SPI's have been set. Target/alert levels have not been fully established yet.

PHASE 4

1. **SSP element 2.2: Service provider safety performance indicators**



Summary
Four States' service providers (in the Netherlands, Montenegro, Portugal and UK) have established safety performance indicators. In four States of seven that are partially completed with this task only Air Traffic Service providers have established performance indicators. Five (5) other States are planning this element.
Additional Observations
Monaco (P): Operators have started to run their SMS in June 2013, thus more feedback is needed before being able to define indicators & objectives.

Finland (PC): Airlines and ATC service provider in Finland have implementing /implemented Finnish CAA`s SPIs. CAA`s SPIs are developed in co-operation with service providers and for ex. flight schools.

Sweden (P): The EU legislation will mandate this as part of the introduction of SMS requirements.

Spain (PC): We have established some safety performance indicators with the servide providers to have a first idea of their level of safety. These indicators have not associated targets.

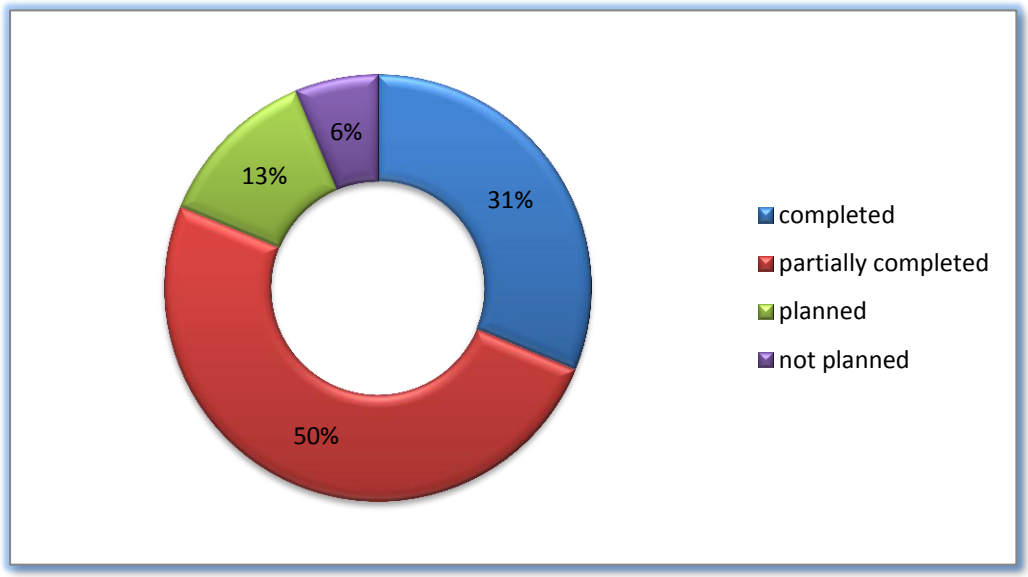
Ireland (PC): Identification of safety indicators is mature in most domains. Safety Targets are published in the ANS domain only.

Italy (PC): Completed only in the ATC sector.

Switzerland (PC): Presently only monitoring (no targets).

UK (C): Service providers have SPI and the UK CAA are working closely with them to establish a common set.

2. **SSP element 3.1(ii): Incorporation of service providers' SMS and safety performance indicators as part of routine surveillance program.**



Summary
Five (5) States have incorporated service providers' SMS into the routine surveillance program. The majority of States (8) are working on it.
Additional Observations
Monaco (PC): SMS audits are integrated in the surveillance programme but we need more feedback before being able to monitor indicators. Finland (C): Airlines and ATC service provider in Finland have implementing /implemented Finnish CAA`s SPIs. In National FDM-group-meetings twice a year

CAA and service providers are comparing their analyses on SPIs. Surveillance program will start to implement SPI-oversight after service providers and CAA have got accustomed to oversee them. CAA will oversee the function of service providers SMS after implemented on 8th April 2014.

Sweden (P): The EU legislation will mandate this as part of the introduction of SMS requirements.

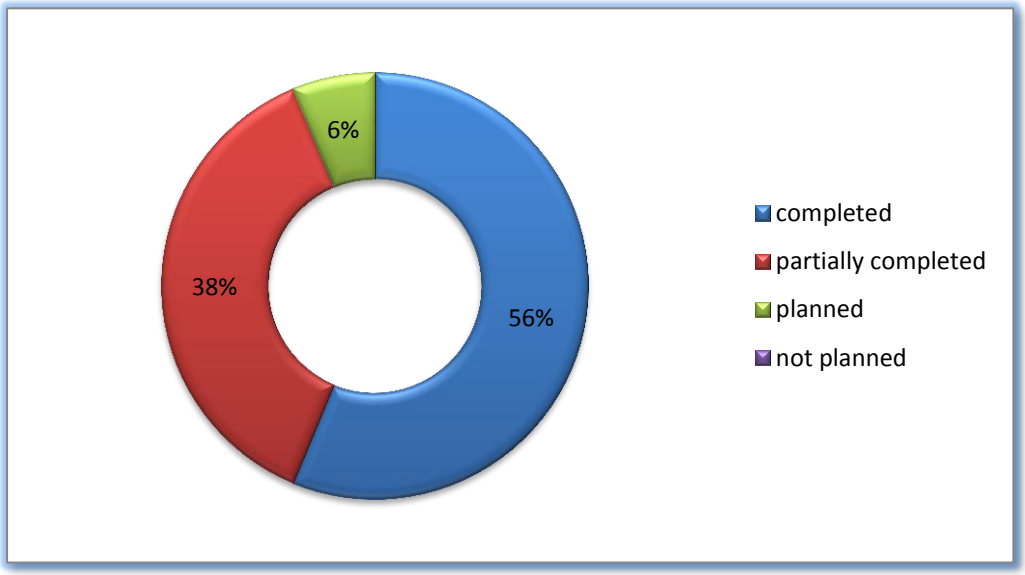
Spain (PC): SMS is part of the routine surveillance program when SMS is required. For example, in case of aerodromes, SMS is inspected.

Ireland (PC): Surveillance programmes include the monitoring of performance against safety targets identified for ANS and also for key safety indicators in other domains as identified in the European Aviation Safety Plan.

Switzerland (PC): SPI being shared and monitored. SMS effectiveness part of routine surveillance.

3. SSP element 3.2(ii):

a. Implement voluntary/confidential safety reporting systems



Summary
Most States (9) have already implemented voluntary/confidential safety reporting system. In many cases the system is the same for voluntary and for confidential reports. Six (6) States need to work on it and one State hasn't started yet but is planing to do so.
Additional Observations
Monaco (PC): The reporting system need to be clarified at the regulation level but also at the implementation level (forms, means for reporting, etc). Confidentiality is hard to ensure in a small civil aviation. Finland (C): Finland has had voluntary reporting system since 1st April 2011. Finland has also had a very good mandatory reporting system via which Trafi gets about

4200 reports / year.

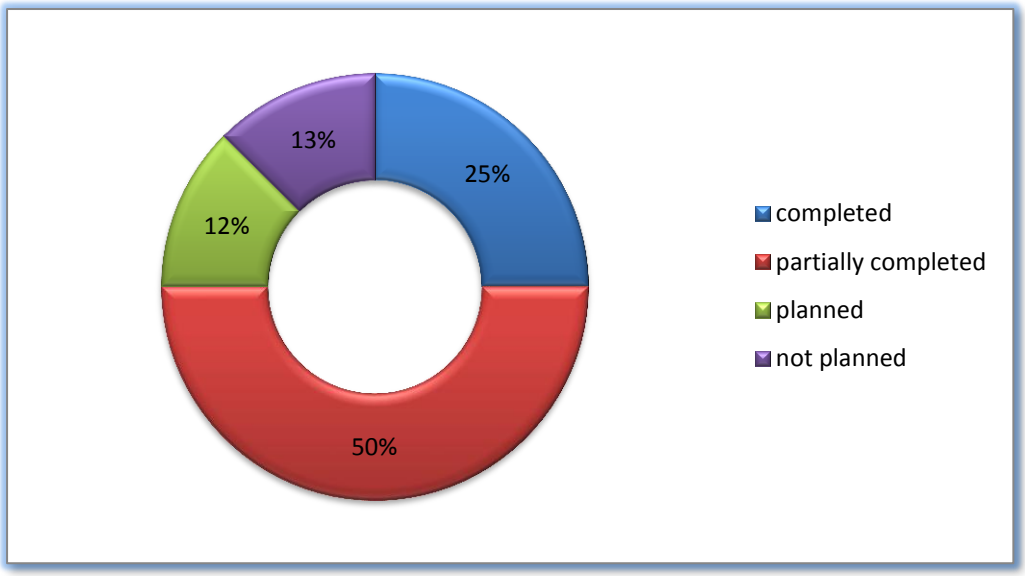
Sweden (PC): Voluntary reports are handled in the same system as the mandatory, but disidentified. All occurrence reports are protected from disclosure through national law.

Spain (C): SNS collects mandatory and voluntary occurrence reports.

Ireland (PC): The voluntarily reporting system is currently only directly accessible to the civil aviation authority.

Italy (PC): Voluntary reporting system is managed by Safety Investigation Authority and is not accessible to the CAA.

b. Establish lower consequence safety indicators with target/alert level monitoring as appropriate



Summary

Four (4) States have established lower consequence safety indicators. Eight (8) States are working on it and Seven (7) other States plan to establish that. Two States don't plan to establish lower consequence safety indicators.

Additional Observations

Monaco (PC): Safety indicators are in place at this level but target are not set.

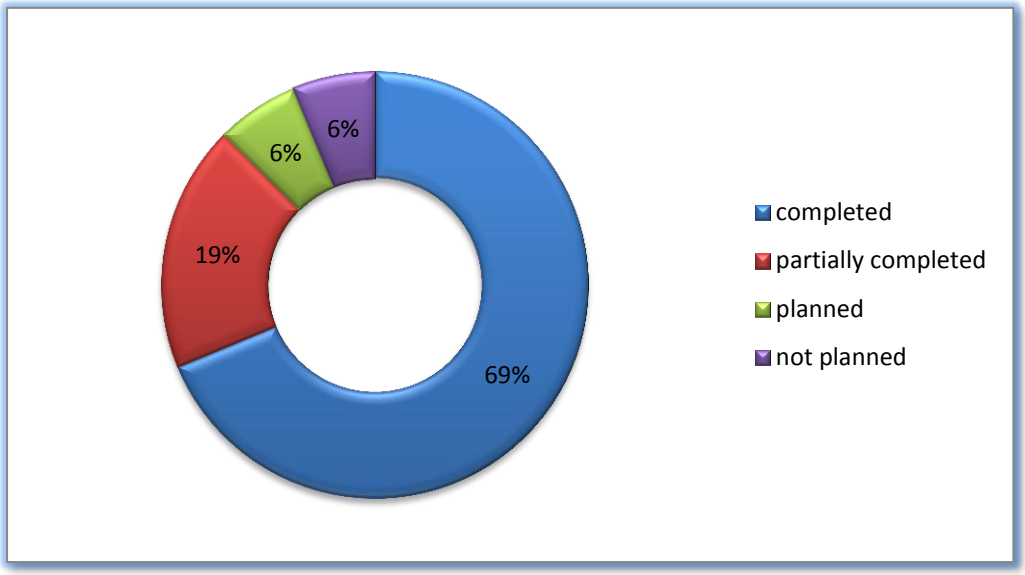
Finland (C): First version of SPIs and SPTs were published in 8th April 2012 and the second version 25th March 2013.

Sweden (C): We have some lower level indicators running and are planning to introduce more. Indicators are analysed by the internal Aviation Safety Analysis Forum every second month.

Ireland (PC): Organisation risk profiles established in some domains consider lower consequence safety indicators as well as other risk and performance related issues

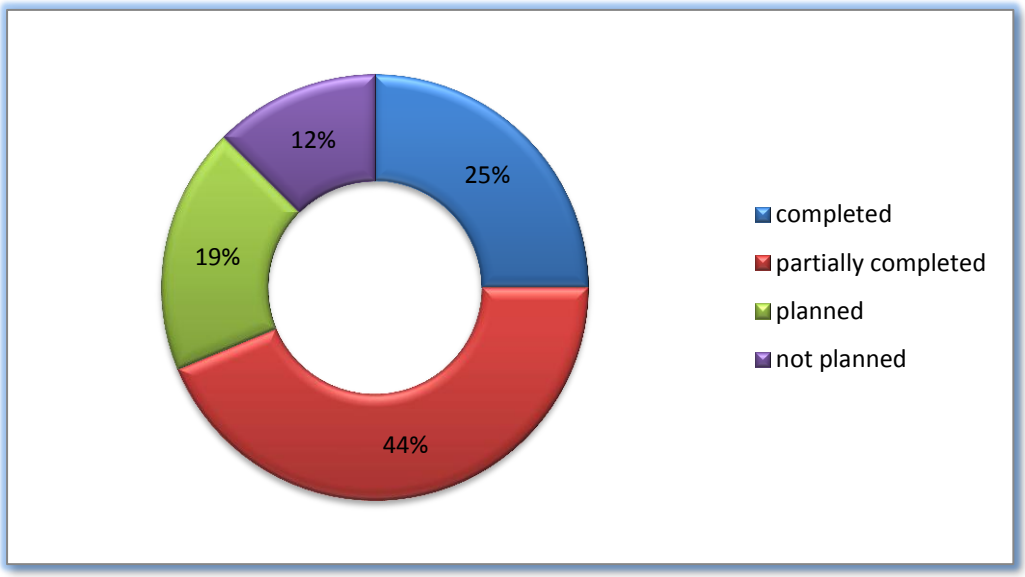
France (PC): Done for the ATM domain. Waiting for guidance in the other domains. Switzerland (C): Presently only monitoring (no targets).

c. Promote safety information exchange with and amongst service providers and other States



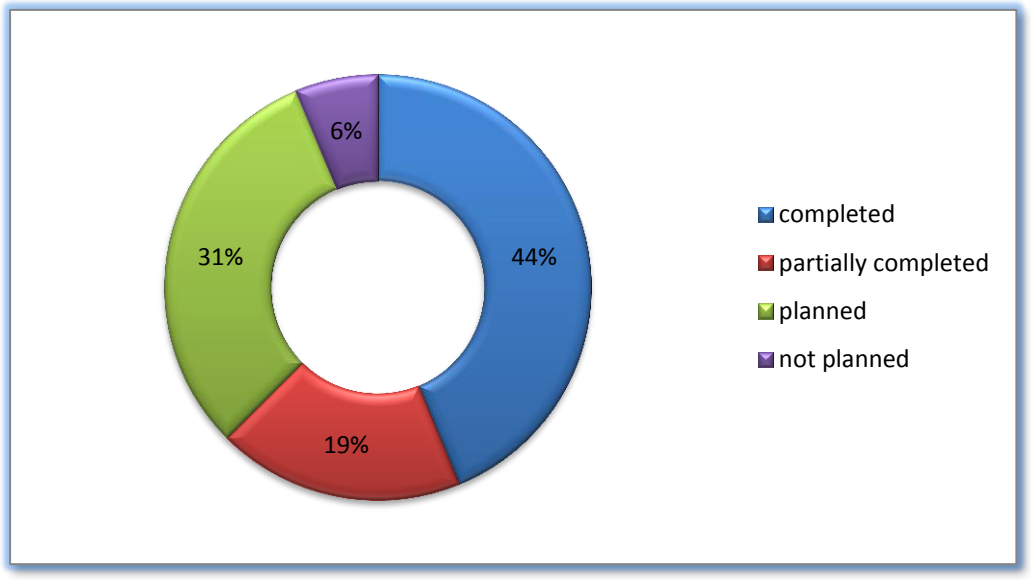
Summary
Eleven States (11) have committed to actively promote information exchange. Some of them follow NoA activities.
Additional Observations
Finland (C): Trafi is working actively in NoA, within NEFAB (hosted the group developing NEFAB safety information change processes) and is continuously publishing analyses, safety bulletins and has published Finland`s Annual Safety Review since 2012. Sweden (PC): Work is underway in the NoA activities. We are open for exchange of data as long as it does not conflict with the national Secrecy Act. Spain (C): We have established several Committees with the Industry to share safety information. Ireland (C): Annual Safety Review and Annual State Safety Plans are published. Full involvement in EASA initiatives on data sharing Switzerland (C): Presently only monitoring (no targets).

4. **SSP element 3.3: Prioritize inspections and audits based on the analysis of safety risk or quality data where applicable**



Summary
Four (4) States reviewed existing surveillance and audit programmes, seven (7) States are not finished yet, three (3) plan this in the future while two (2) States don't plan this task.
Additional Observations
Finland (C): Trafi`s Transport analyses department has done safety analyses for audit preparation in AOC-audits since 2010. During 2012 this has also been done for ATC/AD and maintenance organisation audits. Trend analyses ans SPI-follow up and monthly safety reviews (tilakatsaus) are also used as a background information in prioritizing action done by Trafi. Sweden (PC): Every oversight area is mandated to use risk based methods for the planning of oversight. Spain (C): We have internal Committees to prioritize inspections and audits based on safety data that is collected by different mechanisms. Switzerland (PC): Outputs of SMS system are used by Safety Divisions for planning oversight activity. UK (PC): Peformance Based Oversight is being implemented.

5. **SSP element 3.1(iii): Establish internal review mechanism covering the SSP to assure continuing effectiveness and improvement**

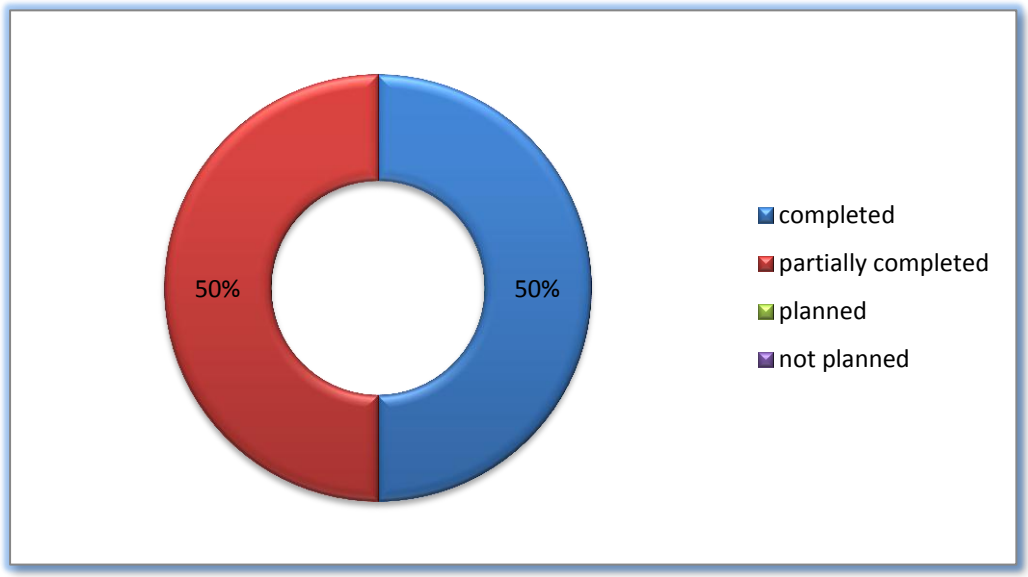


Summary
Seven (7) States have implemented internal review mechanism and they are on regular basis monitoring the improvement and assuring continuing effectiveness. Three States (3) are still working on its implementation. Five (5) States plan this mechanism to establish soon. Italy doesn't plan this element.
Additional Observations
Sweden (PC): The SSP is planned to be evaluated every year and is a part of the internal quality system, and is as such subject to internal auditing. Ireland (C): Updates required in line with Annex 19 and developing EU regulations. Switzerland (C): SSP is reviewed annually by SRM. Updates approved by Board.

TRAINING AND COMMUNICATION THROUGH PHASE 1 TO 4

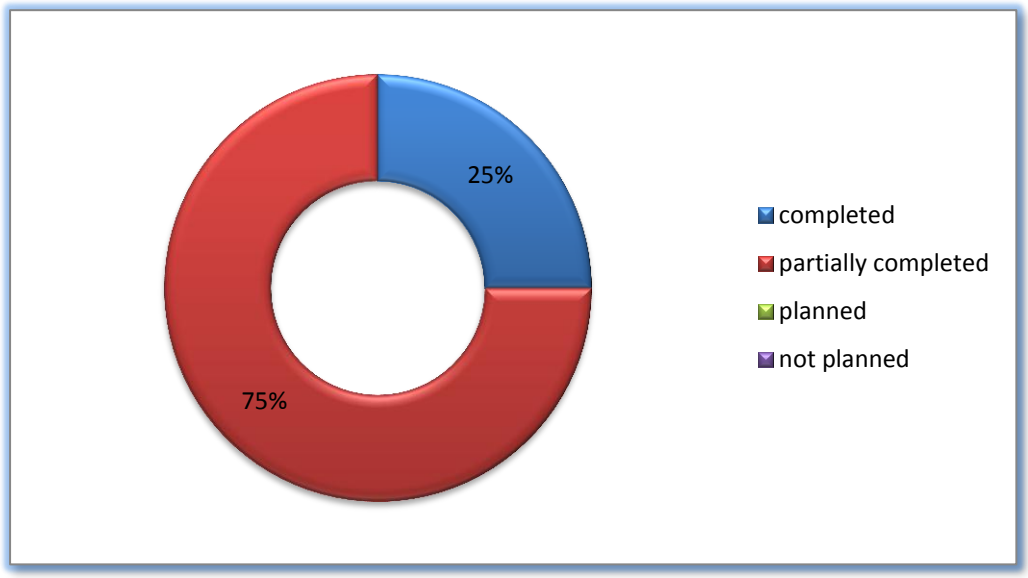
1. **SSP element 4.1, 4.2:**

a. **Internal training, communication and dissemination of safety information**



Summary
All States that responded to the survey have realised the importance of training. Half of the States (8) have already set a training policy and have implemented SMS training programme. The other half (8 States) are not finished yet but they are working on the implementation of this element at the moment.
Additional Observations
Finland (C): Internal safety communication is done for ex. in Monthly Safety Reviews (see 3.3). CAA staff has also been trained about SSP (FASP). Sweden (PC): Training is basic SSP concepts were given during the period 2008-2010. SSP is also a part of the the basic and recurrent training of inspectors. Spain (C): We have two courses: initial and advanced SSP. The initial SSP course will be mandatory for all technical AESA staff. We have different mechanisms to share safety information: ad-hoc working groups, internal Committees. Switzerland (C): Internal training concept and controlling conducted by DD Division.

b. External training, communication and dissemination of safety information



Summary
Four (4) States have implemented the mechanism for external training, communication and dissemination of the safety information. Twelve (12) States are partially completed.
Additional Observations
Sweden (PC): We are publishing safety information through leaflets for the aviation stakeholders, and other relevant information on our webpage. Safety Analyses are published yearly. Information about SMS and SSP is given at annuals seminars with service providers in each oversight area. Spain (C): AESA do not provide external training. Regarding communication and dissemination of safety information, we have different mechanisms in place: ad-hoc working groups, Committees with the Industry, AESA website, e-mails. Ireland (PC): Mature SMS training and exchange most domains. Work beginning in the Airworthiness domain in line with EU rulemaking plans for SMS in this domain.

FINAL THOUGHTS ON SSP

1. What is in your opinion the most difficult task with implementing SSP?

Summary
Monaco: Implementing an efficient safety reporting tool is not easy; information have to be gathered in a way that ease the analysis but also that allow to obtain results and useful outcomes (see the difficulties with ECCAIRS). Also, having in mind that the main purpose of the SSP is to ensure the efficient management of the operators safety through their SMS, it is difficult to convince them about the necessity of this new requirement since we are not able to provide any feedback at this stage.

Netherlands: Establish and maintain the SSP coordination mechanism. Establish an effective ALoS for the different domains.

Finland: To define the acceptable level of safety to promote SSP which is sometimes considered as a difficult and complicated issue (which it is not).

Turkey: Establishment of enforcement policy.

Sweden: The SSP concept requires a "break in" into the core management processes of the authority (budgeting, business planning, HR recruitement processes etc.). This is hard to achieve since they challenge old well built up structures and competences (hierarchies of power and mandate) within the management. SSP is still seen as something "on top" of the Normal Business Process. There is however an increasing awareness about this and that is a good start.

Iceland: Make it simple in a small Authority - EASp is way too loosely connected to the main aviation subjects as they are defined in the SARPs or Annexes. SMS is to complement compliance requirements not replace them. A new balance is needed between Compliance and the extra burden provided by the SMS/SSP cloud.

Spain: Getting the involvement of different people.

Ireland: The aviation system has achieved it's excellent safety record due in the main to the success of compliance based oversight. It is a cultural change to move towards risk and performance based oversight which needs to be carefully managed in order to ensure it is understood by the state bodies and communicated clearly to industry.

France: Define manageable and relevant tier 2 safety indicators.

Montenegro: Definition of SPI and measuring of performance.

Portugal: The Safety Culture is understood and practiced in different points of view concerned the NAA and the Political decision makers.

Switzerland: Reaching awareness and commitment (internal and external) for the use and benefit of the SSP.

UK: Achieving a standardised approach with all various industry and agencies while facilitating and supporting them. Manpower levels of the SSP team required vs reality also presented issues.

2. What would you have done differently?

Summary

Monaco: I would have spent more effort on the safety reporting, particularly on the means for reporting and on the tools for analysis. Indeed, this is what feeds the SSP and allow it to be efficient. Also it could have been of benefit to organized a training for each industry, which is feasible in Monaco due to the small size of the CAA. This may not have accelerated the process because the operator always wait the dead line, but this could have helped to obtain SMS more efficient than conceptual.

Netherlands: We would like to establish an effective but also challenging ALoS and are looking for ways to monitor and ultimately enforce in a pragmatic way Safety management.

Iceland: I would have used the Annexes with few extra requirements and then built the SSP into the Quality/Compliance monitoring system of the Authority to monitor compliance and the quality of the actually performance ad Quality systems, ISO 9001 in essence does that - you have to take action if your design and production/service processes are not doing what they are intended to accomplish. In essence SSP setup establishes a new department within a authority but should complement the Quality department. To summarize: New basic requirements into the SARPs and thereby the EASA Parts and a new type of quality department that monitors both compliance and performance.

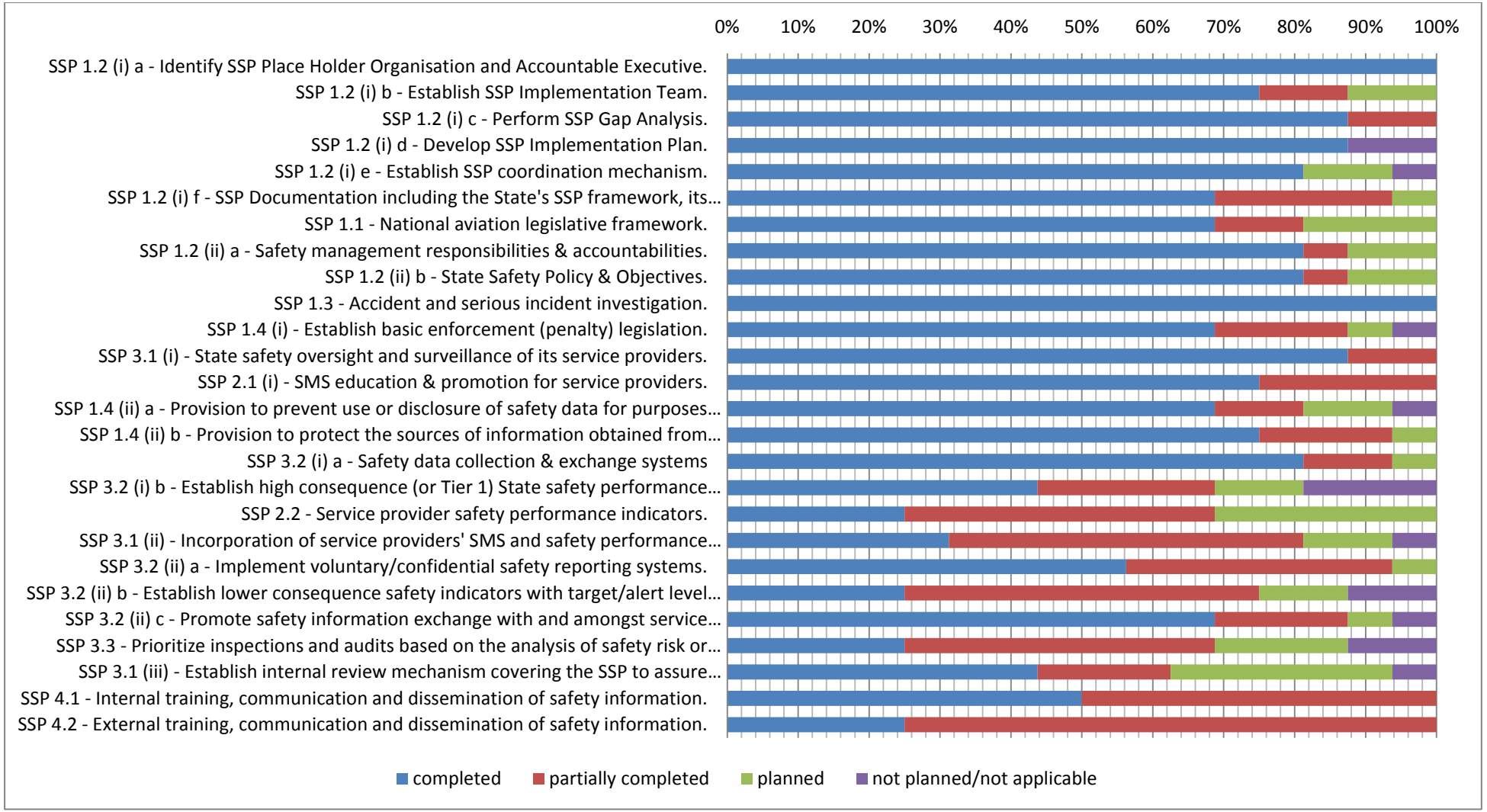
Ireland: I would recognise that the SSP is a cultural change project and consequently devote significant amount of the resources on communications, training and guidance for all the stake holders.

Switzerland: Nothing. We are learning by doing and improving the SSP with every review (conducted on a regular basis).

SSP Phased Approach (as proposed in ICAO SMM Edition 3)

Phase I	Phase II	Phase III	Phase IV
SSP element 1.2 (i) a. Identify SSP Place Holder Organisation and Accountable Executive. b. Establish SSP Implementation Team. c. Perform SSP Gap Analysis. d. Develop SSP Implementation Plan e. Establish SSP coordination mechanism. f. SSP Documentation including the State's SSP framework, its components and elements.	**SSP element 1.1** National aviation legislative framework. **SSP element 1.2 (ii)** a. A Safety management responsibilities & accountabilities b. State Safety Policy & Objectives **SSP element 1.3** Accident and serious incident investigation **SSP element 1.4 (i)** Establish basic enforcement (penalty) legislation. **SSP element 3.1 (i)** State safety oversight and surveillance of its service providers. **SSP element 2.1 (i)** SMS education & promotion for service providers.	**SSP element 1.4 (ii)** c. Provision to prevent use or disclosure of safety data for purposes other than safety improvement. d. Provision to protect the sources of information obtained from voluntary confidential reporting systems. **SSP element 3.2 (i)** a. Safety data collection & exchange systems b. Establish high consequence (or Tier 1) State safety performance indicators and target/alert levels.	**SSP element 2.2** Service provider safety performance indicators. **SSP element 3.1 (ii)** Incorporation of service providers' SMS and safety performance indicators as part of routine surveillance program. **SSP element 3.2 (ii)** a. Implement voluntary/confidential safety reporting systems. b. Establish lower consequence safety indicators with target/alert level monitoring as appropriate. c. Promote safety information exchange with and amongst service providers and other States. **SSP element 3.3** Prioritize inspections and audits based on the analysis of safety risk or quality data where applicable. **SSP element 3.1 (iii)** Establish internal review mechanism covering the SSP to assure continuing effectiveness and improvement.
SSP element 4.1 Internal training, communication and dissemination of safety information. **SSP element 4.2** External training, communication and dissemination of safety information.			

Aggregated Summary



Critical Areas

Most advanced elements (> 80% completed)	Least advanced elements (< 35% completed)
SSP element 1.2 (i) a. Identify SSP Place Holder Organisation and Accountable Executive. c. Perform SSP Gap Analysis. d. Develop SSP Implementation Plan e. Establish SSP coordination mechanism. **SSP element 1.2 (ii)** a. Safety management responsibilities & accountabilities b. State Safety Policy & Objectives **SSP element 1.3** Accident and serious incident investigation **SSP element 3.2 (i)** a. Safety data collection & exchange systems .	**SSP element 2.2** Service provider safety performance indicators **SSP element 3.1 (ii)** Incorporation of service providers' SMS and safety performance indicators as part of routine surveillance program. **SSP element 3.2 (ii)** b. Establish lower consequence safety indicators with target/alert level monitoring as appropriate. **SSP element 3.3** Prioritize inspections and audits based on the analysis of safety risk or quality data where applicable. **SSP element 4.2** External training, communication and dissemination of safety information.

Individual States Summary