

Finnish Plan for Aviation Safety 2017 - 2021

Finnish Aviation Safety Programme Annex 1

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Foreword

The Finnish Aviation Safety Programme describes the national aviation safety management system. The programme includes a safety policy and a high-level description of the legislative background, processes and safety work.

This document is the Finnish Plan for Aviation Safety, Annex 1 to the Finnish Aviation Safety Programme, which describes the actions to be completed under the Safety Plan in Finland, the parties responsible for them and schedules for 2017-2021. The document is updated annually based on needs for actions identified as part of Finnish aviation safety risk management work and the European Plan for Aviation Safety maintained by the EASA. The European Plan for Aviation Safety is similarly underpinned by global safety objectives of the ICAO.

Each aviation organisation is responsible for the safety of its own operation. The organisations have the duty to identify any threats to their activities, assess risks and take the required action to eliminate the risks or to reduce them to an acceptable level as part of their safety management. The organisations must also process risks affecting their activities addressed in the Finnish Plan for Aviation Safety identified at the national level and, if necessary, implement actions aiming to eliminate these risks or reduce them to an acceptable level. The processing of the risks addressed in the Safety Plan in the organisations is overseen by Trafi.

Pekka Henttu, Director General of Civil Aviation

Finnish Plan for Aviation Safety, document version history

Date issued	Date valid	Validity
9 May 2017	9 May 2017	until further notice
Underlying international standards, recommendations and other documents:		
<p>Trafi's rules of procedure, 1 January 2017, section 6.6: Finnish Aviation Safety Programme,</p> <p>Aviation Act 864/2014, section 4: Finnish Aviation Safety Programme,</p> <p>Convention on International Civil Aviation, Annex 19 (Safety Management),</p> <p>Global Aviation Safety Plan GASP 2017 – 2019 (ICAO Doc 10004),</p> <p>COM(2015) 599 final, REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL, The European Aviation Safety Programme</p> <p>European Plan for Aviation Safety (EPAS) 2017 - 2021</p> <p>COM(2011) 144 White Paper – Roadmap to a Single European Transport Area</p>		
Revision details:		
Date	Version	Change
20 December 2013	1.0	First publication
11 February 2015	2.0	Status of actions updated for 2014. OPS.009 Fire and smoke, added.
9 May 2017	3.0	Extensive update: layout and structure modified, measures updated based on EPAS 2017 – 2021 and the FASP process

Acronyms

AloS	Acceptable level of Safety
AloSP	Acceptable level of Safety Performance
AMC	Acceptable Means of Compliance
DOC 9859	ICAO Safety Management Manual
EASA	European Aviation Safety Agency
EASP	European Aviation Safety Programme
EPAS	European Plan for Aviation Safety
ECCAIRS	European Coordination Center for Accident and Incident Reporting Systems
Eurocontrol	European Organisation for Safety of Air Navigation
FASP	Finnish Aviation Safety Programme
FPAS	Finnish Plan for Aviation Safety
FDM	Flight Data Monitoring
GASP	Global Aviation Safety Plan
ICAO	International Civil Aviation Organization
RSOO	Regional Safety Oversight Organization
SMS	Safety Management System
SPI	Safety Performance Indicator
SPT	Safety Performance Target
SSP	State Safety Programme

1 European Plan for Aviation Safety EPAS

1.1 EPAS background



In 2011, the European Commission issued a White Paper on Transport¹ that set the objective of the European Union being the safest region in the world for aviation.

A long-term forecast published by Eurocontrol in 2010² indicates that the number of flight movements in Europe will double by 2030. Long-term forecast was updated in 2013³, and updated version approaches the growth in flight movements through four different scenarios, in which the growth from 2012 till 2035 varies from 20% to 80% depending on the scenario. While the commercial aviation safety situation in Europe is good at the moment, measures will be required in the future to reduce the number of accidents even as the number of flights

increases and to keep the annual number of fatalities at its present low level. Advanced safety management will also be needed to respond to changes in air transport system structures, business models and technical solutions, which may at times be rapid, and to respond to the challenges brought about by new safety threats.

In 2011, the European Commission also issued a Communication⁴ to the Council and to the European Parliament outlining the measures needed to attain the objective set in the White Paper. In this Communication, the Commission notes that in addition to regulatory compliance there is a need for a systemic approach to safety, in other words the introduction of safety management systems.

The Commission issued the first version of the European Aviation Safety Programme⁵ together with the Communication, describing how aviation safety is managed at the EU level. In December 2015, the Commission published the first update of the Safety Programme annexed to its report⁶.

A *European Plan for Aviation Safety, EPAS*, has also been published since 2011. It contains key identified safety risks to aviation at the European level and strategic safety objectives and actions for achieving them, as well as addressing the global objectives defined in the *Global Aviation Safety Plan, GASP*, published by the ICAO.

The current revision of the EASA's Basic Regulation (see Finnish Aviation Safety Programme FASP, section 1.2.1) will make the European Aviation Safety Programme and Plan mandatory. The revision will also impose on the Member States the obligation to formulate national safety programmes and plans. These

¹ COM(2011) 144 WHITE PAPER – Roadmap to a Single European Transport Area – Towards a more competitive and resource efficient transport system.

² EUROCONTROL CND/STATFOR Doc415, 17.12.2010 - Long-Term Forecast - Flight Movements 2010 – 2030.

³ Challenges of Growth 2013, Task 4: European Air Traffic in 2035

⁴ COM(2011) 670 COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT – Setting up an Aviation Management System for Europe

⁵ The European Aviation Safety Programme, SEC/2011/1261 final.

⁶ COM(2015) 599 final, REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL The European Aviation Safety Programme

obligations already apply to states under ICAO Annex 19. At the European level, the Basic Regulation revision will reinforce the effectiveness and implementation of the European Safety Programme and Plan.

1.2 EPAS as part of safety management in European aviation

The EPAS is produced as part of the EASA's *Safety Risk Management process (SRM)*. Within the framework of its SRM process, the EASA coordinates the identification of key issues in European aviation and the development of the European Safety Risk Portfolio. Through expert and decision-making forums that follow an annual programming cycle, the Member States and aviation stakeholders can participate in and influence risk management in European aviation. The actions defined as the result of this process are published annually in the EPAS and implemented in a coordinated manner both at the European and the national level.

The actions contained in the EPAS, and thus also in the Finnish Plan for Aviation Safety, are divided into three categories by the type of issues they seek to influence: *systemic issues, operational issues and emerging issues*. The contents of these categories are described in detail in connection with the actions in Chapter 3. The actual actions, or the selection of means for improving safety, are divided into four types: *safety promotion, focused oversight task, regulation* and *research/study*. In addition to identifying key issues, the SRM process also pinpoints the most appropriate means of safety management for each issue.

The European Plan for Aviation Safety is drawn up by the EASA for a four-year period at a time, and it is updated annually. The actions defined in the plan are assigned to the EASA, the European Commission, the Member States and various networks and teams that participate in the EASA's SRM process as well as various working groups owning the actions.

Finland is committed to implementing EPAS actions assigned to the Member States and including them in the Finnish Plan for Aviation Safety. Finland submits annual reports to the EASA on progress made with the actions and is involved in influencing EPAS contents through the EASA's SRM process on expert and decision-making forums.

The European Aviation Safety Programme and Safety Plan can be accessed at the [EASA's safety management website](#) and [Trafi's aviation safety management website](#). [English pages are also available](#).

2 Finnish Plan for Aviation Safety

2.1 Background to the Safety Plan

The Finnish Aviation Safety Programme (FASP) describes the national aviation safety management system. It contains an aviation safety policy and a high-level description of the legislative background, processes and safety work. The Finnish Plan for Aviation Safety is appended to the Safety Programme as Annex 1. It describes key risks for Finnish aviation identified through European and national level safety risk management, the specified strategic safety objectives and the actions taken to achieve the objectives.

The FASP and its Annex also comply with the ICAO requirement of establishing and maintaining a State Safety Programme.

2.2 Role of the Safety Plan in Finnish aviation safety management

The Finnish Plan for Aviation Safety is updated annually. The update addresses the European Plan for Aviation Safety update, the outcomes of the Finnish Aviation Safety Management operating model (the FASP process), and any other identified needs for actions. A description of the FASP process is contained in Chapter 2 of the Finnish Aviation Safety Programme, *Safety Risk Management*.

Where applicable, the national policy programmes concerning the transport system and the objectives and actions specified in them will also be taken into consideration in Finnish aviation safety management.

The implementation and effectiveness of Safety Plan actions assigned to both Trafi and aviation industry stakeholders will be monitored regularly as part of the FASP process and Trafi's continuous monitoring of the safety situation. The parties responsible for each action specified by Trafi will also see to communication about individual actions to the relevant customer organisations and supervise and report to the Risk Panel on progress made with their implementation.

The FASP coordinator at Trafi is responsible for coordinating Safety Plan maintenance and updates. The Risk Panel chaired by the Director General of Civil Aviation approves the Safety Plan and its amendments as part of the FASP process. The Safety Plan can be accessed on [Trafi's aviation safety management website](#).

2.3 Safety Plan structure

In its structure, the Safety Plan follows the European Plan for Aviation Safety described in section 1.2.

Chapter 3 describes the Safety Plan actions by categories and titles, the parties responsible for them and each action's EPAS reference, objective and schedule. Some of the EPAS actions assigned to the Member States are straightforward, while others leave it to the Member State to define the action in detail, accounting for its national situation and needs.

3 Safety Plan actions

The Figure below shows a compilation of key action areas in the European Plan for Aviation Safety EPAS at title level. In some of these areas, there are currently no actions assigned to the Member States.

<i>Systemic issues</i>													
Safety management				Human factors and competence				Aircraft tracking, rescue operation and accident/safety investigations					
<i>Operational issues</i>													
Commercial air transport, aeroplanes							Helicopter operations		General aviation				
Aircraft upset in flight	Design and maintenance improvements	Mid-air collisions	Runway safety	Grpund safety	Terrain conflict	Fire, smoke and fumes	The safety priority is influencing the following areas: <ul style="list-style-type: none"> • loss of control in flight • controlled flight into terrain • system failure (technical) 		Systemic enablers	Staying in control	Coping with weather	Preventing mid-air collisions	Managing the flight
<i>Emerging issues</i>													
Drones (RPAS)			Security risks with impact on safety			New business models			New products, systems, technologies and operations				

3.1 Systemic issues - safety management

Systemic issues, introduction

Systemic level themes are issues that concern an individual organisation, a system element or the entire aviation system. Systemic actions impact on an identified development need or threat.

Systemic themes often do not have a direct, short-term link with individual incidents or accidents. These themes, such as safety or fatigue management, have an extensive and usually delayed impact on the safe operation of an organisation or a system. Systemic issues are often background factors, either easily identifiable or latent. For example, they may be associated with shortcomings in processes, methods or operating cultures. If systemic level threats are not identified and if the risks caused

by them are not managed, they may trigger an incident or an accident. Identifying systemic level threats is particularly essential in the case of new, emerging issues. There often is little or no safety data on them, and the role of proactive risk and impact assessments and research is highlighted.

The global safety management chain (GASP – EASP/EPAS – FASP/FPAS - SMS) was created to systematically develop the safety of the entire aviation system and its elements. Key systemic level elements are the state safety programmes (SSPs, including the FASP in Finland) as well as the stakeholders' safety management systems (SMS).

3.1.1 SYS.001. Finnish Aviation Safety Programme

reference: EPAS action number and title

MST.001: Member States to give priority to the work on SSPs



National action SYS.001.1

Trafi has published a national aviation State Safety Programme, which it keeps up to date and develops. Trafi communicates actively about the programme contents and sees to the implementation of the programme and continuous improvement of the activities on its basis.

Objective of the action:

Finnish aviation safety management is systematic, effective and continuously improving. Finland complies with ICAO and EASA requirements regarding the development and introduction of a state safety programme.

Timetable

Continuous

Deliverable

An up-to-date national safety programme has been published and implemented

Status

First version of the Finnish Aviation Safety Programme was published on 8 April 2012 and has been updated regularly. Version 5.0 was published on 14 March 2017

National action SYS.001.2

As part of the implementation of the Finnish Aviation Safety Programme, Trafi manages risks to Finnish aviation through the FASP process introduced in 2016. Trafi will produce the first Risk Pictures for all sectors of the aviation and, on this basis, define the needs for risk management actions and follow-up. Information on the FASP process is communicated to aviation stakeholders.

Objective of the action:

Safety risk management in Finnish aviation is systematic, effective and continuously improving. Finland complies with ICAO and EASA requirements regarding risk management in Finnish aviation.

Timetable

2017 Risk Pictures 1.0 have been completed and will be published in 2018 as part of the Finnish Plan for Aviation Safety update, subsequently continuous

Deliverable

Finnish Aviation Safety Risk Management Portfolio (Risk Pictures, AloS/AloSP, actions, monitoring)

Status

FASP process introduced in Q3/2016, formulation of Risk Pictures version 1.0 is under way in aviation sectors, launch of the work in different areas has been staggered

National action SYS.001.3

Trafi is developing Performance and risk-based operations management further.

In 2017:

- Trafi will pilot performance-based individual approvals.
- Trafi will assess the effectiveness of updated oversight plans, launch a safety risk management campaign intended for external customers and assess the impacts of these measures after 2018.

In 2018:

- Trafi will introduce a new IT solution for managing organisation profiles.

Objective of the action:

Risk management in Finnish aviation is systematic, effective and continuously improving. Finland complies with ICAO and EASA requirements regarding risk management in Finnish aviation.

Timetable

2017:

- approvals have been piloted: assessment (implemented/not implemented)
- risk management campaign for customers has been planned, implementation launched
- a project on developing instructions for assessing organisation performance has been completed

2018:

- IT tool in use: assessment (implemented/not implemented)
- project on developing instructions for assessing organisation performance: training provided, instructions in use
- safety risk management campaign for customers has been fully implemented and its impact assessment in RISTO has begun.

Deliverable

Performance and risk-based operations management

Status

Actions have been initiated

National action SYS.001.4

Information about key risks to Finnish aviation identified in the FASP process is communicated to the stakeholders, and processing these risks is taken into account in organisation assessments.

Objective of the action:

Implementing safety risk management in Finnish aviation.

Timetable

2018, subsequently continuous

Deliverable

The stakeholders have processed key risks to Finnish aviation from the perspective of their own activities.

Status

Detail will be added to the Risk Pictures of Finnish aviation in 2017. Versions 1.0 to be completed by the end of the year, followed by implementation of the actions in 2018.

3.1.2 SYS.002. Finnish Plan for Aviation Safety

reference: EPAS action number and title

MST.001: Member States to give priority to the work on SSPs



National action SYS.002.1

Trafi maintains the national Finnish Plan for Aviation Safety (FPAS). Trafi communicates actively about the plan content, sees to the implementation of actions assigned to it, and oversees the implementation of actions assigned to other stakeholders.

Objective of the action:

Finland implements the actions assigned from European Plan for Aviation Safety EPAS for Member States and those identified through the national safety risk assessment process.

Timetable

Continuous

Deliverable

FPAS updated and published, actions implemented in practice

Status

First version published on 20 December 2013, the latest update contained in this document

3.1.3 SYS.003. National aviation safety indicators and targets

reference: EPAS action number and title

MST.001: Member States to give priority to the work on SSPs



National action SYS.003.1

Trafi assesses the national aviation safety performance indicators (SPI) and targets (SPT) appended as Annex 2 to the Finnish Aviation Safety Programme as well as any need to update them and update Annex 2 where necessary. Trafi communicates about the indicators and targets and applies them to safety management in Finnish aviation. The stakeholders take the national safety performance indicators and targets into account, and assess and process them in relation to their own activities.

Objective of the action:

Effective and useful indicators and targets for monitoring and assessing the safety levels and performance of Finnish aviation have been specified and introduced. Finland fulfils ICAO requirements.

Timetable

continuous

Deliverable

FASP Annex 2 Safety performance indicators and targets has been assessed, updated, published and implemented

Status

First version published on 8 April 2012. The latest update, version 4.1, published on 29 September 2015. Annex 2 to be updated in 2017, published in autumn 2017 and introduced on 1 January 2018.

National action SYS.003.2

Trafi participates in European development of safety performance indicators through the EASA's NoA (*Network of Analysts*) and CAGs (*Collaborative Analysis Groups*).

Objective of the action:

The objective is influencing the development of European indicators into a direction that coincides with Finnish preferences.

Timetable

continuous

Deliverable

European safety performance indicators and targets that are used in Finland's SPI/SPT development and monitoring.

Status

Trafi experts participate in the NoA, the NoA has produced the first version of common European indicators

In the "*SPIs for the Safety Risk Portfolios*" developed by CAG-CAT OPS FW (commercial air transport, aeroplanes), a Trafi expert participates in the group

National action SYS.003.3

Trafi will agree with aviation organisations upon an acceptable safety level (*ICAO: the service provider's proposed safety performance indicators (SPIs) and their associated targets and alerts are reviewed and agreed upon by the relevant State regulatory organization*).

Objective of the action:

The objective of the action is ensuring that the national safety performance indicators will be used in safety work.

Timetable

2017, continuous

Deliverable

Agreement upon acceptable safety level with the organisations reached

Status

Qualitative targets for the indicators were specified in 2013 and updated in 2015; the organisations shall themselves specify targets for the indicators applicable to their operation

3.1.4 SYS.004. Safety promotion

reference: EPAS action number and title

MST.002: Promotion of SMS



National action SYS.004.1

Trafi sees to the accessibility of materials produced by the ESSI (*the European Strategic Safety Initiative*), which was disbanded in 2016, and its working groups ECAST, EHEST and EGAST and their successors, including ESPN-R that took over from EHEST in helicopter operations, as well as the SMICG (*Safety Management*

International Collaboration Group). Trafi will add links to these materials onto its website and market them to the stakeholders.

Objective of the action:

The objective of the action is supporting aviation sector stakeholders in introducing and developing safety management systems by using the material.

Timetable

Continuous

Deliverable

Links to material produced by the ESSI, the teams that took over from it and SMICG will be available on the website, and attention will be drawn to the materials at seminars and other stakeholder events.

Status

Partly completed

3.1.5 SYS.005. Flight data monitoring (FDM)

reference: EPAS action number and title

MST.003: Member States should set up a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes



National action SYS.005.1

Trafi organises regular meetings with operators producing FDM data (national FDM forum), which discuss openly issues that come up in the FDM data analysis.

Objective of the action:

The objective of the action is supporting the operators in using FDM systems as part of their safety management and enabling confidential dialogue and sharing of safety information between industry stakeholders and Trafi.

Timetable

Continuous

Deliverable

Regular meetings with operators producing FDM data

Status

The national FDM forum has been up and running since the beginning of 2010, with two meetings a year

National action SYS.005.2

Trafi will assign the operators producing FDM data the task of also including the issues relevant to the nationally specified safety performance indicators in their FDM analysis, enabling the monitoring of these issues in the FDM system. Trafi will ensure the implementation of this action as part of its oversight activities.

Objective of the action:

The objective of the action is including the national safety indicators in operators' FDM programmes where applicable.

Timetable

Continuous

Deliverable

The safety performance indicator data have been taken into account in FDM events to the extent that this data can be derived from the FDM data.

Status

Trafi ensures the implementation of this action as part of its oversight activities.

National action SYS.005.3

In 2017, Trafi will define a national FDM status report (*template*) in cooperation with the national FDM forum. In the future, each operator will present their review at the forum. The template will take into account the EASA level objectives specified by the EASA's EAFDM group (publication: *Developing standardised fdm-based indicators, Focus on operational risks identified in the European Aviation Safety Plan*).

Objective of the action:

The objective of the action is supporting the safety management of Finnish aviation and of the FDM operators through comprehensive and systematic utilisation of FDM data.

Timetable

2017

Deliverable

A national FDM review (template)

Status

On-going

3.1.6 SYS.006. Occurrence reporting

reference: EPAS action number and title

SPT.062: Comparable risk classification of events across the industry



National action SYS.006.1

Trafi will introduce the common European risk classification scheme referred to in Regulation 376/2014 on occurrences in civil aviation within the implementation schedule to be set for the Member States.

Objective of the action:

The objective is harmonising and improving the quality of occurrence data, which is an important information source for safety management, by integrating a common European risk classification in it.

Timetable

Within the implementation schedule to be set for the Member States

Deliverable

Introduction of a common European risk classification scheme: risk classified European occurrence data

Status

Trafi is currently waiting for the completion of the common European risk classification and, subsequently, the guidance material.

3.2 Operational issues

Compared to systemic issues, operational level themes have more direct links with the actions of an individual person, organisation or operational area or environmental factors, including weather phenomena. Operational level threats may have direct links with a situation developing into an incident or an accident.



Operational level threats, risks and safety factors are often identified by analysing data from occurrence reports as well as carrying out risk assessments. At the European level, the safety risk management process (the EASA's SRM process) has identified key risk areas, the causal and background factors that impact on them and protections for commercial air transport, helicopter operations and general aviation. See the Figure at the beginning of Chapter 3 for the priorities of operational actions defined on the basis of these risk areas. The actions seek to reduce the probability of events that result in incidents and accidents and mitigate the seriousness of their consequences.

While the main focus of the actions is on commercial air transport, they also address other sectors, including general aviation and helicopter operations.

3.2.1 OPS.CAT.001. Loss of control in flight (LOC-I)

reference: EPAS action number and title

MST.004: Include loss of control in flight in national SSPs

National action OPS.LOC.001.1

Trafi has included loss of control in flight (LOC-I) and its identified causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process LOC-I threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of LOC-I events, defines the required actions as part of the FASP process and, as part of its oversight, evaluates how the stakeholders have addressed and processed the LOC-I threats relevant to their operations.



Objective of the action:

The objective of the action is reducing the risk of LOC-I events and factors that impact on them.

Timetable

Continuous

Deliverable

LOC-I events and their risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' own safety management.

Status

LOC-I events and their causal factors are included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. LOC-I risks are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.

3.2.2 OPS.CAT.002. Runway excursions (RE)

reference: EPAS action number and title

MST.007: Include runway excursions in national SSPs



National action OPS.RE.002.1

Trafi has included the threat of runway excursions (RE) and their identified causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process RE threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of RE events, defines the required actions as part of the FASP process and evaluates as part of its oversight how the stakeholders have addressed and processed the RE threats relevant for their operations.

Objective of the action:

The objective of the action is reducing the risk of runway excursions and factors that impact on them.

Timetable

Continuous

Deliverable

Runway excursions and their risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' own safety management.

Status

RE events and their causal factors are included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. RE risks are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.

National action OPS.RE.002.2

Trafi attends to EAPPRE (*European Action Plan for Prevention of Runway Excursions*) recommendations and implements them in cooperation with aviation industry organisations and service providers.

Objective of the action:

The objective of the action is ensuring that EAPPRE recommendations are implemented in Finland as far as possible.

Timetable

Continuous

Deliverable

EAPPRE recommendations have been implemented as far as possible

Status

In order to chart the situation, a survey on the status of implementing the recommendations was sent to AOC, ATO and ANSP organisations in October 2014. The need for further actions was assessed in 2015. The final results were collated in a report published on 8 September 2015 titled "*Selvitys Suomen ilmailun turvallisuussuunnitelman toimenpiteiden toteuttamistilanteesta EAPPRE-, EAPPRI- ja EAPAIRR - kokonaisuuksien osalta*" (Report on EAPPRE, EAPPRI and EAPAIRR action implementation status in the Finnish Plan for Aviation Safety). The report was forwarded to the AOC, ATO and ANSP organisations. There is currently no need for further actions.

3.2.3 OPS.CAT.003. Local runway safety teams (LRST)

reference: EPAS action number and title

MST.011: Runway safety teams

National action OPS.LRST.003.1

Local Runway Safety Teams have been set up. Trafi will ensure the continuity of their activities.

Objective of the action:

The objective of the action is improving runway safety in Finland.

Timetable

Continuous

Deliverable

LRSTs are up and running

Status

The theme was addressed in EAPPRI/EAPPRE programme implementation, and LRSTs were set up. Trafi controls LRST activities in connection with its oversight activities.

3.2.4 OPS.CAT.004. Runway incursions (RI)

reference: EPAS action number and title

MST.014: Include runway incursions in national SSPs

National action OPS.RI.004.1

Trafi has included the threat of runway incursions (RI) and their identified causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process IR threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of IR events, defines the required actions as part of the FASP process and evaluates as part of its oversight how the stakeholders have addressed and processed the IR threats relevant for their operations.



Objective of the action:

The objective of the action is reducing the risk of runway incursions and factors that impact on them.

Timetable

Continuous

Deliverable

Runway incursion occurrences and their risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' safety management.

Status

RI events and their causal factors are included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. RI risks are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.

National action OPS.RI.004.2

Trafi attends to EAPPRI (*European Action Plan for Prevention of Runway Incursions*) recommendations and implements them in cooperation with aviation industry organisations and service providers.

Objective of the action:

The objective of the action is ensuring that EAPPRI recommendations are implemented in Finland as far as possible.

Timetable

Continuous

Deliverable

EAPPRI recommendations have been implemented as far as possible.

Status

In order to chart the situation, a survey on the status of implementing the recommendations was sent to AOC, ATO and ANSP organisations in October 2014. The need for further actions was assessed in 2015. The final results were collated in a report published on 8 September 2015 titled "*Selvitys Suomen ilmailun turvallisuussuunnitelman toimenpiteiden toteuttamistilanteesta EAPPRE-, EAPPRI- ja EAPAIRR - kokonaisuuksien osalta*" (Report on EAPPRE, EAPPRI and EAPAIRR action implementation status in the Finnish Plan for Aviation Safety). The report was forwarded to the AOC, ATO and ANSP organisations. There is currently no need for further actions.

3.2.5 OPS.CAT.005. Mid-air collisions (MAC)

reference: EPAS action number and title

MST.010: Include MACs in national SSPs

National action OPS.MAC.005.1

Trafi has included the threat of mid-air collisions (MAC) and their identified causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process MAC threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of MAC events, defines the required actions as part of the FASP process and evaluates as part of its oversight how the stakeholders have addressed and processed the MAC threats relevant for their operations.

Objective of the action:

The objective of the action is reducing the risk of mid-air collisions and factors that impact on them.

Timetable

Continuous

Deliverable

Mid-air collisions and their risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' safety management.

Status

MAC events and their causal factors have been included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. MAC risks are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.



National action OPS.MAC.005.2

Trafi attends to EAPAIRR (*European Action Plan for Prevention of Airspace Infringement Risk Reduction*) recommendations and implements them in cooperation with aviation industry organisations and service providers.

Objective of the action:

The objective of the action is ensuring that EAPAIRR recommendations are implemented in Finland as far as possible.

Timetable

Continuous

Deliverable

EAPAIRR recommendations have been implemented as far as possible.

Status

In order to chart the situation, a survey on the status of implementing the recommendations was sent to AOC, ATO and ANSP organisations in October 2014. The need for further actions was assessed in 2015. The final results were collated in a report published on 8 September 2015 titled "*Selvitys Suomen ilmailun turvallisuussuunnitelman toimenpiteiden toteuttamistilanteesta EAPPRE-, EAPPRI- ja EAPAIRR - kokonaisuuksien osalta*" (Report on EAPPRE, EAPPRI and EAPAIRR action implementation status in the Finnish Plan for Aviation Safety). The report was forwarded to the AOC, ATO and ANSP organisations. There is currently no need for further measures.

3.2.6 OPS.CAT.006.Mid-air collisions between civil and military aircraft (MAC)

reference: EPAS action number and title

MST.024: Loss of separation between civil and military aircraft



National action OPS.MAC.006.1

Finland will publish "*due regard*" procedures and append them to ICAO EUR Doc 032. Finland chairs the Baltic Sea Project Team, which drafts recommendations on operations over the high seas. Together with the other Baltic Sea states, Finland will publish waypoints for such as government aircraft that will improve flight planning and route predictability. Finland will also investigate better utilisation of military radar systems by civil air traffic control. Coordination between civil and military operations will be improved by establishing a network of contact persons between the air traffic control organisations of the Baltic Sea states. Finland will also participate in the drafting of the EUR OPS Bulletin (2015_002).

Objective of the action:

The objective of the action is reducing the threat of mid-air collisions between civil and military aircraft over the high seas.

Timetable

2017-2018

Deliverable

Several actions aiming for improvements

Status

Finland has published its "*due regard*" procedures and appended them to ICAO EUR Doc 032. Finland has chaired the Baltic Sea Project Team, which has drafted

recommendations on operations over the high seas. Together with the other Baltic Sea states, Finland has published waypoints for government aircraft that will improve flight planning and route predictability. Better use of military radar systems by civil air traffic control is also being investigated. Coordination between civil and military operations has been improved by establishing a network of contact persons between the air traffic control organisations of the Baltic Sea states. Finland has also participated in the drafting of the EUR OPS Bulletin (2015_002).

3.2.7 OPS.CAT.007. Ground safety

reference: EPAS action number and title

MST.018: Include ground safety in national SSPs

National action OPS.GH.007.1

Trafi has included ground safety related threats in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process ground safety related threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of ground safety events, defines the required actions as part of the FASP process and evaluates as part of its oversight how the stakeholders have addressed and processed the ground safety related threats relevant for their operations.

Objective of the action:

The objective of the actions is reducing risks to aviation safety associated with ground safety.

Timetable

Continuous

Deliverable

Ground safety and its risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' safety management.

Status

Ground safety and its causal factors have been included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. The risks related to ground operations are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.



3.2.8 OPS.CAT.008. Controlled flight into terrain (CFIT)

reference: EPAS action number and title

MST.006: Include CFIT in national SSPs

National action OPS.CFIT.008.1

Trafi has included the threat of controlled flight into terrain (CFIT) and its causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process CFIT threats relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of CFIT events, defines the required actions as part of the FASP process and evaluates as part of its oversight activities how the stakeholders have addressed and processed the CFIT threats relevant for their operations.



Objective of the action:

The objective of the action is reducing the risk of controlled flight into terrain and the factors that impact on these cases.

Timetable

Continuous

Deliverable

CFIT events and their risk factors have been addressed in the FASP, the Finnish Aviation Risk Pictures and the stakeholders' own safety management.

Status

CFIT events and their causal factors have been included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. CFIT risks are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.

3.2.9 OPS.CAT.009. Fire, smoke and fumes

reference: EPAS action number and title

MST.005: Include fire, smoke and fumes in national SSPs

National action OPS.FIRE.009.1

Trafi has included fire, smoke and fumes and their causal factors in the Finnish aviation safety performance indicators and targets. The stakeholders must address and process threats related to fire, smoke and fumes events relevant to their operations and strive to reduce their risk. Trafi monitors the number and risk level of fire and smoke events, defines the required actions as part of the FASP process and evaluates as part of its oversight how the stakeholders have addressed and processed the threats related to fire and smoke events relevant for their operations.



Objective of the action:

The objective of the action is reducing the risk of fire and smoke events and the factors that impact on them.

Timetable

Continuous

Deliverable

Fire and smoke events and their risk factors have been addressed in the FASP, the Finnish aviation Risk Pictures and the stakeholders' safety management.

Status

Fire and smoke events and their causal factors have been included in the Finnish Aviation Safety Programme Annex 2, Safety Performance Indicators and Targets. The risks of fire and smoke events are addressed in the FASP process as part of the formulation and maintenance of Finnish aviation Risk Pictures.

3.2.10 OPS.HECO.001. Helicopter safety

reference: EPAS action number and title
MST.015: Helicopter safety events

National action OPS.HECO.001

Trafi has set up a national working group focusing on helicopter safety which meets regularly. Trafi participates in the activities of the ESPN-R team that has taken over from the EHEST team. Trafi communicates about the material produced by EHEST and the ESPN-R (*European Safety Promotion Network – Rotorcraft*) team to Finnish helicopter operators.

Objective of the action:

The objective of the action is improving the safety of helicopter operations in Finland.

Timetable

Continuous

Deliverable

FHST is up and running, Trafi participates in the activities of the ESPN-R forum that has taken over from EHEST

Status

ESPN-R, which took over from the EHEST forum, was established in January 2017



GENERAL AVIATION

General aviation refers to all other manned aviation apart from commercial air transport and aerial work. At the European level, as key areas for actions to improve safety emerged preventing mid-air collisions (MAC), coping with weather, preventing loss of control in flight and managing the flight.



3.2.11 OPS.GA.001. Airspace infringement (AI)

reference: EPAS action number and title

MST.016: Airspace infringement risk in General Aviation

National action OPS.GA.001.1

Trafi engages in safety work to prevent airspace infringements in general and recreational aviation as set out in the *Operating model for safety work in Finnish general aviation* developed in a general aviation safety project in 2015. In addition to Trafi, Finavia, the Finnish Meteorological Institute, the Finnish Aeronautical Association and AOPA Finland have committed to the operating model.

Objective of the action:

The objective of the action is reducing the risk of airspace infringements (AI) and the resulting mid-air collisions (MAC) and the factors contributing to both AI and MAC events.

Timetable

Continuous

Deliverable

Implementation of the operating model on the basis of jointly specified plans

Status

The following were jointly selected for the national themes of safety work in 2017:

1. Location awareness
2. Situational awareness
3. Abnormal runway contact
4. A safe operations model for flying clubs

The practical implementation of these themes will include Trafi's safety bulletin that will be extensively disseminated through the organisations to support safety work in clubs. They will also form the framework for the Lentoon! 2017 seminar. A particular campaign theme is preventing EFHF airspace infringements in cooperation with the operating model network and EFHF association. All channels used by the stakeholders will be employed in the communications, with webcasts as a new channel. As the indicators for monitoring implementation were specified turning the rising trend of airspace infringements seen in the early part of the year, increasing the number of clubs committed to the safe operations model for flying clubs (developed in the general aviation safety project) and reducing the number of abnormal runway contacts from last year's figures.

National action OPS.GA.001.2

Trafi participates in the planning and implementation of the MAC/AI prevention safety promotion campaign carried out as an action of the EASA's SPN (*Safety Promotion Network*) team. Trafi will communicate about the material produced as the outcome of this campaign to Finnish general and recreational aviators.



Objective of the action:

The objective of the action is reducing the risk of airspace infringements (AI) and the resulting mid-air collisions (MAC) and the factors contributing to both AI and MAC events.

Timetable

2017

Deliverable

European-wide safety campaign

Status

Campaign planning is under way.

3.2.12 OPS.GA.002. Mid-air collisions (MAC)

reference: EPAS action number and title
FOT.010: Service provision to GA flights

National action OPS.GA.002.1

Trafi participates in developing best practices for preventing mid-air collisions (MAC) through the EASA's GA TeB (*General Aviation Technical Advisory Body*).

Objective of the action:

The objective of the action is reducing the risks of airspace infringements (AI) and the mid-air collisions caused by them as well as factors contributing to both AI and MAC events.

Timetable

Continuous

Deliverable

Best practices

Status

The GA- TeB team started operating in 2016. Trafi has a member and a substitute member in the team.

3.2.13 OPS.GA.003. Flight management

reference: EPAS action number and title
MST.017: Safe transportation of dangerous goods in GA

National action OPS.GA.003.1

Trafi has published a safety bulletin on safe transportation of dangerous goods in general and recreational aviation for general aviators.

Objective of the action:

The objective of the action is improving the safety of general aviation.

Timetable

2017

Deliverable

Safety bulletin

Status

On 2 January 2017, Trafi published an aviation safety bulletin titled "*Vaarallisten aineiden turvallinen kuljetus yleis- ja harrasteilmailussa*" (Safe transportation of dangerous goods in general and recreational aviation).

3.2.14 OPS.GA.004. Safety Promotion

reference: EPAS action number and title
MST.025: Improve the dissemination of safety messages

National action OPS.GA.004.1

Trafi disseminates safety messages and develops safety communications for general and recreational aviation as set out in the Operating model for safety work in *Finnish general aviation* developed in a general aviation safety project in 2015. Safety promotion is an element of this operating model. In addition to Trafi, Finavia, the Finnish Meteorological Institute, the Finnish



Aeronautical Association and AOPA Finland have committed to the operating model.

Objective of the action:

The objective of the action is improving the safety promotion as an essential systemic safety factor, thus improving the safety of general aviation.

Timetable

2017 (EPAS), nationally: continuous

Deliverable

Implementation of the operating model on the basis of jointly specified plans.

Status

The following were jointly selected for the national themes of safety work in 2017:

1. Location awareness
2. Situational awareness
3. Abnormal runway contact
4. A safe operations model for flying clubs

The practical implementation of these themes will include Trafi's safety bulletin that will be extensively disseminated through the organisations to support safety work in clubs. They will also form the framework for the Lentoon! 2017 seminar. A particular campaign theme is preventing EFHF airspace infringements in cooperation with the operating model network and EFHF association. All channels used by the stakeholders will be employed in the communications, with webcasts as a new channel. As the indicators for monitoring implementation were specified turning the rising trend of airspace infringements seen in the early part of the year, increasing the number of clubs committed to the safe operations model for flying clubs (developed in the general aviation safety project) and reducing the number of abnormal runway contacts from last year's figures.

3.3 Emerging issues

Emerging issues, introduction

Emerging issues are about attempting to anticipate issues that may pose a threat to different areas of aviation in the near future or later. They often concern changes in the operating environment. The change may be associated with the advancement of technology, new operating methods, societal changes or such phenomena as climate change. Increasing attention must be paid to environmental issues in aviation and their reconciliation with safety issues in the future.



At European level, as key target areas for actions to improve safety emerged drones, security risks that affect aviation safety, new business models (NMB) as well as new products, systems, technologies and operations.

3.3.1 EME.001. Cybersecurity

reference: EPAS action number and title
SPT.071: Cybersecurity road map



National action EME.CYB.001.1

Trafi will include cybersecurity in the Finnish Aviation Safety Programme (FASP) and the Finnish Aviation Security Programme. Trafi will integrate cybersecurity in the FASP process and launch work on cybersecurity Risk Pictures in Finnish aviation.

Objective of the action:

The objective of the action is controlling threats associated with cybersecurity and reducing the risk they pose to aviation safety.

Timetable

2017

Deliverable

- Update of the FASP and its annexes as well as the Finnish Aviation Security Programme to address cybersecurity
- Finnish aviation cybersecurity Risk Picture 1.0

Status

Completed actions include an extensive study on the management of cybersecurity in aviation as well as cooperation with other agencies (National Cyber Security Centre) and stakeholders. This cooperation has included voluntary sharing of information and experiences based on mutual trust. Cybersecurity has been integrated in the FASP and the Finnish Plan for Aviation Safety.

3.3.2 EME.002. New business models

reference: EPAS action number and title

MST.019: Better understanding of operators' governance structure

National action EME.NBM.002.1

Action: Trafi will conduct a survey among the accountable managers of AOC holders on how the stakeholders' key persons – including safety managers and accountable managers – fulfil the responsibilities that are part of their roles in practice.

Objective of the action:

The objective of the action is identifying issues related to new business models and assessing and reducing their risks.

Timetable

2017

Deliverable

Oversight action: discussion

Status

The action will be implemented in connection with safety discussions.

reference: EPAS action number and title

MST.022: Operator's management system

National action EME.NBM.002.2

Trafi will request from the operators an analysis of the issues described in EPAS action MST.022: relevance of the threats to their operations, risk assessment results and selected actions. The results will be taken into account in the planning of oversight actions.

In its exercise of oversight, Trafi will pay particular attention to the stakeholders' continuous assessment of risks related to their own operations, especially in connection with new business models and business decisions.

Objective of the action:

The objective of the action is identifying threats related to new business models and assessing and reducing their risks.

Timetable

2017

Deliverable

Oversight priority area

Status

The action will be implemented in connection with exercise of oversight.

reference: EPAS action number and title

MST.023: Better EU-wide occurrence reporting data for NAAs

National action EME.NBM.002.3

Trafi participates in a study commissioned by the EASA and carried out through the EASA's NoA (*Network of Analyst*), which charts the level of stakeholders' safety culture based on the quality of reporting. The target group of the study are the

Member States, and it draws on occurrence reporting data (*EPAS action SPT.067*). Once the study has been completed, Trafi will use the results in its official activities.

Objective of the action:

The objective of the action is identifying threats related to new business models and assessing and reducing their risks.

Timetable

2017

Deliverable

NoA study results

Status

Being prepared by NoA

National action EME.NBM.002.4

Trafi will implement a survey that charts the safety culture of Finnish airlines. The survey will analyse the Finnish situation, on the basis of which the need for further measures can be assessed and any actions required can be specified (including fatigue, just culture issues).

Objective of the action:

The objective of the action is identifying threats related to new business models and assessing and reducing their risks.

Timetable

2017

Deliverable

Results of the safety culture survey, any actions to be taken on their basis

Status

To be implemented in 2017

reference: EPAS action number and title

SPT.073: Operator's management system

National action EME.NBM.002.5

The EASA will set up a working group tasked to develop guideline material (*best practices*) to support the stakeholders' safety management work in 2017. The guideline material will focus on issues that emerge or may emerge as a result of new business models and practices. Examples of the themes to be covered include new employment relationship models, long-term wet leasing arrangements, companies' complex administrative structures and remote base operation. Representatives from the Member States and the industry will be invited to participate in the working group. Trafi will offer resources for this work. The results will be used in Finland.

Objective of the action:

The objective of the action is identifying threats related to new business models and assessing and reducing their risks.

Timetable

2017

Deliverable

Guideline material

Status

Pending.

3.3.3 EME.003. New products, systems, technologies and operations

reference: EPAS action number and title

MST.020: Loss of radar detection



National action EME.NPST.003.1

Trafi has ensured that the recommendations of the EASA's technical report are evaluated together with the stakeholders and introduced in Finland where appropriate.

Objective of the action:

The objective of the action is controlling the introduction of new products, systems, technologies and operations.

Timetable

2017

Deliverable

Discussion on the recommendations and their deployment where appropriate

Status

The various areas of the EASA's technical report have been discussed and communicated to Finavia. Finavia has announced that it has addressed the report's proposals in its processes. Finland's status information was submitted to the EASA in June 2016. No further actions are proposed.

3.3.4 EME.004. Drones

No EPAS reference: EPAS has no actions directly assigned to the Member States. The actions listed below were specified on the basis of nationally identified needs for actions.



National action EME.DRONE.004.1

Trafi will organise instructive information events focusing on safety of drone operation for professional and recreational operators in different parts of Finland. Trafi will also set up a droneinfo.fi website for drone operators and provide a mobile application to support the safety promotion and safe operation of drones.

Objective of the action:

The objective of the action is improving the safety of drone operation and reducing the risks.

Timetable

Information events: Q2 / 2017

Droneinfo website: Q2 / 2017

Mobile application: 2017

Deliverable

- Information events: increasing awareness of statutes, regulations and safe operation
- Droneinfo.fi: a new channel where actors can access information

- Mobile application: actors can check air space restrictions on the basis of their GPS location.

Status

The actions are progressing on the planned schedule.

National action EME.DRONE.004.2

Trafi will exert influence on all key international forums that seek to develop the regulation on and safe operation of drones in the ICAO, EASA, JARUS and European Commission task forces.

Objective of the action:

The objective of the action is improving the safety of drone operation and reducing the risks.

Timetable

2017

Deliverable

Trafi will continue and maintain its position as an active and influential participant on all the aforementioned forums.

Status

Trafi has a representative in the ICAO's RPAS panel, the EASA's RMT.0230 team, JARUS plenary as well as in European Commission task forces, including U- Space.

National action EME.DRONE.004.3

Trafi will organise a *European High Level Conference on Drones*.

Objective of the action:

The objective of the action is improving the safety of drone operation and reducing the risks.

Timetable

Q4 / 2017

Deliverable

The most significant drone conference in Europe will be organised in Helsinki in 2017

Status

Conference preparations are progressing on schedule.