Liikenne- ja viestintävirasto
Transport- och kommunikationsverket
Finnish Transport and Communications Agency

Finnish Plan for Aviation Safety 2021–2025

Finnish Aviation Safety Programme Annex 1

Traficom Publications

15/2021

Contents

Photo by: Nina Kaverinen

Foreword

Safety and passenger confidence in the air transport system are key objectives in **Finnish aviation safety policy**[1]. Commercial air transport is an important mode of transport in terms of global accessibility and the movement of people and goods. Furthermore, commercial air transport is also the fastest and most efficient mode of transport in terms of the accessibility of Finland and international business connections. In 2019 before the COVID-19 pandemic, the industry transported 4.54 billion passengers with a good level of safety; statistically, in 2019 the number of accidents per one million flights was 1.13 in commercial air transport[2]. Based on international estimates, the commercial air transport industry provides direct and indirect employment to tens of millions of professionals, many of whom carry out tasks that impact the safety of air transports. The COVID-19 pandemic that began in winter 2020 had and continues to have a major impact on global air transport, significantly reducing air travel. Even during the pandemic, however, commercial air transport operations have continued to maintain essential, fast connections and ensure the necessary movement of people and goods, thus also serving as an important part of Finland's national emergency supply chain.

The coronavirus pandemic has put the performance of the aviation system to an extreme test. As regards safety, **the aviation system has been able to respond to the change caused by the coronavirus situation** thanks to functional and effective safety management – at the organisation, state and global level – providing the necessary system-level tools for ensuring that the achieved high level of safety is maintained even during the pandemic and the recovery from it.

[1] The safety policy is discussed in section 1 of the Finnish Aviation Safety Programme (FASP)
[2] Source: IATA: including Substantial Damage and Hull Loss accidents for IATA and non-IATA jets and turboprops

These tools help stakeholders react to both internal and external, i.e. operating environment related, changes and manage the risks associated with them. The recovery from the pandemic and the ramping up of transport operations can present threats, which should be prepared for by ramping up operations as regards infrastructure, vehicles and personnel alike in a controlled manner and without compromising on safety.

The aviation safety programme, plan for aviation safety and the strategic safety objectives and performance indicators and targets are advanced safety management mechanisms at the national level. The updated Finnish Aviation Safety Programme was published in December 2020. It describes Finland's national aviation safety management structures and provides the objectives and guidelines for safety work. To maintain a high level of safety and safety performance, it is important for the authorities and aviation organisations, within the framework of their respective roles, to recognise and react to safety threats and take the necessary steps to keep risks under control. This also necessitates active interaction between different parties, at both the national and global level.

The **Finnish Plan for Aviation Safety**[3] is updated annually. The updated plan describes the actions that Traficom and aviation stakeholders are required to take as part of national safety risk management efforts, the parties responsible for the actions and the timeframes for their implementation in 2021–2025. Compared to the previous version, the plan includes several updated actions and a few new actions, in addition to which actions that have already been carried out have been deleted. By carrying out the included actions, aviation stakeholders **strengthen the performance and resilience of the Finnish aviation system** against all types of changes in the operating environment and **support the management of already known operative risks**.

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[3] Finnish Aviation Safety Programme Annex 1

Finnish Plan for Aviation Safety, document version history

Date issued	Date valid	Valid
17.3.2021	17.3.2021	Until further notice
Underlying international standards, recommendations and other documents		
Aviation Act (864/2014) Act on Transport Services (320/2017) Convention on International Civil Aviation, Annex 19 (Safety Management) Global Aviation Safety Plan GASP (ICAO Doc 10004) EASA Regulation (EU) 2018/1139[4] European Aviation Safety Programme European Plan for Aviation Safety (EPAS) 2021–2025 COM(2011) 144 White Paper - Roadmap to a single European transport area - Towards a competitive and resource-efficient transport system COM(2015) 598 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: An Aviation Strategy for Europe		
Reference number	TRAFICOM/57782/07.00.06.00/2021	
Modification details		
Date	Version	Change
20/12/2013	1.0	First publication
11/2/2015	2.0	Status of actions updated for 2014. OPS.009 Fire and smoke, added.
9/5/2017	3.0	Extensive update: layout and structure modified, measures updated based on EPAS 2017–2021 and the Finnish aviation risk management process
19/2/2018	4.0	Annual update based on EPAS 2018–2022 and Finnish Aviation Safety Risk Management
20/3/2019	5.0	Annual update based on EPAS 2019–2023 and Finnish Aviation Safety Risk Management
23/4/2020	6.0	Annual update based on EPAS 2020–2024 and Finnish Aviation Safety Risk Management
17/3/2021	7.0	Annual update based on EPAS 2021–2025 and Finnish Aviation Safety Risk Management

[4] *REGULATION (EU) 2018/1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91*

Acronyms

ADR	Aerodromes
AIR	Airworthiness
AMO	Approved Maintenance
ANS	Air Navigation Services
AOC	Air Operator Certificate
ATO	Approved Training Organisation
CAMO	Continuing Airworthiness
CAO	Combined Airworthiness
C-UAS	Counter UAS
DGCA	Director General of Civil Aviation
EASA	European Union Aviation Safety Agency
EASP	European Aviation Safety Programme
EPAS	European Plan for Aviation Safety
Eurocontrol	European Organisation for Safety of Air Navigation
FASP	Finnish Aviation Safety Programme
FDM	Flight Data Monitoring
FPAS	Finnish Plan for Aviation Safety
FRMS	Fatique Risk Management System
GASP	Global Aviation Safety Plan
GH	Ground handling
GRF	GRF
ICAO	International Civil Aviation Organization
IFALPA	International Federation of Air Line Pilots' Associations
RPAS	Remotely Piloted Aircraft System
SMICG	Safety Management International Collaboration Group
SMS	Safety Management System
SPAS	State Plan for Aviation Safety
SPI	Safety Performance Indicator
SPO	Specialised operations
SPN	Safety Promotion Network
SPT	Safety Performance Target
SSP	State Safety Programme
UAS	Unmanned Aircraft System

1 European Plan for Aviation Safety EPAS

1.1 EPAS as part of safety management in European aviation

The commercial aviation safety situation in Europe is good at the moment. Maintaining this status requires taking measures to reduce the number of accidents and prevent the annual number of fatalities from increasing from its present low level, even if the number of flights increases as forecast before the COVID-19 pandemic. Advanced safety management will also be needed when responding to potentially rapid changes in the aviation system's structures, business models and technical solutions, as well as in the context of developments like the COVID-19 pandemic, which have an adverse impact on business conditions and traffic volumes. The tools of advanced safety management allow us to identify new threats posed by such changes and respond to their attendant challenges.

The **European Plan for Aviation Safety, EPAS**, has been published since 2011. Obligations concerning the European Aviation Safety Programme and Plan as well as national aviation safety programmes and plans are included in EASA Regulation (EU) 2018/1139. These safety management obligations also apply to states under ICAO Annex 19.

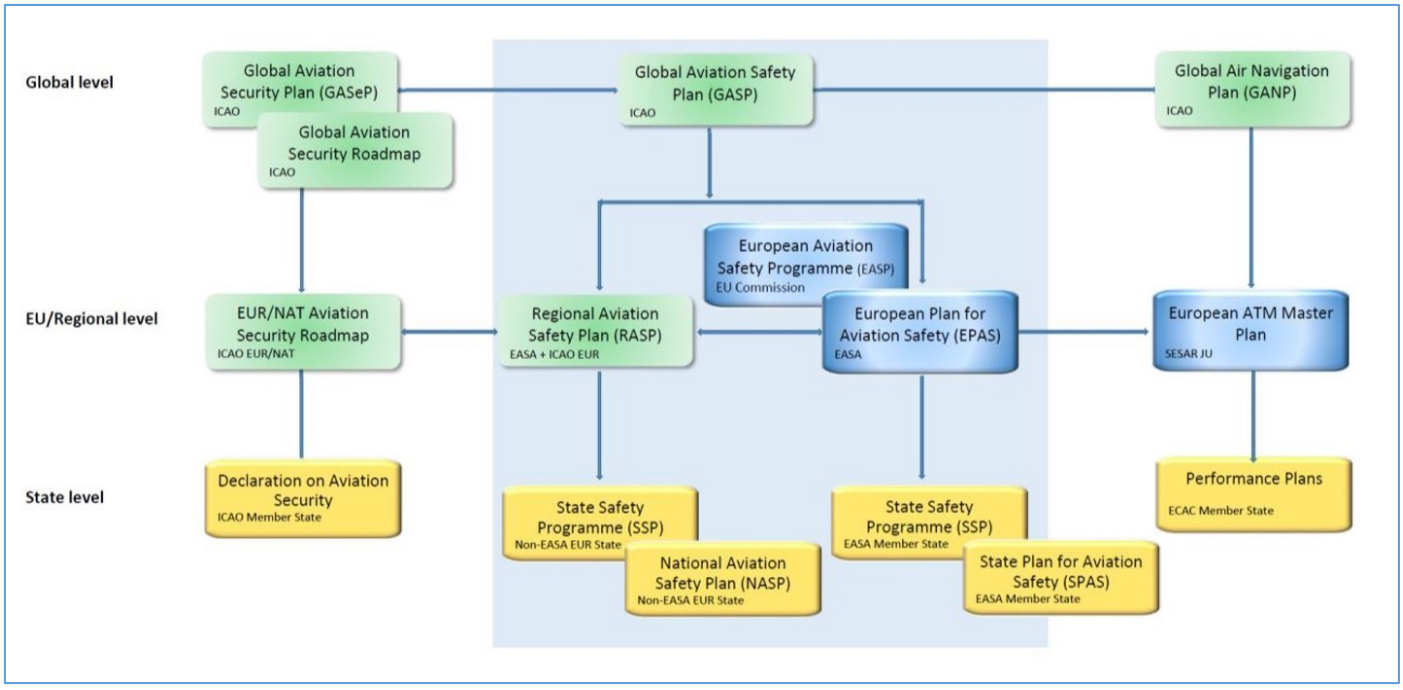


Figure 1: Image by EASA (EPAS 2021–2025, vol 1), relationship between EPAS and other programmes and plans

EPAS 2021-2025, published by EASA on 15 January 2021 is a comprehensive package of the strategic priorities and measures of aviation in Europe. Published for the first time in three volumes, EPAS consists of an Introduction & Strategy volume (volume 1), an Actions volume (volume 2) and a European Safety Risk Portfolios volume (volume 3). The strategic priorities of EPAS are based on the Commission's Aviation Strategy[5] and EASA's strategic plan. In addition to safety, EPAS also takes into account objectives and measures to increase the environmental sustainability and fluency of air transport. The impacts of the COVID-19 pandemic will also be

[5] https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1552

reflected in strategy work in the coming years, with elements such as increasing the resilience of the aviation system given increased emphasis. Efforts have been made to harmonise the global work for maintaining and improving the performance of the air transport system. EPAS is strongly connected to the *Global Aviation Safety Plan GASP* and *Global Air Navigation Plan GANP* published by ICAO[6] and also takes into account other relevant regional plans and strategic papers, including *The ATM Master Plan*[7] and the *Report of the Wise Persons Group on the future of the Single European Sky*[8].

In the context of safety, EPAS includes **identified key risks in aviation at the European level, strategic safety objectives and actions** for achieving these, and takes into account the global objectives defined by GASP.

Figure 2: Image by EASA (EPAS 2021–2025, vol 3), European-level SRM process principle

The safety-related content of EPAS is produced as part of EASA's Safety Risk Management process (SRM). Within the framework of its SRM process, EASA coordinates the identification of key safety risks in European aviation, and the creation and maintenance of the European Safety Risk Portfolio. Through the forums of this process that progresses following an annual cycle, Member States and aviation stakeholders can participate in and influence European aviation risk management. Themes or actions can also be proposed for EPAS directly at any time of year using the Candidate Issue Identification form[9]. The actions defined as the result of this process are published annually in EPAS and implemented in a coordinated manner at the European level and nationally.

[6] https://www4.icao.int/ganpportal
[7] https://www.atmmasterplan.eu/
[8] https://ec.europa.eu/transport/modes/air/news/2019-04-15-recommendations-on-air-traffic-management-in-europe_en
[9] https://www.easa.europa.eu/rulemaking-proposal-candidate-issue-identification-form

The actions contained in EPAS seek to influence **systemic and operational safety** in commercial air transport and general aviation. These actions concern manned aviation with aeroplanes and helicopters and unmanned aviation. They are also a means to prepare for **changes in the aviation system or operating environment**. While changes, such as new technologies or operating models, bring benefits, they can also introduce new threats. Well-functioning safety management structures **strengthen the resilience of Finland's aviation system** to threats and changes in the system and operating environment, and ensure **that changes are safely integrated into the aviation system in an anticipatory manner**.

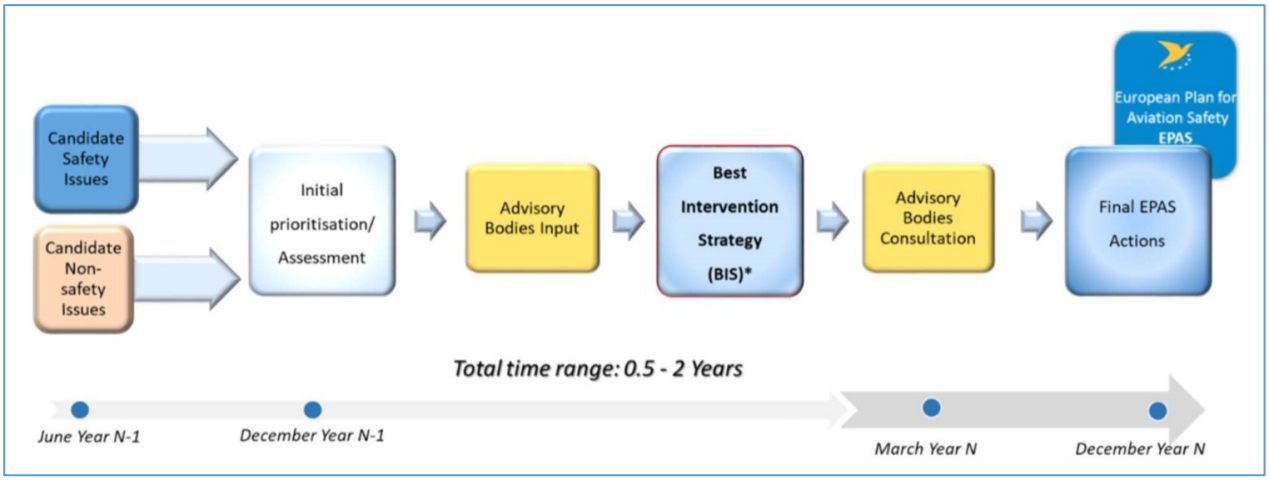


Figure 3: Image by EASA: Prioritisations of EPAS actions

The actions included in EPAS, i.e. the range of tools for improving safety, can be divided into five categories: **safety promotion, oversight capabilities and focus areas, regulation, research** and **evaluation**. The most appropriate means of safety management is chosen for each action. Actions assigned to Member States are divided into safety promotion, maintaining and improving oversight capabilities and oversight focus areas.

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

Finland includes EPAS actions assigned to Member States in the Finnish Plan for Aviation Safety. Aviation stakeholders must process, document and implement the actions where applicable. Traficom supervises the processing and implementation of the actions and reports to EASA annually on their progress.

The European Aviation Safety Programme and Safety Plan can be accessed at EASA's safety management website and Traficom's aviation safety management website.

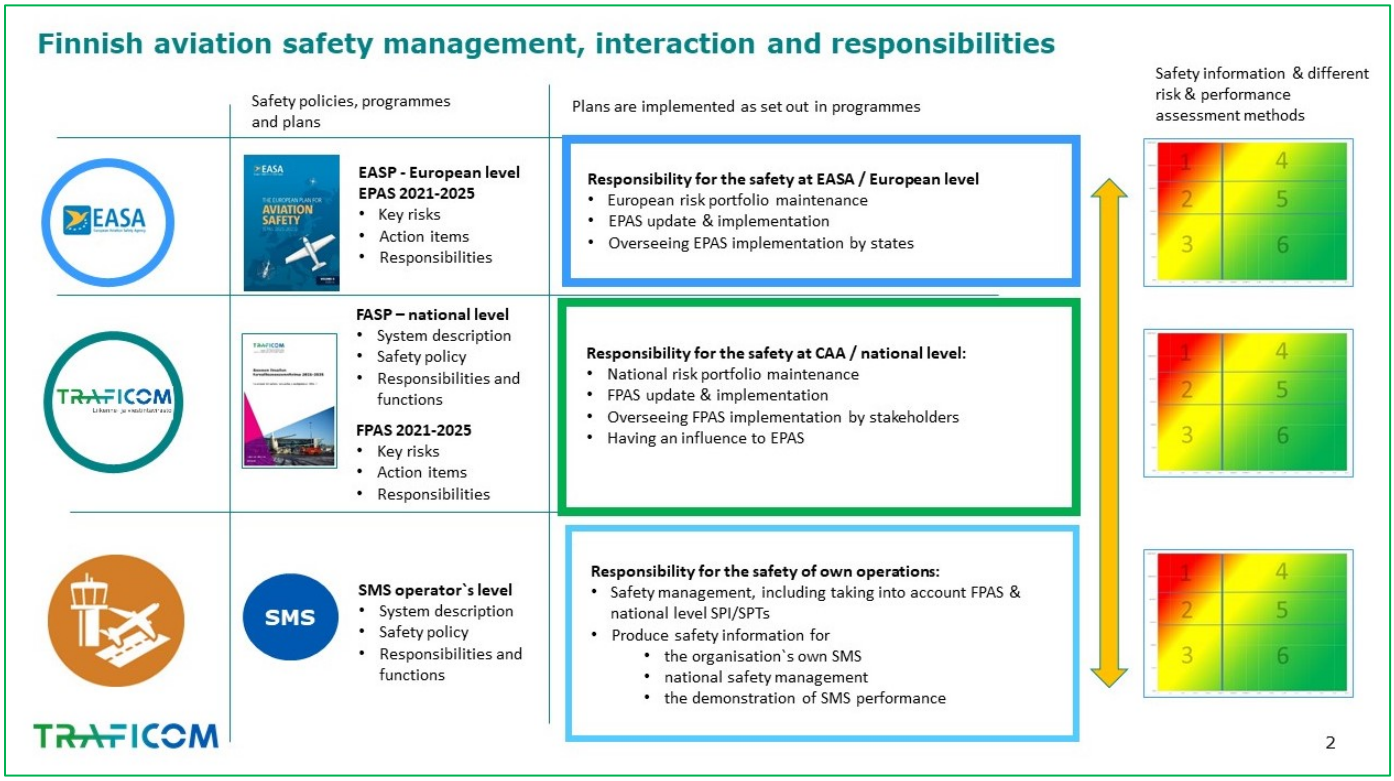


Figure 4: Roles and responsibilities in aviation safety management in Finland.

2 Finnish Plan for Aviation Safety

2.1 Role of the Safety Plan in Finnish aviation safety management

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 framework, processes and safety work. By maintaining FASP, Finland fulfils the obligations laid down in Article 7 of EASA's Regulation (EU) 2018/1139 on a national safety programme.

The Finnish Plan for Aviation Safety (*FPAS*) is appended to the Safety Programme as Annex 1. It describes key safety risks for Finnish aviation identified through European and national level safety risk management, the specified strategic safety objectives and the actions to be taken to achieve them (*see FASP, section 2.6*). By maintaining FPAS, Finland fulfils the obligations laid down in Article 8 of EASA's Regulation (EU) 2018/1139 on a national safety plan.

The FASP and its Annexes also comply with the ICAO requirement of establishing and maintaining a State Safety Programme (SSP).

Finland has phrased the obliging nature of the FASP and its Annexes in section 4 of the Aviation Act (864/2014) as follows:

"The Finnish Transport and Communications Agency shall prepare and validate the national safety programme referred to in Article 7 of the EASA Regulation as well as the national safety plan referred to in Article 8, taking into consideration the standards referred to in the Chicago Convention as well as the European Aviation Safety Programme referred to in Article 5 of the EASA Regulation and the European Plan for Aviation Safety referred to in Article 6 of the EASA Regulation.

Aviation stakeholders shall process the national aviation safety programme as well as the national plan for aviation safety in their own safety management."

Each aviation stakeholder is responsible for the safety of its own operations. Stakeholders must address in their Safety Management Systems the threats identified by them and those identified in the Finnish aviation safety risk management process in respect of their own operations, assess the associated risks and, if necessary, implement actions aiming to reduce risks to an acceptable level. Traficom and aviation stakeholders must process, document and implement the actions of the Finnish Plan for Aviation Safety where applicable. As part of its oversight activities, Traficom assesses how stakeholders have addressed the actions described in the FPAS and the threats relevant to them in their safety management.

The effectiveness of FPAS actions is monitored as part of Finnish aviation safety risk management and safety assurance.

The Finnish Plan for Aviation Safety is updated annually. For information on the responsibilities for maintaining FPAS, see FASP section 1. The FPAS can be accessed on Traficom's aviation safety management website.

2.2 Safety Plan structure

The actions described in section 3 are divided into systemic and operational level actions addressed to a number of domains in aviation and those addressed to individual aviation domains. The objectives, parties responsible for implementation, schedule and status of implementation of each action are described, and an EPAS reference is given if the action is based on an EPAS action assigned to Member States. Some of the EPAS actions assigned to Member States are straightforward, while others leave it to the Member State to define the action in detail. Details of EPAS actions and nationally identified actions are defined in the Finnish aviation safety risk management process (*FASP, section 2.6*).

Annex 1, included at the end of this document, contains a list of actions for each stakeholder group to help aviation organisations identify actions that concern them. New and deleted actions have also been marked in the list.

3 Safety Plan actions

3.1 Systemic issues – safety management

Systemic issues, introduction

Systemic themes are issues that concern an individual organisation, a system element or the entire aviation system. Systemic actions comprehensively improve the safety level of aviation in Finland. They also maintain and reinforce the activities and competence that have helped us reach the current level of safety.

Systemic themes do not necessarily have a direct, short-term link to an individual occurrence, incident or accident. Systemic threats are background factors, either easily identifiable or latent. They can be associated with shortcomings in processes, methods or operating cultures, for example. If systemic threats are not identified and if the risks caused by them are not managed, they may trigger or contribute to an occurrence, incident or accident.

Identifying systemic threats is particularly important in relation to changes in the aviation system, in case of new, emerging issues. The safety data available on these issues is often limited or non-existent, highlighting the importance of proactive safety risk and impact assessments and related research.

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 (FASP, section 1). Key system-level elements are the state safety programmes (SSPs, including the FASP in Finland) and stakeholders' Safety Management Systems (SMS).

3.1.1 SYS.001. Finnish Aviation Safety Programme

EPAS reference: MST.0001: Member States to give priority to the work on SSPs

SYS.001.1, Finnish Aviation Safety Programme

Action:
Traficom has published the Finnish Aviation Safety Programme (FASP). Traficom updates and further develops the programme. Traficom actively communicates about the programme contents and sees to the implementation of the programme and the continuous improvement of activities based on the programme.

Objective of the action:
Finnish aviation safety management is systematic, effective and continuously improving. Finland complies with ICAO and EU regulation requirements regarding the development and implementation of a safety programme.

Stakeholder responsible for implementation:
Traficom: FASP maintenance, development and implementation
Aviation organisations: Processing FASP and its Annexes with reference to their operations.

Timetable
Continuous

Deliverable

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

Status
The need to update the FASP is assessed annually. The latest version of the programme, FASP version 7.0, was published on 10 December 2020. ICAO reviewed the FASP and its implementation in terms of GEN, SDA, ANS, OPS and AIG in its SSP implementation assessment (SSPIA) in November 2018. Finland was the pilot country for SSP assessments. Traficom continuously improves the FASP and related national aviation safety work based on development proposals given in the assessment.

3.1.2 SYS.002. Finnish Plan for Aviation Safety

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety (SPAS)

SYS.002.1, Finnish Plan for Aviation Safety

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

Objective of the action:
Finland implements the actions assigned to EPAS Member States in the European Plan for Aviation Safety and those identified through the national aviation safety risk management process (see FASP, section 2.6).

Stakeholder responsible for implementation:
Traficom: FPAS maintenance, development and implementation
Aviation organisations: Implementation of the FPAS's actions in their operations

Timetable
Continuous, annual updates

Deliverable
FPAS updated and published, actions implemented in practice

Status
The first version was published on 20 December 2013, this document is the latest update. Traficom implements FPAS as described in the FASP section 2.6 and oversees the implementation of the actions assigned to stakeholders

3.1.3 SYS.003. Finnish aviation safety performance targets and indicators

EPAS reference: MST.0001: Member States to give priority to the work on SSPs and MST.0028 Member States to establish and maintain a State Plan for Aviation Safety (SPAS)

SYS.003.1. Finnish aviation safety performance targets and indicators

Action:
Traficom assesses the national aviation safety performance targets (SPT) and indicators (SPI) in Annex 2 to the Finnish Aviation Safety Programme as well as any need to update them, and updates Annex 2 where necessary. Traficom communicates about the targets and indicators, and applies them to safety management in Finnish aviation.

Stakeholders take the national safety performance targets and indicators into account, and assess and process them in relation to their own operations as part of their safety management.

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

Stakeholder responsible for implementation:
Traficom
Aviation organisations

Timetable
Continuous
2020–2021: Traficom will create a comprehensive monitoring system and publish the outcome of the FASP Annex 2/Annex A targets.

Deliverable
FASP Annex 2, Finnish aviation safety performance targets and indicators, has been assessed, updated, published and implemented

Status
The latest content update, version 5.0, was published on 17 October 2018 and became applicable on 1 January 2019. Due to the agency reform, during which Trafi became Traficom, version 5.1, which included some editorial changes and incorporated the publication into Traficom's publication series, was published on 12 August 2020. Traficom has been developing BI-based SPI monitoring and will integrate the revised performance indicators in its authority duties.

3.1.4 SYS.004. Finnish aviation safety risk management

EPAS reference: MST.0001: Member States to give priority to the work on SSPs and MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

SYS.004.1, Finnish aviation safety risk management

Action:
The Finnish aviation safety risk management process (FASP, section 2.6) is implemented by Traficom and aviation stakeholders. For the division of responsibilities, see FASP section 1.5.

Finnish aviation safety risk management consists of identifying threats to be addressed and strengths and functions to be fostered, maintaining the risk pictures of aviation domains, determining the acceptable risk level, measures for maintaining risks at an acceptable level and strengthening the issues to be fostered, and monitoring the effectiveness of the actions. Information about the results is provided to the relevant stakeholders and incorporated into Traficom's operating system and annual planning (FASP, section 2.6).

Each aviation stakeholder is responsible for the safety of its own operations. Each aviation organisation must, within the scope of its SMS, identify hazards/threats – including threats caused by the COVID-19 pandemic during the pandemic itself and the recovery from it – and assess risks related to its own operations, determine the acceptable risk level in its operations and take any necessary actions to eliminate risks or to reduce them to an acceptable level. Stakeholders have the opportunity to

participate in creating and updating national risk pictures by participating in joint risk workshops and through the safety information they produce.

Organisations must also process the Finnish Plan for Aviation Safety and nationally identified safety threats in respect of their own operations and, if necessary, implement actions to eliminate risks related to threats or reduce them to an acceptable level. Organisations have the duty to demonstrate the performance of their management system to the supervising aviation authority, on the basis of which Traficom assigns oversight actions to organisations. For a description of acceptable levels of safety performance, see the FASP sections 3.2 and 3.3.

As part of national risk picture work, Traficom continues to proactively identify existing and potential threats to the safety of the aviation system caused by the COVID-19 pandemic, carry out related risk assessment and define and implement actions necessary for risk management and safety assurance. This work will be carried out both during the COVID-19 pandemic and the recovery from it.

The aforementioned work is carried out as necessary in cooperation with EASA, ICAO and other international stakeholders and Finnish aviation stakeholders.

Objective of the action:
Risk management in Finnish aviation is systematic, effective and continuously improving. Finland complies with ICAO and EU-level requirements regarding risk management in Finnish aviation.

Stakeholder responsible for implementation:
Traficom: Implementing Finnish aviation safety risk management as described in the FASP section 2.6
Aviation organisations: Implementing safety risk management relevant to their operations, including the action described above

Timetable
Continuous
2021–2022: Traficom maintains national risk pictures in cooperation with aviation stakeholders. During 2021, an aim is to launch joint workshops with the organisations also in the last four domains (general aviation maintenance, hot air balloon operations, ground handling and aviation medicine).Traficom carries out risk picture work in the aforementioned domains internally.

Deliverable
Finnish aviation safety risk management process is implemented

Status
The FASP process was introduced in phases starting in Q3/2016. National aviation risk pictures are created and updated in 14 aviation domains and in regard to the authority's own operations. Aviation organisations have been engaged in this cooperation.

3.1.5 SYS.005. Safety promotion

SYS.005.1, Safety promotion in relation to safety management systems (SMS)

EPAS reference: MST.0002: Promotion of SMS

Action:
Traficom raises safety awareness as part of its aviation authority duties by visiting customers, organising internal events or external events for its stakeholders and

taking the matter into account in different phases of approval and certification management as described in the FASP section 4.2, *External training and sharing of safety information*. Examples of sharing and developing safety management information include the risk workshops with stakeholders, as described in action SYS.004.1, and FASP-SMS seminars.

Traficom ensures that materials produced by EASA Safety promotion activities (incl. SPN, E-SPN-R), the SM ICG group and other guidance materials relevant to safety management (SSP, SPAS, SMS) are available to aviation stakeholders. Traficom publishes guidance materials on its website where they are easily accessible and encourages stakeholders to use them. Information about the European working groups and forums whose work stakeholders have an opportunity to participate in and/or influence are also compiled on the website.

As regards the impacts of the COVID-19 pandemic, Traficom ensures that stakeholders are aware of and have access to all the guidance material relevant to safety management and the operations of organisations produced by EASA and ICAO or cooperation forums coordinated thereby.

Objective of the action:
Supporting stakeholders in SMS implementation and development by making guidance material available to them

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous: In terms of the activities described in the FASP section 4.2, External training and sharing of safety information
2021: Sharing safety management guidance material useful to stakeholders on Traficom's website and informing aviation stakeholders about the material.

Deliverable
Sharing and use of best practices

Status
Continuous implementation in line with the principles of the FASP section 4.2, *External training and sharing of safety information*

SYS.005.2, Promoting safety through proficiency in and use of English in aviation

EPAS reference: SPT.0105: Language proficiency requirements — raise awareness on language proficiency requirement implementation, together with ICAO, the industry and the Member States

Action:
Refresher training for language proficiency examiners and the training of new language proficiency examiners are used to harmonise the activities of the examiners, collect best practices and emphasise the significance of language proficiency requirements for safety. Traficom is a member of the EASA LPRI TF working group and actively participates in its activities.

Objective of the action:
Raise awareness among language proficiency examiners of the significance of their work and among organisations and individuals of the significance of language proficiency issues in relation to safety. Improve learners' proficiency in English and understanding of the significance of language proficiency as a safety factor.

Stakeholder responsible for implementation:
Traficom and aviation language proficiency examiners where relevant

Timetable
Continuous
Annual refresher training sessions. Monitoring is used to oversee the quality and harmonisation of the language proficiency examinations. Training will be developed based on the observations made during oversight.

Deliverable
Harmonised language proficiency examinations and good English proficiency among pilots

Status
Annual refresher training sessions

SYS.005.3, Promoting safety through proficiency in and use of English in aviation

EPAS reference: MST.0033 Language proficiency requirements — share best practices, to identify areas for improvement for the uniform and harmonised language proficiency requirements implementation

Action:
Training for language proficiency examiners is used to harmonise the activities of the examiners, collect best practices, and emphasise the significance of language proficiency requirements for safety. Traficom is a member of the EASA LPRI TF working group and actively participates in its activities. Traficom participates in producing information and responds to EASA's surveys on language proficiency.

Objective of the action:
Raise awareness among language proficiency examiners of the significance of their work and among organisations and individuals of the significance of language proficiency issues in relation to safety

Stakeholder responsible for implementation:
Traficom and aviation language proficiency examiners where relevant

Timetable
Continuous
Annual refresher training sessions. Monitoring is used to oversee the quality and harmonisation of the language proficiency examinations. Training will be developed based on the observations made during oversight.

Deliverable
Harmonised language proficiency examinations and good English proficiency among pilots

Status
Annual refresher training sessions

3.1.6 SYS.006. Just culture

SYS.006.1, Just culture

MST.0027: Develop Just Culture in GA (in FPAS extended to cover all aviation domains)

In general, it can be said that positive development has taken place for several years in the reporting culture of all domains of Finnish aviation. There is an atmosphere of

trust, an integral element of just culture, between the aviation community and the aviation authority.

Finnish Aviation Safety Programme (FASP) section 2.5.3, *Confidentiality of occurrence information and Just Culture as elements of a good safety culture*, describes the elements of a good reporting culture and the principles of just culture in Finnish aviation. In Finland, the reporting obligation under the Occurrence Regulation (EU) No 376/2014 also applies to aircraft listed in Annex I to the EASA Basic Regulation (EU) 2018/1139.

Action:
All aviation:
Traficom publishes guidance material on themes concerning safety culture and just culture, and organises a related event for aviation stakeholders.

General and recreational aviation:
The recreational aviation safety project in 2015 built analysis cooperation between Traficom, SIL and SMLL. This cooperation has since been further developed and is one way to maintain and strengthen good reporting culture. The cooperation developed in the context of safety work in recreational aviation also plays an important role in maintaining an atmosphere of trust. These cooperation forms will be continued and further developed. Particular areas of development include the quality and immediacy of feedback on reporting. For more information, please see action SYS.GA.002, *Safety promotion in GA*.

Objective of the action:
Maintaining and reinforcing just culture in Finnish aviation and encouraging stakeholders to maintain and develop a good reporting and safety culture

Stakeholder responsible for implementation:
General action: **Traficom**
Action on general and recreational aviation: **Stakeholders committed to the operating model for Finnish recreational aviation safety work: Traficom, Finavia, Fintraffic ANS, Finnish Meteorological Institute, Finnish Aeronautical Association (SIL) and AOPA Finland (SMLL)**

Timetable
Continuous
2019–2021: just culture and safety culture website that collects guidance material and just culture - safety culture event/seminar

Deliverable
Cooperation promoting a good reporting and safety culture

Status
The material publication and event/seminar were postponed to 2021. The section on safety culture was strengthened in the FASP update (see FASP version 7.0 section 2.5.3)

3.1.7 SYS.007. Safety management systems (SMS)

SYS.007.1, Assessment of safety management system (SMS) performance
EPAS reference: MST.0026: SMS assessment

Action:
To assess organisations' compliance management systems (CMS) and safety management systems (SMS), Traficom uses methods that produce evidence of the

compliance and performance of the organisations' management systems. As one element of the development work, the management system assessment tool developed by EASA has been taken into account, either as such or for its contents.

Traficom revises its assessment tool to take into account the latest revision of EASA's assessment tool.

Target levels are set for the performance of the entire safety management systems used by organisations or for different elements of these systems. Based on the results, Traficom decides on the need for action (e.g. oversight, safety promotion). As part of the assessment of stakeholders' SMS performance, Traficom assesses how the impacts of the COVID-19 pandemic during the pandemic itself and the recovery from it have been processed in the different areas of the stakeholders' SMS.

National safety performance indicators (FASP, Annex 2) are used to also monitor the development of SMS performance in organisations.

Objective of the action:
Traficom uses the results of and develops performance-based oversight, and the assessment criteria for SMS audit practices between Member States are harmonised.

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous

Deliverable
Traficom has assessment methods and tools for assessing overall performance, and it uses these in its risk- and performance-based activities. Traficom is able to provide EASA with the required information on the SMS performance of Finnish organisations and to give feedback on areas where EASA's SMS assessment tool needs to be further developed.

Status
The assessment tool is used systematically as part of OPS (AOC and SPO), ATO, GH, ADR and ANS oversight, and the results of the assessment lay the foundation for organisations' profile and risk-based oversight. Expanding the use of the tool to also cover the activities of AIR, PART and AeMC organisations is being examined.

Traficom provides EASA with information on the compliance and performance of organisations' SMS in the manner specified by EASA either separately or in connection with standardisation. A Traficom representative participates in the EASA working group that revises EASA's SMS assessment tool.

SYS.007.2, Management of change as part of safety management

No EPAS reference: The action listed below was defined on the basis of nationally identified needs for action.

Action:
Aviation organisations constantly develop and improve their operations. In an assessment carried out by Traficom on the effectiveness of stakeholders' SMS procedures for management of change (MoC), it was observed that the procedures do not yet efficiently support all aspects of the identification of safety threats caused by changes and the associated safety risk management. Organisations must ensure that:

- they have an appropriate MoC procedure, including required personnel training
- they identify changes that need to be processed; the management informs the organisation of the changes in advance, ensuring that they can be processed and that necessary actions can be implemented before the change takes place
- the performance of the MoC procedure is subject to an internal audit as part of the SMS system
- the performance of the MoC procedure can be verified.

As part of oversight activities, Traficom assesses the performance of stakeholders' SMS MoC functions and internal audits. The assessment also takes into consideration how the organisation has identified and processed the changes in the operating environment and the organisation's operations caused by the COVID-19 pandemic during the pandemic itself and the recovery from it.

Objective of the action:
Ensuring that aviation stakeholders implement timely and comprehensive MoC procedures and identify the changes in their operations that require the activation of the MoC procedure.

Stakeholder responsible for implementation:
Aviation organisations
Traficom

Timetable
2019–2022
For Part-CAMO organisations, actions are required from the date of issue of the final Part-CAMO certificate.

Deliverable
Stakeholders have highly effective MoC procedures, the functioning of which can be verified.

Status
Ongoing. Based on the observations, the focus of the oversight is on the description of the MoC procedure, timely identification of changes requiring a risk assessment, risk management as the change process progresses (updating the risk assessments made) and comprehensive implementation of change management.

SYS.007.3, New business models

EPAS reference: MST.0019: Better understanding of operators' governance structure

Action:
Traficom examines how the stakeholders' key persons – including safety managers and accountable managers – in reality implement and perceive the responsibilities related to their roles. In this, Traficom also uses the following guidance material prepared by EASA: *Practical Guide: Management of hazards related to new business models of commercial air transport operators*.

The stakeholders' management has the duty to ensure that new business models and any threats associated with them are addressed in the company's SMS, including timely processing through change management procedures (MoC) where required. This duty also applies to the subcontracting of safety-critical functions and the subcontracting of chained or large-scale functions.

Objective of the action:

Identifying threats related to new business models and assessing and reducing their risks.

Stakeholder responsible for implementation:
Traficom
Aviation organisations

Timetable
2021–2023

Deliverable
Oversight action: discussion

Status
For Traficom's part, the action is implemented in connection with safety discussions and oversight and taken into consideration in the organisations' profile.

3.1.8 SYS.008. Cybersecurity in aviation

SYS.008.1, Cybersecurity in aviation

EPAS reference: No EPAS reference: the need for the action has been identified based on national risk management.

Background:
International cyber regulation in aviation is developed in a risk- and performance-based manner. The management of cyber risks, or more precisely the management of operative information security risks, will become increasingly central in flight safety activities. To this end, the management of information security must become a more integral part of the operational activities (management of flight safety and security issues) carried out by the authority and organisations in the aviation system.

In Finland, the aviation cybersecurity work implements the ICAO[10] and ESCP strategies[11] as well as Finland's Cyber Security Strategy[12] and fulfils the international and national obligations set for cybersecurity in aviation.

Action:
Cybersecurity has been included in the Finnish Aviation Safety Programme (FASP) and the Finnish Aviation Security Programme. Cybersecurity is discussed in connection with Finnish aviation safety risk management (FASP, section 2.6).

Stakeholders must ensure the identification of cybersecurity threats – including ones caused by the COVID-19 pandemic during the pandemic itself and the recovery from it – and the management of related risks concerning critical aviation systems.

Objective of the action:
Efficiently identifying cybersecurity threats and managing the risks caused by them

Stakeholder responsible for implementation:
Traficom
Aviation organisations

Timetable
Continuous: Traficom: Maintaining the FASP, Security Programme and risk picture/portfolio in terms of cybersecurity

[10] https://www.icao.int/cybersecurity/Pages/Cybersecurity-Strategy.aspx
[11] https://www.easa.europa.eu/sites/default/files/dfu/Cybersecurity%20Strategy%20-%20First%20Issue%20-%2010%20September%202019.pdf
[12] https://turvallisuuskomitea.fi/en/finlands-cyber-security-strategy-2019/

Continuous: Stakeholders: Identifying cybersecurity threats and managing the risks caused by them

Deliverable

- Cybersecurity included in the FASP and its Annexes as well as the Finnish Aviation Security Programme
- A formed and maintained Finnish aviation cybersecurity risk picture/portfolio
- Stakeholders have methods for identifying threats to cybersecurity and managing the related risks.

Status

2020: Finalisation of the Finnish aviation cybersecurity risk picture/portfolio 1.0 launched in 2018 in cooperation with strategic stakeholders and the implementation of key actions for managing cybersecurity in aviation
Ensuring the management of information security related to aviation by strategic stakeholders
2021–2024:

- Maintaining the cybersecurity risk picture/portfolio of Finnish aviation; identifying threats, paying attention to changes in the operating environment, risk management and strengthening resilience
- Appropriate consideration and inclusion of the management of information security related to aviation as part of the flight safety work of all aviation stakeholders
- Utilisation of Kybermittari in ensuring the cybersecurity management capabilities of key stakeholders; definition, realisation and coordination of follow-up work

3.1.9 SYS.009. Oversight competence, resources and focus areas

SYS.009.1, The oversight of Part-147 organisations

EPAS reference: MST.0035: Oversight capabilities/focus area: Fraud cases in Part-147

Action:

Part-147 organisations must ensure that:

- all changes to the examination system are made in a controlled manner
- the personnel involved in the examination activities have been appropriately trained and familiarised with their task
- the roles of the persons involved in processing the examination questions have been defined
- the confidentiality of the examination questions is ensured before each exam
- risk factors related to the examination situation are identified and anticipated
- arrangements are made for external individuals taking the examination outside the school in a manner approved by the authorities.

Traficom continuously monitors the activities of Finnish Part-147 organisations. Examination activities are monitored by following the preparation of the examination, the examination situation and the processing of questions. The themes listed above are also reviewed in discussions and meetings with the persons responsible for the examination activities and supervising the examinations. The process has proven to be reliable. Future changes to the examination system require implementing the change management procedure (MoC) as well as identifying threats caused by the change and other factors and related risk management.

Objective of the action:
Ensuring that stakeholders carry out the examination process in accordance with the Regulation and that they recognise any such risks in their own activities that may jeopardise the reliability of the examination.

Stakeholder responsible for implementation:
Traficom
Part-147 organisations

Timetable
Continuous

Deliverable
Stakeholders have a safe, operational and reliable Part-147 examination system

Status
Ongoing

SYS.FOT.009.2, Resources and competence

EPAS reference: MST.0032: Oversight capabilities/focus area ((a) Availability of adequate personnel in CAs, b) Cooperative oversight in all sectors, c) Organisations management system in all sectors)

Action:
Traficom is committed to ensuring it has the resources and expertise required for its official duties as an aviation authority. This is supported by continuous training and international cooperation.

Resource needs are regularly assessed.

Objective of the action:
The level of safety in Finnish aviation remains high.

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous

Deliverable
Official duties in the field of aviation are performed with sufficient resources and expertise

Status
Ongoing

SYS.009.3, Cooperative oversight

EPAS reference: MST.0032: Oversight capabilities/focus area ((a) Availability of adequate personnel in CAs, b) Cooperative oversight in all sectors, c) Organisations management system in all sectors)

Action:
Traficom engages in active cooperation with other states concerning the management and oversight of approvals and certificates issued to Finnish companies that also operate outside Finland. Traficom also seeks to make cooperation agreements with the aviation authorities in its key partner countries.

Objective of the action:
The level of safety in commercial air transport remains high. State aviation authorities in different countries have the means and cooperation mechanisms they need for oversight in situations where several countries share responsibility for overseeing an organisation.

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous

Deliverable
Sufficient and effective oversight in cooperation with the aviation authorities of other countries.

Status
Ongoing

SYS.009.4, Performance- and risk-based operations management

EPAS reference: MST.0032: Oversight capabilities/focus area ((a) Availability of adequate personnel in CAs, b) Cooperative oversight in all sectors, c) Organisations management system in all sectors)

Action:
Traficom maintains and develops performance- and risk-based operations management based on the principles of continuous improvement.

Traficom carries out and develops national-level risk management (*see action SYS.004.1)* and utilises the results thereof in the performance- and risk-based operations management of organisations. Traficom utilises and develops its capabilities and existing methods in regard to the assessment of organisations' performance (*see action SYS.007.1*) and strengthens its competence in taking human factors and safety culture into consideration in the assessment of performance (see action *SYS.009.6*).

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.

Stakeholder responsible for implementation:
Traficom

Timetable
2021–2023

Deliverable
Performance and risk-based operations management.

Status
2019–2020: Traficom commissioned a follow-up survey on safety culture (TUKU II, VTT), and the actions derived from its results have been communicated, deployed and will be implemented as part of Traficom's work.
2021–2023: ongoing as regards actions.

SYS.009.5, Fatigue Risk Management System (FRMS) utilisation and FRMS competence as part of risk management

EPAS reference: MST.0034: Oversight capabilities/focus area: flight time specification schemes

Action:
Traficom develops competencies and methods for assessing the functionality and efficiency of the Fatigue Risk Management System (FRMS), including the development and implementation of the FRMS operability and performance assessment tool.

Traficom participates in the activities of the *Fatigue Risk Management Forum* for forming an up-to-date, international situational picture and obtaining most recent research knowledge.

Objective of the action:
Increasing the competence of inspectors. Forming a reliable picture of the performance and efficiency of organisations' FRMS systems. Increasing cooperation and harmonisation between EASA Member States with regard to FRMS.

Stakeholder responsible for implementation:
Traficom

Timetable
2020–2022

Deliverable
Creating an EASA-level FRMS tool and incorporating this assessment into organisations' performance profiles.

Status
The pilot version of the FRMS assessment tool is in test use. Further development of the tool to be used as part of organisations' management system assessment and its inclusion in organisations' performance profiles is currently ongoing.

NEW ACTION: SYS.009.6, Strengthening competence in taking human factors and human performance into account in aviation authority work

EPAS reference: MST.0037: Foster a common understanding and oversight of Human Factors

Action:
Human factors and human performance (HF) are already part of the competencies that staff is provided with training in and required to possess in many of Traficom's official duties in the field of aviation, and part of personnel training programmes. HF has also become one of the focus areas in EASA and ICAO safety work. To strengthen the practical implementation of HF themes, Traficom will:

- assess the HF competency of its staff in relation to the competency requirements of different positions
- prepare a separate HF training programme and plan or make the necessary changes to existing training programmes and plans
- organise necessary additional HF training.

After this, Traficom will regularly assess the need for HF training and the level of HF competency as part of its existing processes for ensuring the maintaining of competency.

In carrying out the action described above, Traficom will utilise guidance material produced in EASA's SPT.0115 and relevant existing ICAO and EASA material, including the ICAO Manual on Human Performance (HP) for Regulators Doc 10151 (First Edition).

Objective of the action:
Strengthen competency in regard to the oversight, analysis and consideration of human factors and human performance in Traficom's aviation authority work and implement the aforementioned themes into practice in a systematic manner.

Stakeholder responsible for implementation:
Traficom

Timetable
By the end of 2023
2021: as an interim objective, Traficom will maintain and continue existing HF training and provide basic HF training to staff who have not been trained but are assessed to need or benefit from it in their work.

Deliverable
The importance and impact of human factors are more comprehensively taken into account in Traficom's regulatory work, including oversight, analysis, safety promotion and the SMS performance of organisations.

Status
New action

NEW ACTION: SYS.009.7, PPL/LAPL learning objectives in the Meteorological Information part of the PPL/LAPL syllabus

EPAS reference: MST.0036 PPL/LAPL learning objectives in the Meteorological Information part of the PPL/LAPL syllabus

Action:
Traficom will prepare the proposed learning objectives and include corresponding questions in the pool of PPL/LAPL theory exam questions. Traficom will strive to collaborate with EASA and other Member States in the preparation of the learning objectives to achieve a harmonised result.

Objective of the action:
Strengthen the competency of PPL/LAPL pilots in regard to meteorological information and its use through practical learning objectives.

Stakeholder responsible for implementation:
Traficom

Timetable
2021

Deliverable
PPL and LAPL training programmes updated with supplementary learning objectives concerning meteorological information and the use thereof.

Status
New action

3.2 Operational issues

Operational issues, introduction

Operational themes are more directly linked to the actions of an individual person, organisation or operational area or to environmental factors, including weather events. At the operational level, threats may directly cause a situation to develop into an occurrence, incident or accident.

Operational threats and safety factors are often identified by analysing occurrence data from flight safety reports and by carrying out risk assessments. Risk management measures seek to reduce the probability of events that result in occurrences, incidents and accidents and mitigate the severity of their consequences.

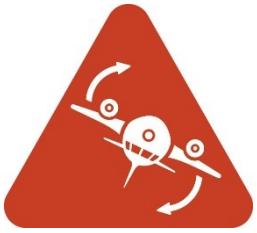
For information on the safety situation of Finnish aviation, see Traficom's Liikennefakta website (in Finnish).

Among other aspects, EPAS requires national safety plans to include threats identified at the international level. These include the following themes:

- Loss of control in flight (LOC-I) (LOC-I data on the Liikennefakta website)
- Runway excursions (RE) (RE data on the Liikennefakta website)
- Runway incursions (RI) (RI data on the Liikennefakta website)
- Mid-air collisions (MAC) (MAC data on the Liikennefakta website)
- Controlled flight into terrain (CFIT) (CFIT data on the Liikennefakta website)
- Fire, smoke and fumes (follow up data on the Liikennefakta website)
- Airspace infringement (AI) (AI data on the Liikennefakta website)

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

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety



Information on LOC-I events and the safety situation in regard to them is available on Traficom's Liikennefakta website.

OPER.LOC.001.1, Loss of control in flight (LOC-I)

Action:
Loss of control in flight (LOC-I) threats and their identified causal factors have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process LOC-I threats in their safety management and take action to reduce the risk thereof. Examples of factors that may cause LOC-I threats include, among other things, bird strikes and incidents involving foreign object debris (FOD).

Traficom monitors the number and risk level of LOC-I events, defines required actions as part of Finnish aviation safety risk management and assesses how stakeholders have addressed and processed LOC-I threats.

To process LOC-I threats as part of their safety management, organisations must:

- assess risks in their own operations

- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

Objective of the action:
Mitigating LOC-I risks

Stakeholder responsible for implementation:
Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)
Aviation organisations (AOC, SPO, ATO, ANS, ADR): Addressing of LOC-I threat in their operations

Timetable
Continuous

Deliverable
LOC-I events and their causal factors are included in FASP Annex 2 and addressed in Finnish aviation safety risk management and stakeholders' safety management.

Status
Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

3.2.2 OPER.002. Runway excursions (RE)

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on RE events and the safety situation in regard to them is available on Traficom's Liikennefakta website.

OPER.RE.002.1, Runway excursions (RE)

Action:
Runway excursion (RE) threats and their identified causal factors, such as runway conditions (RWY CON), have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process RE threats in their safety management and take action to reduce the risk thereof.

Traficom monitors the number and risk level of RE events, defines the required actions as part of Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed RE threats.

To process RE threats as part of their safety management, organisations must:
- assess risks in their own operations
- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

The definition of required actions also includes measures and preparation for arranging the moving of an immobilised aircraft in a situation in which precautionary, preventive and recovery-focused protection measures (i.e. safety barriers) have failed, an RE risk has been realised, a runway excursion has occurred and all that is left is minimising the damage.

Objective of the action:
Reducing RE risks

Stakeholder responsible for implementation:
Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)
Aviation organisations (AOC (aeroplanes), SPO (aeroplanes), ATO (aeroplanes), ANS, ADR): Addressing RE threat in their operations

Timetable
Continuous

Deliverable
Runway excursions and their causal factors are included in FASP Annex 2 and addressed in Finnish aviation safety risk management and stakeholders' safety management.

Status
Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

3.2.3 OPER.003. Runway safety

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

OPER.RWY.003.1, Local runway safety teams (LRST)

Action:
A Local Runway Safety Team has been set up at Helsinki-Vantaa Airport. Traficom oversees its activities. The aerodrome operator must also ensure the effectiveness of LRST activities at other aerodromes.

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

Stakeholder responsible for implementation:
Traficom
Aviation organisations (ADR, ANS)

Timetable
Continuous

Deliverable
Efficient LRST activities, the effectiveness of LRST activities at other aerodromes has been assessed

Status
An LRST is operating at EFHK. Traficom is involved in EFHK's LRST and processes the subject matter with the stakeholders as part of oversight.

OPER.RWY.003.2, Solutions to improve runway safety

EPAS reference: MST.0029: Implementation of SESAR runway safety solutions

Action:
Traficom contacts aerodrome operators and air navigation service providers to assess which runway safety solutions identified in the SESAR project have already been implemented in Finland. It also assesses the feasibility of the solutions and the

possibility of introducing those solutions that have not yet been implemented in Finland. The solutions are presented in the 2019 SESAR Solutions Catalogue, 2019 third edition. Additional information is also available in the ATM Master Plan updated in 2019.

Objective of the action:
The objective of this action is to improve runway safety in Finland and to ensure that runway safety solutions of the SESAR project have been implemented to the extent possible.

Stakeholder responsible for implementation:
Traficom
Aviation organisations (ADR, ANS)

Timetable
2019: First contacts with stakeholders and completing the EAPPRI action (*see OPER.RI.004.2, Runway incursions (RI) and EAPPRI*)
2020–2021: Assessing the scope of implementation and the introduction of the solutions to be implemented

Deliverable
The runway safety solutions of the SESAR project have been implemented to the extent possible

Status
Ongoing

3.2.4 OPER.004. Runway incursions (RI)

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on runway incursions and the safety situation in regard to them is available on Traficom's Liikennefakta website.

OPER.RI.004.1, Runway incursions (RI)

Action:
Runway incursion (RI) threats and their identified causal factors have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process RI threats in their safety management and take action to reduce the risk thereof.

Traficom monitors the number and risk level of RI events, defines the required actions as part of Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed RI threats.

To process RI threats as part of their safety management, organisations must:
- assess risks in their own operations
- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

Objective of the action:
Reducing RI risks

Stakeholder responsible for implementation:

Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)
Aviation organisations (AOC (aeroplanes), SPO (aeroplanes), ATO (aeroplanes), ANS, ADR): Addressing RI threat in their operations

Timetable
Continuous

Deliverable
Runway incursions and their causal factors are included in FASP Annex 2 and addressed in Finnish aviation safety risk management and organisations' safety management

Status
Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

OPER.RI.004.2, Runway incursions (RI) and EAPPRI

No separate EPAS reference. In EPAS 2018–2022, the MST.014 action required the following: RIs 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 should implement actions suggested by the European Action Plan for the Prevention of Runway Incursions (EAPPRI)."

Action:
Traficom processes the recommendations of EAPPRI version 3.0 (*European Action Plan for the Prevention of Runway Incursions*) published in November 2017 and implements them in cooperation with aviation industry organisations and service providers.

Objective of the action:
Ensuring that the recommendations of the updated EAPPRI are implemented in Finland as far as possible

Stakeholder responsible for implementation:
Traficom
Aviation organisations (AOC/aeroplanes, ATO/aeroplanes, ANS, ADR)

Timetable
2018–2021

Deliverable
EAPPRI recommendations have been implemented as far as possible.

Status
Actions in previous EAPPRI versions have been addressed and implemented where applicable. A survey related to the addressing of version 3.0 was sent to stakeholders in 2018. The responses obtained from the stakeholders have been reviewed by Traficom and further processing of this matter with stakeholders is ongoing.

3.2.5 OPER.005. Mid-air collisions (MAC)

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on the safety situation in regard to MAC threats is available on Traficom's Liikennefakta website.

OPER.MAC.005.1, Mid-air collisions (MAC)

Action:
Mid-air collision (MAC) threats and their identified causal factors have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process MAC threats in their safety management and take action to reduce the risk thereof.

Traficom monitors the number and risk level of MAC events, defines the required actions as part of Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed MAC threats.

To process MAC threats as part of their safety management, organisations must:

- assess risks in their own operations
- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

Objective of the action:
Reducing MAC risks

Stakeholder responsible for implementation:
Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)
Aviation organisations (AOC, SPO, ATO, ANS, RPAS): Addressing MAC threat in their operations

Timetable
Continuous

Deliverable
Mid-air collisions and their causal factors are included in FASP Annex 2 and addressed in the Finnish aviation safety risk management and stakeholders' safety management

Status
Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

OPER.MAC.005.2, Loss of separation between civil and military aircraft (MAC)

EPAS reference: MST.0024: Loss of separation between civil and military aircraft

Action:
In collaboration with ICAO, Finland has convened a working group (*Ad-hoc civil military expert group on flight safety over Baltic sea*), the work of which is contributed to by all states in the Baltic Sea region except Lithuania as well as EASA, NATO and Eurocontrol. The group prepared the document '*Principles and best practices in case of air encounters, especially in the High Seas airspace commonly*

shared by civil & military aviation over the Baltic Sea' for ICAO EUR OPS Bulletin (EUR OPS Bulletin 2017_001).The group also established a strategic cooperation network that can, if necessary, address issues related to the coordination of civil and military aviation in the Baltic Sea region. Finland has announced its readiness to continue organising meetings on this theme, should this be considered necessary.

Objective of the action:
Reducing threat of loss of separation between civil and military aircraft and MAC over the high seas by harmonising methods and increasing cooperation between relevant stakeholders

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous

Deliverable
Mid-air collisions and their causal factors are included in FASP Annex 2 and addressed in the Finnish aviation safety risk management and stakeholders' safety management.

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 other Baltic Sea states, Finland has published waypoints for state 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 air traffic control organisations of the Baltic Sea states. Finland has also participated in the drafting of the EUR OPS Bulletin (2015_002).

Finland has actively promoted increased civil-military cooperation in several international forums, such as the ICAO GANIS-SANIS symposium in 2017, the ICAO Air Navigation conference in 2018 and the OSCE Security Days in 2018, and an OSCE Structured Dialogue group in the autumn of 2019.

Finland has announced its readiness to facilitate further work, should the parties consider this necessary. Finland actively monitors the coordination of civil and military aviation, the implementation of the agreed actions and the level of safety in the Baltic region.

OPER.MAC.005.3, Mid-air collisions (MAC) and SESAR solutions

EPAS reference: MST.0030: Implementation of SESAR solutions aiming to reduce the risk of mid-air collision en-route and TMA

Action:
Traficom assesses in cooperation with air navigation service providers to what extent SESAR solutions for reducing the risk of mid-air collisions (MAC) have been implemented in Finland. It also assesses the feasibility of the solutions and the possibility of introducing those solutions that have not yet been implemented in Finland. The solutions are presented in the 2019 SESAR Solutions Catalogue, 2019 third edition. Additional information is also available in the ATM Master Plan updated in 2019.

Objective of the action:
The objective of the action is to reduce the risk of MACs in Finland and to ensure that SESAR solutions for reducing risk have been implemented to the extent possible.

Stakeholder responsible for implementation:
Traficom
Aviation organisations (ANS)

Timetable
2020–2021

Deliverable
SESAR solutions for reducing risk of MACs have been implemented to the extent possible.

Status
Ongoing

3.2.6 OPER.006. Controlled flight into terrain (CFIT)

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on CFIT events and the safety situation in regard to them is available on Traficom's Liikennefakta website.

OPER.CFIT.006.1, Controlled flight into terrain (CFIT)

Action:
Controlled flight into terrain (CFIT) threats and their identified causal factors have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process CFIT threats in their safety management and take action to reduce the risk thereof.

Traficom monitors the number and risk level of CFIT events, defines the required actions as part of Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed CFIT threats.

To process CFIT threats as part of their safety management, organisations must:
- assess risks in their own operations
- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

Objective of the action:
Reducing CFIT risks

Stakeholder responsible for implementation:
Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)
Aviation organisations (AOC, SPO, ATO, ANS): Addressing CFIT threats in their operations

Timetable
Continuous

Deliverable
Controlled flight into terrain and related threat factors are included in FASP Annex 2 and addressed in the Finnish aviation safety risk management and stakeholders' safety management.

Status
Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

3.2.7 OPER.007. Fire, smoke and fumes

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on fire, smoke anf fumes events and the safety situation in regard to them is available on Traficom's Liikennefakta website.

OPER.FIRE.007.1, Fire, smoke and fumes

Action:
Threats of fire as well as observations of smoke and other fumes and their identified causal factors have been included in the Finnish aviation safety performance indicators and targets (FASP Annex 2). Stakeholders must address and process these threats in their safety management and take action to reduce the risk thereof.

Traficom monitors the number and risk level of fires and observations of smoke and other fumes, defines the required actions as part of the Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed these threats.

To process the threats associated with fire, smoke and fumes as part of their safety management, organisations must:

- assess risks in their own operations
- define the acceptable level of safety and the necessary alert and response levels
- define and implement the required actions
- monitor the effectiveness of their actions.

The definition of required actions as regards ADR operators, for example, includes possible direct radio contact between the aerodrome's rescue service and the aircraft and operating procedures for organising evacuation and rescue operations for aircraft on the ground, including in the vicinity of terminals and passenger boarding bridges.

Objective of the action:
Mitigating the risks of fire, smoke and fumes

Stakeholder responsible for implementation:
Traficom: As regards Finnish aviation safety risk management (FASP 2.6) and oversight (FASP 3.0)

Aviation organisations (AOC, AIR, ADR): threats related to fire, smoke and fumes in their operations

Timetable
Continuous

Deliverable

Threats of fires, smoke and fumes and their causal factors are included in FASP Annex 2 and addressed in the Finnish aviation safety risk management and stakeholders' safety management

Status

Traficom's part has been implemented, and Traficom ensures implementation by stakeholders as part of oversight.

3.3 Actions concerning individual domains of aviation

Section 3.3 contains actions assigned separately to each domain of aviation. These actions were specified on the basis of EPAS (EPAS reference given) and/or the results of the Finnish aviation safety risk management process. The section for each domain begins with the topical threat scenarios for the domain in question (*see FASP section 2.6*) for which it has been considered necessary to include actions in the Safety Plan. These threat scenarios are defined on the basis of national safety risk pictures, which are based on an assessment of the safety risk level in the relevant domain of Finnish aviation. The results of this assessment do not provide information on the performance of individual stakeholders regarding the threat in question.

In some domains, it was found that the actions in sections 3.1 and 3.2 already cover the key threats that have been identified. For these domains, actions have not been separately included in section 3.3.

3.3.1 Helicopter safety

SYS.HECO.001, Collaboration forums for helicopter safety

EPAS reference: MST.0015: Helicopter safety events

Action:
Traficom has established a national working group on helicopter safety (FHST). The group convenes regularly. Traficom also organises an FHST Safety Day for Finland's helicopter operators each year as part of its safety promotion activities (FASP section 4.2). Traficom also distributes material produced for the Safety Day and other safety information to helicopter operators via its Helicopter safety website (in Finnish) and as part of its daily regulatory work.

At the European level, Traficom promotes helicopter safety by participating in the activities of EASA's ESPN-R-(European Safety Promotion Network – Rotorcraft). Traficom also participates in the annual EASA Rotorcraft Symposium, is an observer on EASA's R.COM committee, and participates in the EASA Helicopter Expert Group (HEG) activities. Traficom also participates in the Nordic Meeting - Helicopter and General Aviation forum, which deals with safety issues from a Nordic perspective.

Traficom relays safety information produced at the European level to Finnish helicopter operators. In addition to this, helicopter operators can utilise EASA's helicopter safety website "Rotocraft - EASA community" and the open ESPN-R LinkedIn forum.

Objective of the action:
Improving helicopter safety

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous

Deliverable
FHST is operational, Traficom participates in European activities to promote helicopter safety

Status
Implementation underway

SYS.HECO.002, Helicopter safety

The system-level theme of **developing standard operating procedures (SOP) and supporting their implementation** was identified as a key scenario in the national risk picture for the domain of helicopter operations in commercial air transport (CAT RW) and aerial work (SPO RW). The theme is also one of the national safety performance indicators that helicopter operators are obliged to monitor (*FASP Annex 2, Finnish Aviation Safety Objectives and Safety Performance Indicators and Targets, helicopter operation indicator RW-SPI-SOP*).The development and introduction of SOP is also considered necessary for helicopter flight training.

Action:
Helicopter operators, including helicopter training organisations (ATO), ensure that they have standard operating procedures (SOP) which describe in sufficient detail and scope all helicopter operations relevant to their activities. SOPs are to be taken into account in all training and helicopter operations, they are reviewed regularly, and they are updated based on the needs identified in risk management.

Traficom includes SOPs and their implementation in its oversight plan as one of the oversight priorities and promotes their use by means of safety promotion (*FASP section 4.2*).

Objective of the action:
Implementing Finnish aviation safety risk management in the domain of helicopter operations by strengthening one of the key safeguards for reducing risks, the use of standard operating procedures, and thereby ensuring that risk level in helicopter operations remains acceptable

Stakeholder responsible for implementation:
Organisations involved in helicopter operations in commercial air transport (CAT RW) and aerial work (SPO RW)
Approved training organisations for helicopter operation (ATO RW)
Traficom

Timetable
2019–2023

Deliverable
The action described above has been addressed in organisations' safety management and the results have been processed in connection with Traficom's oversight. The SOP theme is included as part of safety promotion.

Status
Implementation underway

SYS.HECO.003, Development of a network of low-level IFR routes

EPAS reference: MST.0031: Implementation of SESAR solutions aiming to facilitate safe IFR operations (NB: the action has been included in a previous version of EPAS but has now also been included in the FPAS)

Action:
Comprehensive assessment of the prerequisites and need for the implementation of a network of low-level IFR routes in Finland.

Objective of the action:
The objective of the action is to determine what kinds of needs and, on the other hand, prerequisites there are for the development of a network of low-level IFR routes and to clarify the roles of different stakeholders in the development of the network.

Stakeholder responsible for implementation:
The operators using the network, procedure design organisations, air navigation service providers and Traficom, each from the perspective of their respective roles

Timetable
By the end of 2021

Deliverable
An assessment and the necessary decisions on whether a network of low-level IFR routes will be promoted in Finland

Status
A preliminary survey on the need for the network has been implemented, and stakeholders are currently examining prerequisites for making progress in the planning of the network.

3.3.2 Airport safety

SYS.ADR.001, Airport safety

In terms of airport safety, the key scenarios at the operational level in the national safety risk picture continue to be as follows:

- runway conditions and maintenance at airports in Northern Finland, especially in regard to foreign flight operators not accustomed to winter conditions
- unauthorised vehicles on runways (runway incursion, RI) in summer and especially in winter conditions
- operational compliance and usability of the manoeuvring area.

At the systemic level, the key scenarios continue to be as follows:

- shortcomings in airport maintenance reporting
- shortcomings in the use of information produced within SMS for decision-making (*see also action SYS.007.2, Management of change as part of safety management*)
- shortcomings in reporting on local conditions. Related to this scenario, a new Global Reporting Format (GRF) for runway surface condition assessment and reporting will be implemented in Europe on 12 August 2021. This must be taken into consideration when reporting on local conditions.

Action:
As part of their safety management, airport operators must address the above key scenarios identified at the national level and threats that they have identified themselves in respect of their own operations, define an acceptable level of safety and, if necessary, take action to reduce risks to an acceptable level.

Traficom includes the identified key scenarios in its oversight plan as one of the oversight priorities.

Objective of the action:
Implementing Finnish aviation safety risk management in the ADR domain by ensuring that the risks related to the threat scenarios described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
Airport operators
Traficom

Timetable
2021–2022

Deliverable
The action described above has been addressed in organisations' safety management and the results have been processed in connection with Traficom's oversight.

Status
Implementation is ongoing with regard to oversight. Traficom, in cooperation with Finavia and Fintraffic ANS, has also updated the Winter Operations Bulletin for airlines flying into the airports of Northern Finland. The bulletin has been published in Finnish and English. The English version has been distributed through several different channels and can also be found on the IFALPA Safety bulletin website.

3.3.3 Safety of flight training

SYS.ATO.001, Safety of flight training

At the operational level, shortcomings in airspace observation remain the key scenario of the national safety risk picture in the flight training domain (ATO). These shortcomings may lead to a risk of collision (MAC), especially during solo flights to/from uncontrolled aerodromes.

At the systemic level, negative training, and in regard to this especially shortcomings in taking the defects of FSTDs into account, was identified as the key scenario.

Action:
As part of their safety management, flight training organisations must address the above key scenarios identified at the national level and threats that they have identified themselves in respect of their own operations, define an acceptable level of safety and, if necessary, take action to reduce risks to an acceptable level.

Traficom includes the identified key scenarios in its oversight plan as one of the oversight priorities.

Objective of the action:
Implementing Finnish aviation safety risk management in the ATO domain by ensuring that the risks associated with the threat scenario described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
Flight training organisations

Traficom

Timetable
2021–2022

Deliverable
The action described above has been addressed in organisations' safety management and the results have been processed in connection with Traficom's oversight.

Status
Implementation underway

3.3.4 Safety of commercial air transport

SYS.CAT.001, Safety of commercial air transport

At the operational level of the commercial air transport domain (AOC), the key scenario identified in the national risk picture is still the impacts of cabin baggage volumes on evacuation, obstructing/slowing down evacuation. The reason for this was that actions to highlight the issue at the national and European level are still underway.

At the systemic level, the following key scenarios were identified:

- development of organisations' threat identification and risk management
- shortcomings in regard to organisations' management of change (MoC) processes acknowledging rapid changes and multiple changes occurring at the same time (including the post-COVID-19 restart/recovery phase)
- shortcomings in organisations' determination and utilisation of a fatigue risk management system (FRMS).

Action:
As part of their safety management, commercial air transport organisations must address the above scenarios identified at the national level and threats that they have identified themselves in respect of their own operations, define an acceptable level of safety and, if necessary, take action to reduce risks to an acceptable level. Once they have introduced fatigue risk management systems (FRMS), organisations must assess how efficient and effective they are.

Traficom includes the scenarios in organisations' risk-based oversight. Traficom develops methods to assess the performance of fatigue risk management systems (FRMS); for more information, see action *SYS.009.5, Fatigue Risk Management System (FRMS) utilisation and competence as part of risk management*.

Shortcomings in the management of change are also connected to the system-level action SYS.007.2, *Management of change as part of safety management*, which is obligatory to all aviation organisations that are required to implement an SMS.

Objective of the action:
Implementing Finnish aviation safety risk management in the commercial air transport domain by ensuring that the risks related to the threat scenarios described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
AOC operators (aeroplanes)

Traficom

Timetable
2021–2022

Deliverable
The action described above has been addressed in commercial air transport organisations' safety management and the results have been processed in connection with Traficom's oversight.

Status
Implementation underway

SYS.CAT.002. Flight data monitoring (FDM)

SYS.CAT.002.1, National FDM forum

EPAS reference: MST.0003: Member States should maintain a regular dialogue with their national aircraft operators on flight data monitoring (FDM) programmes

Action:
Traficom organises regular meetings with operators producing FDM data (*national FDM forum*).

Objective of the action:
Supporting stakeholders in using FDM systems as part of their safety management, raising awareness of best practices and safety benefits, enabling confidential dialogue and sharing of safety information between industry stakeholders and Traficom, and encouraging FDM operators to use the guidance material produced by European cooperation forums or other existing useful material. Guidance material is available on EASA's website.

Stakeholder responsible for implementation:
Traficom: organisation of the national FDM forum
Operators producing FDM data: participating in the FDM forum and promoting best practices in aviation safety work regarding FDM systems and their use

Timetable
Continuous

Deliverable
Efficient use of FDM systems in safety work.

Status
The national FDM forum is organised 1–2 times a year. The forum was not organised in 2020 due to the coronavirus situation.

3.3.5 Ground handling safety

SYS.GH.001, Ground handling safety

The following were identified as key scenarios in the national safety risk picture in the ground handling (GH) domain:

- correct procedure is not followed while fuelling when passengers are on board/boarding/disembarking
- incorrect or deficient loading of the aircraft

- shortcomings in immediate information provision when a ground handling vehicle collides with an aircraft (including immediately informing the crew and technical staff and occurrence reporting)
- scenarios where the mass/centre of gravity of the aircraft has been incorrectly calculated
- shortcomings in guiding and supervising passengers on the apron.

At the systemic level, the following key scenarios were identified:

- a subcontractor operates incorrectly, but the organisation procuring the service does not have the capability to ensure safe operation in direct subcontracting and especially in subcontracting chains
- due to shortcomings in SMS performance, the system does not identify safety threats and/or is incapable of managing safety risks
- due to tight schedules, ground handling functions are performed incorrectly or neglected
- shortcomings in the management of change (MoC) in regard to changes occurring in the GH operating environment
- refuelling arrangements and responsibilities at aerodromes.

Action:
As part of their safety management, organisations must address the above key scenarios in ground handling identified at the national level and ground handling threats that they have identified themselves in respect of their own operations, define an acceptable level of safety and, if necessary, take action to reduce risks to an acceptable level.

Traficom monitors the number and risk level of events related to ground handling and ground operations, defines the required actions as part of Finnish aviation safety risk management and assesses how the stakeholders have addressed and processed threats related to ground handling and ground operations. Traficom participates in ground handling safety work in EASA's GH-CAG group.

Objective of the action:
Implementing Finnish aviation safety risk management in the GH domain by ensuring that the risks related to the threat scenarios described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
GH organisations
AOC organisations
Traficom

Timetable
2021–2022

Deliverable
The action described above has been addressed in the safety management of ground handling organisations and in the safety management of the organisations using ground handling services. Traficom includes the identified key scenarios in its oversight plan as one of the oversight priorities.

Status
Ongoing.

3.3.6 Airworthiness and maintenance safety

SYS.AIR.001, Airworthiness and maintenance safety

Two scenarios at the systemic level were identified as key scenarios in the national safety risk picture in the airworthiness and maintenance (AIR) domain:

- A mistake is made in airworthiness management, causing a maintenance task or AD to be neglected.
- Maintenance staff carry out their work incorrectly, leading to an aircraft being released to service even though it is not airworthy.

Action:
As part of their safety management system or in the absence of SMS, in their operations, continuing airworthiness management organisations (CAMO), maintenance organisations (AMO) and combined airworthiness organisations (CAO) must process the above key scenarios identified at the national level and threats that they have identified themselves in respect of their own operations, define an acceptable level of safety and, if necessary, take action to reduce risks to an acceptable level.

Traficom includes the scenarios in its oversight plan as one of the oversight priorities.

Objective of the action:
Implementing Finnish aviation safety risk management in the AIR domain by ensuring that the risks related to the threat scenarios described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
CAMO, AMO and CAO organisations
Traficom

Timetable
2021–2022

Deliverable
The threat scenarios described above have been addressed in the organisations' safety management and the results have been processed in connection with Traficom's oversight.

Status
Implementation underway

3.3.7 General aviation safety

General aviation refers to all other manned aviation apart from commercial air transport and aerial work. At the European level, the key risk areas (KRA) for actions to improve safety are KRA 1) **control of aircraft** (*preventing loss of control, or LOC-I events*), KRA 2) **preventing controlled flight into terrain** (CFIT events) and KRA 3) **preventing mid-air collisions** (MAC). In addition to these, key risk areas have been identified in specific domains of general and recreational aviation (*see the European Safety Risk Portfolios EPAS 2021-2025, volume 3)*. EPAS actions strengthen protection measures for reducing systemic risks related to **meteorological conditions**, **control of aircraft** and **managing the flight**, among others.

Traficom works on the safety of general and recreational aviation as set out in **Finland's operating model for recreational aviation safety work** developed in a recreational aviation safety project in 2015 (in Finnish, with links to documents in English). In addition to Traficom, Finavia, Fintraffic ANS, the Finnish Meteorological Institute, the Finnish Aeronautical Association (SIL) and AOPA Finland (SMLL) are committed to the operating model.

In the operating model, the stakeholders committed to complying with the model discuss the safety situation annually and specify priorities for safety work and needs for action during the year. These needs and priorities are also used as themes of the Lentoon! seminar that those stakeholders organise together each year.

OPER.GA.001, Airspace infringements

EPAS reference: MST.0028: Member States to establish and maintain a State Plan for Aviation Safety

Information on airspace infringements and the safety situation in regard to them is available on Traficom's Liikennefakta website.

Action:
Airspace infringements (AI) do not currently emerge as a key threat in general and recreational aviation in Finland, but several actions have been implemented over a number of years to mitigate the risks associated with them. AI events and their risk levels are monitored as part of Finnish aviation safety risk management. Should any needs for additional actions be identified, the operating model of Finnish recreational aviation safety work will be used. As regards the background factors affecting airspace infringements, threats caused by airspace complexity are also addressed with action SYS.GA.003 *Identification of the safety aspects of airspace complexity and changes therein and the utilisation of air traffic control in general aviation*.

Objective of the action:
Reducing AI and MAC risks

Stakeholder responsible for implementation:
Stakeholders committed to the operating model for Finnish recreational aviation safety work: Traficom, Finavia, Fintraffic ANS, Finnish Meteorological Institute, Finnish Aeronautical Association (SIL) and AOPA Finland (SMLL)

Timetable
Continuous

Deliverable
AI and MAC risks in control

Status
Progressing as planned. In 2018, Finland as a member of the SPN network participated in a safety campaign on preventing MAC/AI events in general and recreational aviation (EPAS 2018–2022, action SPT.089).

SYS.GA.002, Safety promotion in GA

EPAS reference: MST.0025: Improve the dissemination of safety messages

Action:
Key elements of safety promotion associated with the Finnish operating model for recreational aviation safety work include the **annual Lentoon! seminar** and **effective safety promotion and sharing of best practices** using different

communication channels. The cooperation described above continues within the framework of the operating model. Stakeholders meet annually before the beginning of the flying season to discuss and make decisions on essential topical themes for safety promotion.

The key themes chosen for 2021 are 'back to the skies,' just culture (confidential safety culture) and reporting. The operating model's cooperation group has recognised that the unique disruption caused by the COVID-19 crisis and the restarting of operations after it demand special attention.

The cooperation group also considered there to be a need to continue the just culture and reporting themes from the previous year, as the implementation of the Club-SMS developed for the aviation clubs of the Finnish Aeronautical Association (SIL) was pushed back to the starting flying season due to the COVID-19 pandemic. The SIL's Club-SMS creates an opportunity to lower the reporting threshold and develop a feedback system covering a large part of Finnish recreational aviation. The National Transport Safety Strategy is being prepared at the Ministry of Transport and Communications. During the preparations, the aviation working group has also been addressing themes related to aviation community safety culture.

For more information on the matter, please see action *SYS.006.1, Just culture*, which is a response to EPAS action *MST.0027, Develop just culture in GA*. In the FPAS, the scope of the action has been extended to cover all aviation domains.

Objective of the action:
Improving safety promotion as an essential systemic safety factor, thus improving general aviation safety.

Stakeholder responsible for implementation:
Stakeholders committed to the operating model for Finnish recreational aviation safety work: Traficom, Finavia, Fintraffic ANS, Finnish Meteorological Institute, Finnish Aeronautical Association (SIL) and AOPA Finland (SMLL)

Timetable
Continuous

Deliverable
Effective, risk-based safety promotion

Status
Progressing as planned. The 2020 Lentoon! seminar was cancelled due to the COVID-19 pandemic. The 2021 Lentoon! seminar covering the key themes described above will be organised on 10 April as a webinar due the coronavirus situation.

NEW ACTION IN EPAS: SYS.GA.003 Identification of the safety aspects of airspace complexity and changes therein and the utilisation of air traffic control in general aviation

MST.0038 Airspace complexity and traffic congestion, the new EPAS action has been incorporated into the previous FPAS action SYS.GA.003.

Action:
Traficom ensures that the safety impacts of airspace complexity and airspace changes have been identified, that the risks associated with them have been assessed and that the required actions have been taken in accordance with

organisations' risk management processes. In addition to this, Traficom ensures that the issue has also been taken into consideration in the national aviation risk picture.

Traficom participates in developing best practices for preventing mid-air collisions (MAC) and airspace infringements (AI) through EASA's GA TeB (General Aviation Technical Advisory Body).

In the cooperation group on the *Operating model for Finnish recreational aviation safety work*, Traficom seeks to identify ways to reduce MAC and AI risks, including best practices for encouraging pilots in general and recreational aviation to use the air traffic control service in the event of occurrences and incidents and, in particular, to proactively prevent occurrences and incidents.

Objective of the action:
Reducing MAC and AI risks

Stakeholder responsible for implementation:
Traficom
Cooperation group on the Operating model of Finnish recreational aviation safety work

Timetable
Continuous

Deliverable
Assessment of the safety impacts of airspace complexity and airspace changes and the management of associated risks;
The appropriate use of air traffic control services in general and recreational aviation

Status
Traficom oversees the organisation responsible for airspace complexity in a performance- and risk-based manner (see FASP section 3). Traficom maintains the national risk picture (see FASP section 2.6).

The GA TeB group started operating in 2016. Traficom's representative is the chair of the group.

The cooperation group on the Operating model of Finnish recreational aviation safety work has highlighted an urgent need for a functional tool with the help of which dynamic airspace changes could be communicated in real-time. Fintraffic ANS has a project in progress in relation to this.

3.3.8 Safety of unmanned aviation (Drones)

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

Background:
Unmanned aviation is a growing domain of aviation that is transforming rapidly in terms of legislation. There is currently a transition underway from national regulation to developing EU legislation.

Coordinating the growing volume of unmanned aviation with traditional, manned aviation requires new ways of thinking and assessing risks and actions for mitigating risks. The robotisation of air transport or the digitalisation of transport in general also introduces new needs in terms of traffic control and coordinating traditional and

roboticised transport. The transition to EU regulation for unmanned aviation will provide new tools for risk management. However, the Drone Regulation (implementing regulation (EU) 2019/947) includes a transition period that will last until the start of 2023, and before that the situation is subject to rapid changes.

The EU regulation of drones has been constructed to use a risk-based approach. It includes stakeholders' personal responsibility for risk management; stakeholders assess the risks of their operations and plan the measures required to keep these under control. As regards higher risk level operations, Traficom addresses these risk assessments and oversees the stakeholders using a risk-based approach.

Various airspace-related risks (such as airspace infringements) and mid-air collision risks will be mitigated from the start of 2023 especially by the fact that, according to current legislation, shops will only be allowed to sell CE-marked drones, and these drones will include harmonised geospatial tracking.

As a new element for increasing safety, U-space legislation is currently being finalised at the European level. This will enable the creation of a traffic control system for unmanned flights.

SYS.DRONE.001, Risk management

As part of national risk management, Traficom also produces and maintains a national UAS/RPAS/drone risk picture. The key scenarios identified in the national risk picture have changed significantly in some respects as a result of the EU Drone Regulation becoming applicable. The risk picture is currently being updated to correspond to the new situation following the comprehensive transformation of the industry as a result of EU legislation becoming applicable. The current identified and updated key risk scenarios at the systemic level are:

- lack of knowledge of regulations and the obligations thereof regarding safe operations, encompassing
    - operators who are not aware that they should be aware of the obligations related to drone operations
    - operators who do not understand the content of the obligations
- incorrect attitudes, encompassing
    - operators who, for whatever reason, do not operate in compliance with regulatory obligations
    - operators who knowingly operate in violation of obligations and regulations
- difficulties in coordinating manned and unmanned aviation and making them visible to each other.
  In terms of this point, one of the key problems is making manned aviation visible to unmanned aviation in uncontrolled airspaces via digital means, as the so-called see-and-avoid principle used in manned aviation when operating under visual flight rules (VFR) is an inadequate concept for coordinating manned and unmanned aviation in the same airspace. Instead, possible solutions need to be sought from the realms of digitalisation and robotisation.

Action:

Traficom strives to reduce the risks of unmanned aviation related to the risk scenarios described above by the following means:

- EU regulation has been constructed to use a risk-based approach. It includes stakeholders' personal responsibility for risk management; stakeholders assess the risks of their operations and plan the measures required to keep these under control. As regards higher risk level operations, Traficom

addresses these risk assessments and oversees the stakeholders using a risk-based approach.
- Traficom engages in cooperation with the police and facilitates the making of identified and required legislative changes.
- Traficom participates in the definition of the Counter UAS (C-UAS) concept and promotes the making of identified and required legislative changes.
- Decisions or orders issued by Traficom can be used to establish prohibited, restricted and allowed UAS geographical zones, which serve in their part to mitigate the risk of mid-air collisions between unmanned and manned aircraft either via restrictions or by increasing awareness of flight zones.
- Traficom promotes the safety of drone activities and improves stakeholders' knowledge of regulation and safe operation by the means described in action *SYS.DRONE.002, Safety promotion*.

As regards airspace-related risks, U-space legislation is currently being finalised at the European level. This will enable the creation of a traffic control system for unmanned flights. Traficom actively participates in the preparation of the U-space concept and ensures that Finnish perspectives are taken into account in the end result.

Objective of the action:
Reducing risks in unmanned aviation

Stakeholder responsible for implementation:
Operators using remotely piloted aircraft
Traficom

Timetable
2021–2023

Deliverable
Threat scenarios have been addressed to a sufficient degree in safety assessments of operators using remotely piloted aircraft.

Status
Actions in accordance with EU regulation have been implemented as of 1 January 2021.

SYS.DRONE.002, Safety promotion

Action:
Traficom uses a number of channels to communicate information about safe operation to professionals and hobbyists. Traficom also maintains the website droneinfo.fi for drone operators to support safety promotion and the safe operation of drones and monitors the numbers of visitors of the website. The National Transport Safety Strategy is being prepared at the Ministry of Transport and Communications. During the preparations, the aviation working group has also been addressing themes related to unmanned aviation and lack of knowledge of aviation regulations.

In its own role, Traficom also promotes U-space development in Finland and influences international regulatory work in accordance with action *SYS.DRONE.003, Influencing in international aviation*. Traficom participates in the EASA SPN working group, and coordinates associated European actions for promoting the safe operation of drones at the national level.

Objective of the action:

Reducing risks in unmanned aviation

Stakeholder responsible for implementation:
Traficom

Timetable
Targeted information via newsletters and events in 2021–2022
Droneinfo: updating the website content in 2021–2022
U-Space: Traficom promotes U-Space development in Finland by supporting the GOF U-Space project in 2021–2022

Deliverable
Communications targeting customers on several platforms (droneinfo.fi, social media, bulletins, newsletters). Communications efforts have a strong emphasis on social media for the purpose of reaching young drone operators.

Status
Actions are progressing as planned

SYS.DRONE.003, Influencing in international aviation

Action:
Traficom will exert influence on all key international forums that seek to develop the regulation on and safe operation of drones, including ICAO, EASA and the European Commission task forces.

Objective of the action:
Reducing the risks of unmanned aviation and streamlining international regulation

Stakeholder responsible for implementation:
Traficom

Timetable
2020–2023

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

Status
Traficom has a representative on the ICAO RPAS panel and European Commission task forces, such as U-Space.

Annex: List of actions by stakeholder groups

Measures only assigned to Traficom (indirect impacts on aviation organisations)

- SYS.005.1, Safety promotion in relation to safety management systems (SMS)
- SYS.007.1, Assessment of safety management system (SMS) performance
- SYS.FOT.009.2, Resources and competence
- SYS.009.3, Cooperative oversight
- SYS.009.4, Performance- and risk-based operations management
- SYS.009.5, Fatigue Risk Management System (FRMS) utilisation and FRMS competence as part of risk management
- NEW ACTION: SYS.009.6, Strengthening competence in taking human factors and human performance into account in regulatory work
- NEW ACTION: SYS.009.7, PPL/LAPL learning objectives in the Meteorological Information part of the PPL/LAPL syllabus
- OPER.MAC.005.2, Loss of separation between civil and military aircraft (MAC)
- SYS.HECO.001, Collaboration forums for helicopter safety
- SYS.DRONE.002, Safety promotion
- SYS.DRONE.003, Influencing in international aviation

Actions assigned to all stakeholders and Traficom:

- SYS.001.1, Finnish Aviation Safety Programme
- SYS.002.1, Finnish Plan for Aviation Safety
- SYS.003.1. Finnish aviation safety performance targets and indicators
- SYS.004.1, Finnish aviation safety risk management
- SYS.007.2, Management of change as part of safety management
- SYS.007.3, New business models
- SYS.008.1, Cybersecurity in aviation
- SYS.HECO.003, Development of a network of low-level IFR routes
  (implementation assigned to '*The operators using the network, procedure design organisations, air navigation service providers and Traficom, each from the perspective of their respective roles*')

Actions assigned to individual groups of aviation organisations and Traficom:

Language proficiency examiners

- SYS.005.2, Promoting safety through proficiency in and use of English in aviation
- SYS.005.3, Promoting safety through proficiency in and use of English in aviation

AIR organisations

- OPER.FIRE.007.1, Fire, smoke and fumes
- SYS.AIR.001, Airworthiness and maintenance safety (CAMO, AMO and CAO organisations)
- SYS.009.1, The oversight of Part-147 organisations (Part 147 organisations)

ATO organisations (aeroplanes and helicopters)

- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.MAC.005.1, Mid-air collisions (MAC)
- OPER.CFIT.006.1, Controlled flight into terrain (CFIT)
- SYS.ATO.001, Safety of flight training

ATO organisations (aeroplanes)

- OPER.RE.002.1, Runway excursions (RE)
- OPER.RI.004.1, Runway incursions (RI)
- OPER.RI.004.2, Runway incursions (RI) and EAPPRI

ATO organisations (helicopters)

- SYS.HECO.002, Helicopter safety

ANS organisations

- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.RE.002.1, Runway excursions (RE)
- OPER.RWY.003.1, Local runway safety teams (LRST)
- OPER.RWY.003.2, Solutions to improve runway safety
- OPER.RI.004.1, Runway incursions (RI)
- OPER.RI.004.2, Runway incursions (RI) and EAPPRI
- OPER.MAC.005.1, Mid-air collisions (MAC)
- OPER.MAC.005.3, Mid-air collisions (MAC) and SESAR solutions
- OPER.CFIT.006.1, Controlled flight into terrain (CFIT)

ADR organisations

- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.RE.002.1, Runway excursions (RE)
- OPER.RWY.003.1, Local runway safety teams (LRST)
- OPER.RWY.003.2, Solutions to improve runway safety
- OPER.RI.004.1, Runway incursions (RI)
- OPER.RI.004.2, Runway incursions (RI) and EAPPRI
- OPER.FIRE.007.1, Fire, smoke and fumes
- SYS.ADR.001, Airport safety

AOC organisations (aeroplanes and helicopters)

- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.MAC.005.1, Mid-air collisions (MAC)
- OPER.CFIT.006.1, Controlled flight into terrain (CFIT)
- OPER.FIRE.007.1, Fire, smoke and fumes
- SYS.002.1, National FDM forum (operators producing FDM data)
- SYS.GH.001, Ground handling safety

AOC organisations (aeroplanes)

- OPER.RE.002.1, Runway excursions (RE)
- OPER.RI.004.1, Runway incursions (RI)
- OPER.RI.004.2, Runway incursions (RI) and EAPPRI
- SYS.CAT.001, Safety of commercial air transport

AOC organisations (helicopters)

- SYS.HECO.002, Helicopter safety

SPO organisations (aeroplanes and helicopters)

- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.MAC.005.1, Mid-air collisions (MAC)
- OPER.CFIT.006.1, Controlled flight into terrain (CFIT)

SPO organisations (aeroplanes)

- OPER.RE.002.1, Runway excursions (RE)
- OPER.RI.004.1, Runway incursions (RI)

SPO organisations (helicopters)

- SYS.HECO.002, Helicopter safety

GH organisations

- SYS.GH.001, Ground handling safety

RPAS organisations

- OPER.MAC.005.1, Mid-air collisions (MAC)
- SYS.DRONE.001, Risk management

Actions to be implemented collaboratively in the framework of the operating model of Finnish recreational aviation safety work by the stakeholders committed to the model: Traficom, Finavia, Fintraffic ANS, Finnish Meteorological Institute, Finnish Aeronautical Association (SIL) and AOPA Finland (SMLL)

- SYS.006.1, Just culture
- OPER.GA.001, Airspace infringements
- SYS.GA.002, Safety promotion in GA
- SYS.GA.003 Identification of the safety aspects of airspace complexity and changes therein and the utilisation of air traffic control in general aviation (*note: the new EPAS action MST.0038 has been incorporated into the previous FPAS action)*

Deleted actions

- OPER.006.1, Ground safety
- SYS.CAT.002.2, FDM use in performance monitoring (operators producing FDM data)

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