TRAFICOM
Finnish Transport and Communications Agency

The Finnish Plan for Aviation Safety 2023-2025

The Finnish Aviation Safety Programme, Annex 1

Traficom Publications
6/2023

Contents

Photo by: Subodh Agnihotri

Foreword

The Finnish aviation safety policy was updated last autumn[1]. Safety and passenger confidence in the air transport system were determined as the key objectives in the policy. The daily work of aviation authorities and aviation organisations aims to secure these two core objectives.

The aviation safety policy describes how "*...the foundation pillars of confidence are safety[2], aviation security[3], cybersecurity[4], health security and environmental friendliness. In addition, the parties must ensure that economy, reliability and precision form a part of smoothly operating travel chains that support the accessibility of Finland.*" In recent years, the only certainty in the operating environment of aviation has been the permanency of change; as authorities and operators, we must adapt to changing circumstances from pandemics and massive conflicts to increasing economic competition and make the most of the available safety management mechanism.

Statistically speaking, commercial air transport is at an "ultra-safe level." At the same time, it is a branch of business that must remain profitable. This same equation applies to all security-critical business activities. Effective change management is at the heart of the equation; the operating environment is changing and it must be monitored from the perspective of competitiveness and safe operation. Any cost and resource challenges encountered must be solved without compromising safety. It should be remembered that the process to ensure safety restarts every day. Adequate resources must be allocated to safety work under all conditions. Changes in the operating environment must be assessed and changes in organisation`s own activities reviewed in advance, at the right time and objectively. Any necessary change management measures

[1] *Finnish Aviation Safety Programme (FASP), version 8.0, aviation safety policy in section 1.1*
[2] *Aviation safety*
[3] *Aviation security*
[4] *Cybersecurity*

must be taken and their effects must be monitored. It is also possible to not carry out a change or, instead, take corrective actions, if the end result of the change or management measure is undesirable.

The strengths of the Finnish aviation system include a positive safety culture and active dialogue between the aviation authority and organisations, aiming to determine the key risks and strengths of aviation system at the national level. The past winter brought on challenges concerning one of the strengths of Finnish aviation; it is important to ensure that snowhow remains a strength of the Finnish aviation system.

This Plan for Aviation Safety contains essential, prioritised actions to preserve the strengths of the Finnish aviation system and manage safety risks. The actions are binding on both Traficom and aviation organisations. Cooperation helps us secure passengers' confidence in aviation and the industry's vitality in future as well.

Pietari Pentinsaari, Deputy Director-General, Finnish Transport and Communications Agency Traficom

Jari Pöntinen, Director General of Civil Aviation (DGCA) Finland, Finnish Transport and Communications Agency Traficom

Finnish Plan for Aviation Safety, document version history

Date issued	Date valid	Valid
3/April/2023	3/April/2023	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 (ICAO Annex 19, Safety Management) Global Aviation Safety Plan GASP (ICAO Doc 10004) EASA Regulation (EU) 2018/1139[5] The European Aviation Safety Programme European Plan for Aviation Safety (EPAS) 2023–2025 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/49032/07.00.06.00/2023	
Modification details		
Date	Version	Change
20/December/2013	1.0	First publication
11/February/2015	2.0	Status of actions updated for 2014. OPS.009 Fire and smoke, added.
9/May/2017	3.0	Extensive update: layout and structure modified, measures updated based on EPAS 2017–2021 and the Finnish aviation risk management process
19/February/2018	4.0	Annual update based on EPAS 2018–2022 and Finnish Aviation Safety Risk Management
20/March/2019	5.0	Annual update based on EPAS 2019–2023 and Finnish Aviation Safety Risk Management
23/April/2020	6.0	Annual update based on EPAS 2020–2024 and Finnish Aviation Safety Risk Management
17/March/2021	7.0	Annual update based on EPAS 2021–2025 and Finnish Aviation Safety Risk Management
6/April/2022	8.0	Annual update based on EPAS 2022–2026 and Finnish Aviation Safety Risk Management
3/April/2023	9.0	Annual update based on EPAS 2023–2025 and Finnish Aviation Safety Risk Management

[5] *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 Organisation
ANS	Air Navigation Services
AOC	Air Operator Certificate
ATO	Approved Training Organisation
CAMO	Continuing Airworthiness Management Organisation
CAO	Combined Airworthiness Organisation
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	Fatigue Risk Management System
FTL	Flight and duty time limitation
GASP	Global Aviation Safety Plan
GH	Ground handling
GRF	Global Reporting Format
ICAO	International Civil Aviation Organization
IFALPA	International Federation of Air Line Pilots' Associations
RPAS	Remotely Piloted Aircraft System
SIAP	Standardisation Inspection Annual Programme
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
SSPIA	State Safety Programme Implementation Assessment
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.

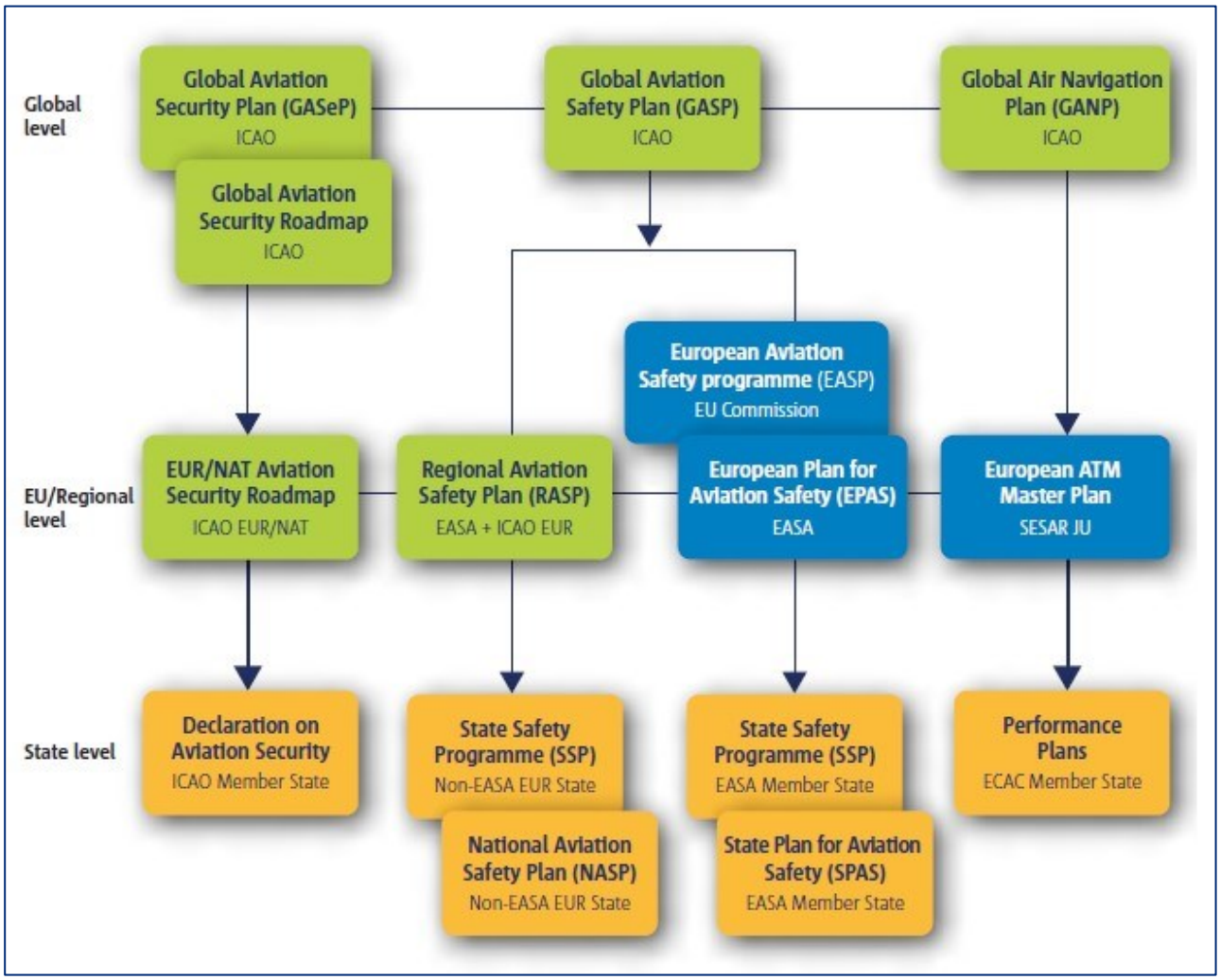
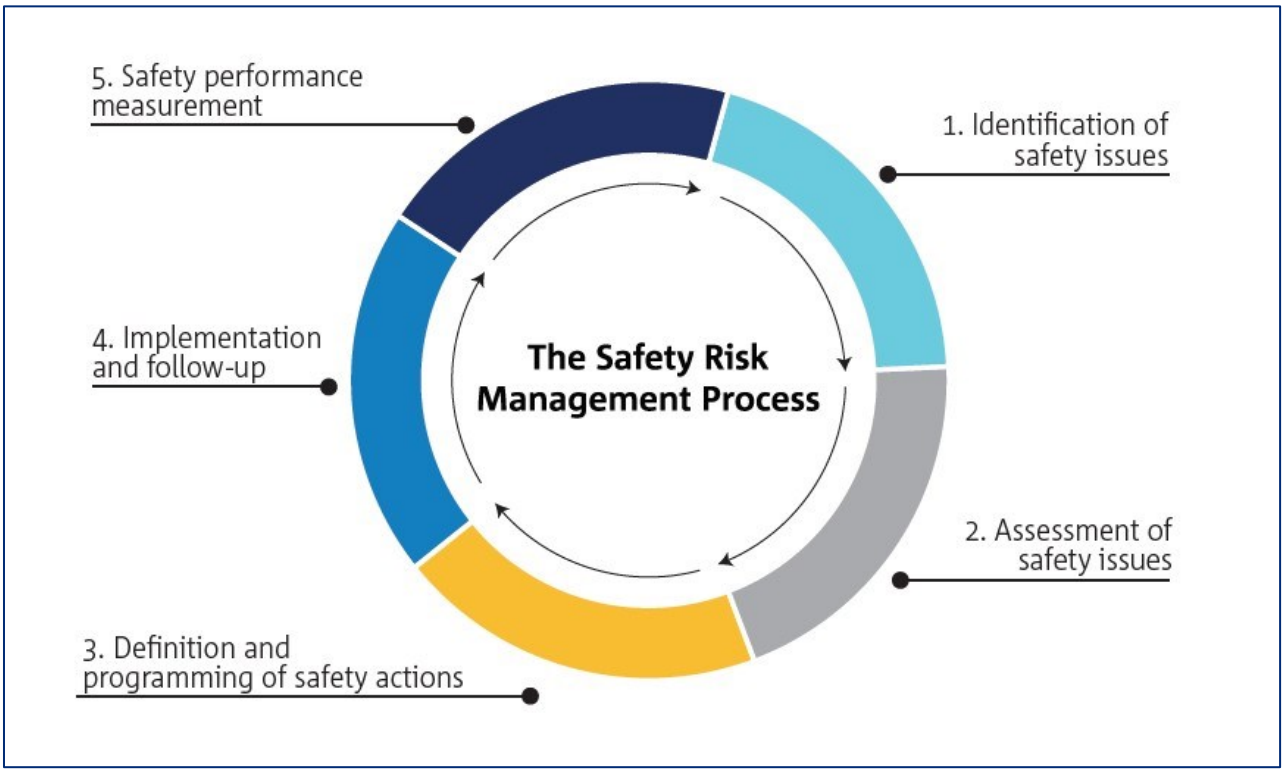


Figure 1: Image by EASA (EPAS 2022–2026, vol 1), relationship between EPAS and other programmes and plans

EPAS 2023–2025, published by EASA on 17 January 2023, is a comprehensive package of the strategic priorities and measures of aviation in Europe. EPAS consists of an strategy and performance volume (*volume 1, Strategic priorities*), an actions volume (*volume 2, EPAS actions*) and a European safety risk portfolios volume (*volume 3, Safety Risk Portfolios*). EPAS is also guided by the Commission's Better Regulation agenda[6], and the strategic priorities of EPAS are based on the Commission's Aviation Strategy[7] 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 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*[8] and *Global Air Navigation Plan GANP* published by ICAO[9] and also takes into account other relevant regional plans and strategic papers, including *The ATM Master Plan*[10] and the *Report of the Wise Persons Group on the future of the Single European Sky*[11]. EPAS is also the regional aviation safety plan (RASP) required by ICAO for EASA Member States. ICAO and EASA cooperate in producing an EUR RASP for the entire EUR region.

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.



[6] https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/better-regulation_en
[7] https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1552
[8] https://www.icao.int/safety/GASP/Pages/Home.aspx
[9] https://www4.icao.int/ganpportal
[10] https://www.atmmasterplan.eu/
[11] https://ec.europa.eu/transport/modes/air/news/2019-04-15-recommendations-on-air-traffic-management-in-europe_en

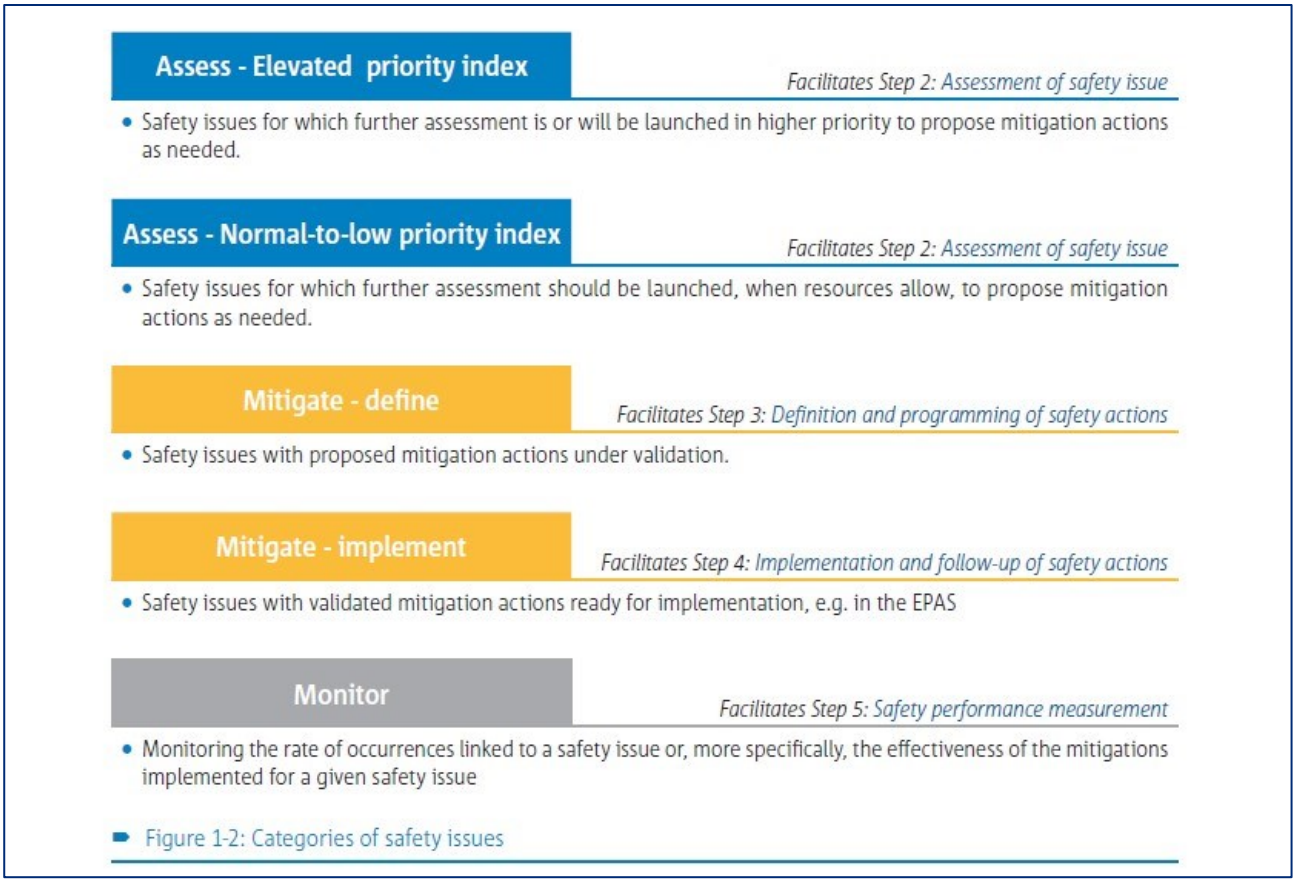


Figure 2: Image by EASA (EPAS 2023–2025, vol 3), European-level SRM process principle

Figure 3: Image by EASA (EPAS 2023–2025, vol 3), European-level SRM process principle – categorisation of assessed safety themes

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*[12]. 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.

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 these are safely integrated into the aviation system in a proactive manner**.

[12] https://www.easa.europa.eu/rulemaking-proposal-candidate-issue-identification-form

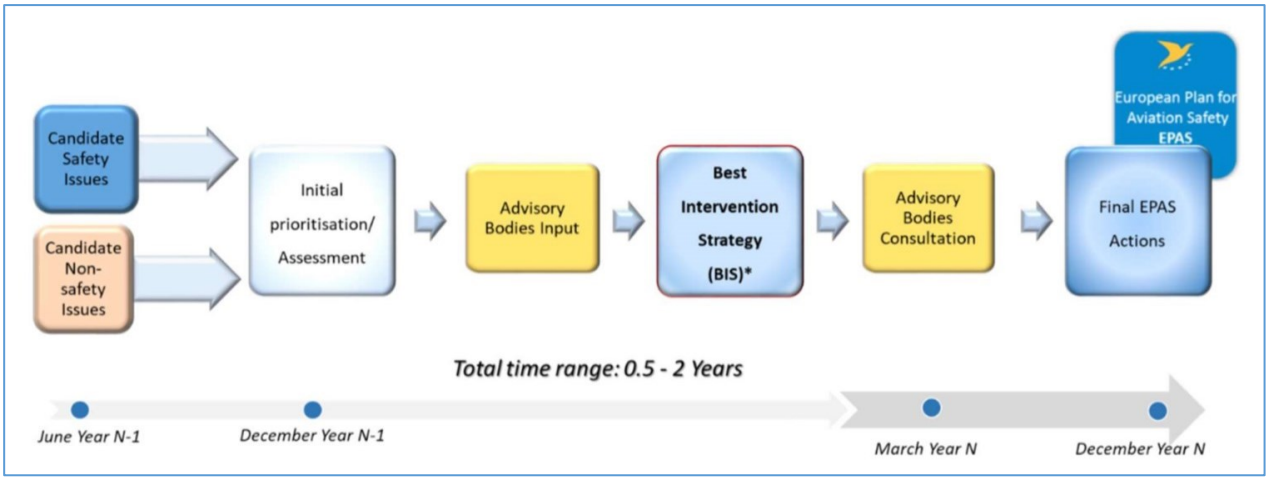


Figure 4: Image by EASA: Prioritisations of EPAS actions

The actions included in EPAS, i.e. the range of tools for improving safety, can be divided into six categories: **safety promotion, oversight capabilities and focus areas, regulation, implementation support tasks, research** and **evaluation**. Tasks assigned to Member States may include tasks to reinforce safety promotion, supervision and/or safety management. 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.

As of 2023, the European Plan for Aviation Safety will be drawn up by EASA for a three-year period at a time (previously a five-year period), and it will be 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.

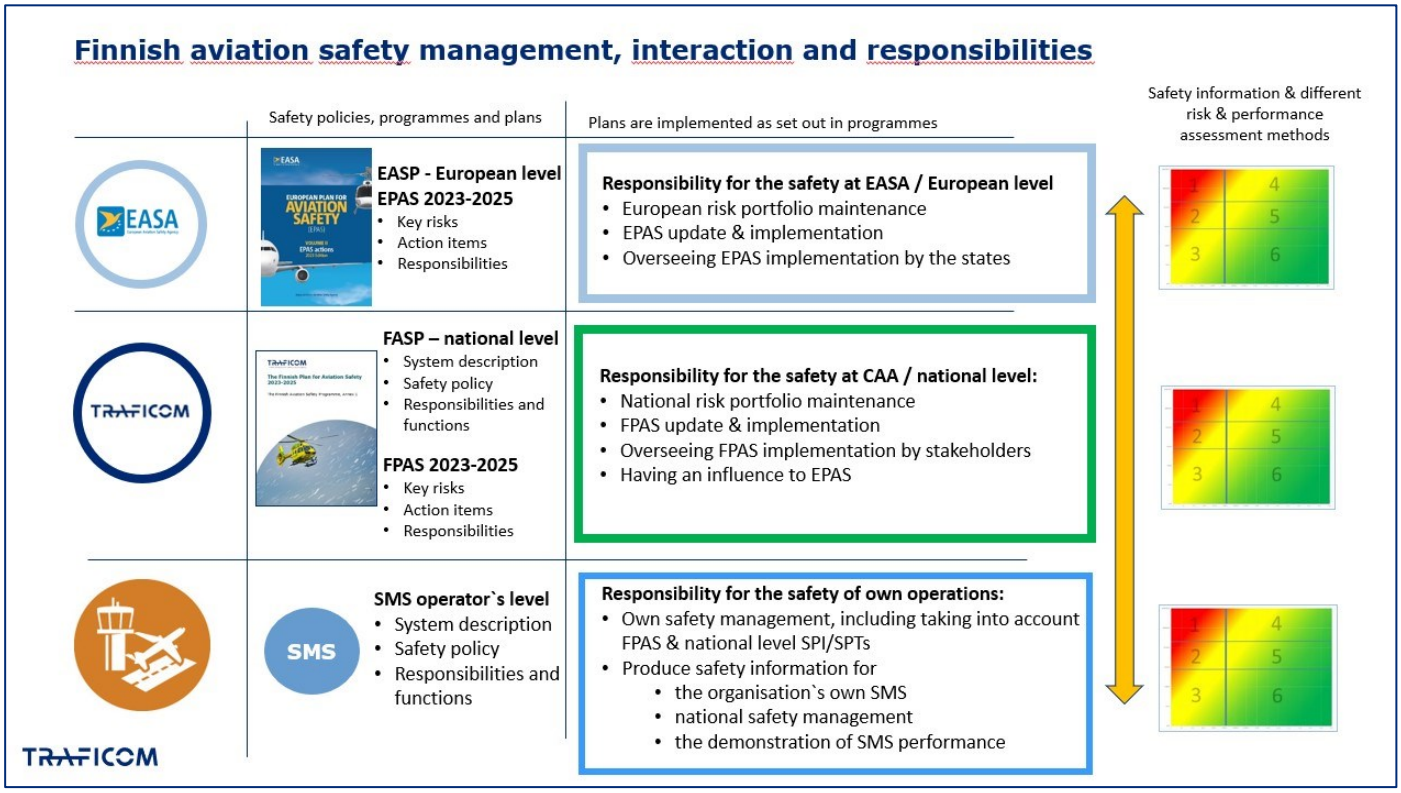


Figure 5: Roles and responsibilities in aviation safety management in Finland.

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 the 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 actions 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 (*see 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). Finland complies with the obligations for national aviation safety management, operations of aviation authorities and national coordination described in EU regulations, EPAS MST.0001 and ICAO Annex 19. 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: Maintenance, development and implementation of the FASP; coordination of national cooperation in aviation safety management and monitoring of the implementation with regard to aviation organisations.

Other national authorities with responsibilities under FASP: The fulfilment of responsibilities described in the FASP and participation in national coordination and cooperation when necessary.

Aviation organisations: Processing FASP and its Annexes with reference to their operations and integration of the actions concerning their operations set out in the Finnish Plan for Aviation Safety (FASP Annex 1) and the national performance objectives and indicators (FASP Annex 2) into their own safety management.

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 8.0, was published on 4 October 2022.** 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. After that, EASA audited the Finnish SSP implementation as part of the *Standardisation Inspection Annual Programme* (SIAP) in September 2022. Traficom continuously improves the FASP and related national aviation safety work based on development proposals.

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 has included EPAS actions for which EU Member States are responsible in the national safety plan and defines their focus areas in further detail utilising the national safety risk management process (*see FASP section 2.6*). Traficom also uses the process to determine other safety measures based on national needs and include them in the plan. A draft plan is sent to the Ministry of Transport and Communications, Safety Investigation Authority, Finland and the Finnish Military Aviation Authority for comments. Traficom confirms the actions after the comments have been considered.

Traficom publishes annual updates of the safety plan. 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 EU Member States in the European Plan for Aviation Safety EPAS 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
2023: Traficom updates Annex 2 of the FASP. Aviation organisations and national aviation partners are given an opportunity to influence the content of the update and comment on the draft versions throughout the update process.

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 SPI monitoring based on business

intelligence (BI) and utilises monitoring results in its authority duties. Traficom publishes monitoring information on the tieto.traficom.fi website.

In 2022, Traficom prepared a draft to update the national performance targets and indicators for cybersecurity in aviation. The draft was reviewed together with strategic aviation organisations at the aviation sector's cybersecurity event in spring and autumn 2022. The draft was updated on the basis of comments received from the organisations. In terms of other domains of aviation, the update process will be launched in spring 2023.

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 in accordance with their roles and responsibilities. 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 changes in the operating environment – 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. Stakeholders' responsibilities to manage changes in their own operations or operating environment have been described in more detail in action *SYS.007.2, Management of change as part of safety management*.

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 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 recovery from the COVID-19 pandemic and the altered security policy situation in Europe, carry out related risk assessment and define and implement actions necessary for risk management.

The aforementioned is carried out as necessary in cooperation with EASA, ICAO and other international stakeholders and Finnish aviation stakeholders. The aviation sector has created mechanisms for ensuring safe operations and for relaying necessary information on conflict zones, threats or increased risks around the world. The mechanisms coordinated by the European Commission together with EASA include *the European Information Sharing and Cooperation Platform on Conflict Zones* and *the Conflict Zone Information Bulletin* (CZIB). Finland is actively involved in this work. Traficom and the aviation organisations are monitoring the situation and ensuring that the risks related to their activities are maintained at an acceptable level regardless of the situation of the operating environment.

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
In 2023, the aim is to address the theme of safety culture at stakeholder groups' risk workshops, which are a continuation to the *Turvallisuuskulttuuri SMS-työn osana-mitä se on?* webinar organised by Traficom on 26 January 2022. The risk workshops are intended for stakeholder groups that did not have the safety culture section in their domain specific risk workshop in 2022.

Deliverable
Finnish aviation safety risk management process is implemented

Status
The Finnish aviation risk management process launched in Q3/2016 is now fully established, and the process is being developed further with the principle of constant improvement. National aviation risk pictures are created and updated in 14 aviation domains. In regard to the authority's own operations, risk assessments are conducted and actions are determined as part of the risk pictures in these 14 aviation domains and the risk management of Traficom's management system. Aviation organisations have been engaged in this cooperation.

The aims for 2022 have mainly been implemented. The risk workshops with stakeholders have been initiated also in regard to the last started domains: hot air balloon operations, ground handling and aviation medicine. Safety culture workshops were held for OPS/CAT, ANS, ATO, AIR CAT, AIR GA and GH stakeholders.

In 2023, annual risk workshops will continue to be organised for stakeholders and the theme of safety culture will be included in the workshops. There are plans to invite also DTO training organisations to the risk workshop intended for ATO organisations.

SYS.004.2, Aviation safety, security and cybersecurity occurrence reporting coordination mechanisms

EPAS reference: MST.0040 Safety and security reporting coordination mechanism

Action:
Traficom ensures and, if needed, develops the occurrence reporting coordination mechanisms for aviation safety, aviation security and aviation cybersecurity. This will be done in a way that complies with the reporting obligations of different areas so that information submitted to Traficom can be used appropriately also in regard to the interfaces of different areas and their risk management.

Objective of the action:
To ensure the use of required information in national aviation safety risk management work. National aviation safety risk management covers aviation safety, aviation security and cybersecurity with interfaces.

Stakeholder responsible for implementation:
Traficom

Timetable
2022–2023: coordination mechanism implemented

Deliverable
The required coordination mechanism in regard to occurrence reporting of aviation safety, security and cybersecurity has been ensured.

Status
In Traficom, all aviation occurrence reporting pursuant to the Occurrence Regulation (EU) No 376/2014 (safety, security, cybersecurity) is processed in the Safety Information Team. Safety and security reporting is already processed in the same system and the necessary coordination for risk management needs exists. In regard to aviation cybersecurity occurrence reporting, development needs for implementing the action are currently being examined. Regulations under the EASA Basic Regulation have been published; Commission Delegated Regulation (EU) 2022/1645 of 26 September 2022 and Commission Implementing Regulation (EU) 2023/203 of 2 February 2023. The regulations contain reporting obligations relating to aviation cybersecurity, which must be taken into account in the development of the reporting systems and processes of aviation authorities and aviation organisations covered by the regulations. The regulations must be enforced within the regulations' transition periods.

An updated version of the NIS directive, (EU) 2022/2555, was also released on 27 December 2022. The directive entered into force on the 20th day from its publication. Member States have 21 months from the directive entering into force to implement the regulations into their national legislation. The Ministry of Transport and Communications has initiated a project in order to implement the updated NIS Directive into national legislation.

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 seminars on safety management.

Traficom ensures that materials produced by EASA Safety promotion activities (incl. SPN, E-SPN-R), the SM ICG group (*Safety Management International Collaboration 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 changes in the operating environment (e.g. 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

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*. Traficom continues to participate in EASA's SPN and ESPN-R groups and in the work of SMICG and continues to maintain and develop its aviation website. One of the priorities in safety promotion for 2021–2023 have been cultural elements as part of SMS work. On 26 January, Traficom organised a webinar concerning safety culture supporting SMS work called *Turvallisuuskulttuuri SMS-työn osana-mitä se on?* for aviation organisations and professionals. The significance of cultural elements as part of SMS work were discussed further in the risk workshops held with the stakeholder groups. Traficom's aviation website contains plenty of material to support stakeholders' SMS work.

Traficom will be hosting SM ICG's Plenary Meeting in June 2023. In connection with the event, Traficom will organise an Industry Day for relevant stakeholders for the purpose of learning the stakeholders' views on the benefits and development targets of management systems' (incl. SMS) assessment methods from the perspective of constant improvement of the safety management system. The information shared can be utilised in the development of the assessment methods of stakeholders' management systems both at the national and international level.

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

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. 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. 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
Refresher training sessions when necessary. Traficom oversees 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
Refresher training sessions are organised when necessary. The latest training session was organised in January 2023.

NEW ACTION: SYS.005.4, Taking into account the recommendations of safety investigation authorities

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

Action background:
A great deal of unutilised safety information is still available in the domain of safety investigation. It is common that only the target organisation of safety recommendations takes recommendations brought up in the context of safety investigations into account in its operations.

Significant development has taken place in the area of safety concepts. According to the traditional Safety-I concept, things go well because the system is working as it should and things go awry when someone or something is not working correctly or breaks down. Advanced safety thinking, Safety-II, is founded on the idea that most things go well because people know how to adapt to their everchanging operating environment in their everyday work. The core philosophy of the Safety-II safety concept is to ensure that as many parts of the system as possible work correctly.

Targets of safety investigation are the cases where the risks have already been realised. Organisations should take into account the risks and any safety recommendations that apply to their operations in their own safety management systems, even if the recommendations have not been directed at their organisation. Organisations should use means of risk management to assess the existence of a risk and its potential impact on their operations and its scale, and develop appropriate measures to prevent the realisation of the detected risk in future or mitigate its impact on their operations.

Action:
Traficom uses safety information available in its risk management work.

Aviation organisations ensure that they have implemented a process for utilising relevant external sources of information in their risk management work. This process must cover e.g. any safety recommendations directed at them by safety investigation authorities and actions assigned to them in the Finnish Plan for Aviation Safety. In addition, an organisation’s process must cover the utilisation of national or international safety recommendations directed at other organisations, that are also relevant to the organisation’s own operations, in the organisation’s safety management system.

Objective of the action:
Utilisation of safety information obtained through safety investigations as a source of information in aviation organisations’ own safety management

Stakeholder responsible for implementation:
Traficom
Aviation organisations

Timetable
Continuous

Deliverable
Safety information obtained through safety investigations has been processed and utilised in organisations’ own safety management

Status
New action

3.1.6 SYS.006. Safety culture, reporting culture and just culture

SYS.006.1, Safety culture, reporting culture and just culture atmosphere

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 and maintains guidance material on themes concerning safety culture and just culture, and incorporates cultural elements into events organised for aviation stakeholders.

Through means of safety promotion, coordination and training, Traficom ensures that other national authorities with connections to e.g. obligations set by the Occurrence Regulations (EU) 376/2014 or other official obligations related to civil aviation know the significance of cultural elements and safety information to safety management in aviation and aforesaid special European and national legislation related to aviation.

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 in Finland 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**
Other national authorities with official obligations related to civil aviation or connection to Traficom's authority duties, such as the National Police Board of Finland, public prosecutor and Safety Investigation Authority, Finland.
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

2019–2022: just culture and safety culture website that collects guidance material and just culture - safety culture event/seminar
2022–2023: as a continuation to the seminar held on 26 January 2022, cultural elements as parts of SMS work will be discussed at events organised for different stakeholder groups, including annual risk workshops. The website on cultural elements is maintained and kept up to date, including the latest material produced by EASA.

Deliverable
Cooperation in promoting a good reporting and safety culture and the principle of just culture

Status
A webinar concerning safety culture supporting SMS work, *Turvallisuuskulttuuri SMS-työn tukena-mitä se on?*, was organised on 26 January 2022 for aviation organisations and professionals. As a continuation to the webinar, the theme was addressed in regular risk workshops held with stakeholders throughout the year (*see FASP, section 2.6*), which included a separate safety culture module.

An information/training event on aviation safety information and it`s utilization, (*Ilmailun turvallisuustieto ja sen hyödyntäminen - Tilaisuus syyttäjille)* was held for prosecutors on 17 March 2022. The event's themes included, in particular, the Occurrence Regulation (EU) 376/2014, just culture principle and the importance of safety information as a building block of safety management.

The updated FASP published on 4 October 2022 strengthened the elements of safety culture and just culture (see FASP version 8.0, incl. sections 1.1 *Finnish aviation safety policy*, 1.7 *Enforcement policy (CE-8)* and 2.5.3 *Confidentiality of occurrence information and Just Culture as elements of a good safety culture*).

Traficom's website for cultural elements (in Finnish), published on 15 April 2021, was also updated in 2022.

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 assesses the up-to-dateness of its assessment tool regularly and updates it when necessary. The latest revision of EASA's assessment tool is taken into account in the update.

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 changes in the operating environment, such as the impact of the COVID-19 pandemic during the pandemic and at the recovery

stage, the potential or identified effects of international crises and conflicts on safe operations or e.g. the potential impact of cost or resource challenges on operations have been processed in the different areas of the stakeholders' SMS (see SYS.007.2, *Management of change as part of safety management*).

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
2024 Q1-Q2: Traficom assesses the up-to-dateness of its assessment tool and updates it when necessary. Action *SYS.007.4, Assessment of the safety culture of AOC operators*, is taken into account in the update.

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 tools are used systematically as part of OPS (AOC, SPO and NCC), ATO, GH, ADR and ANS oversight, and the results of the assessment lay the foundation for organisations' profile and risk-based oversight. The use of the tools will be gradually expanded to also cover AIR oversight (Part-CAMO 2022, Part-145 2023). Expanding the use of the tool to also cover the activities of 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.

Traficom updated its assessment tool in January 2023. The changes made by the EASA working group to the EASA SMS tool were taken into account in the update. In addition, the tool was updated based on user feedback. Traficom has provided training on the content and use of the new tool at first for OPS and ATO oversight teams.

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 in a timely manner. The management informs the organisation of the changes in advance, ensuring that they can be processed with enough time
- possible effects of the results are genuinely taken into account in decision-making; depending on the results, it may be decided that the designed change will not be implemented at all or that the necessary change management actions must be adopted in a timely manner (needs for actions before, during and after the implementation of the change, incl. monitoring the impact of the change as necessary)
- 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 different current changes, like changes in the operating environment and the operation of the organisation due to e.g. pandemics or conflict zone situations, both during the situation itself and during the recovery from the situation. The assessment also focuses on how the organisation has utilised available information on identified threats caused by the situations (including information produced by EASA and the Conflict Zone information coordinated by the Commission together with EASA), how it has strived to identify potential threats caused by the changes, and how it has processed the above-mentioned as part of the organisation's management of change.

In addition, the assessment considers how the organisation has identified and processed changes to operational activities and supportive functions, including safety management, resulting from different business challenges, such as cost pressures, resource challenges or employee turnover. The assessment also addresses how the organisation has defined the necessary change management actions in order to maintain an acceptable level of safety and positive safety culture within the organisation.

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
2023–2025
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* and *Guidance for the oversight of group operations*.

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.

NEW ACTION: SYS.007.4, Assessment of the safety culture of AOC operators

EPAS reference: MST.0042: Assessment of safety culture at air operators

Action background:
A positive safety culture, good reporting culture and maintenance of a just culture atmosphere play a key role in ensuring the safety of aviation organisations' operations. The measurement and evaluation of cultural elements involves many challenges. EASA and the Member States strive to incorporate cultural elements into the evaluation and monitoring of organisations' performance in a more

systematic manner. In this work, it is essential to monitor the effectiveness of the evaluation, collect regular feedback from the Member States and organisations and develop the evaluation and monitoring of cultural elements further based on feedback and experience. At the same time, it is important to continue the implementation of safety promotion actions on a regular basis.

Action:
2023: Traficom works actively in EASA forums in order to ensure that material and tools produced by EASA to evaluate safety culture would correspond to the views and needs of Finnish organisations.

2024/Q1-Q2: Traficom will assess the material and tool produced by EASA and, based on the assessment, as appropriate, incorporate the elements of constant evaluation of safety culture into the processes and tools used in the assessment of organisations' performance.

Traficom will continue to implement the theme in practice by means of safety promotion by implementing the long-term action *SYS.006.1 Safety culture, reporting culture and just culture* and utilise previous experience of the evaluation of safety culture in the process.

Objective of the action:
Maintain and promote a good safety culture and incorporation of cultural elements into organisations' safety management.

Stakeholder responsible for implementation:
Traficom

Timetable
2023-2024/Q2

Deliverable
EASA has produced guidance material and tools for Member States for the purpose of evaluating the safety culture of organisations. Traficom has included elements of safety culture evaluation in the supervision of AOC (CAT) organisations.

Status
New action

3.1.8 SYS.008. Cybersecurity in aviation

SYS.008.1, Cybersecurity in aviation

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 in aviation, or more precisely the management of information security risks with impact on aviation safety or aviation security, will become increasingly central in flight safety activities. To this end, the management of information security must become a more integral part of the management of the overall safety of the aviation system carried out by the authority and organisations.

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).

In Finland, the aviation cybersecurity work implements the ICAO[13] and ESCP strategies[14] as well as Finland's Cyber Security Strategy[15] and fulfils the international and national obligations set for cybersecurity in aviation. Stakeholders must ensure the identification of cybersecurity threats – including ones caused by changes in the operating environment – and the management of related risks concerning critical systems and information from the aviation safety and aviation security point of view.

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
Continuous: Stakeholders: Identifying cybersecurity threats and managing the risks caused by them
2021–2024:

- Active influencing of the development of EU regulation and ICAO standards and recommendations of cybersecurity in aviation and the implementation of the gradually increasing cybersecurity regulation in Finland.
- 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 Cybermeter (Kybermittari) in ensuring the cybersecurity management capabilities of key stakeholders; definition, realisation and coordination of follow-up work

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 (strategic situational picture of aviation cybersecurity)
- Stakeholders have methods for identifying threats to cybersecurity and managing the related risks.

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

- The EU and national regulation of aviation cybersecurity is appropriate and effective. The Finnish aviation system has adopted the regulatory obligations.
- Traficom and aviation organisations have the necessary systems and processes to report cybersecurity events/incidents and store, protect, process, analyse and relay information to the appropriate authorities in accordance with the regulatory obligations related to aviation cybersecurity.

Status
The work is progressing as planned.

Finland is part of the most important international aviation cybersecurity working groups and forums, such as ICAO's Cybersecurity Panel and Trust Framework panel, ECAC's Cyber Study Group and EASA's ESCP and NoCa.

Finland has been actively influencing the renewal of the NIS directive (EU) 2022/2555 published on 27 December 2022 and the regulations based on the EASA Basic Regulation Commission Delegated Regulation (EU) 2022/1645 of 26 September 2022 and Commission Implementing Regulation (EU) 2023/203 of 2 February 2023. In terms of the NIS directive, the work will continue in a project led by the Ministry of Transport and Communications in order to integrate the updated NIS directive into national legislation. With respect to the Commission regulations, i.e. Part-IS regulation, the work will continue during the transition period by completing the AMC and GM materials and in the EASA Part-IS Implementation Task Force, in which Finland cooperates with EASA and Member States in order to prepare the enforcement of the regulation.

On a national level, the focus in 2022–2023 will be on the implementation of regulation (EU) 2019/1583 that became applicable in the beginning of 2022, the oversight of the stakeholders based on the already applicable EU regulation and national legislation, the promotion of cybersecurity in regard to all aviation stakeholders and on risk picture and situational awareness work in cooperation with strategic aviation stakeholders. Traficom maintains and develops a website on cybersecurity in aviation (in Finnish), published in December 2021, with information on cybersecurity work in aviation, regulations and guidance material.

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 management of chance 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.

Resources are continuously 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 actions SYS.004.1 and SYS.004.2*) 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
2023–2024

Deliverable
Performance and risk-based operations management.

Status
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 functionality and performance assessment tool.

A representative of Traficom participates in the activities of EASA's FTL/FRM Expert Group. The Expert Group strives to increase cooperation and harmonisation between EASA Member States with regard to Fatigue Risk Management Systems. For example, the Group develops the existing and produces new guidance material on the themes of FTL and FRM. In addition, Traficom participates in the activities of the *Fatigue Risk Management Forum* for forming an up-to-date, international situational picture and obtaining the most recent research knowledge.

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

Stakeholder responsible for implementation:
Traficom

Timetable
2023–2024

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

Status
The FRMS assessment tool is ready and has been in test use. The tool will be officially introduced in May 2023. The tool will be used as part of organisations' management system assessment and the results will be included in organisations' performance profiles.

SYS.009.6, Strengthening competence in taking human factors and human performance into account in regulatory 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

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 assessment of SMS performance of organisations.

Status
In 2021, the HF themes were included as part of Traficom's training programme regarding SSP (FASP) issues and they are included in the training programmes for service areas and teams.

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
2023/Q4

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

Status
The implementation has begun. EASA updated the LAPL and PPL learning objectives in March 2020 (ED Decision 2020/005/R) with regard to e.g. meteorology. The current learning objectives take the conditions of the action into account.
Traficom will include questions corresponding to the learning objectives in the pool of PPL/LAPL theory exam questions in 2023. Training organisations will also be informed of the matter and provided with material suitable for educational purposes, e.g. aeronautical meteorology material produced by the Finnish Meteorological Institute.

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 the aviation section on Traficom's Tieto.fi website.

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 Tieto.fi website)
- Runway excursions (RE) (RE data on the Tieto.fi website)
- Runway incursions (RI) (RI data on the Tieto.fi website)
- Mid-air collisions (MAC) (MAC/Airprox data on the Tieto.fi website)
- Controlled flight into terrain (CFIT) (CFIT data on the Tieto.fi website)
- Fire, smoke and fumes (data on the Tieto.fi website)
- Airspace infringement (AI) (AI data on the Tieto.fi website)

In addition, the actions include the national prioritised threat:

- Collisions while taxiing to or from a runway (GCOL) (GCOL data on the Tieto.fi 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

Further information: LOC-I data on the Tieto.fi 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 and stakeholders (AOC, SPO, ATO, NCC, 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

Further information: RE data on the Tieto.fi 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. In their processing work, stakeholders must also take into account changes in the operating environment, e.g. the new Global Reporting Format (GRF) for runway surface condition assessment and reporting that was implemented on 12 August 2021, strong and/or sudden changes in weather or changes to resources.

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), NCC (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 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)

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 2021 SESAR Solutions Catalogue, fourth edition. Additional information is also available in the ATM Master Plan updated in 2020.

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, AOC aeroplanes)

Timetable
2023– assessing the implementation
2024– continuous

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

Further information: RI data on the Tieto.fi 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), NCC (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.

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

Further information: MAC/Airprox data on the Tieto.fi 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, NCC, 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: 'Due regard' for the safety of civil traffic over high seas

Action background:
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.

Action:
Finland creates, maintains and uses its "due regard[16]" procedures, updates them to ICAO EUR Doc 032 and ensures that stakeholders who operate state aircraft are aware of the requirements and have access to the required guidelines for using the "due regard" procedures.

Finland maintains the coordination between civilian and military aviation, also using the ICAO Manual on Civil-Military Cooperation in Air Traffic Management (Doc 10088).

On a general level, Finland monitors military aviation traffic volumes and the nature of activities over the Baltic Sea. Reported incidents where the involved parties are civilian and military aircraft are especially being monitored. The purpose is to identify trends that may have a negative impact on aviation safety. Finland utilises information as part of national aviation risk management and reports the information to EASA according to the obligations in regard to occurrence reporting ((EU) 376/2014).

Finland continues with active cooperation on a European level and in ICAO to ensure safety in regard to these themes and maintains its readiness to, if necessary, lead working groups like the Ad-hoc Baltic sea group.

[16] *A due regard procedure means that the theme in question is given appropriate attention. See also https://skybrary.aero/articles/due-regard*

Traficom has participated in the preparation of EASA's safety risk portfolio *Review of Aviation Safety Issues arising from the war in Ukraine* . As part of national aviation risk management (*see FASP, section 2.6*) Traficom has also produced and maintains a national aviation risk picture of the identified and potential impacts of the war in Ukraine and it`s induced changes to the aviation operating environment.

As part of the maintenance of the national risk picture, Traficom processes information in the risk picture produced by EASA and takes it into account in the national risk picture. At regular workshops organised for aviation stakeholders, Traficom discusses threats caused by changes in the operating environment and the risk picture of the aviation domain in question. In addition, Traficom provides stakeholders with relevant material produced by EASA.

As part of the national risk management process, Traficom encourages stakeholders to utilise national and international safety information in their safety management. Aviation stakeholders must also process the nationally prioritised threats highlighted in the FPAS in their own risk management. See also actions *SYS.004.1, Finnish aviation risk management* and *SYS.007.2, Management of change as part of safety management*.

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

Stakeholder responsible for implementation:
Traficom

Timetable
Continuous
Reporting to EASA 2023-Q4

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 prepared several recommendations on operations over the high seas. Together with other Baltic Sea states, Finland has for example 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.

The national risk management actions are in progress.

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

EPAS reference: MST.0030: Implementation of the SESAR solutions aiming to reduce the risk of mid-air collisions enroute and in terminal manoeuvring areas

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 2021 SESAR Solutions Catalogue, fourth 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
2023–2024

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

Further information: CFIT data on the Tieto.fi 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, NCC, 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

Further information: data on the Tieto.fi 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 for example ADR operators 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, NCC, 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.

3.2.8 OPER.008 Collisions while taxiing to or from a runway (GCOL)

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

Further information: GCOL data on the Tieto.fi website

NEW ACTION: OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)

Action:
Collisions while taxiing to or from a runway (GCOL) 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 GCOL threats in their safety management and take action to reduce the risk thereof.

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

To process GCOL 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 GCOL 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), NCC (aeroplanes), ANS, ADR, GH): Addressing RI threat in their operations

Timetable
Continuous

Deliverable
Collisions while taxiing to or from a runway (GCOL) and their causal factors are included in FASP Annex 2 and addressed in Finnish aviation safety risk management and operators' safety management

Status
New action

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 Finnish Helicopter Safety Team (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 is an observer on EASA's R.COM committee. Traficom also participates in the Nordic Meeting - Helicopter and General Aviation forum, which deals with safety issues from a Nordic perspective.

Traficom promotes safety information produced at the European level to Finnish helicopter operators. In addition to this, helicopter operators can utilise EASA's helicopter safety website Rotorcraft - 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. Traficom organises *Helicopter Safety Day* events. In addition, the FHST working group has convened regularly. On the initiative of the FHST group, Traficom also organised an event on the safe and flexible coordination of helicopter and drone operations on 12 January 2022, where different perspectives and practices to promote safety were discussed. In 2022, Helicopter Safety Day was held on 7 September.

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
2023–2025

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

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 2025

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 published (in Finnish). Stakeholders are currently examining prerequisites for making progress in the planning of the network.

NEW ACTION: SYS.HECO.004, Survey of the impact of regulatory obligations from the perspective of small operators

EPAS reference: MST.0041 Harmonisation in Helicopter AOC approvals, procedures and documents

Action:
Traficom will carry out a survey to determine whether small Finnish helicopter operators deem the current regulations targeting commercial helicopter operators to be too burdensome. As part of the survey, Traficom will send a questionnaire on the topic to Finnish helicopter operators.

At the EASA level, the aim is to reduce excess administrative work and streamline helicopter operators' licence processes. If, based on the result of the survey, the current regulations are deemed problematic by Finnish operators, Traficom will evaluate its control process and assess the need for changes and participate in development work through EASA's Helicopter Expert Group in order to improve the situation.

Objective of the action:
At the EASA level, the aim is to reduce excess administrative work and streamline helicopter operators' licence processes.

Stakeholder responsible for implementation:
Traficom

Timetable
2023–2024

Deliverable
A survey on the impact of regulations targeting commercial helicopter operators from the perspective of small operators and any subsequent further actions, such as updated and harmonised AOC approval processes, working instructions and checklists used by Traficom.

Status
New action

Image: Peter Gudella / Shutterstock

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 are as follows:

- winter conditions and maintenance at airports
- 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 are 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*)
- relay of timely condition information and the correspondence between this information and information received from elsewhere. Related to this scenario, a new Global Reporting Format (GRF) for runway surface condition assessment and reporting has been 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
2023–2025

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, Fintraffic ANS, Finnair, Norra and the Finnish Meteorological Institute as well as with the airports of Lappeenranta, Mikkeli, Enontekiö and Seinäjoki, has also updated the Winter Operations Bulletin for airlines flying into Finnish airports. 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, the following key scenarios were identified:

- negative training, and in regard to this especially shortcomings in taking the defects of FSTDs into account
- shortcomings in organisations' risk assessments.

In addition, the following systemic-level themes were highlighted based on the safety recommendations of Safety Investigation Authority (SIA), Finland:

- emergency instructions and drills for accident situations
- risk assessment and necessary risk management measures related to operations in winter conditions at uncontrolled aerodromes.

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.

Based on the SIA's safety recommendations (2021-S33 and 2021-S34), flight training organisations must review and, if necessary, update their emergency instructions and ensure that practical emergency training is provided. In addition, training organisations operating at uncontrolled aerodromes must review and, if necessary, update their risk analyses with respect to the impact of winter conditions.

Traficom includes the identified key scenarios as well as the aforementioned safety themes brought up in the context of safety investigations 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
2023–2025

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 threat management in regard to changes to organisations' business environment (e.g. pandemics and conflict zone situations)
- shortcomings in organisations' determination and utilisation of a fatigue risk management system (FRMS).
- correct procedure is not followed while fuelling when passengers are on board/boarding/disembarking

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*.

Organisations' ability to adapt their operations and manage the risk level of their operations in prevailing conditions and implement possible changes while making genuine and efficient use of management of change (MoC) and risk management processes is ensured in organisation oversight. Shortcomings in the management of change are also connected to the systemic 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 associated with the threat scenarios described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
AOC operators (aeroplanes and hot air balloon operations)
Traficom

Timetable
2023–2025

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
In future, the programme of the FDM forum will include the other safety management themes as well. FDM will form one part of the forum.

3.3.5 Safety of non-commercial operations with complex motor-powered aircraft

SYS.NCC.001, Safety of non-commercial operations with complex motor-powered aircraft

At the systemic level, the following key scenarios in the national risk picture were identified in the domain of non-commercial operations with complex motor-powered aircraft (NCC):

- 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 the organisation's own compliance monitoring

Action:
As part of their safety management, NCC operators 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.

Traficom includes the scenarios in organisations' risk-based oversight.

Shortcomings in the management of change are also connected to the systemic 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 NCC domain by ensuring that the risks related to the threat scenario described above are maintained at an acceptable level.

Stakeholder responsible for implementation:
NCC operators (aeroplanes)
Traficom

Timetable
2022–2025

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

Status
Implementation underway

3.3.6 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)
- 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 sufficiently 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

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 working groups, such as the GH-CAG group and the working group preparing new ground handling regulations, and shares information about the new EU-level ground handling regulations in preparation.

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
2023–2025

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.

3.3.7 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), production organisations (POA) 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 to 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, POA and CAO organisations
Traficom

Timetable
CAMO 2022–
AMO 2022–2024
POA 2023–2025
CAO Recommendation

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

Image: Jani Hottola

3.3.8 General aviation safety

Background:

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 in EPAS 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*).

One factor highlighted in EPAS to prevent MAC events are measures to prevent airspace infringements (AI). In the domain of hot air balloon operations, the general aviation KRAs are, in addition to control of aircraft, mid-air collision with obstacles and landing. For more information about key risk areas in specific domains of general and recreational aviation, see *the European Safety Risk Portfolios EPAS 2023-2025, volume 3.*

EPAS actions strengthen protection measures for reducing systemic risks related to e.g. **taking into account meteorological conditions** and **managing the flight**, including iConspicuity, which means maintaining situational awareness during flight in relation to real-time information obtained from various digital systems, e.g. GPS navigation and meteorological data, and discernibility in relation to 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 (AI) and the safety situation in regard to them is available on Traficom's Tieto.fi website (AI data on the Tieto.fi website) (in Finnish).

Action:
Airspace infringements (AI) are one factor identified to contribute to mid-air collisions (MAC). 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 addition, 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 2023 are "see and hear, and be seen and heard". The theme chosen by the cooperation group for the operating model refers to the use of a radio and transponder as well as viewing the airspace and aerodromes through e.g. NOTAMs. Flight preparation continues to remain important as well. The cooperation group also brought up concerns over enthusiasts' courage and skill to act in controlled airspace, since recreational aviation training largely takes place at uncontrolled aerodromes.

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 2022 Lentoon! seminar was held on 28 May 2022. A safety bulletin covering the themes of the 2022 seminary was published in spring 2022. The 2023 Lentoon! seminar was held on 1 April 2023 at the Aviation Museum. EASA participated in this year's seminar. The link to the seminar materials can be found on the website of the Finnish Aeronautical Association and Traficom.

Related to the reporting of the themes of 2022 and just culture, Traficom's website for cultural elements (in Finnish), which contains plenty of information, was published on 15 April 2021.
A webinar concerning safety culture supporting SMS work, *Turvallisuuskulttuuri SMS-työn tukena-mitä se on?*, was organised on 26 January 2022 for aviation organisations and professionals. A recording of the event is available on Traficom's website, and it can be utilised also in the recreational aviation community. EASA has also released a video related to the topic on its YouTube channel: GA Season Opener Day 1 - Be Ready and Fly Safely Introduction - YouTube

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

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 design 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.

Image: Shutterstock

3.3.9 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 as a segment in aviation is still experiencing strong growth. Unmanned aircraft are operated within the limits specified by the EU Regulation on unmanned aircraft (Implementing Regulation (EU) 2019/947) starting from 31 December 2020, from the start of 2023 with respect to model aircraft clubs or until the start of 2024 with respect to equipment according to transitional provisions. There are no specific SMS requirements for organisations other than LUC organisations, but the operators are required to ensure the safety of their own activities, be aware of the risks of their own activities and, if necessary, use risk-based risk management methods. When the specified risk level is exceeded, the operator must apply for an authorisation or a certificate.

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 automation 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 provides new tools for risk management.

After the transition period, only drones that bear CE markings and are classified C according to regulation (EU) 2019/945 can be placed on the market. These drones will include harmonised geospatial tracking, which will mitigate various airspace-related risks (such as airspace infringements) and mid-air collision risks. In Europe, there is not yet a harmonised view of which information should be

presented through geospatial tracking. Thus, there is a significant risk that the regulations will change in the future.

As a new element for increasing safety, the U-space regulation (EU) 2021/664 has been published at the European level. This will enable a traffic control system for unmanned flights and better coordination of manned and unmanned aviation. The regulation has been applied since 26 January 2023. The U-space regulation framework creates additional requirements for ATS providers and manned aviation. These additional requirements have been adopted in the ATM/ANS and SERA regulations by the Commission's Implementing Regulations (EU) 2021/665 and (EU) 2021/666.

National legislation complementing the U-space regulation was implemented through a revision of the Aviation Act, which entered into force on 20 February 2023.

SYS.DRONE.001, Risk management

As part of national risk management (*see FASP, section 2.6*), 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 has been updated to correspond to the new situation following the comprehensive transformation of the industry. 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 automation.

Action:

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

Stakeholders have personal responsibility for risk management; stakeholders must 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 promotes the making of identified and required legislative changes;
- participates in the definition of the Counter UAS (C-UAS) concept and promotes the making of identified and required legislative changes;
- prepares general-level cybersecurity guidelines for unmanned aviation hobbyists and stakeholders;
- investigates the possibility of also awarding the Cybersecurity Label by the National Cyber Security Centre Finland (NCSC-FI) at Traficom to unmanned aircraft meant for consumer usage; and
- 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*.
- Decisions or regulations 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.
- Based on the risk assessments, Traficom can establish allowed UAS geographical zones and U-space airspaces.

Objective of the action:
Reducing risks in unmanned aviation

Stakeholder responsible for implementation:
Operators using remotely piloted aircraft
Traficom

Timetable
2023–2025

Deliverable
Threat scenarios have been addressed to a sufficient degree in safety assessments of operators using remotely piloted aircraft. The risk level of unmanned aviation is maintained at an acceptable level with Traficom's and stakeholders' actions.

Status
Actions in accordance with EU regulation have been implemented as of 1 January 2021. Traficom's actions are progressing as planned. Allowed UAS geographical zones have been established around drone ports. Drone port locations have been incorporated into aeronautical charts to ensure that manned aircraft are more aware of the existence of these ports. Authorisations of the Finnish Border Guard, the Finnish Defence Forces, the Finnish Customs and the Prison and Probation Service of Finland to intervene in unauthorised drone operation in their respective spheres of responsibility have been described in more detail in legislation. Information campaigns to increase awareness of drone operation have been published through different channels (television, radio, print media, social media).

SYS.DRONE.002, Safety promotion

Action:
Traficom uses a number of channels to communicate information about safe operation to professionals and hobbyists. Traficom also updates and 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. Traficom publishes bulletins and newsletters for drone operators and, if necessary, organises events for drone operators.

The Ministry of Transport and Communications' National Transport Safety Strategy for 2022–2026, covering the entire transport system, was published in March 2022. The strategy discusses the safety of all modes of transport from the perspective of attitudes, competence and automation and cybersecurity, for example. Regarding safety in aviation, the strategy addresses the safety of unmanned and recreational aviation. The strategy's measures concerning aviation were worked on by a working group, which consisted of representatives of aviation stakeholders, including Traficom. The results of national risk management and the actions included in the Finnish Plan for Aviation Safety valid at the time were also utilised in the determination of the measures concerning aviation. The Ministry of Transport and Communications coordinates the implementation of the strategy and leads the operations of the monitoring group overseeing the implementation. In addition, an event on road safety (*Liikenneturvallisuusfoorumi*) is held annually to report the progress of the implementation and discuss timely topics related to road safety. Traficom implements the drone measures assigned to it in the strategy and is an active cooperation partner in the implementation of measures for which Traficom has been named as a cooperation partner.

In its own role, Traficom promotes U-space development in Finland and influences international regulatory work in accordance with action *SYS.DRONE.003, Influencing in international aviation*. Traficom also 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
Continuous

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
2023–2025

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 in Europe e.g. in the EASA UAS Technical Body and many of its sub-groups, the IAM/UAM (innovative/urban air mobility) working group, the Nordic UAS forum and the NAARIC group (*National Aviation Authority Regulation Implementation Coordination*).

Appendix 1: List of actions by stakeholder groups

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

- SYS.004.2, Aviation safety, security and cybersecurity occurrence reporting coordination mechanisms
- SYS.005.1, Safety promotion in relation to safety management systems (SMS)
- SYS.007.1, Assessment of safety management system (SMS) performance
- **NEW ACTION:** SYS.007.4, Assessment of the safety culture of AOC operators
- 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
- SYS.009.6, Strengthening competence in taking human factors and human performance into account in regulatory work
- 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
- **NEW ACTION:** SYS.HECO.004, Survey of the impact of regulatory obligations from the perspective of small operators
- 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
- **NEW ACTION:** SYS.005.4, Taking into account the recommendations of safety investigation authorities
- 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 Traficom and other authorities that have civil aviation obligations or interface with Traficom`s civil aviation authority tasks:

- SYS.006.1, Safety culture, reporting culture and just culture atmosphere

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

AIR organisations

- OPER.FIRE.007.1, Fire, smoke and fumes
- SYS.AIR.001, Airworthiness and maintenance safety (CAMO, AMO, POA 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)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)

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.003.2, Solutions to improve runway safety
- OPER.RI.004.1, Runway incursions (RI)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)
- 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)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)
- 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.CAT.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.RWY.003.2, Solutions to improve runway safety
- OPER.RI.004.1, Runway incursions (RI)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)
- SYS.CAT.001, Safety of commercial air transport

AOC organisations (hot air balloon operations)
- SYS.CAT.001, Safety of commercial air transport
- 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

AOC and SPO 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)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)

NCC organisations (aeroplanes)
- SYS.NCC.001, Safety of non-commercial operations with complex motor-powered aircraft
- OPER.LOC.001.1, Loss of control in flight (LOC-I)
- OPER.RE.002.1, Runway excursions (RE)
- OPER.RI.004.1, Runway incursions (RI)
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)
- 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

GH organisations
- SYS.GH.001, Ground handling safety
- **NEW ACTION:** OPER.GCOL.008.1, Collisions while taxiing to or from a runway (GCOL)

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, Safety culture, reporting culture and just culture atmosphere
- 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

Deleted actions

- SYS.005.3, Promoting safety through proficiency in and use of English in aviation
- SYS.005.4, Safety promotion during recovery from the COVID-19 pandemic

Finnish Transport and Communications Agency Traficom
PO Box 320, FI-00059 TRAFICOM
Switchboard: +358 29 534 5000

traficom.fi

ISBN 978-952-311-843-0
ISSN 2669-8757 (e-publication)

TRAFICOM
Finnish Transport and Communications Agency