

Finnish Aviation Safety Objectives and Safety Performance Indicators and Targets

Finnish Aviation Safety Programme Annex 2

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Finland's Safety Objectives and Safety Performance Indicators, document version history

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17 October 2018	1 January 2019	until further notice

Underlying international standards, recommendations and other documents:
Aviation Act 864/2014

Convention on International Civil Aviation, Annex 19 (Safety Management)

ICAO Doc 9859 Safety Management Manual

Global Aviation Safety Plan GASP (ICAO Doc 10004)

REGULATION (EU) 2018/1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

European Aviation Safety Programme

European Plan for Aviation Safety (EPAS)

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Revision details:

Date	Version	Change
8 April 2012	1.0	First publication
25 March 2013	2.0	Indicator update, layout change
30 January 2014	3.0	Objective update for 2014
11 February 2015	4.0	Underlying international standard replaced with Annex 19, change of target setting for 2015. Removed indicators and targets for number of EFHK runway separations and number of infringements of EFIN and EFHK separation minima, as these have been removed from Finland's performance plan.
29 September 2015	4.1	References to corresponding data fields in ADREP taxonomy added to indicators. Removed "animals" from the FOD category.
17 October 2018	5.0	Extensive update, layout change. Updated introduction and background sections and the SPI/SPT structure. Specified new SPIs/SPTs and edited or removed some of the existing ones.



1 Introduction

Safety management mechanisms comprise the system-level methods used to maintain and improve aviation safety at the international, national and organisation¹ level. At the EU and national level, we strive to maintain the high level of safety already achieved, improve it and build up our ability to respond to future threats and changes posing challenges to us. In a performance-based operating environment, this also requires **a clear statement about the acceptable level of safety performance**² we are working to achieve. The acceptable level is determined by setting **strategic safety objectives and the safety performance indicators**³ and **targets** required for monitoring the achievement of the targeted level in practice. Ultimately, this is about implementing safety policy into everyday actions.

Regulation evolving towards a performance-based direction sets the boundary conditions for the operations and for their performance. Under the updated EASA Basic Regulation⁴, which entered into force on 11 September 2018, the European Union and its Member States are required to draw up aviation safety programmes and plans, thus reinforcing the use of existing safety management elements, which the states were already obliged to have in place under ICAO standards. Provisions on these obligations are contained in the Finnish Aviation Act.

¹ For the purposes of this document, ‘organisations’ refers to any and all organisations that offer aviation-related services, including but not limited to training organisations, air operators, maintenance organisations, organisations responsible for the design and manufacturing of aircraft, air traffic service providers, aerodrome operators, and organisations providing ground handling services and aeronautical weather services.

² AloSP, Acceptable level of Safety Performance

³ (EU) 2018/1139, or the so called EASA Regulation, contains the following definition: ‘safety performance’ means the Union’s, a Member State’s or an organisation’s safety achievement, as defined by its safety performance targets and safety performance indicators;’ (safety performance target, SPT, safety performance indicator, SPI)

⁴ (EU) 2018/1139

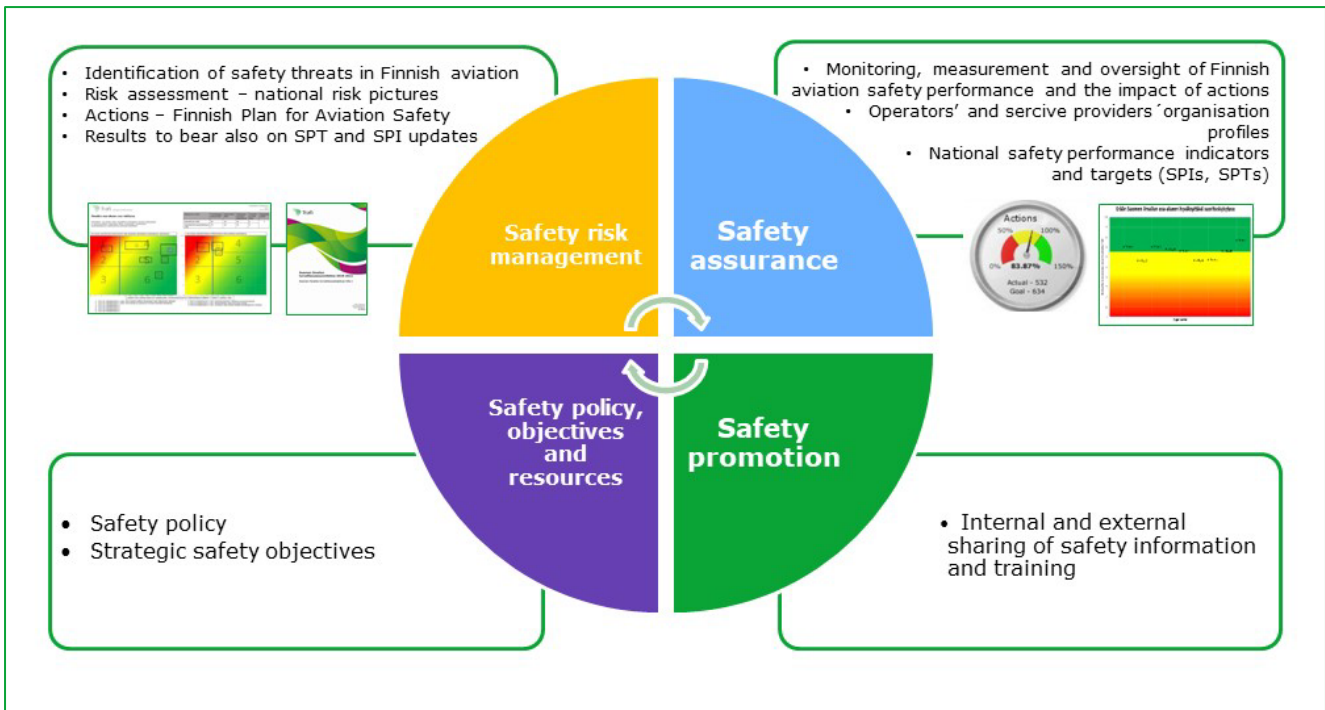
As part of the Finnish Aviation Safety Programme, Finland is to establish an acceptable level of national safety performance in relation to the aviation activities under its responsibility. When specifying this performance, the safety targets set at the EU level must be taken into consideration. **The safety performance indicators and targets set for Finnish aviation in this document specify the acceptable level of safety performance, which Trafi and aviation organisations must achieve in their daily operations.**

A precondition for the use of advanced safety management mechanisms is dialogue and cooperation between the organisations, national authorities and the EASA. Rather than taking place overnight, the transition to risk and performance-based operation requires the setting of clear targets and sustained work, sharing of best practices and lessons learned, and continuous joint development. Other key elements are highlighting the role of safety information, more flexible response to identified threats, safety promotion as well as risk and performance-based oversight and regulation.

The role of SPI/SPT indicators and the methods of cooperation in Finnish aviation safety management are described in section 1.1.

1.1 The role of safety performance indicators and targets in safety management

The Finnish Aviation Safety Programme⁵ describes the national aviation safety management system. It comprises the same main elements as the organisations' safety management systems⁶.



The Figure above shows the elements of national safety management and their relationship with performance measurement. These elements are:

⁵ Finnish Aviation Safety Programme, FASP

⁶ Safety Management System, SMS

- 1) Safety policy, objectives and resources: safety policy provides the top-down direction for our activities. The safety policy and objectives are updated on the basis of new information and needs emerging in other operations. Strategic safety objectives are needed to translate safety policy into concrete terms.
- 2) Safety risk management: we identify key threats and strengths to be maintained in Finnish aviation, assess the risks and complete the measures required to manage the risks. The organisations play a key role as producers of national safety information and participants in the national risk picture work⁷. Key national risk management measures are updated annually to the Finnish Plan for Aviation Safety⁸ and implemented by Trafi and aviation organisations. New information obtained through risk assessment also influences the updates of safety policy, objectives and indicators.
- 3) Safety assurance: comprises the monitoring, assessment and oversight of Finnish aviation safety level, or the safety performance and the impact of the measures. The tools used for this include the organisations' profile information and national safety performance indicators and targets⁹. The end result is assessed in terms of the safety policy and strategic safety objectives: did the safety work carried out by the Finnish authorities and organisations reach the targeted safety level? If the targets are not reached, the level of the performance is not adequate in these respects. In particular, the end result indicates what positive outcomes need to be fostered and in which areas performance must be improved.
- 4) Safety promotion: contains the internal and external sharing of safety information and training. This element contains a significant volume of cooperation between Trafi and the organisations, for example in the form of workshops, seminars and sparring. In a risk and performance-based operating environment, the various elements overlap, and safety promotion is also a natural part of oversight.

1.2 Safety performance indicators and targets – Trafi's obligations

Finland must specify an acceptable level of safety performance that must be achieved at the national level. When specifying this performance, the safety objectives set at the EU level must be taken into consideration.

For the safety performance indicators and targets monitored by Trafi, see Appendix A. They consist of system-level, operational-level and FASP compliance¹⁰ indicators and targets. The EASA and the ICAO exercise oversight to ensure that Finland has specified an acceptable level of safety performance and the necessary indicators and targets for monitoring it. This oversight also includes monitoring national performance.

1.3 Safety performance indicators and targets – organisations' obligations

Each aviation organisation is responsible for the safety of their own activities. The organisations have the duty to identify any threats to their operations, assess risks

⁷ For more information, see the section 2.6 on *Hazard / threat identification, safety risk assessment and management (ICAO CE-8)* in the Finnish Aviation Safety Programme.

⁸ Finnish Plan for Aviation Safety FPAS

⁹ Safety Performance Indicator (SPI), Safety Performance Target (SPT)

¹⁰ SSP compliance

and take the required action to eliminate the risks or to mitigate them to an acceptable level as part of their safety management. Under EU obligations, the organisations' safety management must also include safety performance monitoring and measurement. National SPIs complement the safety level monitoring carried out by the organisations and are a link between national and organisation-level safety management. In addition to national indicators, each organisation shall specify any other indicators and targets required for their own safety management.

Trafi oversees the organisations' safety management performance. Using national SPIs in their safety management is part of the organisations' safety management performance.

Below is an example of the target set for the indicator of runway incursions¹¹:

"Management of RI risks (target):

Processing of RI threats in the organisations' own safety management processes - Conducting a risk assessment of own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of those actions."

In practice, this target:

- Draws attention to a key threat
- Obliges the organisation to process the threat from the perspective of their own operations in their safety management processes. The operator is left the freedom to assess the risk level of the threat in their operations, determine an acceptable level of safety and identify their own need for actions. Monitoring the impact of the actions is essential. Rather than assessing the impact of actions aiming to prevent RI cases exclusively through the actual number of RI cases per individual operator, it would be more appropriate to assess whether or not the actions succeeded in eliminating or reducing the probability or seriousness of RI cases, that is their risk. This may be achieved by strengthening protective measures associated with RI cases¹² or eliminating triggering factors that contribute to their occurrence.
- Trafi oversees the processing of SPIs and implementation of monitoring by the organisations.

It is important for the organisation to identify safety issues that they can control. Additionally, it is vital for the organisation to pass on information for the national risk picture on problems, which require cooperation between the organisations and authorities or, for instance, international influencing to solve.

¹¹ Runway Incursion, RI

¹² proactive and reactive measures

2 Appendices A-I: SPI/SPT summaries for Trafi and aviation organisations

2.1 Instructions for reading the summaries

The summaries listed below as Appendices comprise the SPIs and SPTs for Finnish aviation. Aviation organisations shall go through the summary applicable to their activities and assess the suitability of the indicators and targets from the perspective of their operations. The organisations shall integrate the SPIs and SPTs compatible with their activities in their safety management processes.

The organisations should also go through the national SPIs and SPTs monitored by Trafi. Trafi's summary covers safety objectives that concern national-level safety work in the entire aviation sector. Both Trafi and the organisations contribute to the success of this work and objective achievement. By specifying and publishing SPTs which it is responsible for monitoring, Trafi also communicates about the focus areas of the authorities' work and key objectives for the effectiveness of this work.

The summaries for Trafi and the organisations define the direction and shape we want the development of the Finnish aviation safety to take in the years to come and the acceptable level of safety performance specified for Finnish aviation.

The following list contains the headings used in the summaries. In the summary of Trafi's indicators, the last column has been replaced by one showing the information source of the indicator in question.

Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 or new SPI/SPT
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- Strategic safety objective: the SPI in question, and the concrete SPT specified for it, have been determined to monitor the implementation of this objective
- Identifier: the identifier of the SPI in question
- Safety performance indicator, SPI: description/heading of the indicator and, if necessary, a more detailed definition
- Safety performance target (SPT) set for the indicator: the concrete target set for the indicator in question and, if necessary, a more detailed definition
- Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT: an indication of whether this is a new SPI/SPT or an unchanged or modified SPI/SPT from the previous version of FASP Annex 2.

An effort has been made to set out the SPIs and SPTs in the summaries so that they are as relevant as possible to the organisations of the aviation sector in question, and to specify the operations for which the SPI is appropriate in the indicator definitions. Due to differences between operations and operating environments, however, the organisations must assess the suitability of the indicators, introduce the SPIs relevant to their operations, and be able to justify why the other SPIs in the summary are not relevant to their operations.

2.1.1 *Indicators for different levels of operations*

The summaries contain both system-level and operational-level targets and indicators. See below for a brief explanation of the different levels of the indicators.

Use of tiers 1, 2 and 3 in the indicators

A three-tiered definition based on threat identification was used in the previous version of FASP Annex 2. In this update, the definition of indicators is based on a division between the system level and operational level used in the European Plan for Aviation Safety EPAS and the state safety plan, FPAS. In addition to identifying threats, the updated indicators are, in particular, focusing the monitoring on strengthening system-level issues. Those include system-level performance and activities with positive outcomes identified to be fostered. The activities and the competence through which the current level of safety performance has been achieved will be maintained and strengthened.

Tier 2 and 3 SPIs carried over from the earlier version of FASP Annex 2, have been grouped around the same tier 2 threat when appropriate in the organisations' summary. In a three-tiered model:

- Tier 1 SPIs refer to the number of accidents, the fatalities associated with them and serious incidents. This is the final publicly seen result of the safety level in Finnish aviation, which is monitored in Finland, at the EU level and globally. However, this monitoring provides little support for the day-to-day safety work. In the updated version, tier 1 is included in Trafi's summary.
- Tier 2 SPIs measure the functionality of the system and focus on certain key operational threats identified as the most common direct factors leading to accidents. Their definitions are in line with international definitions (including those of the ICAO). Some of the tier 2 SPIs have remained unchanged, or they have been modified for the organisations' summaries.
- Tier 3 SPIs were developed by reflecting on the contributing factors of tier 2 threats. Tier 3 SPIs may be contributing factors in one or several tier 2 threats. In these cases, the most significant identified link has been included in the SPI identifier, for example RE/UA (*Runway excursion/ Unstable approach*). Some of the tier 2 SPIs have remained unchanged, or they have been modified for the organisations' summaries.

System level

The Member States' safety programmes and the organisations' safety management systems comprise key system-level elements.



System-level themes are issues that concern an individual organisation, a system sector or the entire aviation system. System-level performance monitoring and targets set for improving the performance improve the safety level of Finnish aviation across a broad front while maintaining and strengthening the activities and competence through which the current safety level has been achieved.

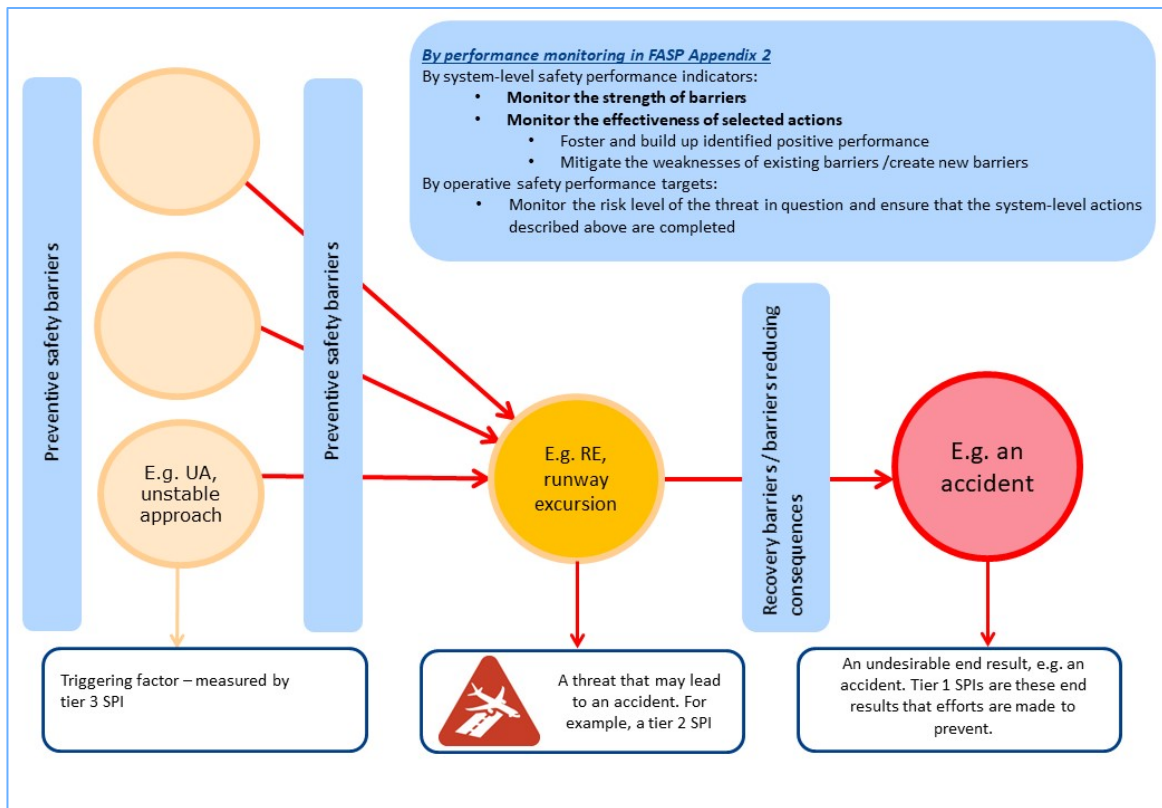
System-level themes do not necessarily have a direct, short-term link with individual occurrences, incidents or accidents. System-level threats are background factors, either easily identifiable or latent. For example, they may be associated with shortcomings in processes, procedures or operating cultures. If system-level threats are not identified and if the risks caused by them are not managed, they may trigger or contribute to an occurrence, an incident or an accident.

Operational level

Operational-level themes have more direct links with the actions of an individual person, organisation or domain or environmental factors, including weather phenomena. Operational-level threats may have direct links with a situation developing into an occurrence, an incident or an accident. Operational-level threats and safety factors are often identified by analysing information in occurrence reports and occurrence data as well as by carrying out risk assessments. Risk management actions seek to mitigate the probability of events that result in occurrences, incidents and accidents



and to mitigate the seriousness of their consequences. The Figure below clarifies the levels and the tiers in performance measurement.





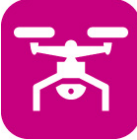

2.2 SPI-SPT summaries for Trafi and the aviation organisations:






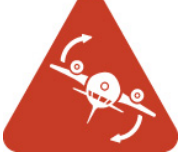

- Appendix A: National level aviation safety performance indicators and targets (SPIs/SPTs) monitored by Trafi
 - System level
 - Operational level
 - FASP level (SSP compliance)
- Appendix B: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by commercial air transport operators (aircraft, CAT OPS FW)
- Appendix C: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by flight training organisations (Complex ATO)
- Appendix D: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by flight training organisations (Non Complex ATO)
- Appendix E: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by air navigation service providers (ANS) and, where applicable, meteorological service providers (MET)
- Appendix F: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by airport operators (ADR)
- Appendix G: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by ground handling service providers (GH)
- Appendix H: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by commercial air transport rotary wing (CAT OPS RW) and aerial work (SPO RW) operators
- Appendix I: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by aviation airworthiness and maintenance organisations (AIR)


Appendix A: National level aviation safety performance indicators and targets (SPIs/SPTs) monitored by Trafi

- System level
- Operational level
- Level of FASP compliance (SSP compliance)



Finnish aviation safety policy					
<p>As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.</p> <p>The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.</p> <p>The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.</p> <p>Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.</p>					
National-level aviation safety performance targets and indicators monitored by Trafi – system-level:					
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Source
	Continuous development of safety performance in all domains of the Finnish aviation operators.	SSP-SPI-1	Improvement of safety performance in the Finnish aviation domains and particularly in the evaluation areas of safety management defined for each domain (e.g. subcontracting, risk management, management of change MoC).	<p>Continuous development (<i>defined</i>). Improvement of performance in the evaluation areas selected for each aviation domain; the evaluated organisations shall at minimum reach the defined control level by the year 2021.</p> <p><i>Background to the target:</i> In the target, performance is approached from the perspective of the entire domain, for example all CAT OPS FW operators as a whole. For an individual operator, key areas to be improved may be partly or completely different from those selected for SSP-SPI-1.</p>	Trafi's organisation profile data
	The key threats in Finnish aviation have been identified and will be addressed in the organisations' safety management processes.	SSP-SPI-2	Taking the key threats identified in Trafi's national risk pictures into account in the organisation's own operation in Finnish aviation domains.	<p>a) The central threats identified in Trafi's national risk pictures are included in the operators' own portfolios/risk registers in all aviation domains. Scale: 95–100% = green, 80–94% = yellow, <80% = red</p> <p>b) The central threats identified in Trafi's national risk pictures are addressed in organisations and risk management action plans have been prepared.</p>	Trafi's organisation profile data
	Risk management in Finnish aviation is a systematic, efficient and continuously developing effort.	SSP-SPI-3	Implementation of the measures included in the Finnish Plan for Aviation Safety (FPAS)	The FPAS measures are in progress and they are implemented regularly (continuous measures) or in accordance with the issued timetable. Scale: 95–100% = green, 80–94% = yellow, <80% = red	Trafi's organisation profile data Reporting to EASA EASA/ EASA audits
	Finland has procedures and operating models in place to manage cyber threats in the field of aviation.	SSP-SPI-4	Organisations' emergency response plans (ERP) for cyber threat management	Organisations have defined an emergency response plan (ERP) for cyber threat management. Scale: green / 100%, yellow / 80–99%, red: >80%	Trafi's organisation profile data
		SSP-SPI-5	The inclusion of cyber threats risk management as part of aviation safety risk management at Trafi and among the organisations	In Finland, risk management related to cyber threats has been incorporated as part of aviation safety risk management at Trafi and among the organisations: 2019: processes for cyber threat management are developed and documented. 2020: processes for cyber threat management are operational. Scale: 95–100% = green, 80–94% = yellow, <80% = red	Trafi's organisation profile data Finnish aviation risk management process / national risk pictures and FPAS




	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Source
	Unmanned aviation is safely integrated with regard to the Finnish aviation system and third parties. Drone operators are responsible for the safety of their operations.	SSP-SPI-6	Reaching the users of remotely piloted aircraft and recreational unmanned aircraft (drones) with safety information through drones sold in Finland	By 1 January 2020, all remotely piloted aircraft and recreational unmanned aircraft (drones) sold in Finland will be accompanied with a notification (sticker/QR code/other) that obligates the user to study the applicable decree and information on safe flying. Scale: green / 100%, yellow / 75–99%, red / <75%	TBD
	Drone operators are responsible for the safety of their operations. Authorities will intervene in infringing activities.	SSP-SPI-7	The responsibility of commercial drone operators to meet the requirements set for insurance under the European insurance regulation (EC 785/2004) and for the necessary safety assessments	Commercial drone operators inspected in annual reviews fulfil the requirements set for the insurance policies and safety evaluations. Scale: green / 100%, yellow / 90–99%, red / <90%	Oversight data
		SSP-SPI-8	Completing drone flight training that is in keeping with the EU obligation entering into force in 2019	Finnish drone operators and enthusiasts will complete training that is in keeping with the EU obligation entering into force in 2019. Scale: 95–100% = green, 80–94% = yellow, <80% = red	Oversight data
National-level aviation safety performance targets and indicators monitored by Trafi – operational level:					
	The safety level of Finnish aviation remains high. No aviation accidents occur where the reasons are caused by the Finnish aviation system.	SPI 1.1	Number of aviation accidents (absolute number and in proportion to traffic volume) A) Number of accidents including: - all that occurred in Finland (including foreign AC/operators/license holders) - all that occurred elsewhere than in Finland: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license B) Number of accidents that occurred: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license C) Number of accidents listed in part A, to which the operation of the Finnish aviation system (activities of the Finnish aviation organisations) has contributed	- A, B: Commercial air transport: no accidents (→ 2004-2016 average 0.1/100 000 hours flown) C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation. - B: General and recreational aviation: ≤ 10 accidents / 100 000 hours flown (five-year average) (→ 2004-2017 average 14.31 / 100 000 hours flown and 2013–2017 14.86 / 100 000 hours flown) - C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation.	Trafi / Traffic analysis
		SPI 1.2	Number of fatal aviation accidents (absolute number and in proportion to traffic volume) A) Number of fatal accidents including: - all that occurred in Finland (including foreign AC/operators/license holders) - all that occurred elsewhere than in Finland: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license B) Number of fatal accidents that occurred: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license C) Number of fatal accidents listed in part A, to which the operation of the Finnish aviation system (activities of the Finnish aviation organisations) has contributed	- Commercial air transport: no fatal accidents (→ 1 fatal accident 2004-2017) C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation. - General and recreational aviation: ≤ 0.6 fatal accidents / 100 000 hours flown (five-year average) (→ 2008-2017 average 3.52 / 100 000 hours flown, 2013–2017 average 2.85 and 2015–2017 0.6 / 100 000 hours flown) C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation.	Trafi / Traffic analysis
		SPI 1.3	Number of fatalities in aviation accidents (absolute number and in proportion to traffic volume) A) Number of fatalities in accidents including: - in all accidents that occurred in Finland (including foreign AC/operators/license holders) - in all accidents that occurred elsewhere than in Finland: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license B) Number of fatalities in accidents that occurred: - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license C) Number of fatalities in accidents listed in part A, to which the operation of the Finnish aviation system (activities of the Finnish aviation organisations) has contributed	- Commercial air transport: no fatalities (→ 2004–2017 average 0.37 / 100 000 hours flown (Copterline)) C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation. - General and recreational aviation: maximum of 2 fatalities / 100 000 hours flown (five-year average) (→ 2004-2017 average 4.24 / 100 000 hours flown and 2013–2017 average 6.01 / 100 000 hours flown. NB! The influence of the accident in Jämi is included in the numbers). C: in case of an accident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation.	Trafi / Traffic analysis



	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Source
	The safety level of Finnish aviation remains high.	SPI 1.4	<p>Number of aviation serious incidents (absolute number and in proportion to traffic volume)</p> <p>A) Number of serious incidents including:</p> <ul style="list-style-type: none"> - all that occurred in Finland (including foreign AC/operators/license holders) - all that occurred elsewhere than in Finland: <ul style="list-style-type: none"> - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license <p>B) Number of serious incidents that occurred:</p> <ul style="list-style-type: none"> - to Finnish aircraft or - to aircraft operated by a Finnish operator or with Finnish license <p>C) Number of serious incidents listed in part A, to which the operation of the Finnish aviation system (activities of the Finnish aviation organisations) has contributed</p>	<ul style="list-style-type: none"> - Commercial air transport: downward trend in the rate of serious incidents in proportion to traffic volume (five-year average) (→ 2004-2017 average 2.26 / 100 000 hours flown and 2014-2017 average 1.97 / 100 000 hours flown) C: in case of a serious incident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation. - General and recreational aviation: downward trend in the rate of serious incidents in proportion to traffic volume (five-year average) (→ 2004-2017 average 20.14 / 100 000 hours flown and 2014-2017 average 26.88 / 100 000 hours flown) C: in case of a serious incident, at this stage the goal is identifying and itemising the role of the Finnish aviation system in these cases for the purposes of safety management in Finnish aviation. 	Trafi / Traffic analysis
	The level of runway safety in Finnish aviation remains high.	SPI 2.1	<p>Runway excursion (RE)</p> <p>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for RE risks. RE risks in Finland remain at the acceptable level. - Organisations have processed RE threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing actions required, identifying and implementing the actions required, and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data
	The level of runway safety in Finnish aviation remains high.	SPI 2.2	<p>Runway incursion - vehicle, aircraft or person, RI-VAP</p> <p>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for RI risks. RI risks in Finland remain at the acceptable level. - Organisations have processed RI threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing the actions required and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data
	The safety level of Finnish aviation remains high.	SPI 2.3	<p>Mid-air collisions (MAC) and near misses</p> <p>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for MAC risks. MAC risks in Finland remain at the acceptable level. - Organisations have processed MAC threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing the actions required and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data
	The safety level of Finnish aviation remains high.	SPI 2.4	<p>Controlled flight into or towards terrain (CFIT) and similar incidents</p> <p>Controlled flight into (or towards) terrain occurs when an airworthy aircraft under the control of the pilot is inadvertently flown (or nearly flown) into terrain, water or an obstacle. This includes all cases of separation minima infringement between airborne aircraft and obstacles.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for CFIT risks. CFIT risks in Finland remain at the acceptable level. - Organisations have processed CFIT threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing the actions required and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data
	The safety level of Finnish aviation remains high.	SPI 2.5	<p>Loss of control in flight (LOC)</p> <p>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for LOC-I risks. LOC-I risks in Finland remain at the acceptable level. - Organisations have processed LOC-I threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing the actions required and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data
	The safety level of Finnish aviation remains high.	SPI 2.6	<p>Ground collisions – collisions while taxiing to or from a runway in use (GCOL)</p> <p>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</p>	<ul style="list-style-type: none"> - Trafi has defined an acceptable level for GCOL risks. GCOL risks in Finland remain at the acceptable level. - Organisations have processed GCOL threats in their own safety management processes – Conducting a risk assessment of their own operations, setting a target level, identifying and implementing the actions required and monitoring the efficiency of these actions. 	National risk picture Trafi's organisation profile data







FASP compliance performance indicators monitored by Trafi					
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Source
	Response: We actively react to any shortcomings noted and implement corrective measures in the spirit of continuous improvement.	SSP-COMP-1	Indicator for Trafi's External audit process: Findings detected in ICAO and EASA audits that were corrected within the given time period	A minimum of 90% of findings detected in ICAO and EASA audits are corrected within the given deadline.	Trafi / External audit process
	The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements.	SSP-COMP-2	Universal Safety Oversight Audit Programme (USOAP) Effective Implementation (%)	Finland remains among the top five EUR-NAT countries measured by the Effective Implementation indicator. In addition, a positive trend is achieved in every audit/validation measure.	ICAO USOAP
		SSP-COMP-3	ISC findings (Immediate Safety Concern) in EASA audits and SSC findings (Significant Safety Concern) in ICAO audits	Finland does not receive ISC (Immediate Safety Concern) findings in EASA audits, and Finland does not have SSC (Significant Safety Concern) findings detected by ICAO.	EASA and ICAO audits
	The safety standards and operating models in Finnish aviation meet the EU requirements.	SSP-COMP-4	Implementing the new EU requirements on aviation applicable to Trafi on schedule in all aviation domains	Trafi has implemented the new EU requirements on aviation applicable to Trafi by the issued deadline: objective 100 % in each domain	Trafi
	The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements.	SSP-COMP-5	The implementation level of the national safety programme (FASP) evaluated in accordance with the ICAO criteria	Finland reaches level 4 (SSP fully implemented, 100%) by 1 January 2021, i.e. one year before the GASP target time (Effective Implementation rate EI 100%). Scale: green / 98–100%, yellow / 93–97%, red / <93%	ICAO

Appendix B: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by commercial air transport operators (aeroplanes, CAT OPS FW)

Finnish aviation safety policy As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties. The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation. The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above. Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.					
SPIs monitored by aviation organisations: - commercial air transport operations by aeroplanes (CAT OPS FW)					
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	CAT FW-SPI-1	Performance of the organisation's safety management system (SMS)	Improving the performance of the operators' safety management systems (SMSs). - Trafi's organisation profile data is used as criteria. Trafi uses a total performance assessment tool for conducting evaluations. Operators can also utilise the assessment tool for self-evaluations and development of SMS performance. <i>Background to the target:</i> The purpose of the target is that the operators will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	CAT FW-SPI-RE CAT FW-SPI-RE/UA CAT FW-SPI-RE/ARC CAT FW-SPI-RE/HS RTO	SPI LEVEL 2: Runway excursion, RE <i>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</i> SPI LEVEL 3: RE/ Unstable approaches, UA <i>An unstable approach is any situation where the approach of an aircraft is not stable as per the criteria in the Flight Operations Manual (OM-A).</i> SPI LEVEL 3: RE/Abnormal runway contact, ARC <i>Cases involving any takeoff or landing where the aircraft makes abnormal contact with the runway (or other landing area). Examples include hard/heavy landings, long/fast landings, off-centre landings, significant crabbed landings, nose wheel first touchdown, tail strikes and wing tip/nacelle strikes as well as landing gear failure caused by abnormal runway contact. Excludes cases of technical malfunction of landing gear.</i> SPI LEVEL 3: RE/ High speed rejected takeoff, HS RTO <i>Cases where a rejected takeoff was executed after the speed callout that, as per standard operating procedure (SOP), indicates the transition from the low-speed regime to the high-speed regime of the takeoff roll.</i>	Management of RE, UA, ARC and RTO risks: - Operators have processed RE and RE/UA, ARC and HS RTO threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE) LEVEL 3: FASP Annex 2, SPI 3.1 Unstable approaches (RE/UA) LEVEL 3: FASP Annex 2, SPI 3.5 Abnormal runway contact (RE/ARC) Modification: the definition has been clarified LEVEL 3: FASP Annex 2, SPI 3.6 High speed rejected takeoff (RE/RTO) Modification: the name was changed to stress the fact that this is a High speed RTO, and the definition was clarified

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The level of runway safety in Finnish aviation remains high.	CAT FW-SPI-RI	SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP <i>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</i>	RI and RI/AC risk management: - Operators have processed RI and RI/AC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		CAT FW-SPI-RI/AC	SPI LEVEL 3: Runway incursions by aircraft (RI/AC)		LEVEL 3: FASP Annex 2, SPI 3.7 Runway incursions by aircraft (RI-VAP/RI AC)
	The safety level of Finnish aviation remains high.	CAT FW-SPI-MAC	SPI LEVEL 2: Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	Management of MAC, SMI AC, AI, LB, TCAS IGN and NAV ERROR risks: - Operators have processed MAC, SMI AC, AI, LB, TCAS IGN and NAV ERROR threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC)
		CAT FW-SPI-MAC/SMI AC	SPI LEVEL 3: Separation minima infringements caused by aircraft (MAC/SMI AC) <i>Cases where an aircraft movement (e.g. action contrary to ATC clearance) caused an infringement of a separation minimum between aircraft, between aircraft and terrain, or between aircraft and controlled airspace.</i>		LEVEL 3: FASP Annex 2, SPI 3.11 Separation minima infringements caused by aircraft (MAC/SMI) Modification: the name was changed to stress that this is about SMIs caused by aircraft
		CAT FW-SPI-MAC/AI	SPI LEVEL 3: MAC/ Airspace infringement, AI <i>Cases where an aircraft entered controlled or restricted airspace or an ADIZ without appropriate clearance or permission.</i>		LEVEL 3: FASP Annex 2, SPI 3.14 Airspace infringements (MAC/AI)
		CAT FW-SPI-MAC/LB	SPI LEVEL 3: Level busts of more than 300 feet or more than 200 feet in RVSM airspace (MAC/Level bust, LB)		LEVEL 3: FASP Annex 2, SPI 3.15 Level busts of more than 300 or 200 feet (MAC/LB)
		CAT FW-SPI-MAC/TCAS IGN	SPI LEVEL 3: Incorrect response to TCAS-RA (MAC/ TCAS IGN)		LEVEL 3: FASP Annex 2, SPI 3.16 Incorrect response to TCAS-RA (MAC/ TCAS IGN)
		CAT FW-SPI-MAC/NAV ERROR	SPI LEVEL 3: Lateral deviations from cleared flight path (MAC/NAV ERROR) <i>Cases where an aircraft deviated laterally from its cleared flight path or ATC clearance, e.g. following the wrong SID/STAR or deviating from the assigned SID/STAR or track by more than the maximum defined for the track in question.</i>		LEVEL 3: FASP Annex 2, SPI 3.17 Lateral deviations from cleared flight path (MAC/NAV ERROR) Modification: The definition will be clarified
	The safety level of Finnish aviation remains high.	CAT FW-SPI-CFIT	SPI LEVEL 2: Controlled flight into or towards terrain (CFIT) and similar incidents <i>Controlled flight into (or towards) terrain occurs when an airworthy aircraft under the control of the pilot is inadvertently flown (or nearly flown) into terrain, water or an obstacle. This includes all cases of separation minima infringement between airborne aircraft and obstacles.</i>	CFIT, QNH, GPWS and CHART risk management: - Operators have processed CFIT, QNH, GPWS and CHART threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.4 Controlled flight into or towards terrain (CFIT) and similar situations
		CAT FW-SPI-CFIT/QNH	SPI LEVEL 3: Incorrect altimeter pressure settings (CFIT/QNH)		LEVEL 3: FASP Annex 2, SPI 3.18 Incorrect altimeter pressure settings (CFIT/QNH)
		CAT FW-SPI-CFIT/GPWS	SPI LEVEL 3: Ground Proximity Warning System terrain warnings (CFIT/GPWS)		LEVEL 3: FASP Annex 2, SPI 3.19 Ground Proximity Warning System terrain warnings (CFIT/GPWS)
		CAT FW-SPI-CFIT/CHART	SPI LEVEL 3: Errors, omissions and inconsistencies in aeronautical charts (CFIT/CHART) <i>Errors, omissions and inconsistencies in aeronautical chart data in aircraft databases, involving incorrect or outdated SID/STAR/waypoint information, or errors, omissions or inconsistencies in AIS publication charts, e.g. permanent obstacles not marked on the chart.</i>		LEVEL 3: FASP Annex 2, SPI 3.20 Errors and omissions in aeronautical charts (CFIT/CHART) Modification: provided a more accurate definition and heading

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	CAT FW-SPI- LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</i>	LOC-I, LASER, SPEED, WAKE, FIRE, ICE, LS, LOADING, TIEDOWN and FCONT risk management: - Operators have processed LOC-I, LASER, SPEED, WAKE, FIRE, ICE, LS, LOADING, TIEDOWN and FCONT threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		CAT FW-SPI- LOC-I/ LASER	SPI LEVEL 3: Laser interference (LOC-I/LASER) <i>Cases where laser interference was perpetrated</i>		LEVEL 3: FASP Annex 2, SPI 3.21 Laser interference (LOC-I/LASER)
		CAT FW-SPI- LOC-I/ SPEED	SPI LEVEL 3: Low speed and high speed cases (LOC-I/SPEED) <i>Cases where the airspeed of an airborne aircraft was above the situation-specific maximum or below the situation-specific minimum during any phase of flight, including stick shaker cases.</i>		LEVEL 3: FASP Annex 2, SPI 3.22 Low speed and high speed cases (LOC-I/SPEED) Modification: The definition will be clarified
		CAT FW-SPI- LOC-I/ WAKE	SPI LEVEL 3: Wake turbulence incidents (LOC-I/WAKE) <i>Cases where an aircraft encountered the wake turbulence of another aircraft and this precipitated an incident. Excludes loss of wake vortex separation, unless it precipitates an incident.</i>		LEVEL 3: FASP Annex 2, SPI 3.23 Wake turbulence incidents (LOC-I/WAKE)
		CAT FW-SPI- LOC-I/ FIRE	SPI LEVEL 3: Fire or smoke on aircraft (LOC-I/FIRE) <i>All cases where fire was detected on an aircraft and cases where smoke was detected that put or could have put the aircraft's safe operation at risk.</i>		LEVEL 3: FASP Annex 2, SPI 3.24 Fire or smoke on aircraft (LOC-I/FIRE) Modification: a more accurate definition will be provided
		CAT FW-SPI- LOC-I/ ICE	SPI LEVEL 3: Deicing and anti-icing errors (LOC-I/ICE) <i>Cases in which:</i> <ul style="list-style-type: none"> - deicing or anti-icing was not performed or was performed incorrectly/inadequately, or the aircraft departed after the holdover time had elapsed - deicing or anti-icing fluid residue caused problems - the aircraft's own deicing systems cannot cope with icing in flight, or the aircraft has no deicing system and encounters icing conditions. Excludes malfunctions in the deicing/anti-icing system. 		LEVEL 3: FASP Annex 2, SPI 3.25 Deicing and anti-icing errors (LOC-I/ICE) Modification: The definition will be clarified
		CAT FW-SPI- LOC-I/ LS	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance / difference between actual weight and loadsheet weight (LOC-I/LS)		LEVEL 3: FASP Annex 2, SPI 3.26 Aircraft weight and balance errors (LOC-I/LOAD) Modification: LOAD-SPI will be divided into three parts. More specific definitions will be provided for each indicator. Linked not only to LOC-I but also RE threat (LS-SPI).
		CAT FW-SPI- LOC-I/ LOADING	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance/ Actual loading different from loading instructions/loadsheet, work error (LOC-I/LOADING)		
		CAT FW-SPI- LOC-I/ TIEDOWN	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance/ incorrect or deficient load tiedown (LOC-I/TIEDOWN)		
		CAT FW-SPI- LOC-I/ FCONT	SPI LEVEL 3: Control system failures (LOC-I/FCONT) <i>Cases involving failures in the control systems of an aircraft, including flight control surface failure, autoflight system failure and control indicator failure (e.g. airspeed and attitude data).</i> <i>Control system failure affects the controllability of the aircraft and the situational awareness of the flight crew, and hence may lead to loss of control or a runway excursion.</i>		LEVEL 3: SPI 3.27 Control system failures (LOC-I/ FCONT) Modification: the definition will be clarified
	The safety level of Finnish aviation remains high.	CAT FW-SPI- GCOL	SPI LEVEL 2: Ground collisions – collisions while taxiing to or from a runway in use (GCOL) <i>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</i>	GCOL risk management: - Operators have processed GCOL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.6 Ground collisions – collisions while taxiing to or from a runway in use (GCOL) Modification: The definition will be clarified

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	CAT FW-SPI-PHUF	SPI LEVEL 3: Human error and other disruptions in taxi or line-up, leading to wrong configuration, wrong weight, wrong FMS data or wrong location upon takeoff. (PHUF)	Management of risks related to taxi and line-up upon takeoff: - Operators have processed threats caused by human error in taxi or line-up upon takeoff in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: SPI 3.35.1 Human error and other disruptions in taxi or line-up, leading to wrong configuration, wrong weight, wrong FMS data or wrong location upon takeoff. (PHUF)
	The safety level of Finnish aviation remains high.	CAT FW-SPI-FUELING	SPI LEVEL 3: Refuelling incidents and occurrences (FUELING)	Refuelling risk management: - Operators have processed threats related to refuelling in the operators' own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: SPI 3.35.3 Refuelling incidents and occurrences (FUELING)
 	The safety level of Finnish aviation remains high.	CAT FW-SPI-FAT OPS CAT FW-SPI-FAT ORG	SPI LEVEL 3: Fatigue during occurrences in flight operations (FAT OPS) <i>Cases where fatigue results in a mistake or other occurrence.</i> SPI LEVEL 3: Cases of fatigue/decreased alertness during flight operations (FAT ORG) <i>Cases where fatigue or decreased alertness is experienced. Causal factors for this may be found in the organisation's operation (e.g. shift planning/implementation, failure to rest) or an individual's actions.</i>	Management of risks related to fatigue management: - Operators have processed fatigue management related threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: SPI 3.35.2 Fatigue during flight operations and air navigation services (FAT) Modification: The indicator will be modified to only relate to flight operations. The FAT indicator will be divided into two categories: FAT OPS and FAT ORG
	The safety level of Finnish aviation remains high.	CAT FW-SPI-INCAPA	SPI LEVEL 3: Flight crew incapacitation (INCAPA) <i>Flight crew incapacitation, in which a crew member is unable to manage his/her duties during the flight. Typical causal factors may include food poisoning or an attack of illness.</i>	Flight crew incapacitation risk management: - Operators have processed flight crew incapacitation threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new SPI/SPT
	The safety level of Finnish aviation remains high.	CAT FW-SPI-UNRULY	SPI LEVEL 3: Unruly passenger at airport or on aircraft (UNRULY) <i>Cases referred to in ICAO Convention Annex 17: "A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft."</i>	Unruly passenger risk management: - Operators have processed threats related to unruly passengers in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new SPI/SPT

Annex C: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by flight training organisations (Complex ATO)

Finnish aviation safety policy

As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.




The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.



The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.





Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.

SPIs monitored by aviation organisations:

- Flight training (C-ATO)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	C-ATO-SPI-1	Performance of the organisation's safety management system (SMS)	<p>Safety objective: improving the performance of the organisations' safety management system (SMS)</p> <ul style="list-style-type: none"> - Trafi's organisation profile data is used as criteria. In this respect, Trafi uses a total performance assessment tool to evaluate the SMS performance. Organisations can also utilise the assessment tool for self-evaluations and development of SMS performance. - Examples of key SMS areas for ATO organisations include: <ul style="list-style-type: none"> o comprehensive and timely change management o monitoring and measuring of the safety level o updating the risk register and timely response to risks o monitoring the impact of risk management measures – impact on the risk and the safety level <p><i>Background to the target:</i> The purpose of the target is that the organisations will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.</p>	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	C-ATO- SPI-RE	<p>SPI LEVEL 2: Runway excursion, RE</p> <p>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</p>	<p>RE and ARC risk management:</p> <ul style="list-style-type: none"> - Organisations have processed RE and ARC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE)
		C-ATO- SPI-RE/ARC	<p>SPI LEVEL 3: RE/Abnormal runway contact, ARC</p> <p>Cases involving any takeoff or landing where the aircraft makes abnormal contact with the runway (or other landing area). Examples include hard/heavy landings, long/fast landings, off-centre landings, significant crabbed landings, nose wheel first touchdown, tail strikes and wing tip/nacelle strikes as well as landing gear failure caused by abnormal runway contact. Excludes cases of technical malfunction of landing gear.</p>		LEVEL 3: FASP Annex 2, SPI 3.5 Abnormal runway contact (RE/ARC)
	The level of runway safety in Finnish aviation remains high.	C-ATO- SPI-RI	<p>SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP</p> <p>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</p>	<p>RI and RI/AC risk management:</p> <ul style="list-style-type: none"> - Organisations have processed RI and RI/AC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.2 runway incursions (RI-VAP)
		C-ATO- SPI-RI/AC	<p>SPI LEVEL 3: Runway incursions by aircraft (RI/AC)</p>		LEVEL 3: FASP Annex 2, SPI 3.7 Runway incursions by aircraft (RI-VAP/RI AC)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	C-ATO-SPI-MAC	SPI LEVEL 2: Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	Management of MAC, AI, LB and NAV ERROR risks: - Processing MAC, AI, LB, and NAV ERROR threats in the organisations' own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC) Modification: In ATO operations are included particularly landing circuits at non-controlled aerodromes, instruction flights in the surroundings of non-controlled aerodromes, and instruction flights in the training areas of controlled aerodromes.
		C-ATO-SPI-MAC/AI	SPI LEVEL 3: MAC/ Airspace infringement, AI <i>Cases where an aircraft entered controlled or restricted airspace or an ADIZ without appropriate clearance or permission.</i>		LEVEL 3: FASP Annex 2, SPI 3.14 Airspace infringements (MAC/AI)
		C-ATO-SPI-MAC/LB	SPI LEVEL 3: Level busts of more than 300 feet (MAC/LB)		LEVEL 3: FASP Annex 2, SPI 3.15 Level busts of more than 300 or 200 feet (MAC/LB) Modification : the ATO heading and definition are to be changed by dropping RVSM airspace LB (200 feet) in the indicator.
		C-ATO-SPI-MAC/ NAV ERROR	SPI LEVEL 3: Lateral deviations from cleared flight path (MAC/NAV ERROR) <i>Cases where an aircraft deviated laterally from its cleared flight path or ATC clearance, e.g. following the wrong SID/STAR or deviating from the assigned SID/STAR or track by more than the maximum defined for the track in question.</i>		LEVEL 3: FASP Annex 2, SPI 3.17 Lateral deviations from cleared flight path (MAC/NAV ERROR) Modification: The definition will be clarified
	The safety level of Finnish aviation remains high.	C-ATO-SPI-LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</i>	LOC-I, WAKE, LOAD and WX risk management: - Organisations have processed LOC-I, WAKE, LOAD and WX threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		C-ATO-SPI-LOC-I/WAKE	SPI LEVEL 3: Wake turbulence incidents (LOC-I/WAKE) <i>Cases where an aircraft encountered the wake turbulence of another aircraft and this precipitated an incident. Excludes loss of wake vortex separation, unless it precipitates an incident.</i>		LEVEL 3: FASP Annex 2, SPI 3.23 Wake turbulence incidents (LOC-I/WAKE)
		C-ATO-SPI-LOC-I/LOAD	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance (LOC-I/LOAD) <i>Shortcomings, errors and occurrences related to the weight, balance or loading of aircraft. In flight training, the indicator has special reference to flight preparation by the student.</i>		LEVEL 3: FASP Annex 2, SPI 3.26 Aircraft weight and balance errors (LOC-I/LOAD) Modification: a more accurate definition was provided NB! In the CAT OPS FW domain, LOAD-SPI has been divided into three parts. For ATOs, the LOAD indicator will not be divided. Linked not only to LOC-I but also RE threat (LS-SPI).
		C-ATO-SPI-LOC-I/WX	SPI LEVEL 3: Errors in accounting for or interpreting weather observations and incidents caused by weather (LOC-I-WX) <i>Flight training cases where weather data has not been accounted for sufficiently in flight preparation, or they have been interpreted incorrectly, and cases where poor weather and/or insufficient or incorrect decisions as the weather changed precipitated an incident during a training flight. In addition to LOC-I, WX- SPI is linked to CFIT.</i>		A new indicator in this form

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
 	The safety level of Finnish aviation remains high.	C-ATO-SPI-FAT OPS	SPI LEVEL 3: Fatigue during occurrences in flight operations (FAT OPS) <i>Cases where fatigue results in a mistake or other occurrence.</i>	Management of risks related to fatigue management: <ul style="list-style-type: none"> - Organisations have processed fatigue management related threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 3: SPI 3.35.2 Fatigue during flight operations and air navigation services (FAT) Modification: The indicator will be modified to only relate to flight operations. The FAT indicator will be divided into two categories: FAT OPS and FAT ORG
		C-ATO-SPI-FAT ORG	SPI LEVEL 3: Cases of fatigue/decreased alertness during flight operations (FAT ORG) <i>Cases in which fatigue or decreased alertness is experienced. Causal factors for this may be found in the organisation's operation (e.g. shift planning/implementation, failure to rest) or an individual's actions.</i>		
	The safety culture in Finnish aviation has a high standard. Good safety culture is maintained and developed.	C-ATO-SPI-JUST	SPI LEVEL 3: Number and type of occurrence reports <i>The indicator contains the number of occurrence reports in the organisation's operations in proportion to flight hours. It is also used to monitor the number of occurrence reports in proportion to flight hours where the reporter relates a mistake made by them as part of the occurrence.</i>	The objective of the monitoring is maintaining and developing a good reporting culture in the organisation: <ul style="list-style-type: none"> - ensuring a sufficient number of reports and receiving the safety information by monitoring and setting targets for the trends and level of report numbers and reporting quality - evaluating whether the atmosphere is trustful and encouraging enough to promote the reporting of your own mistakes, and defining the measures required for maintaining and/or developing the atmosphere. <i>A good safety culture contains a trustful atmosphere in which encouragement is provided for producing and sharing safety information openly. In an atmosphere of this type, persons dare also report their own mistakes. This first-hand information produced by reporters is a highly valuable information source for safety work.</i>	A new indicator
	The safety level of Finnish aviation remains high.	C-ATO-SPI-TECHNICAL	SPI LEVEL 3: Serious technical problems in aircraft (TECHNICAL) <i>Cases where a technical fault caused a flight to be aborted, an emergency to be declared or an aircraft to be grounded. Examples:</i> <ul style="list-style-type: none"> • engine failure • malfunction of a control, compression or other critical system or device (e.g. propeller or rotor) • serious damage to electrical wiring interconnection system (EWIS) • significant fluid leak or fluid spoiling (e.g. fuel or hydraulic fluid) • significant structural flaw, including rupture, corrosion, wear and tear or delamination • significant maintenance error observed in connection with normal operation <i>Different technical problems in an aircraft may cause a serious incident or an accident if not reacted to in time. Engine failure, especially on a single-engine aircraft, will immediately precipitate a serious incident.</i>	TECHNICAL risk management: <ul style="list-style-type: none"> - Organisations have processed TECHNICAL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 3: SPI 3.34.5 Serious technical problems in aircraft (LOC-I/TECHNICAL) Modification: the definition was modified.

Appendix D: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by flight training organisations (Non Complex ATO)

Finnish aviation safety policy

As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.




The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.



The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.




Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.

SPIs monitored by aviation organisations:

- Flight training (Non Complex ATO)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	NC-ATO-SPI-1	Performance of the organisation's safety management system (SMS)	<p>Safety objective: improving the performance of the organisations' safety management system (SMS)</p> <ul style="list-style-type: none"> - Trafi's organisation profile data is used as criteria. - Examples of key SMS areas for ATO organisations include: <ul style="list-style-type: none"> o comprehensive and timely change management o monitoring and measuring of the safety level o updating the risk register and timely response to risks o monitoring the impact of risk management measures – impact on the risk and the safety level <p><i>Background to the target:</i> The purpose of the target is that the organisations will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.</p>	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	NC-ATO- SPI-RE	SPI TASP 2: Runway excursion, RE <i>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</i>	RE and ARC risk management: - Organisations have processed RE and ARC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE)
		NC-ATO- SPI-RE/ARC	SPI LEVEL 3: RE/Abnormal runway contact, ARC <i>Cases involving any takeoff or landing where the aircraft makes abnormal contact with the runway (or other landing area). Examples include hard/heavy landings, long/fast landings, off-centre landings, significant crabbed landings, nose wheel first touchdown, tail strikes and wing tip/nacelle strikes as well as landing gear failure caused by abnormal runway contact. Excludes cases of technical malfunction of landing gear.</i>		LEVEL 3: FASP Annex 2, SPI 3.5 Abnormal runway contact (RE/ARC) Modification: the definition has been clarified
	The level of runway safety in Finnish aviation remains high.	NC-ATO- SPI-RI	SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP <i>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</i>	RI and RI/AC risk management: - Organisations have processed RI and RI/AC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		NC-ATO- SPI-RI/AC	SPI LEVEL 3: Runway incursions by aircraft (RI/AC)		LEVEL 3: FASP Annex 2, SPI 3.7 Runway incursions by aircraft (RI-VAP/RI AC)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	NC-ATO-SPI-MAC	SPI LEVEL 2: Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	Management of MAC, AI, LB and NAV ERROR risks: - Processing MAC, AI, LB, and NAV ERROR threats in the organisations' own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC) Modification: In ATO operations are included particularly landing circuits at non-controlled aerodromes, instruction flights in the surroundings of non-controlled airports, and instruction flights in the training areas of controlled airports.
		NC-ATO-SPI-MAC/AI	SPI LEVEL 3: MAC/ Airspace infringement, AI <i>Cases where an aircraft entered controlled or restricted airspace or an ADIZ without appropriate clearance or permission.</i>		LEVEL 3: FASP Annex 2, SPI 3.14 Airspace infringements (MAC/AI)
		NC-ATO-SPI-MAC/LB	SPI LEVEL 3: Level busts of more than 300 feet (MAC/LB)		LEVEL 3: FASP Annex 2, SPI 3.15 Level busts of more than 300 or 200 feet (MAC/LB) Modification : the heading and definition for ATOs are to be changed by dropping RVSM airspace LB (200 feet) in the indicator.
		NC-ATO-SPI-MAC/ NAV ERROR	SPI LEVEL 3: Lateral deviations from cleared flight path (MAC/NAV ERROR) <i>Cases where an aircraft deviated laterally from its cleared flight path or ATC clearance, e.g. following the wrong SID/STAR or deviating from the assigned SID/STAR or track by more than the maximum defined for the track in question.</i>		LEVEL 3: FASP Annex 2, SPI 3.17 Lateral deviations from cleared flight path (MAC/NAV ERROR) Modification: The definition will be clarified
	The safety level of Finnish aviation remains high.	NC-ATO-SPI-LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</i>	LOC-I, WAKE, LOAD and WX risk management: - Organisations have processed LOC-I, WAKE, LOAD and WX threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		NC-ATO-SPI-LOC-I/WAKE	SPI LEVEL 3: Wake turbulence incidents (LOC-I/WAKE) <i>Cases where an aircraft encountered the wake turbulence of another aircraft and this precipitated an incident. Excludes loss of wake vortex separation, unless it precipitates an incident.</i>		LEVEL 3: FASP Annex 2, SPI 3.23 Wake turbulence incidents (LOC-I/WAKE) Modification: the indicator applies to non-complex ATOs if the destinations of their instruction flights include aerodromes with schedule flights or other air traffic where the WAKE threat is realistic.
		NC-ATO-SPI-LOC-I/LOAD	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance (LOC-I/LOAD) <i>Shortcomings, errors and occurrences related to the weight, balance or loading of aircraft. In flight training, the indicator has special reference to flight preparation by the student.</i>		LEVEL 3: FASP Annex 2, SPI 3.26 Aircraft weight and balance errors (LOC-I/LOAD) Modification: a more accurate definition was provided NB! In the CAT OPS FW domain, LOAD-SPI has been divided into three parts. For these organisations, specific definitions will be provided for each indicator. Linked not only to LOC-I but also RE threat (LS-SPI). For ATOs, the LOAD indicator will not be divided.

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	NC-ATO-SPI-LOC-I/WX	<p>SPI LEVEL 3: Errors in accounting for or interpreting weather observations and incidents caused by weather (LOC-I-WX)</p> <p><i>Flight training cases where weather data has not been accounted for sufficiently in flight preparation, or they have been interpreted incorrectly, and cases where poor weather and/or insufficient or incorrect decisions as the weather changed precipitated an incident during a training flight.</i></p> <p><i>In addition to LOC-I, WX- SPI is linked to CFIT.</i></p>	<p>Management of risks related to aviation weather:</p> <ul style="list-style-type: none"> - Organisations have processed aviation weather related threats in the organisations' own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	A new indicator in this form
	The safety culture in Finnish aviation has a high standard. Good safety culture is maintained and developed.	NC-ATO-SPI-JUST	<p>SPI LEVEL 3: Number and type of occurrence reports</p> <p><i>The indicator contains the number of occurrence reports in the organisation's operations in proportion to flight hours. It is also used to monitor the number of occurrence reports in proportion to flight hours where the reporter relates a mistake made by them as part of the occurrence.</i></p>	<p>The objective of the monitoring is maintaining and developing a good reporting culture in the organisation:</p> <ul style="list-style-type: none"> - ensuring a sufficient number of reports and receiving the safety information by monitoring and setting targets for the trends and level of report numbers and reporting quality - evaluating whether the atmosphere is trustful and encouraging enough to promote the reporting of your own mistakes, and defining the measures required for maintaining and/or developing the atmosphere. - A good safety culture contains a trustful atmosphere in which encouragement is provided for producing and sharing safety information openly. In an atmosphere of this type, persons dare also report their own mistakes. This first-hand information produced by reporters is a highly valuable information source for safety work. 	A new indicator
	The safety level of Finnish aviation remains high.	NC-ATO-SPI-TECHNICAL	<p>SPI LEVEL 3: Serious technical problems in aircraft (TECHNICAL)</p> <p><i>Cases where a technical fault caused a flight to be aborted, an emergency to be declared or an aircraft to be grounded. Examples:</i></p> <ul style="list-style-type: none"> • engine failure • malfunction of a control, compression or other critical system or device (e.g. propeller or rotor) • serious damage to electrical wiring interconnection system (EWIS) • significant fluid leak or fluid spoiling (e.g. fuel or hydraulic fluid) • significant structural flaw, including rupture, corrosion, wear and tear or delamination • significant maintenance error observed in connection with normal operation <p><i>Different technical problems in an aircraft may cause a serious incident or an accident if not reacted to in time. Engine failure, especially on a single-engine aircraft, will immediately precipitate a serious incident.</i></p>	<p>TECHNICAL risk management:</p> <ul style="list-style-type: none"> - Organisations have processed TECHNICAL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	<p>LEVEL 3: SPI 3.34.5 Serious technical problems in aircraft (LOC-I/TECHNICAL)</p> <p>Modification: the definition was modified.</p>

Appendix E: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by air navigation service providers (ANS) and, where applicable, meteorological service providers (MET)

Finnish aviation safety policy

As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.




The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.





The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.



Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.

SPIs monitored by aviation organisations:

- air navigation service providers (ANS) and, where applicable, meteorological service providers (MET)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	ANS-SPI-1	Performance of the organisation's safety management system (SMS)	<p>Safety objective: improving the performance of the service providers' safety management system (SMS)</p> <ul style="list-style-type: none"> - Trafi's organisation profile data is used as criteria. <p><i>Background to the target:</i> The purpose of the target is that the service providers will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.</p>	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	ANS- SPI-RE	<p>SPI LEVEL 2: Runway excursion, RE</p> <p><i>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</i></p>	<p>RE risk management:</p> <ul style="list-style-type: none"> - Service providers have processed RE and UA threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE)
		ANS- SPI-RE/UA	<p>SPI LEVEL 3: RE/ Unstable approaches, UA</p> <p><i>An unstable approach is any situation where the approach of an aircraft is not stable as per the criteria in the Flight Operations Manual (OM-A).</i></p>		LEVEL 3: FASP Annex 2, SPI 3.1 Unstable approaches (RE/UA)
	The level of runway safety in Finnish aviation remains high.	ANS- SPI-RI	<p>SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP</p> <p><i>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</i></p>	<p>RI risk management:</p> <ul style="list-style-type: none"> - Service providers have processed RI risks in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		ANS- SPI-RI/ATCO	<p>SPI LEVEL 3: Runway incursions with direct/indirect ATC contribution (RI-VAP/RI ATCO)</p>		LEVEL 3: FASP Annex 2, SPI 3.8 Runway incursions with direct/indirect ATC contribution (RI-VAP/RI ATCO)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	ANS-SPI-MAC	Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	MAC, SMI ATCO, AI and MAC/LB risk management: - Service providers have processed MAC, SMI ATCO, AI and MAC/LB threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC)
		ANS-SPI-MAC/SMI ATCO	SPI LEVEL 3: Separation minima infringements with direct/indirect ATC contribution (MAC/SMI ATCO)		LEVEL 3: FASP Annex 2, SPI 3.12 Separation minima infringements with direct/indirect ATC contribution (MAC/SMI ATCO)
		ANS-SPI-MAC/AI	SPI LEVEL 3: MAC/ Airspace infringement, AI <i>Cases where an aircraft entered controlled or restricted airspace or an ADIZ without appropriate clearance or permission. Also includes failure of coordination between ATS bodies, resulting in an aircraft entering controlled airspace without the receiving ATS being aware of it.</i>		LEVEL 3: FASP Annex 2, SPI 3.14 Airspace infringements (MAC/AI)
		ANS-SPI-MAC/LB	SPI LEVEL 3: Level busts of more than 300 feet or more than 200 feet in RVSM airspace (MAC/LB)		LEVEL 3: FASP Annex 2, SPI 3.15 Level busts of more than 300 or 200 feet (MAC/LB)
	The safety level of Finnish aviation remains high.	ANS-SPI-CFIT	SPI LEVEL 2: Controlled flight into or towards terrain (CFIT) and similar incidents <i>Controlled flight into (or towards) terrain occurs when an airworthy aircraft under the control of the pilot is inadvertently flown (or nearly flown) into terrain, water or an obstacle. This includes all cases of separation minima infringement between airborne aircraft and obstacles.</i>	CFIT, CFIT/QNH and CFIT/ CHART risk management: - Service providers have processed CFIT, CFIT/QNH and CFIT/ CHART threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.4 Controlled flight into or towards terrain (CFIT) and similar situations
		ANS-SPI-CFIT/QNH	SPI LEVEL 3: Incorrect altimeter pressure settings (CFIT/QNH)		LEVEL 3: FASP Annex 2, SPI 3.18 Incorrect altimeter pressure settings (CFIT/QNH)
		ANS-SPI-CFIT/CHART	SPI LEVEL 3: Errors, omissions and inconsistencies in aeronautical charts (CFIT/CHART) <i>Errors, omissions and inconsistencies in aeronautical chart data in aircraft databases, involving incorrect or outdated SID/STAR/waypoint information, or errors, omissions or inconsistencies in AIS publication charts, e.g. permanent obstacles not marked on the chart.</i>		LEVEL 3: FASP Annex 2, SPI 3.20 Errors and omissions in aeronautical charts (CFIT/CHART) Modification: provided a more accurate definition and heading
	The safety level of Finnish aviation remains high.	ANS-SPI-LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</i>	LOC-I and LOC-I/ WAKE risk management: - Service providers have processed LOC-I and LOC-I/ WAKE threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		ANS-SPI-LOC-I/WAKE	SPI LEVEL 3: Wake turbulence incidents (LOC-I/WAKE) <i>Cases where an aircraft encountered the wake turbulence of another aircraft and this precipitated an incident. Excludes loss of wake vortex separation, unless it precipitates an incident.</i>		LEVEL 3: FASP Annex 2, SPI 3.23 Wake turbulence incidents (LOC-I/WAKE)
	The safety level of Finnish aviation remains high.	ANS-SPI-GCOL	SPI LEVEL 2: Ground collisions – collisions while taxiing to or from a runway in use (GCOL) <i>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</i>	GCOL risk management: - Service providers have processed GCOL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.6 Ground collisions – collisions while taxiing to or from a runway in use (GCOL) Modification: The definition will be clarified

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	ANS-SPI-TECH SPI LEVEL 3: Air navigation service technical systems and functions		Management of risks related to air navigation service technical systems and functions: <ul style="list-style-type: none"> - Service providers have processed threats related to air navigation service technical systems and functions, including cybersecurity, in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. <i>Background: A number of technical systems are used to provide air navigation services. Many of them have back-up systems for providing the service in case of an error or a fault in the main system. In this case, aircraft are not necessarily aware of the fault. In some cases, however, no backup system existed or the backup system was inadequate, and the error or fault affected service provision, which was seen e.g. as compromised safety or significant delays.</i>	LEVEL 3: FASP Annex 2, SPI 3.32 Air navigation service technical systems and functions
		ANS-SPI-TECH/WX	SPI LEVEL 3: Serious problems, errors or shortcomings of aviation weather service (TECH/WX) <i>Includes serious, long-lasting or extensive disruptions during which the aviation weather service was not available for operators or ATC (e.g. AFTN connection, weather observation system) and cases where aviation safety was or could have been put at risk due to a significant error or inadequacy in the service (e.g. incorrect QNH data, missing TAF AMD or SIGMET).</i>		LEVEL 3: FASP Annex 2, SPI 3.32.1 Weather observation errors (WX) Modification: the heading and definition were modified.
		ANS-SPI-TECH/COM	SPI LEVEL 3: Air navigation services communications system malfunctions or disruptions (TECH/COM) <i>Cases where air navigation services communications systems (e.g. phone, FPL, OLDI, Eurocat coordination) experienced an ATM-specific occurrence with Eurocontrol ESARR 2 severity classification C (Ability to provide safe but degraded ATM service) or above. The severity of the incident may be assessed using the Risk Analysis Tool developed by Eurocontrol.</i>		LEVEL 3: FASP Annex 2, SPI 3.32.2 Air navigation services communications system malfunctions or disruptions (MAC/COM)
		ANS-SPI-TECH/NAV	SPI LEVEL 3: Air navigation services navigation system malfunctions or disruptions (TECH/NAV) <i>Cases where air navigation services navigation systems (e.g. ILS, VOR, DME) experienced an ATM-specific occurrence with Eurocontrol ESARR 2 severity classification C (Ability to provide safe but degraded ATM service) or above. The severity of the incident may be assessed using the Risk Analysis Tool developed by Eurocontrol.</i>		LEVEL 3: FASP Annex 2, SPI 3.32.3: Air navigation services navigation system malfunctions or disruptions (MAC/NAV)
		ANS-SPI-TECH/MAC/SUR	SPI LEVEL 3: Air navigation services surveillance system malfunctions or disruptions (TECH/COM) <i>Cases where air navigation services surveillance systems (e.g. Eurocat, radar) experienced an ATM-specific occurrence with Eurocontrol ESARR 2 severity classification C (Ability to provide safe but degraded ATM service) or above. The severity of the incident may be assessed using the Risk Analysis Tool developed by Eurocontrol.</i>		LEVEL 3: FASP Annex 2, SPI 3.32.4: Air navigation services surveillance system malfunctions or disruptions (MAC/SUR)
	The safety level of Finnish aviation remains high.	ANS-SPI-ASM	SPI LEVEL 3: Errors in airspace reservations and their processing (ASM) <i>Errors in the ASM airspace reservation process, including active D/P/R area in a situation where NOTAM shows the area as deactivated, incorrect area data or late area reservation.</i>	Management of risks related to airspace reservations and their processing: <ul style="list-style-type: none"> - Service providers have processed threats related to airspace reservations and their processing in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	A new SPI/SPT

Appendix F: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by airport operators (ADR)

Finnish aviation safety policy




As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.




The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.

The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.





Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.

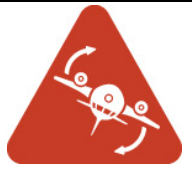





SPIs monitored by aviation organisations: - aerodrome operators (ADR)

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	ADR-SPI-1	Performance of the organisation's safety management system (SMS)	<p>Safety objective: improving the performance of the operators' safety management system (SMS)</p> <ul style="list-style-type: none"> - Trafi's organisation profile data is used as criteria. <p><i>Background to the target:</i> The purpose of the target is that the operators will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.</p>	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	ADR- SPI-RE	<p>SPI LEVEL 2: Runway excursion, RE</p> <p><i>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</i></p>	<p>RE and RWY CON risk management:</p> <ul style="list-style-type: none"> - Operators have processed RE and RWY CON threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE)
		ADR- SPI-RE/RWY CON	<p>SPI LEVEL 3: Deficiencies in runway condition and related information (RE/RWY CON)</p>		LEVEL 3: FASP Annex 2, SPI 3.3 Deficiencies in runway condition and related information (RE/RWY CON)
	The level of runway safety in Finnish aviation remains high.	ADR- SPI-RI	<p>SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP</p> <p><i>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</i></p>	<p>RI risk management</p> <ul style="list-style-type: none"> - Operators have processed RI risks in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		ADR- SPI-RI/VEHICLE	<p>SPI LEVEL 3: Runway incursions caused by ground vehicles (RI-VAP/RI VEHICLE)</p>		LEVEL 3: FASP Annex 2, SPI 3.9 Runway incursions caused by ground vehicles (RI-VAP/RI AC)
		ADR- SPI-RI/OTHER	<p>SPI LEVEL 3: Runway incursions caused by persons (RI-VAP/RI OTHER)</p>		<p>Modification: The SPI has been divided into two separate SPIs: RI VEHICLE and RI OTHER. RI-VEHICLE contains runway incursions caused by ground vehicles, the causes of which include maintenance, rescue services or temporary arrangements with their convoys.</p>

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	ADR-SPI-CFIT	SPI LEVEL 2: Controlled flight into or towards terrain (CFIT) and similar incidents <i>Controlled flight into (or towards) terrain occurs when an airworthy aircraft under the control of the pilot is inadvertently flown (or nearly flown) into terrain, water or an obstacle. This includes all cases of separation minima infringement between airborne aircraft and obstacles.</i>	CFIT and CFIT/OBSTACLE risk management: - Operators have processed CFIT and CFIT/OBSTACLE threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.4 Controlled flight into or towards terrain (CFIT) and similar situations
		ADR-SPI-CFIT/OBSTACLE	SPI LEVEL 3: Lack of information on obstacles (OBSTACLE) <i>Shortcomings and errors related to temporary obstacles to air navigation: temporary obstacles to air navigation erected without an appropriate permit or in violation of published procedures, including cranes etc., or cases with errors or shortcomings in the examination of obstacles to air navigation.</i>		A new SPI/SPT
	The safety level of Finnish aviation remains high.	ADR-SPI-GCOL	SPI LEVEL 2: Ground collisions – collisions while taxiing to or from a runway in use (GCOL) <i>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</i>	GCOL risk management: - Operators have processed GCOL, GCOL/APRON and GCOL/FOD threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.6 Ground collisions – collisions while taxiing to or from a runway in use (GCOL) Modification: The definition will be clarified
		ADR-SPI-GCOL/APRON	SPI LEVEL 3: Insufficient supervision at apron and other apron related occurrences (GCOL/APRON) <i>Cases where supervision on the apron is lacking and/or passengers gained access to areas where they should not be. Also includes other occurrences in apron level activities, for example shortcomings in paint markings and incorrect placement of fleet. Excludes SEC cases (security).</i>		LEVEL 3: FASP Annex 2, SPI 3.30 Insufficient supervision at apron (GCOL/APRON) Modification: a more accurate heading and definition were provided
		ADR-SPI-GCOL/FOD	SPI LEVEL 3: Foreign Object Debris in the manoeuvring area and apron, and damage caused (GCOL/FOD) <i>Includes all cases where objects and materials in the manoeuvring area and apron in places where they should not be caused or could have caused damage or risk to aircraft, the environment or persons. Also includes cases where the required FOD inspection was not carried out. FOD cases may also be linked to LOC-I cases.</i>		LEVEL 3: FASP Annex 2, SPI 3.31 FOD (Foreign Object Debris) in the manoeuvring area and apron, and damage caused (GCOL/FOD) Modification: The definition will be clarified, and the data on the location of the event (location on stand, on apron, on runway, on taxiway) and potential link to LOC-I cases are to be specified.
	The safety level of Finnish aviation remains high.	ADR-SPI-TECH SPI LEVEL 3: Aerodrome technical systems and functions		Management of risks related to aerodrome technical systems and functions: - Operators have processed threats related to aerodrome technical systems and functions, including cybersecurity, in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: FASP Annex 2, SPI 3.33 Aerodrome technical systems and functions
		ADR-SPI-TECH/PEPA	SPI LEVEL 3: Shortcomings in airport rescue services (PEPA) <i>Cases where shortcomings or faults are noted in airport rescue services, e.g. personnel numbers, equipment or the alert system.</i>		LEVEL 3: FASP Annex 2, SPI 3.33.1 Shortcomings in airport rescue services (PEPA)
		ADR-SPI-TECH/APIS	SPI LEVEL 3: APIS equipment malfunctions (APIS) <i>Cases with shortcomings or errors in the functioning or work of the APIS system, a signaller or a Marshaller.</i>		A new SPI/SPT
	The safety level of Finnish aviation remains high.	ADR-SPI-LIGHTS	SPI LEVEL 3: Shortcomings in aerodrome lights (LIGHTS) <i>Faults and shortcomings in aerodrome light systems, e.g. PAPI or runway lights.</i>	Management of risks related to shortcomings in aerodrome lights: - Operators have processed threats related to shortcomings in aerodrome lights in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new SPI/SPT

Appendix G: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by ground handling service providers (GH)

Finnish aviation safety policy As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties. The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation. The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above. Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.					
SPIs monitored by aviation organisations: - ground handling service providers (GH)					
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations.	GH-SPI-1	Performance of the organisation's safety management system	Safety objective: improving the performance of the service providers' safety management system <i>Background to the target:</i> The purpose of the target is that the service providers will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.	A new, system-level SPI/SPT
	The level of runway safety in Finnish aviation remains high.	GH- SPI-RI	SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.	RI risk management - Service providers have processed RI risks in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		GH- SPI-RI/ VE-HICLE	SPI LEVEL 3: Runway incursions caused by ground vehicles (RI-VAP/RI VEHICLE)		LEVEL 3: FASP Annex 2, SPI 3.9 Runway incursions caused by ground vehicles (RI-VAP/RI AC) Modification: The SPI has been divided into two separate SPIs: RI VEHICLE and RI OTHER. RI-VEHICLE contains runway incursions caused by ground vehicles, the causes of which include maintenance, rescue services or temporary arrangements with their convoys.
 	The safety level of Finnish aviation remains high.	GH-SPI- LOC-I	SPI LEVEL 2: Loss of control in flight, LOC Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.	LOC-I and ICE risk management: - Service providers have processed LOC-I and ICE threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		GH-SPI- LOC-I/ ICE	SPI LEVEL 3: Deicing and anti-icing errors (LOC-I/ICE) Cases in which: - deicing or anti-icing was not performed or was performed incorrectly/inadequately, or the aircraft departed after the holdover time had elapsed - deicing or anti-icing fluid residue caused problems - the aircraft's own deicing systems cannot cope with icing in flight, or the aircraft has no deicing system and encounters icing conditions. Excludes malfunctions in the deicing/anti-icing system.		LEVEL 3: FASP Annex 2, SPI 3.25 Deicing and anti-icing errors (LOC-I/ICE) Modification: The definition will be clarified

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
 	The safety level of Finnish aviation remains high.	GH-SPI- LOC-I/LS	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance / difference between actual weight and loadsheet weight (LOC-I/LS)	LOC-I, LS, LOADING, TIEDOWN and GH risk management: - Service providers have processed LOC-I, LS, LOADING, TIEDOWN and GH threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: FASP Annex 2, SPI 3.26 Aircraft weight and balance errors (LOC-I/LOAD) Modification: LOAD-SPI will be divided into three parts. More specific definitions will be provided for each indicator. Linked not only to LOC-I but also RE threat (LS-SPI).
		GH-SPI- LOC-I/LOADING	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance/ Actual loading different from loading instructions/loadsheet, work error (LOC-I/LOADING)		LEVEL 3: FASP Annex 2, SPI 3.28 Ground handling damage (LOC-I/GH) Modification: The definition will be clarified
		GH-SPI- LOC-I/TIEDOWN	SPI LEVEL 3: Shortcomings, errors and occurrences related to aircraft weight or balance/ incorrect or deficient load tiedown (LOC-I/TIEDOWN)		
		GH-SPI- LOC-I/GH	SPI LEVEL 3: Ground handling damage (LOC-I/GH) <i>Cases involving damage to an aircraft during ground handling. The aircraft may be stationary, towed or in pushback.</i>		
 	The safety level of Finnish aviation remains high.	GH-SPI- GCOL	SPI LEVEL 2: Ground collisions – collisions while taxiing to or from a runway in use (GCOL) <i>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</i>	GCOL risk management: - Service providers have processed GCOL, GCOL/PB, APRON and FOD threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.6 Ground collisions – collisions while taxiing to or from a runway in use (GCOL) Modification: The definition will be clarified
		GH-SPI- GCOL/PB	SPI LEVEL 3: Pushback or taxi interference (GCOL/PB) <i>Cases involving interference with the pushback or taxiing of an aircraft, including interference with power pushback.</i>		LEVEL 3: FASP Annex 2, SPI 3.29 Pushback or taxi interference (GCOL/PB)
		GH-SPI- GCOL/APRON	SPI LEVEL 3: Insufficient supervision at apron and other apron related occurrences (GCOL/APRON) <i>Cases where supervision on the apron is lacking and/or passengers gained access to areas where they should not be. Also includes other occurrences in apron level activities, for example shortcomings in paint markings and incorrect placement of fleet. Excludes SEC cases (security).</i>		LEVEL 3: FASP Annex 2, SPI 3.30 Insufficient supervision at apron (GCOL/APRON) Modification: a more accurate heading and definition were provided
		GH-SPI- GCOL/FOD	SPI LEVEL 3: Foreign Object Debris in the manoeuvring area and apron, and damage caused (GCOL/FOD) <i>Includes all cases where objects and materials in the manoeuvring area and apron in places where they should not be caused or could have caused damage or risk to aircraft, the environment or persons. Also includes cases where the required FOD inspection was not carried. FOD cases may also be linked to LOC-I cases.</i>		LEVEL 3: FASP Annex 2, SPI 3.31 FOD (Foreign Object Debris) in the manoeuvring area and apron, and damage caused (GCOL/FOD) Modification: The definition will be clarified, and the data on the location of the event (location on stand, on apron, on runway, on taxiway) and potential link to LOC-I cases are to be specified.
	The safety level of Finnish aviation remains high.	GH-SPI- FUELING	SPI LEVEL 3: Refuelling incidents and occurrences (FUELING)	Refuelling risk management: - Service providers have processed threats related to refuelling in the service providers' own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: FASP Annex 2, SPI 3.35.3 Refuelling incidents and occurrences (FUELING)
	The safety level of Finnish aviation remains high.	GH-SPI-UNRULY	SPI LEVEL 3: Unruly passenger at airport or on aircraft (UNRULY) <i>Cases referred to in ICAO Convention Annex 17: "A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft."</i>	Unruly passenger risk management: - Service providers have processed threats related to unruly passengers in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new SPI/SPT

Appendix H: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by commercial air transport (CAT OPS RW) and aerial work (SPO RW) helicopter operators

Finnish aviation safety policy

As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties.




The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation.




The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above.








Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.

SPIs monitored by aviation organisations:



- Commercial air transport (CAT RW) and aerial work (SPO RW) helicopter operators




	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	RW-SPI-1	Performance of the organisation's safety management system (SMS)	<p>Safety objective: improving the performance of the operators' safety management system (SMS)</p> <ul style="list-style-type: none"> - Trafi's organisation profile data is used as criteria. In this respect, Trafi uses a total performance assessment tool to evaluate the SMS performance. Operators can also utilise the assessment tool for self-evaluations and development of SMS performance. - Examples of key SMS areas include: <ul style="list-style-type: none"> o comprehensive and timely change management o monitoring and measuring of the safety level o reporting (sufficient volume, quality and utilisation of occurrence reporting as well as maintenance and development of the reporting culture) o updating the risk register and timely response to risks o monitoring the impact of risk management measures – impact on the risk and the safety level <p><i>Background to the target:</i> The purpose of the target is that the operators will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.</p>	A new, system-level SPI/SPT
	The safety level of Finnish aviation remains high.	RW- SPI-UA	<p>SPI LEVEL 3: Unstable approach, UA</p> <p><i>In rotary wing operations, UA includes:</i></p> <ul style="list-style-type: none"> - approaches where the rate of descent is too great in proportion to air speed - final approach is too short in proportion to landing area size or height of obstacles on its margins 	<p>UA risk management:</p> <ul style="list-style-type: none"> - Operators have processed UA threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 3: FASP Annex 2, SPI 3.1 Unstable approaches (RE/UA)
	The level of runway safety in Finnish aviation remains high.	RW- SPI-RI	<p>SPI LEVEL 2: Runway incursion - vehicle, aircraft or person, RI-VAP</p> <p><i>A runway incursion is any situation where an aircraft, vehicle or person is present on the runway or its protected area, without clearance or otherwise incorrectly. This includes low approaches executed without clearance or otherwise incorrectly.</i></p> <p><i>NB! In rotary wing operations at aerodromes</i></p>	<p>RI and RI/AC risk management:</p> <ul style="list-style-type: none"> - Operators have processed RI and RI/AC threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	LEVEL 2: FASP Annex 2, SPI 2.2 Runway incursions (RI-VAP)
		RW- SPI-RI/AC	<p>SPI LEVEL 3: Runway incursions by aircraft (RI/AC)</p> <p><i>NB! In rotary wing operations at aerodromes</i></p>		LEVEL 3: FASP Annex 2, SPI 3.7 Runway incursions by aircraft (RI-VAP/RI AC)



	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	RW-SPI-MAC	SPI LEVEL 2: Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	MAC, SMI AC, AI and LB risk management: - Operators have processed MAC, SMI AC, AI and LB threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC)
		RW-SPI-MAC/SMI AC	SPI LEVEL 3: Separation minima infringements caused by aircraft (MAC/SMI AC), e.g. <i>Cases where an aircraft movement (e.g. action contrary to ATC clearance) caused an infringement of a separation minimum between aircraft, between aircraft and terrain, or between aircraft and controlled airspace.</i>		LEVEL 3: FASP Annex 2, SPI 3.11 Separation minima infringements caused by aircraft (MAC/SMI)
		RW-SPI-MAC/AI	SPI LEVEL 3: MAC/ Airspace infringement, AI <i>Cases where an aircraft entered controlled or restricted airspace or an ADIZ without appropriate clearance or permission.</i>		LEVEL 3: FASP Annex 2, SPI 3.14 Airspace infringements (MAC/AI)
		RW-SPI-MAC/LB	SPI LEVEL 3: Level busts of more than 300 feet or more than 200 feet in RVSM airspace (MAC/LB)		LEVEL 3: FASP Annex 2, SPI 3.15 Level busts of more than 300 or 200 feet (MAC/LB)
	The safety level of Finnish aviation remains high.	RW-SPI-CFIT	SPI LEVEL 2: Controlled flight into or towards terrain (CFIT) and similar incidents <i>Controlled flight into (or towards) terrain occurs when an airworthy aircraft under the control of the pilot is inadvertently flown (or nearly flown) into terrain, water or an obstacle. This includes all cases of separation minima infringement between airborne aircraft and obstacles.</i>	CFIT risk management: - Operators have processed CFIT threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.4 Controlled flight into or towards terrain (CFIT) and similar situations
	The safety level of Finnish aviation remains high.	RW-SPI- LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path. In rotary wing operations, causal factors of an LOC-I case may include:</i> - vortex ring state/ settling with power - mast bump - type-specific undesirable features - inadvertent flying to IMC-conditions - white out, brown out - dynamic / static roll over - ground resonance	LOC-I, LASER, SPEED, WAKE and FIRE risk management: - Operators have processed LOC-I, LASER, SPEED, WAKE and FIRE threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		RW-SPI- LOC-I/LASER	SPI LEVEL 3: Laser interference (LOC-I/LASER) <i>Cases with laser interference towards a helicopter</i>		LEVEL 3: FASP Annex 2, SPI 3.21 Laser interference (LOC-I/LASER)
		RW-SPI- LOC-I/SPEED	SPI LEVEL 3: Low speed and high speed cases (LOC-I/SPEED) <i>Cases where the airspeed of an airborne aircraft was above the situation-specific maximum or below the situation-specific minimum during any phase of flight, including stick shaker cases.</i>		LEVEL 3: FASP Annex 2, SPI 3.22 Low speed and high speed cases (LOC-I/SPEED) Modification: The definition will be clarified
		RW-SPI- LOC-I/WAKE	SPI LEVEL 3: Wake turbulence incidents (LOC-I/WAKE) <i>Cases where an aircraft encountered the wake turbulence of another aircraft and this precipitated an incident. Excludes loss of wake vortex separation, unless it precipitates an incident.</i>		LEVEL 3: FASP Annex 2, SPI 3.23 Wake turbulence incidents (LOC-I/WAKE)
		RW-SPI- LOC-I/FIRE	SPI LEVEL 3: Fire or smoke on aircraft (LOC-I/FIRE) <i>All cases where fire was detected on an aircraft and cases where smoke was detected that put or could have put the aircraft's safe operation at risk.</i>		LEVEL 3: FASP Annex 2, SPI 3.24 Fire or smoke on aircraft (LOC-I/FIRE) Modification: a more accurate definition will be provided



	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of Finnish aviation remains high.	RW-SPI- GCOL	SPI LEVEL 2: Ground collisions – collisions while taxiing to or from a runway in use (GCOL) <i>A situation where an aircraft comes into contact with another aircraft, a vehicle, a person, an animal, a structure, a building or any other obstacle while moving under its own power in any part of the airport other than the active runway, excluding power pushback.</i>	GCOL risk management: - Operators have processed GCOL and FOD threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.6 Ground collisions – collisions while taxiing to or from a runway in use (GCOL) Modification: The definition will be clarified
	The safety level of Finnish aviation remains high.	RW-SPI- GCOL/FOD	SPI LEVEL 3: Foreign Object Debris in rotary wing operations and damage caused (GCOL/FOD) <i>Includes all cases where objects and materials in the manoeuvring area and apron in places where they should not be caused or could have caused damage or risk to aircraft, the environment or persons. Also includes cases where the required FOD inspection was not carried out. FOD cases may also be linked to LOC-I cases.</i>		LEVEL 3: FASP Annex 2, SPI 3.31 FOD (Foreign Object Debris) in the manoeuvring area and apron, and damage caused (GCOL/FOD) Modification: the heading and definition were made more accurate for rotary wing operations
	The safety level of Finnish aviation remains high.	RW-SPI- PHUF	SPI LEVEL 3: Human error and other disruptions upon takeoff (PHUF) <i>In helicopter operations, PHUF cases may include:</i> - <i>incorrect assessment of wind direction and vortexes</i> - <i>incorrect assessment of performance</i> - <i>incorrect profile in proportion to obstacles</i> - <i>unconnected systems (e.g. SAS)</i>	Takeoff risk management: - Operators have processed threats caused by human error upon take-off in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: SPI 3.35.1 Human error and other disruptions in taxi or line-up, leading to wrong configuration, wrong weight, wrong FMS data or wrong location upon take-off. (PHUF)
 	The safety level of Finnish aviation remains high.	RW-SPI-FAT OPS	SPI LEVEL 3: Fatigue during occurrences in flight operations (FAT OPS) <i>Cases where fatigue results in a mistake or other occurrence.</i>	Management of risks related to fatigue management: - Operators have processed fatigue management related threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 3: SPI 3.35.2 Fatigue during flight operations and air navigation services (FAT) Modification: The indicator will be modified to only relate to flight operations. The FAT indicator will be divided into two categories: FAT OPS and FAT ORG
		RW-SPI-FAT ORG	SPI LEVEL 3: Cases of fatigue/decreased alertness during flight operations (FAT ORG) <i>Cases in which fatigue or decreased alertness is experienced. Causal factors for this may be found in the organisation's operation (e.g. shift planning/implementation, failure to rest) or an individual's actions.</i>		
	The safety level of Finnish aviation remains high.	RW-SPI-INCAPA	SPI LEVEL 3: Flight crew incapacitation (INCAPA) <i>Flight crew incapacitation, in which a crewmember is unable to manage their duties during the flight. Typical causal factors may include food poisoning or an attack of illness. NB: the risk assessment should also cover the pre-flight fit to fly assessment. In Single Pilot operation, the assessment should extend to symptoms of the entire 'flying day' (Fit to fly assessment)</i>	Flight crew incapacitation risk management: - Operators have processed flight crew incapacitation threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new SPI/SPT
	The safety level of Finnish aviation remains high.	RW-SPI-SOP	SPI: Operating procedure standardisation <i>Examples of aspects to be measured:</i> - <i>what proportion of the operations is described in standard operating procedures and at what level of detail</i> - <i>integrating the described procedures in all training and refresher training</i> - <i>necessary check lists supporting the procedures</i>	All helicopter operations are described with a sufficient scope and accuracy in the standard operating procedures (SOP). The SOPs are addressed in all training and practical rotary wing operations of the organisation, they are reviewed regularly, and they are updated based on the needs identified in risk management.	A new SPI/SPT

Appendix I: national aviation safety performance indicators and targets (SPIs/SPTs) monitored by aviation airworthiness and maintenance organisations (AIR)

Finnish aviation safety policy As Finland's civil aviation authority, Trafi has set safety as the principal objective in aviation. Trafi strives to maintain a high level of aviation safety and ensure a balance between safety, economy, traffic flow and environmental friendliness. Trafi considers it particularly important that citizens retain a high level of confidence in the air transport system. Trafi supports and facilitates the trial and introduction of new technologies and operating models, with a view to their safe integration into the aviation system and third parties. The safety standards and procedures observed in Finnish aviation comply with ICAO standards and EU requirements. Trafi is committed to defining an Acceptable Level of Safety and an Acceptable Level of Safety Performance for Finnish aviation, taking into account local circumstances and identified key risks in the risk profile of Finnish aviation. The cornerstones of Finnish aviation safety are continuous development of safety management and of a good safety culture, performance and risk based operations management and operator responsibility for the safety of their own operations. Trafi oversees and promotes all of the above. Trafi is committed to maintaining and developing the national safety programme and to ensuring that resources and expertise commensurate with the duties of the aviation authorities are available. This is supported by continuous training and international cooperation.					
SPIs monitored by aviation organisations: - Airworthiness and maintenance organisations (AIR)					
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	Continuous development of safety performance in all domains of the Finnish aviation organisations	AIR-SPI-1	Performance of the organisation's safety management system	Safety objective: improving the performance of the operators' safety management system - Trafi's organisation profile data is used as criteria. <i>Background to the target:</i> - The purpose of the target is that the operators will measure and evaluate their safety management performance and identify areas in which performance should be improved, and work to improve their performance.	A new, system-level SPI/SPT
	The safety level of airworthiness and maintenance operations in Finnish aviation remains high.	AIR-SPI-ORG	Occurrences related to the maintenance organisation's operations <i>Shortcomings in the safe operation of an organisation engaging in maintenance activities at a level that may put aviation safety at risk. NB. maintenance errors, see AIR-SPI-IM.</i> <i>Examples of potential system-level threats:</i> <ol style="list-style-type: none"> Significant lack of resources <ul style="list-style-type: none"> - lack of personnel - shortage of spare parts or materials - lack of required instructions - lack of required tools or service equipment - lack of required premises (e.g. hangar space or workshop facilities) - the organisation's financial situation Significant shortcoming in training or qualifications <ul style="list-style-type: none"> - required training has not been provided Significant shortcoming or fault related to management <ul style="list-style-type: none"> - shifts or tasks planned in violation of regulations, in a manner that does not support safe operation. - serious shortcoming in the organisation's change management - an order to perform a (maintenance) tasks in violation of regulations issued by supervisor/management Significant shortcoming in quality assurance or subcontractor supervision <ul style="list-style-type: none"> - failure to perform audits in compliance with regulations - absence of required supervision Significant lack of communication <ul style="list-style-type: none"> - lateral level (e.g. among maintenance staff, team work) - vertical level (e.g. between supervisor level and maintenance staff) - between departments or other organisation units - between organisations Significant shortcoming in the organisation's safety culture <ul style="list-style-type: none"> - Sanctions for human errors or reporting - General attitude that allows violations of regulations or incorrect action 	Management of risks related to the maintenance organisation's activities: - Organisations have processed system-level threats related to the maintenance organisation's activities in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	A new, system-level SPI/SPT

			7. Significant shortcoming or failure in the management or planning of production - in a procedure or an information system 8. Significant disruption in production - Fire, flood, serious information system failure, strike		
	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The level of runway safety in Finnish aviation remains high.	AIR- SPI-RE	SPI LEVEL 2: Runway excursion (RE) <i>A runway excursion is an uncontrolled exit by an aircraft from a runway during takeoff or landing. This may be unintentional or intentional, for instance as the result of an evasive manoeuvre.</i>	RE and LG+REV risk management: - Organisations have processed RE and LG+REV threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.1 Runway excursions (RE)
		AIR- SPI-RE/LG+REV	SPI LEVEL 3: Landing gear and reverse thrust malfunctions (RE/LG+REV)		LEVEL 3: FASP Annex 2, SPI 3.2 Landing gear and reverse thrust malfunctions (RE/LG+REV)
	The safety level of Finnish aviation remains high.	AIR-SPI-MAC	SPI LEVEL 2: Mid-air collisions (MAC) and near misses <i>In mid-air collisions of aircraft (manned, unmanned) and AIRPROX (aircraft proximity, near miss) situations, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</i>	MAC and TRANS risk management: - Organisations have processed MAC and TRANS threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.3 Mid-air collisions and near misses (MAC)
		AIR-SPI-MAC/TRANS	SPI LEVEL 3: Transponder faults and failures (MAC/TRANS) <i>Cases where the data returned by the transponder system are missing or incorrect, for instance if the transponder on an aircraft does not respond to interrogations or fails, or if an incorrect code has been entered in the transponder.</i>		LEVEL 3: FASP Annex 2, SPI 3.34.6 Transponder faults and failures (MAC/TRANS)
	The safety level of Finnish aviation remains high.	AIR-SPI- LOC-I	SPI LEVEL 2: Loss of control in flight, LOC <i>Loss of control in flight means a situation where the pilot loses control of an airborne aircraft totally or momentarily, resulting in a significant deviation from the aircraft's intended flight path.</i>	LOC-I, FIRE and FCONT risk management: - Organisations have processed LOC-I, FIRE and FCONT threats in their own safety management processes – Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions.	LEVEL 2: FASP Annex 2, SPI 2.5 Loss of control in flight (LOC-I)
		AIR-SPI- LOC-I/ FIRE	SPI LEVEL 3: Fire or smoke on aircraft (LOC-I/FIRE) <i>All cases where fire was detected on an aircraft and cases where smoke was detected that put or could have put the aircraft's safe operation at risk.</i>		LEVEL 3: FASP Annex 2, SPI 3.24 Fire or smoke on aircraft (LOC-I/FIRE) Modification: a more accurate definition will be provided
		AIR-SPI- LOC-I/ FCONT	SPI LEVEL 3: Control system failures (LOC-I/FCONT) <i>Cases involving failures in the control systems of an aircraft, including flight control surface failure, autoflight system failure and control indicator failure (e.g. airspeed and attitude data). Control system failure affects the controllability of the aircraft and the situational awareness of the flight crew, and hence may lead to loss of control or a runway excursion.</i>		LEVEL 3: SPI 3.27 Control system failures (LOC-I/ FCONT) Modification: the definition will be clarified

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	<p>The safety level of airworthiness and maintenance operations in Finnish aviation remains high.</p>	<p>AIR-SPI- MEL</p>	<p>SPI LEVEL 3: Occurrences in Minimum Equipment List and technical log use (MEL)</p> <ol style="list-style-type: none"> 1. Exceeding the repair period allowed by the Minimum Equipment List (MEL). 2. Incorrect use or interpretation of the Minimum Equipment List 3. One-off extension of the repair period allowed by the Minimum Equipment List (RIE, Rectification Interval Extension) through an approved procedure. 4. Errors and shortcomings related to technical log book use (regarding cockpit crew entries). <p>Certain types of aircraft in specific operation must have a Minimum Equipment List, MEL. The MEL is a document listing the systems, instruments and equipment on the aircraft which may be temporarily out of order, as well as the conditions, restrictions and procedures related to this. A one-off extension of the repair period allowed by the MEL may be made if the operator has an approved procedure for this. If this so-called RIE procedure is used frequently, it may be an indication of shortcomings in airworthiness management.</p> <p>Technical faults noted by the flight crew are entered by them in the aircraft's technical log. If such an entry is incorrect or incomplete, repair of the fault may be delayed or ignored.</p> <p>Data sources</p> <ol style="list-style-type: none"> 1. MEL RIE: operators' MEL RIE reports and Air Safety Reports 	<p>MEL risk management:</p> <ul style="list-style-type: none"> - Organisations have processed MEL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	<p>LEVEL 3: FASP Annex 2, SPI 3.34.2 Occurrences in Minimum Equipment List and technical log use (LOC-I/MEL)</p> <p>Modification: the heading, the definition and the Data sources were modified.</p>
	<p>The safety level of airworthiness and maintenance operations in Finnish aviation remains high.</p>	<p>AIR-SPI- MC</p>	<p>SPI LEVEL 3: Occurrences in Airworthiness Management</p> <ol style="list-style-type: none"> 1. Shortcomings in airworthiness management that may undermine aviation safety (occurrence concerning the Part-M airworthiness management organisation, or CAMO). Examples: <ul style="list-style-type: none"> - Airworthiness data is incomplete, incorrect or inconsistent - Shortcomings and errors in maintenance programme - Errors in job queue management - Errors and shortcomings in component administration - Errors and shortcomings in maintenance job order or work order - Shortcomings in AD monitoring - Errors in management/supervision of modifications - Errors and shortcomings in technical log book system, also errors when importing data into the management system - Errors in management of deferred defects - Shortcomings in the management and storage of maintenance records - Shortcomings/errors in maintenance instructions (to the extent these are a Part-M responsibility) - Errors and shortcomings in airworthiness reviews - Shortcomings/errors in Permits to Fly issued by Part-M organisation - Errors/shortcomings in pre-flight check or instructions issued for it - Errors and shortcomings in assessing defects and damages - Errors and shortcomings in monitoring weight and balance data - Errors and shortcomings in control of flight hours and cycles - Shortcomings in supervision of Part-M subcontracting 2. Shortcomings in the activities of Part-M organisation monitoring airworthiness at a level that may undermine aviation safety. Examples: <ul style="list-style-type: none"> - Significant lack of resources - Significant shortcoming or disruption in information systems - Significant shortcoming in training or qualifications - Significant shortcoming or risk related to management - Significant shortcoming in quality assurance or subcontractor supervision - Significant lack of communication - Significant shortcoming in the organisation's safety culture 	<p>MC risk management</p> <ul style="list-style-type: none"> - Organisations have processed MC threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	<p>LEVEL 3: FASP Annex 2, SPI 3.34.3 Occurrences in maintenance and airworthiness monitoring (LOC-I/MC)</p> <p>Modification: the heading and definition were modified.</p>

	Strategic safety objective	Identifier	Safety performance indicator, SPI	Safety performance target (SPT) set for the indicator	Corresponding or updated SPI/SPT of FASP Annex 2 version to be applied until 31 December 2018 / new SPI/SPT
	The safety level of airworthiness and maintenance operations in Finnish aviation remains high.	AIR-SPI- IM	<p>SPI LEVEL 3: Occurrences in maintenance operations (IM)</p> <p>Cases where a maintenance procedure was incomplete or incorrectly carried out and did not fulfil its intended purpose. Examples:</p> <ul style="list-style-type: none"> - Initial tasks of maintenance operation not performed appropriately (grounding, docking, protective pins, safety equipment) - Instructions misunderstood or not complied with - Item installed incorrectly, in incorrect location or not at all. Also chemicals, sealants etc. - Defect or damage missed in inspection - Errors in adjustment, testing, test run etc. - Use of wrong material or component - Switch, circuit breaker etc. left in wrong position or item left in wrong state - Failure to remove landing gear pins, protective plugs or tapes (Cases often associated with shortcomings in the final tasks of a maintenance operation) - Deviation from maintenance procedure - Performing maintenance work with significantly lowered work capacity (significant fatigue, stress, illness, effects of medications or disturbances in the work environment) - Errors or shortcomings in documenting maintenance work - Tool left in aircraft 	<p>IM risk management:</p> <ul style="list-style-type: none"> - Organisations have processed IM threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	<p>LEVEL 3: SPI 3.34.4 Occurrences in maintenance operations (LOC-I/IM)</p> <p>Modification: the definition was modified.</p>
	The safety level of airworthiness and maintenance operations in Finnish aviation remains high.	AIR-SPI- TECH-NICAL	<p>SPI LEVEL 3: Serious malfunctions in aircraft (TECHNICAL)</p> <p>Cases where a technical fault caused a flight to be aborted, an emergency to be declared or an aircraft to be grounded. Examples:</p> <ul style="list-style-type: none"> • engine failure • malfunction of a control, compression or other critical system or device (e.g. propeller or rotor) • serious damage to electrical wiring interconnection system (EWIS) • significant fluid leak or fluid spoiling (e.g. fuel or hydraulic fluid) • significant structural flaw, including rupture, corrosion, wear and tear or delamination • significant maintenance error observed in connection with normal operation <p>Different technical problems in an aircraft may cause a serious incident or an accident if not reacted to in time. Engine failure, especially on a single-engine aircraft, will immediately precipitate a serious incident.</p>	<p>TECHNICAL risk management:</p> <ul style="list-style-type: none"> - Organisations have processed TECHNICAL threats in their own safety management processes - Conducting a risk assessment of their own operations, defining an acceptable level of safety and the necessary control/response levels, identifying and implementing the actions required and monitoring the efficiency of these actions. 	<p>LEVEL 3: SPI 3.34.5 Serious technical problems in aircraft (LOC-I/TECH-NICAL)</p> <p>Modification: the definition was modified.</p>