



Irish Aviation Authority
Irish State Plan for Aviation Safety
Volume 1 – Strategic Safety Priorities
Reference Period 2023-2025

Consultation Draft

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Introduction

The purpose of the State Plan for Aviation Safety (SPAS) is to identify the actions to be taken at State level to address the main safety issues in civil aviation in Ireland. The IAA has implemented State level safety management processes to identify key safety issues and to drive continuing improvements in aviation safety performance in Ireland. These safety management processes meet or exceed the Standards of ICAO Annex 19 and align with safety management processes in ICAO, EASA, and with organisational safety management systems.

The SPAS focuses on the key risks to civil aviation in Ireland with due regard to the risks identified globally via the Global Aviation Safety Plan (GASP), and within the EU in the European Plan for Aviation Safety (EPAS). The IAA participates in the development of the GASP and the EPAS through related ICAO Panels and EASA Advisory Bodies. The SPAS continuously evolves in a proactive manner to address the known operational risks and the risks emerging from new technologies and new operating concepts. The IAA works with stakeholders in the Irish civil aviation system to help identify and mitigate the risks and to strive for continuous improvement in aviation safety.

The State Plan for Aviation Safety (SPAS) consists of two volumes:

- **Volume 1** - focuses on the strategic safety priorities for the SPAS
- **Volume 2** - provides the safety objectives and actions at the detailed level necessary to implement the strategic safety priorities.

The strategic safety priorities for Ireland that will underpin the safety objectives and the detailed actions of the SPAS are identified in Volume 1 of the SPAS. The IAA consults with stakeholders in respect of the strategic safety priorities in the State through standing consultation forums, including State Safety Programme Co-ordination Committee, domain-centric and cross-domain industry consultation groups and the General Aviation Safety Council of Ireland.

This year, to enhance the consultation process for SPAS, the IAA is seeking direct inputs on the strategic safety priorities through web-based consultation on this document, the SPAS Volume 1: Strategic Safety Priorities. The outcome of this consultation will set the strategic safety priorities for the SPAS for the next three years, after which the consultation will be repeated. This document sets out the strategic safety priorities for Ireland for the reference period 2023 to 2025. This document refers to the actions that are contained in SPAS 2021-2024 Volume 2 and the details and status of these actions can be found in the latest published version SPAS 2021-2024 available at <https://www.iaa.ie/safety/state-safety-plan>

1. The Irish civil aviation system

1.1 Irish Civil Aviation System Overview

The aviation sector has emerged from a period of great disruption for the aviation community due to the COVID-19 pandemic. Last year was characterised by a small number of false dawns, as commercial passenger carrying operations were re-started and quickly shut down again, as national governments responded to different variants of COVID-19 that emerged. This year has seen the commercial operations ramping up quickly, with some airlines approaching and even exceeding traffic and passenger levels last seen during 2019, pre-pandemic.

Safety remained paramount during the pandemic and afterwards. The work done in implementing safety management systems at both State and industry level has supported efforts to ensure that even during unprecedented disruption caused by COVID-19 to the aviation organisations and the people working in them, the aviation sector showed tremendous agility and resilience, whilst continuing to operate aircraft safely.

The following table summarises the main sectors of the Irish civil aviation system for 2019, 2020 and 2021 that shows the evolving impact of the pandemic.

Sector	End 2019	End 2020	End 2021
Aircraft Register			
• Commercial Aircraft	800	625	549
• Commercial Aircraft in Storage	32	78	130
• General Aviation (incl Annex 1)	532	547	552
AOC Holders			
• Aeroplane AOC	13	14	14
• Rotorcraft AOC	3	4	3
• Aeroplane NCC	9	9	11
• Rotorcraft SPO	4	5	11
Airworthiness Organisations			
• Maintenance - Part 145	45	38	35
• Maintenance Management – CAMO/CAM/CAO	32	28	32
• Design – DOA	2	2	2
• Production - POA	2	2	4
Personnel Licencing			
• Commercial Pilot	12,271	13,191	13,991
• General Aviation Pilot	1,236	1,476	1,719
• Maintenance Engineer	2,508	2,721	2,871
• ATCO/Student ATCO Licences	229	246	228
Training			
• Approved Training Organisations (Flight Crew)	10	12	14
• Declared Training Organisations/Registered Training Facilities (Flight Crew)	30	30	30

Sector	End 2019	End 2020	End 2021
• Flight Simulators	15	15	14
• Maintenance Training Organisation	9	5	5
• Approved Security Training Organisations	19	25	24
Aerodromes			
• EASA Certified	8	8	8
• Nationally Licenced	14	14	16

1.2 IAA responsibilities

The IAA is responsible for the safety certification, oversight and enforcement of the Irish civil aviation system which it does through:

- Establishing and implementing safety oversight policies and regulations, in conjunction with Department of Transport, as necessary
- Providing the safety oversight resources required, commensurate with the size and scope of the civil aviation system
- Conducting audits, inspections and tests to ensure regulated entities meet the regulatory requirements on an ongoing basis, including requirements for safety management systems
- Implementing safety management processes to identify the main risks to civil aviation and identifying mitigating actions at State level to address these risks
- Monitoring the performance of the civil aviation system in Ireland
- Providing guidance to civil aviation stakeholders on the implementation of safety regulations and safety management
- Promoting safety awareness and the sharing and exchange of safety information with the aviation community to foster the maintenance and improvement of safety and to support the development of a positive safety culture

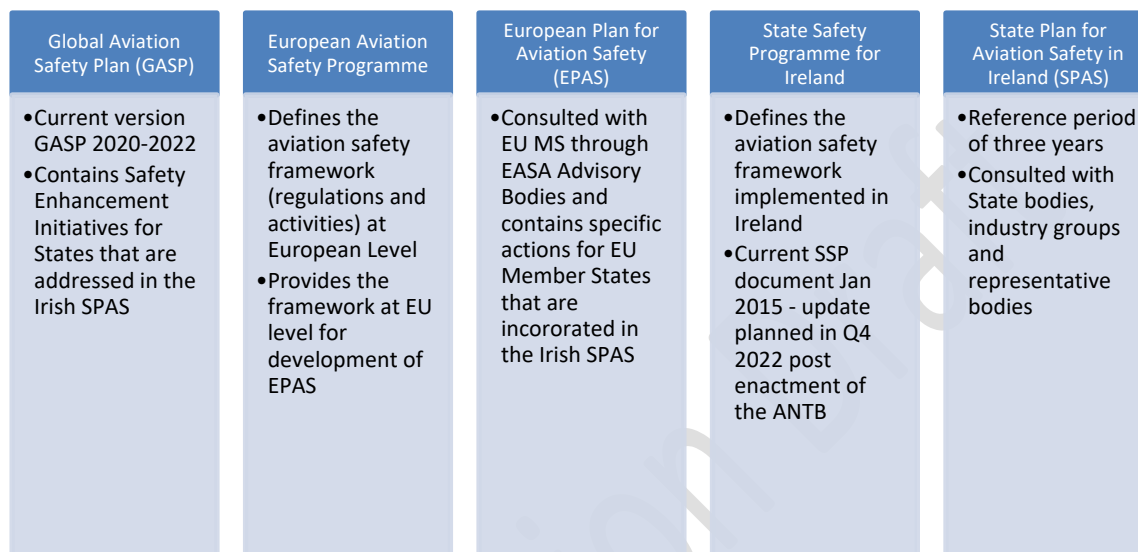
The IAA is also responsible for the oversight of security as set out in the National Civil Aviation Security Programme (NCASP) which it does through:

- Establishing and implementing security oversight policies and regulations, in conjunction with the Department of Transport
- Providing security oversight resources as required, commensurate with the size and scope of civil aviation in Ireland.
- Conducting audits, inspections and tests to ensure regulated entities meet the regulatory requirements on an ongoing basis, including requirements for security management systems
- Implementing security management processes to identify the main risks to civil aviation and identifying mitigating actions at State level to address these risks
- Monitoring the security performance of civil aviation in Ireland
- Providing guidance to relevant stakeholders on the implementation of security regulations and legislation
- Promoting security awareness and the sharing and exchange of security information with the aviation community to foster the maintenance and improvement of security and to support the development of a positive security culture
- Reviewing and approving entities security programmes

2. State Plan for Aviation Safety (SPAS) - Overview

2.1 Global context for safety management

The State Plan for Aviation Safety (SPAS) in Ireland is built on a proactive approach to managing the safety of Irish civil aviation, as required by ICAO Annex 19 (Safety Management) and Regulation (EC) 2018/1139 (EASA Basic Regulation). The SPAS is therefore contextualised in global and European safety management as depicted in the following figure:



2.2 Link to GASP/EPAS

The Irish SPAS is consistent with the goals and objectives of the Global Aviation Safety Plan (GASP) and the European Plan for Aviation Safety (EPAS). The EPAS includes recommended actions for EU Member States (MST Tasks) and these recommendations are included in this Plan, as appropriate for Ireland. SPAS Volume 2 provides specific cross references to GASP Safety Enhancement Initiatives and EPAS MST tasks as appropriate in each of the key safety area addressed in SPAS.

The IAA contributes to the global safety management processes primarily through its active participation in the ICAO Safety Management Panel and other technical panels, the EASA Advisory Bodies, including the Member States Advisory Body (MAB), Technical Boards (TeB), Collaborative Analysis Groups (CAG), Network of Analysts and the EASA Safety Promotion Network. This international collaboration provides the opportunity for the IAA to influence the global and European safety management process based on its own risk assessments, as well as the opportunity to consider lessons learned through the safety management processes employed in ICAO, EASA and other States. The safety issues that impact the Irish civil aviation system are subject to the IAA safety management processes and contribute to the strategic safety priorities in the SPAS.

2.3 Safety management at State level

Each State is responsible for developing its own SPAS, based on its own civil aviation system and associated risks and safety priorities, and the IAA is the responsible authority for developing the SPAS for Ireland. The **safety management** system implemented by the IAA safety regulation division includes risk management processes to;

- **Identify** hazards in civil aviation
- **Risk assess** the associated safety issues to prioritise actions
- **Plan** actions to address the main safety issues (eg as published in SPAS)
- **Implement** the planned actions
- **Monitor** the results

Hazards are identified from analysis of safety information obtained from regulatory oversight activities, safety occurrence reporting and performance monitoring, and are subject to risk assessment to develop safety priorities. Actions are planned to mitigate the risks and the actions that address the key safety issues are included in the SPAS Volume 2. The IAA monitors safety performance at State, sector and organisational levels to establish if the safety objectives to continuously improve aviation safety are being met.

2.4 SPAS safety objectives

Volume 2 of the SPAS identifies the key safety issues that have emerged from the IAA safety management processes, the actions planned by the IAA (State safety regulator) to mitigate the associated risks and the safety objectives that contribute to the overall goal of improving safety performance.

Safety objectives provide a tangible link between the State and regulated organisations and persons in respect of safety management. ICAO Annex 19 and EU Regulations pertaining to safety management require regulated organisations to implement safety management systems. Individual organisations must identify risks specific to their operations and implement risk mitigation strategies to reduce these risks. Organisations must therefore identify and manage their own safety objectives; however, organisations should also consider the safety objectives identified in this Plan, for applicability within their own safety management system(s).

2.5 SPAS Development and Update Cycle

The SPAS development cycle is changing this year to better align with the EASA EPAS update cycle and to facilitate more extensive consultation on SPAS Volume 1, namely, the strategic safety priorities for SPAS.

The amended SPAS development and update cycle now extends to three years as follows:



SPAS Volume 1 (Strategy):

- SPAS Volume 1 will be subject to update and consultation once every three years
- It will establish the SPAS strategy for the following three years, which will be the reference period (RP) for the SPAS.

SPAS Volume 2 (Detailed actions)

- The first issue of SPAS Volume 2 will be released along with SPAS Volume 1 for reference period 2023-2025 in the last quarter of 2022
- An SPAS Progress Report will be issued by end of the 2nd Quarter in each year of the SPAS reference period:
 - To provide the latest status of the detailed actions in the SPAS.
 - To include new or amended actions to address safety issues that emerge within the SPAS reference period.

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3. Strategic safety priorities for SPAS

The strategic safety priorities in SPAS to address two separate areas as depicted in the following figure.



The following paragraphs provide an overview of the key safety issues and associated actions that the SPAS 2021-2024 currently addresses, and in addition provides an overview of issues currently under consideration for inclusion in the next version of SPAS.

Stakeholders are invited to provide feedback on current and proposed SPAS actions in each case.

3.1 Systemic Safety Management at State Level

The safety issues addressed in this chapter include the following

Systemic Safety Management at State level	3.1.1 Continued safety of operations post COVID-19
	3.1.2 Continuously improve safety management at State level
	3.1.3 Separation of IAA safety regulation and service provision functions
	3.1.4 Integrated Risk Management
	3.1.5 Implementation of Risk-Based Oversight
	3.1.6 Competency of regulatory personnel
	3.1.7 Digitalisation
	3.1.8 Oversight of group operations and complex business models
	3.1.9 Regulatory change management
	3.1.10 Implementation of parallel runway operations

3.1.1 Continued safety of operations post COVID-19

The COVID-19 pandemic had a significant impact on aviation regulatory functions during 2020 and 2021. The severe disruption felt by all sectors of the aviation industry necessitated the agile implementation of risk management processes to assess the new safety risks introduced by COVID-19 on continued safe operations by regulated organisations and persons, as well as on the IAA regulatory oversight functions. The COVID-19 risk registers were subject to on-going review and update as the pandemic persisted longer than originally anticipated. Safety oversight functions continued using remote oversight practices where necessary due to COVID-19 related health restrictions, and IAA promoted the key COVID-19 safety messages to assist commercial and private operators during the pandemic.

The current actions in SPAS 2021-2024 Volume 2, Chapter 2.1 include the continued provision of regulatory support and safety promotion to all sectors of Irish civil aviation as aviation operations begin to ramp back up in the post-COVID environment. Regulatory oversight plans are targeting post-COVID-19 ramping up of operations in each domain, focusing on management systems, human performance, human factors and return to service of stored equipment.

No new actions are under consideration for the next version of SPAS.

The IAA invites input from stakeholders on further actions you consider are needed to support you or your organisation in the post-COVID environment.

3.1.2 Continuously improve safety management at State level

The SPAS seeks to continuously improve State-level safety management processes, including enhancing regulatory oversight of organisations SMS, to ensure that these processes continue to comply with evolving ICAO SARPS and EU regulations. The IAA must also ensure that these State-level safety management processes remain fit for purpose in line with the rate of change in aviation, including organisational and technical evolutions.

Some key issues addressed currently in SPAS 2021-2024 Volume 2, Chapter 1.1 include:

- Engaging with ICAO, EU/EASA and other States to help develop rules and implementing guidance for safety management systems
- Continuously Improving State level processes for risk management, performance monitoring and safety promotion
- Improving the processes for sharing safety information to enhance safety management at both State and organisational level
- Improving safety culture in all sectors of the Irish civil aviation system
- Verifying that Human Factors principles are fully integrated into organisational safety management systems
- Implementation of a Flight Data Monitoring (FDM) Forum for Irish operators

Actions under consideration for inclusion in the next version of SPAS include:

- Building resilience and enhancing capability to cope with disruptive events e.g. Ukrainian crisis.
- The establishment of a standing stakeholders forum to further enhance co-ordination between the regulator and all stakeholders on aviation safety management
- The oversight of High-Altitude Operations (HAO) in Irish airspace.
- Separate to the ongoing certification and oversight tasks, conduct an holistic review of the effectiveness of airline provisions concerning support programmes, the psychological assessment of flight crew and the systematic and random testing of psychoactive substances, implemented in 2021 as per Regulation (EU) 2018/1042 amendments.

The IAA invites input from stakeholders on any improvements you feel are needed to the current IAA safety management processes to further support your area of aviation activity, and how you, or your organisation, could contribute to this process.

3.1.3 Separation of IAA safety regulation and service provision functions

In accordance with Irish Government policy and the requirement in EU regulation to ensure that national competent authorities are independent, the safety regulation and air navigation services provision functions of the Irish Aviation Authority is planned to be separated in 2022 and the IAA safety regulatory function will merge with the economic Civil Aviation Regulator (CAR). This major organisational change impacts the State Safety Programme and robust

change management procedures must be applied to ensure there is no disruption to regulatory functions or air navigation services, during or after the change.

The change requires new primary legislation which is addressed in the Air Navigation Transport Bill 2020 (ANTB) available at <https://www.oireachtas.ie/en/bills/bill/2020/72>. The primary purpose of the ANTB is to remove the air navigation service provider from the IAA and establish it as a separate commercial company, and to dissolve CAR and to transfer its functions and personnel to the IAA. The ANTB was initiated in Dáil Éireann on 4th December 2020 and is currently at Seanad committee stage.

The SPAS 2021-2024 Volume 2, Chapter 1.2 includes actions that focus on the continuity of regulatory functions and air navigation services during, and after, the organisational change project. One of the over-riding principles of the separation project, is that there should be minimal impact on the current IAA staff responsible for performing key operational tasks in safety regulation and in the provision of air navigation services.

The IAA invites input from stakeholders on any particular difficulties for you, or your organisation, arising from the IAA separation project, that should be addressed in SPAS.

3.1.4 Integrated Risk Management

The integration of risk management to address the interfaces between aviation safety and aviation security was introduced as a safety priority for the Irish SPAS in 2021. This is in recognition of the emerging risks posed to all aviation sectors in respect of cybersecurity and the fact that the implementation of security measures in airports and on aircraft can directly impact aviation safety.

SPAS 2021-2024 Volume 2, Chapter 1.3 currently addresses the subject of integrated risk management of aviation safety and aviation security. The SPAS actions reflect the preparatory work for implementing forthcoming EU regulations on information security management systems, as well as addressing the need for greater sharing of safety information of mutual interest, between the authorities responsible for aviation safety and aviation security.

During the COVID-19 pandemic, the IAA worked closely with the Department of Transport and health authorities in EASA/Ireland, to support the development, implementation and monitoring of COVID-19 related health protocols, as applicable to aviation. In the next version of SPAS, we will build on that experience and develop actions to support an integrated approach in risk management between authorities responsible for aviation safety and authorities responsible for public health.

The safety implications of changes necessary to support sustainable aviation need to be considered. Currently, the European Plan for Aviation Safety, addresses the certification of new environmentally friendly technologies and aviation fuels, which are within the competence of EASA. The IAA focus is on impact of environment change on safe operations of aircraft. Also under consideration is the risks associated with severe weather events.

The IAA invites input from stakeholders on actions you feel are needed to support an integrated approach to risk management as described, and/or identify any other domains with transversal risks impacting aviation safety that you feel may need to be included in the SPAS.

3.1.5 Implementation of Risk-Based Oversight

The IAA has implemented, and maintains, a comprehensive regulatory oversight programme to oversee the activities of organisations and persons involved in the Irish civil aviation system. This regulatory oversight programme consists of a range of audits, inspections, tests and checks, using competent staff supported by regulations, policies, procedures, tools and training, to allow the IAA to fulfil its obligations.

The traditional compliance-based safety oversight process employed by the IAA is now adapted using a risk-based approach to ensure that the IAA targets its resources towards areas of greater safety concern. The IAA process, which depends on ongoing risk assessment, risk profiling and performance monitoring at all levels in the civil aviation system, was used successfully in a very real sense during 2020/2021, when the COVID-19 pandemic significantly impacted the normal operational environment and the regulatory oversight programme had to be agile enough to quickly respond to identify and target the areas of greatest risk.

Risk-based oversight should to the greatest extent possible be based on data-based decision making and the current actions in SPAS 2021-2024 Volume 2, Chapter 1.4 are focused on developing data collection and analysis methods and tools to support the risk assessment and risk profiling processes across all aviation domains.

No new actions are planned for the next version of SPAS.

The IAA invites input from stakeholders on actions you believe are needed to further support risk-based oversight in your domain, and how you or your organisation could contribute to this process.

3.1.6 Competency of regulatory personnel

The IAA must ensure continued availability of competent personnel in the face of strong demand for resources from external organisations both within and outside of civil aviation. The IAA ensures it offers competitive terms and conditions to retain staff and attract new staff as and when needed. The IAA continuously reviews existing resources in the context of the new obligations arising from the regulatory changes (see also Ch 3.1.9 below) and organisational change management as well as meeting the strategic safety priorities outlined in the SPAS.

SPAS 2021-2024 Volume 2 Chapter 1.6 identifies current actions to address development of inspector competencies in risk-based oversight and safety analysis, as well as oversight of SMS and Human Factors. Actions on competency requirements relating to technical requirements such as oversight of EBT/CBT, oversight of fuel planning/management schemes and flight time limitations were completed and closed in previous versions of the SPAS.

New actions are being considered in the next version of SPAS particularly to address oversight of cybersecurity and oversight of emerging technologies, including drones/urban air mobility, vertiports, U-Space, high airspace operations, electric propulsion, alternative fuels.

The IAA invites input from stakeholders on priority areas you consider that need to be addressed to enhance the competency of regulatory personnel in your domain.

3.1.7 Digitalisation

The regulatory staff in IAA are provided with modern office accommodation and state of the art IT equipment with online access to accommodate remote working (eg by inspectors working in external locations).

The IAA Digitalisation project represents a large capital investment by the IAA to transform the current safety regulation service offering through maximising business activity within the digital environment. This project will see business processes, such as client management, applications processes (approvals, registration, certification, licensing etc.) and oversight management processes migrate to online platforms across all domains over the next few years. Safety management is greatly enhanced through data-based decision making, and the new platform will greatly improve the ability of the IAA to extract safety intelligence from the new digital platform. In addition, the new platform creates the potential for digital communications portals to facilitate exchange of safety information between the regulator and regulated entities.

SPAS 2021-2024 Volume 2, Chapter 1.6, currently addresses the roll-out plans for the regulatory oversight applications on the new IAA digital platform. In addition, this chapter addresses the upgrade of the occurrence reporting system from ECCAIRS I to ECCAIRS II in support of a pan-European project.

New actions are being considered for the next version of SPAS to address the implementation of EU Qualified Electronic Signatures (QES) which will support digital certification and licensing tasks.

The IAA invites input from stakeholders on actions you consider that need to be addressed to enhance the digital experience for you, or your organisation, with the IAA.

3.1.8 Group operations and complex business models

The aviation industry continues to evolve, and this has led to increased complexity in the business models employed by aviation organisations and the number, types and geographic spread of the interfaces between the organisations and their contracted services. This increasing complexity provides increased challenges for the organisations Management Systems, as well as for safety oversight.

Group operations have also emerged which adds further challenges in that Group Safety Management Systems may support certificate holders included within the group, that have been certified and are overseen in different jurisdictions by different regulatory authorities, thereby requiring enhanced co-ordination between the regulatory authorities involved.

The current actions in SPAS 2021-2024 Volume 2, Chapter 1.7 reflects the leading role the IAA plays in this regard within Europe. The IAA helped develop the EASA Guidance document “Practical Guide – Management of Hazards related to new business models of commercial air transport” and is reviewing the implementation of the related recommendations by affected Irish organisations during safety oversight activities. In addition, the IAA has been assisting EASA in developing EU guidance for regulators on the effective oversight of group operations, which is due to be issued in mid-2022.

New actions may be considered for the next version of the SPAS following the publication of the EASA guidance on oversight of group operations and the development of regulations to support a single CAMO in Group operations.

The IAA invites input from stakeholders on actions you consider that need to be addressed to enhance the IAA oversight of group operations and complex business models.

3.1.9 Regulatory change management

Although the competence for rulemaking in civil aviation affecting Irish interests is largely vested in EASA, the new EU regulatory framework includes requirements for both national competent authorities and regulated entities. Accordingly, the actions for the IAA in respect of regulatory changes, as competent authority for Ireland, are two-fold:

1. To implement the requirements for competent authorities and advise affected industry stakeholders of the necessary changes to IAA procedures in this regard
2. To provide guidance to industry stakeholders on the implementation of requirements for regulated entities, including assisting in the interpretation of requirements and means of compliance, and review/acceptance of alternative means of compliance.

The safety regulatory framework is constantly being updated to improve safety and efficiency in aviation and to support fair competition within EU. Regulators and regulated entities employ robust regulatory change management processes to ensure continued compliance with the regulations. Whereas many of the regulatory changes are minor in scope and focused on specific topics or within specific domains, some regulatory changes present significant implementation challenges, often involving cross domain interfaces, that need enhanced co-ordination between the regulator and regulated entities to support their implementation.

SPAS 2021-2024 Volume 2, Chapter 2.3 addresses some of the main regulatory changes that are currently being implemented with focus on those regulatory changes that have emerged to address known safety risks, including:

- Drones
- Medical Fitness for flight, including support programmes
- Ground Handling
- Updates to national regulations.

In the next version of SPAS, it is intended to broaden the subject of drones to include all aspects of urban air mobility (manned/unmanned) and vertiports, which will likely lead to the development of a specific SPAS Chapter in this respect. Additional tasks will be considered in conjunction with the IAA high level policy objectives for the safe integration of Drones in Irish airspace, including, latest EASA Rulemaking Programme, geographical zones, U-Space, drone market surveillance, enforcement policy etc.

The IAA invites input from stakeholders on forthcoming significant regulatory changes impacting you, or your organisation, that should be considered for inclusion in the SPAS.

3.1.10 Parallel Runway Operations

Although this is a very specific subject affecting one airport, it was included in the SPAS since this is the first implementation of parallel runway operations in a commercial airport in Ireland. This cross-domain project involves different regulatory oversight activities, including oversight of flight operations, airport operations and air navigation services provision and the interfaces between them.

The current actions in SPAS 2021-2024 Volume 2, Chapter 2.6 focus on an integrated oversight approach to verify that cross-domain issues are fully addressed and to conduct ongoing safety analysis of occurrences at the airport during and after the project implementation phase.

No further actions are planned for the next version of SPAS in this regard.

The IAA invites input from the stakeholders involved in the parallel runway project on additional support needed for you, or your organisation, that should be considered for inclusion in SPAS.

3.2 Operational Safety

3.2.1 Introduction

Operational risks are the risks of negative safety outcomes arising from aviation operational activities across all sectors of the civil aviation system including flight operations, air navigation services, aerodrome operations, aircraft production and maintenance, training etc. These risks are identified in IAA sector risk registers and actions are prioritised based on risk assessments. The IAA risk registers also take due cognisance of the risks identified through the EU risk management processes and identified in Volume 3 of the EASA EPAS available at <https://www.easa.europa.eu/document-library/general-publications/european-plan-aviation-safety-2022-2026> .

Risk Registers have been developed on an aviation sector basis as follows:

- Flight Operations Fixed Wing (Part OPS/Part NCC)
- Rotorcraft operations
- Air Traffic Management / Air Navigation Services
- Aerodrome Operations
- Continued Airworthiness
- General Aviation
- Drones and Urban Air Mobility

The management of operational safety risks is the responsibility of the regulated organisations (eg via SMS) and licensed personnel, however, the SPAS identifies the actions taken at State level to support civil aviation in addressing these operational risks. In particular, the State competent authority conducts oversight on the effective performance of organisations' safety management systems and it can facilitate the sharing of information on risk between organisations and persons operating within a sector, as well as addressing cross domain risks at the interfaces between sectors. The IAA shares safety information with organisations and persons during regulatory oversight and safety promotion activities.

The SPAS strategic priorities for each of these sectors are addressed separately in the following chapters.

3.2.2 Flight Operations – Fixed wing

Commercial fixed wing operations in Ireland are performed by organisations granted an Air Operations Certificate in accordance with EU Regulations. These organisations are passenger or cargo operators, and they perform the majority of commercial aircraft activity in Ireland.

The EU regulatory framework (Part NCC) also include provisions for private operators to use complex aircraft (eg jet aircraft) for business purposes (traditional business jet operations). Although these are not commercial operations, the complexity of the aircraft involved, and the associated operations are such that they are exposed to very similar risks as AOC operations and as such are included in this sector.

The EASA Air Operations Community Network

<https://www.easa.europa.eu/community/content/air-operations-together4safety> is a very useful resource to keep updated on latest pan-EU information on safety issues and associated safety promotion material in this domain.

The key risk areas for fixed wing Part OPS/NCC fixed-wing operations are:



The current actions in the SPAS 2021-2024 Volume 2, Chapter 3 include actions to address these key risk areas including:

- targeted oversight tasks;
 - oversight planning targeting the management of SPAS key risk areas by AOC Holders/NCC declared operators (eg during SMS oversight), as applicable to the operator
 - review of the level of implementation by AOC Holders/NCC declared operators of recommendations for improving aviation safety, including GAPPRE (RE) and EAPPRI (RI)
 - auditing the effectiveness of local runway safety teams (RI/RE)
- safety promotion tasks;
 - to address the hazards relating to the carriage of lithium batteries (CABIN)
 - to address hazards caused by unruly passenger behaviour in aircraft (CABIN)

New actions will be included in the next version of SPAS based on updates to IAA sector risk registers and associated risk assessment.

The IAA invites input from stakeholders involved in commercial fixed-wing flight operations on additional risk areas and actions that you feel should be considered for inclusion in SPAS.

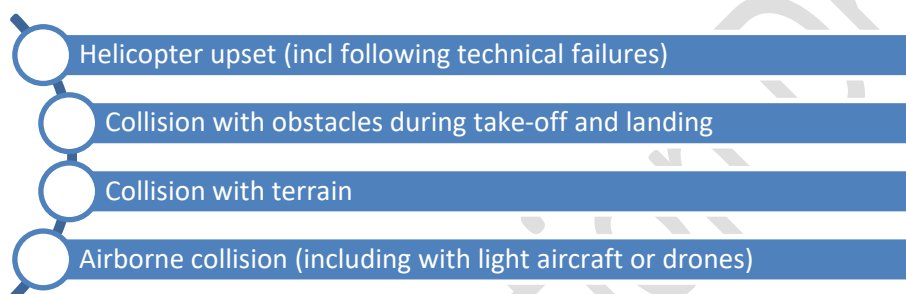
3.2.3 Rotorcraft Operations

Rotorcraft operators in Ireland perform a wide range of highly specialised operations to meet different demands within the State, including passenger transport, medical emergencies, offshore operations, search and rescue, survey work and others. This area includes four types of operations:

- Commercial operations conducted by AOC holders
- SPO (aerial work), such as survey, advertisement, photography
- National SAR operations involving onshore and offshore operations
- non-commercial operations

Although each rotorcraft operational type has its own specific risks, they all share many risks in common and are thus addressed in a common rotorcraft risk register.

The top risks areas for rotorcraft operations identified in Ireland and in wider EU/Global assessments are:



The IAA is actively supporting the EASA initiatives to help improve the safety of helicopter operations in accordance with the EASA Rotorcraft Safety Roadmap. This roadmap addresses many issues to improve rotorcraft safety including rotorcraft design, training and safety promotion. The EASA Rotorcraft Community Network <https://www.easa.europa.eu/community/rotorcraft> is a very useful resource to keep updated on latest pan-EU information on rotorcraft safety issues and associated safety promotion material.

The current actions in SPAS 2021-2024 Volume 2, Chapter 2.5 address the establishment of a dedicated helicopter flight operations forum involving the IAA and Irish helicopter operators, and the need for ongoing safety promotion in this domain. The actions also include the establishment of low-level Helicopter IFR routes both within and outside controlled airspace.

New actions will be included in the next version of SPAS based on updates to IAA sector risk registers and associated risk assessment.

The IAA invites input from stakeholders, particularly in the rotorcraft domain, on additional risk areas and actions for rotorcraft operations, that should be considered for inclusion in SPAS.

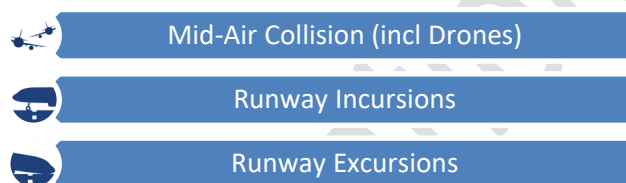
3.2.4 Air Traffic Management / Air Navigation Services (ATM/ANS)

The IAA ATM/ANS service provider (to be re-branded as AirNav Ireland on enactment of the ANTB) provides ATM/ANS in controlled airspace in Ireland, including:

- Air Traffic Services, including
 - Air Traffic Control
 - Flight Information
 - Alerting
- Communication, Navigation and Surveillance services
- Aeronautical information
- Airspace Management
- Air Traffic Flow Management.

The IAA service provider provides enroute services for North Atlantic Traffic at Shannon ACC and North Atlantic Communications at Ballygireen, Co Clare, as well as terminal services at the three State airports (Dublin, Shannon and Cork). In addition, the IAA service provider operates the Aeronautical Rescue Co-ordination Centre for Ireland. Limited Air Navigation Services are also provided by approved service providers at six non-State airports.

The key operational risk areas identified in the ATM/ANS domain are:



The current actions in the SPAS 2021-2024 Volume 2, Chapter 3 include actions to address the key risk areas for ATM/ANS, including:

- targeted oversight tasks;
 - oversight planning targeting the management of SPAS key risk areas by organisations (eg during SMS oversight), as applicable to the organisation
 - review of the level of implementation by ANSP's of recommendations for improving aviation safety, including GAPPRE/EAPPRE (RE) and EAPPRI (RI)
 - auditing the effectiveness of local runway safety teams (RI/RE)
- safety policy driven tasks;
 - encouraging the implementation of SESAR Solutions that could help mitigate operational risks (eg MAC, RI)
- safety analysis tasks;
 - risk modelling and assessment of runway safety in the ATM/ANS domain (RI/RE)

New actions will be included in the next version of SPAS based on updates to IAA sector risk registers and associated risk assessment.

The IAA invites input from stakeholders, particularly those involved in the provision or use of ATM/ATS services, on additional risk areas and actions that you feel should be considered for inclusion in SPAS.

3.2.5 Aerodrome Operations

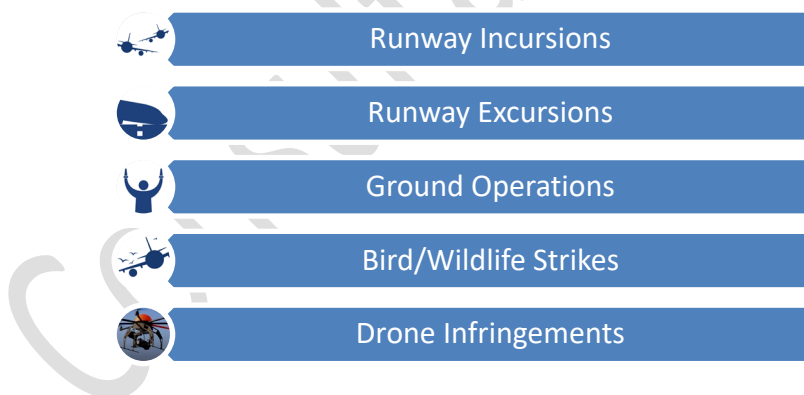
Aerodromes within Ireland consist of three main types:

- Certificated Aerodromes per EU Regulation No. 139 of 2014, which are open to public use and primarily serve commercial air transport. There are currently 8 aerodromes certified to EU regulation in Ireland.
- Nationally Licensed public aerodromes, which are open to public use and serve commercial operations in cases that are not currently within the scope of EU regulations. There are currently 5 nationally licensed public aerodromes in Ireland.
- Nationally licensed private aerodromes, which are not open to public use but require to be licensed to facilitate flight training. There are currently 5 nationally licensed private aerodromes in Ireland.

Details of the current certificated and licensed aerodromes are published in AIP Ireland, AD Section 1.5 – Status of Certification of Aerodromes.

In limited circumstances, a declaration can also be made to the Authority to allow for the use of an unlicensed aerodrome by aircraft engaged in instruction in flying, there are currently 5 airfields where such a declaration is in place.

The key operations risk areas identified in the Aerodromes domain are:



The current actions in the SPAS 2021-2024 Volume 2, Chapter 3 include actions to address the key risk areas for aerodromes including:

- targeted oversight tasks;
 - oversight planning targeting the management of SPAS key risk areas by organisations (eg during SMS oversight), as applicable to the organisation
 - review of the level of implementation by aerodrome operators of recommendations for improving aviation safety, including GAPPRE (RE) and EAPPRI (RI)

- implementation of the recently introduced ICAO runway surface conditions Global Reporting Format (RE)
- auditing the effectiveness of local runway safety teams (RI/RE)
- safety policy driven tasks;
 - encouraging the implementation of SESAR Solutions that could help mitigate operational risks (eg RE/RI)
- safety analysis tasks;
 - safety analysis to support National Bird/Wildlife Hazard Committee in Ireland (WILD)
- safety promotion tasks;
 - to address hazards caused by unruly passenger behaviour on the ramp.

New actions will be included in the next version of SPAS based on updates to IAA sector risk registers and associated risk assessment.

The IAA invites input from stakeholders, particularly those involved in aerodrome operations, on additional risk areas and actions that you feel should be considered for inclusion in SPAS.

3.2.6 Continued Airworthiness

Continued airworthiness refers to both the management of continued airworthiness and the execution of maintenance. The airworthiness domain has been historically subject to Quality Management Systems, however the introduction of requirements for Safety Management Systems (SMS) in airworthiness domain began with the establishment of requirements for SMS for Continued Airworthiness Management Organisations (CAMO) in Commission Implementing Regulation (EU) 2019/1383. The implementing regulations to require SMS for Part 145 organisations and Part 21 Production Organisations is planned for 2023.

The implementation of an SMS is a complex task that may take a considerable length of time to mature before becoming an effective safety management tool for an organisation. SMS requirements have been established in other aviation domains (eg flight operations, air navigation services, aerodromes) for many years in some cases, and the experience gained by the IAA in oversight of the SMS in these organisations can be used to assist airworthiness organisations in developing and maturing their own SMS, e.g. by providing SMS training courses specifically tailored to airworthiness organisations.

The current action in SPAS 2021-2024 Volume 2, Chapter 2.4 focuses on the need to assist airworthiness organisations in assessment of risk and development of associated mitigations. An additional action is included to address a specific issue identified by EASA concerning the risk of fraud in Part-147 examination.

There are no further actions planned for the next version of SPAS

The IAA invites input from stakeholders, particularly in the airworthiness domain, on additional risk areas and actions that you feel should be considered for inclusion in SPAS.

3.2.7 General Aviation

The SPAS also addresses the operational risks for those involved in general aviation. General Aviation (GA) in Ireland is defined as any aviation activity not categorised as Commercial Air Transport (CAT) or addressed under Part NCC declaration. It includes aviation activities regulated under European and National legislation such as.

- specialised operations (Part SPO) including aerial photography, surveys and parachute support operations;
- non-commercial operations using certified non-complex aircraft (Part NCO) such as private flying, pilot training, introductory flights, and cost-sharing flights
- leisure flying involving non-certified aircraft (ie the so called Annex 1 aircraft)

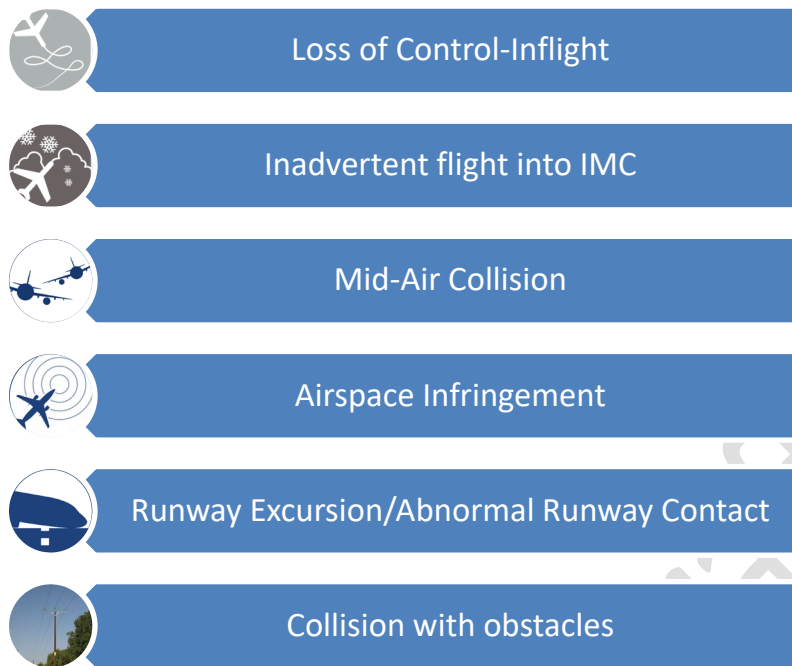
There are over 550 registered GA aircraft in Ireland.

The IAA supports the General Aviation Safety Council of Ireland (GASCI) which seeks to identify flight safety risks and minimise them through education, training and shared experience amongst the general aviation community. GASCI has representatives from most sectors of general aviation in Ireland and includes representatives from the IAA and AAIU. GASCI provides safety information on its website www.GASCI.ie and twitter @gasci_ie. The IAA risk register for general aviation is informed by the key risks identified by GASCI which also considers the pan-EU identified risks in the EASA risk portfolio for this domain.

GASCI has provided a huge step-forward in safety promotion in general aviation in Ireland over the past decade by hosting safety evenings for the GA community at different venues throughout Ireland, with presentations and videos addressing the key risks and in recent times hosting online safety evenings on Zoom. The IAA provides financial and logistical support for GASCI activities.

The EASA General Aviation Community Network <https://www.easa.europa.eu/community/ga> is also a very useful resource to keep updated on latest pan-EU information concerning GA safety issues and associated safety promotion material.

The current version of SPAS addresses the following key risk areas for general aviation:



SPAS 2021-2024 Volume 2, Chapter 3 currently includes actions to address the key risk areas in general aviation including:

- safety promotion tasks;
 - Developing and promulgating safety information to address the key safety areas and promote a positive safety culture
 - Organising safety evenings for general aviation to present safety information
 - Using website and social media platforms to target intended audience
- safety policy driven tasks;
 - continue to support the work of GASCI
 - review airspace design to help eliminate unintentional airspace infringement at the margins of Class C/G
- targeted oversight tasks;
 - focus on learning objectives in the “Meteorological Information” part of PPL/LAPL syllabus with GA Training organisations

New actions will be included in the next version of SPAS based on updates to IAA GA sector risk registers and associated risk assessment.

The IAA invites input from stakeholders, particularly those involved in general aviation, on additional risk areas that you feel should be considered for inclusion in SPAS.

3.2.8 Drone Operations

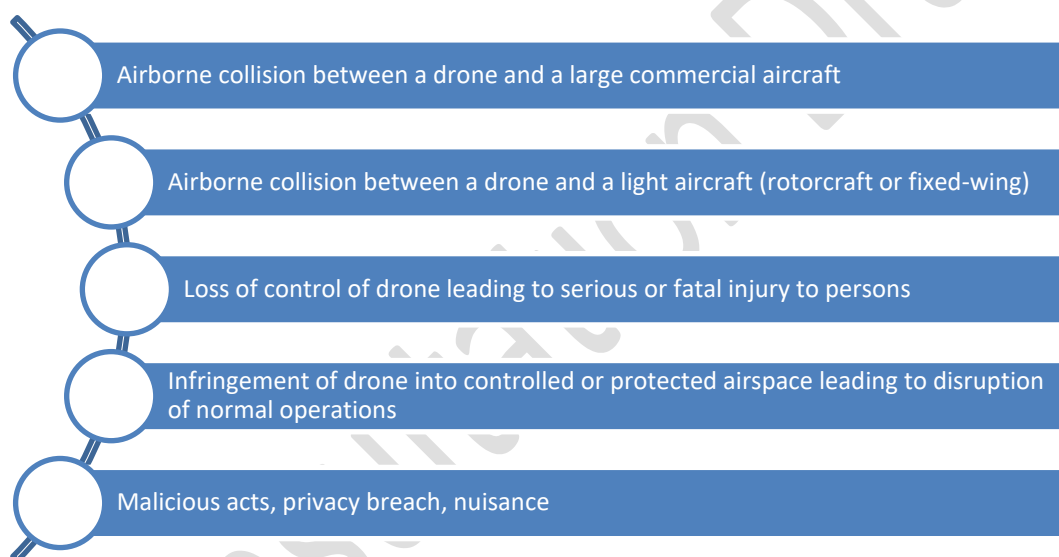
Whereas the IAA is fully supportive and encourages the ongoing development of the Drone industry in Ireland, its primary focus as safety regulator is the safe integration of Drone operations in Irish airspace. UAS operations cover a wide range of use cases and scale of operations, often in non-traditional aviation sectors. Examples of activities that Drone operations can support include aerial photography and videography, farming and agriculture,

construction, package deliveries, sensory analysis and inspection, geographic mapping, medical emergency support, law enforcement, passenger transport, recreational, sport and entertainment, monitoring and surveillance, search and rescue, and recreational, sport and entertainment.

The level of drone activity in Ireland continues to grow with, at time of writing:

- 6,675 Drone operators
- 10,917 Remote Pilots A1/A3 and 1,096 Remote pilots A2
- 229 STS approvals
- 76 operational authorisations
- 2 Light UAS Operator Certificates (LUCs)

The top risks areas for drone operations identified in Ireland and in wider EU/Global assessments are:



The European regulatory framework takes a risk-based approach to regulation of UAS, splitting operations into three categories with increasing risk:

- Open: Lower-risk ops, safety ensured provided the operator complies with the relevant requirements.
- Specific: riskier operations, safety ensured by the operator obtaining an operational authorisation from the competent aviation authority. To obtain authorisation a risk assessment is required to determine the requirements necessary for the safe operation.
- Certified: safety risk is high, certification of the operator, and the drone, along with the licensing of the remote pilot(s), is required to ensure safety.

In addition to the enforcement of the regulations, the use of safety promotion is a key tool used by the regulator for drone operations. The IAA has a dedicated website to support Drone operations in Ireland at <https://www.iaa.ie/general-aviation/drones>. In addition, the EASA

website <https://www.easa.europa.eu/domains/civil-drones> provides further information on the European regulatory framework concerning drone operations.

The current actions in the SPAS 2021-2024 address the implementation of IAA high level policy objectives for safe integration of drone operations and the implementation of the EU regulatory framework (ref also Chapter 3.1.9 above).

Further actions are being developed to address the safety risks associated with drone operations. To this end the IAA encourages the reporting of Drone related aviation safety incidents to the IAA at <https://www.iaa.ie/safety/safety-reporting>. Such drone related incidents include actual or near collision with aircraft, infringement by drones into controlled or protected airspace, loss of control of the drone leading to serious or fatal injury to persons, loss of control of the drone leading to near miss with persons or damage to property or the drone itself, failure of drone safety features. These reports enable us to learn more about the current level of risk and thereby identify the best approach to mitigating these risks.

The IAA invites input from stakeholders, including those involved in Drone operations, on additional risk areas and actions for drone operations, that should be considered for inclusion in SPAS.

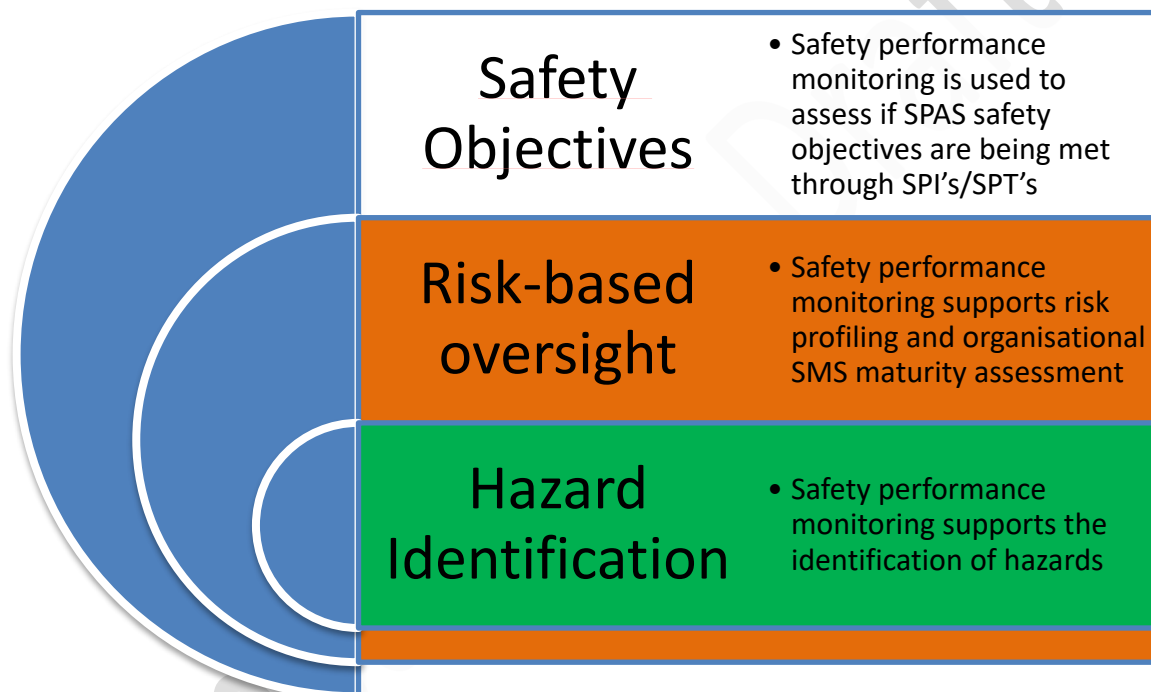
4. Safety Performance Monitoring

4.1 Performance Monitoring in IAA

4.1.1 Overview

Performance monitoring is a key pillar of the safety management processes implemented by the IAA. The IAA monitors the performance of the civil aviation safety system across all sectors.

Performance monitoring in the IAA supports different activities in the IAA safety management system as depicted in the following figure:



The development of safety performance indicators (SPI) and safety performance targets (SPT) across all sectors in Irish civil aviation remains a work in progress and is one of the ongoing actions in the SPAS Volume 2. This will always be an ongoing task as the safety risk picture is constantly changing requiring new safety objectives to be developed and consequently creating new requirements for performance monitoring.

4.1.2 Assurance of Safety Objectives

The primary function of safety performance monitoring as envisaged in ICAO Annex 19 is to provide assurance that safety objectives are being met, and this may be accomplished through development of safety performance indicators with associated safety performance targets, where appropriate. The safety objectives of the SPAS are monitored by the IAA at the sector level. Organisations are responsible for developing their own safety objectives and associated monitoring of their own safety performance; however, organisations should

consider the State level safety objectives as outlined in SPAS as part of their SMS processes, in so far as these safety objectives are appropriate to their own operations.

4.1.3 Supporting Risk-based Oversight

The safety information derived from safety performance monitoring at sector and individual organisation level can support risk-based oversight planning by providing the information necessary for purposes of risk profiling to determine areas of greater need of attention. In addition, safety performance information can provide the means to support both regulators and organisations in their assessment of the effectiveness of an organisations safety management system and to support continuing improvements in this regard.

4.1.4 Identifying new hazards

Safety information derived from safety performance monitoring may identify new hazards for a specific sector (eg SPI's with adverse trends across a full sector) that may be added to the sector risk registers for appropriate risk assessment and risk mitigation.

4.2 Safety Objectives, SPI's and SPT's

The SPAS identifies the safety objectives for the State and the associated safety performance indicators and targets. These are detailed in Chapter 5 below.

The IAA invites input from stakeholders, on the safety objectives, SPIs and SPTs identified in SPAS Volume 1, Chapter 5, and to suggest changes necessary to better support you, or your organisation.

4.3 Safety Performance Reporting

The IAA publishes the Annual Safety Performance Review each year (<https://www.iaa.ie/safety>) that provides aggregated and dis-identified safety information on the main outcome-based safety performance indicators (eg accidents, serious incidents, occurrences) across the different aviation sectors.

More granular sector-based performance reports are developed on a weekly and quarterly basis to support the IAA safety management processes. In addition, sector-based or thematic performance reports or presentations, containing aggregated disidentified data, are developed to support safety meetings and workshops with State level bodies (eg ICAO, EASA or other State Authorities) and with certified stakeholders or general aviation.

Safety information derived from safety performance monitoring may also be developed on an individual organisation basis to support IAA managers and inspectors conducting safety review meetings or safety oversight activities (e.g. SMS effectiveness).

5. SPAS Safety Objectives, SPI's and SPT's

The following two tables summarise the Safety Objectives (SO) for the State as outlined in the State Plan for Aviation Safety, the related Safety Performance Indicators (SPI) and Safety Performance Targets (SPT). In each case the table identifies the safety performance indicators the IAA has already developed and monitors from the regulator's perspective.

Individual organisations (regulated entities) are responsible for developing their own SO/SPI/SPT's as part of their Safety Management Systems, and this activity is subject to oversight by the IAA. The table clarifies the expectations of the IAA from the affected organisations in respect of each of the safety objectives contained in the SPAS. Regulated entities must develop their own SPI's as part of their own SMS processes, however the SPI's developed by the IAA at State level may be considered within the SMS of individual regulated entities, as appropriate to their own activities.

The IAA (regulator) will monitor the safety performance indicators on a **sector basis** primarily using the data collected from the occurrence reporting system and IAA oversight audit management systems. External data provided by ICAO (online platforms) and EASA (eg RAMP inspections, continuous monitoring reports) is also used as appropriate. Regulated entities are responsible for monitoring their own safety performance indicators using their own management systems, which may include the benefits of using operational data recording systems to help monitor some safety performance indicators.

Table 1: Safety Management

No	Safety Objective	What IAA will monitor (SPIs)	What IAA expects organisations to do	Safety Performance Targets
SM.1	To ensure that appropriate safety risk management processes are applied in civil aviation during ramping up of operations post-COVID-19 pandemic.	Aircraft accidents, serious incidents, incidents and non-compliance findings attributable to inadequate management of operations post COVID-19 pandemic.	Develop and monitor their own SPI's in respect of post-COVID-19 operations, to include the related IAA SPI's as appropriate to them.	No aircraft accidents or serious incidents or significant (Level 1) findings of non-compliance attributable to inadequate risk management of operations post COVID-19 pandemic
SM.2	To continuously improve implementation of aviation safety management at State level in Ireland.	<p>ICAO SSP Dashboards Indicators:</p> <ul style="list-style-type: none"> • ICAO SSPIA PQ Self-Assessment completion • ICAO Safety Oversight Index (SOI) • ICAO USOAP EI Score • ICAO USOAP CC/EFOD Completion <p>EASA Dashboard Indicators:</p> <ul style="list-style-type: none"> • EPAS MST tasks completion • EASA Standardisation Dashboards • Use of EASA MS Assessment Tool 	N/A	<p>ICAO SSP Dashboard Targets</p> <ul style="list-style-type: none"> • SSPIA PQ self-assessment completed on ICAO OLF by end 2022 • Maintain ICAO SOI > 1 • Maintain EI Score > 90% • Maintain Average CC/EFOD completion score > 90% <p>EASA Dashboards Targets</p> <ul style="list-style-type: none"> • MST actions completed via SPAS, as appropriate • Standardisation rating index above EU average • MSAT Used in SMS oversight in >90% of regulated organisations by end 2022

No	Safety Objective	What IAA will monitor (SPIs)	What IAA expects organisations to do	Safety Performance Targets
		Occurrence reporting rates of regulated organisations		Positive trends in occurrence reporting rates
SM.3	To ensure there is no disruption to regulatory functions and provision of air navigation services during the IAA separation project.	Project implementation indicators. IAA SRD Internal compliance monitoring – findings of non-compliance. Regulatory Oversight - findings of non-compliance for IAA ANSP.	N/A	No significant adverse findings attributed to inadequate change management and risk management processes, during organisational separation project.
SM.4	To continuously improve aviation safety through an integrated approach to risk management.	Tier 1 SPI's: Rate of aircraft accidents and serious incidents caused by aviation security operations in Ireland. Trend monitoring of security related safety occurrences	Develop and monitor their own SPI's in respect of security related safety occurrences.	No security related accidents or serious incidents caused by inadequate security operations in Ireland. Positive trends in security related safety occurrences reported to IAA.
SM.5	To implement effective risk-based oversight methods across relevant sectors of the Irish civil aviation system.	Organisation risk profile completion rate Processes available to assess effectiveness of RBO methodologies	N/A	ORP's completed in >90% of regulated organisations in OPS, ADR, ANS by end 2022 and AWS by end 2024 Processes to assess the effectiveness of RBO methodologies in all domains by 2024

No	Safety Objective	What IAA will monitor (SPIs)	What IAA expects organisations to do	Safety Performance Targets
SM.6	To ensure that the IAA procures and maintains sufficient and competent staff to oversee the continuously evolving civil aviation system	Resource demand vs capacity in all regulatory domain Specific competencies to address risk-based oversight	N/A	Demand/Capacity maintained at <100% in all domains Specific competencies on risk-based oversight to be provided in all domains by end 2024
SM.7	To implement digital processes to support oversight management and safety management across all oversight sections in IAA.	Audit management transferred to new digital platform Availability of Business Intelligence tools and Big Data analysis capability to support safety management and risk-based oversight	N/A	Audit management migrated to new digital platform by end Q2 2023 Availability of BI Tools and Big Data capability by end 2023
SM.8	To ensure appropriate oversight processes are in place to oversee complex organisations and new business models or novel work practices.	Enhanced guidance and training for inspectorate staff overseeing group operations Effective SMS processes in place to address risks associated with complex business models and/or novel work practices.	N/A	Enhanced guidance and training completed by end 2022 Confirmed in all relevant organisations by end 2022 as part of SMS oversight

No	Safety Objective	What IAA will monitor (SPIs)	What IAA expects organisations to do	Safety Performance Targets
SM.9	To implement robust regulatory change management processes to ensure that the authority requirements are fully implemented, and related guidance provided to industry stakeholders.	Rate of non-compliance findings related to significant regulatory changes	Monitor the rate of internal non-compliance findings related to significant regulatory changes	Positive trends in rate of non-compliance findings following implementation of significant regulatory changes
SM.10	To continuously improve safety by assessing and mitigating the risks emerging due to implementing parallel runway operations.	Aircraft accidents, serious incidents and incidents related to implementation of parallel runways.	Air operators, airport, and ANSP should develop and monitor their own SPI's in respect of the parallel runway implementation, to include the IAA SPI's as appropriate to them.	No accidents or serious incidents during the implementation of parallel runways No adverse trends in incident rates at the affected airport.

Table 2: Operational Risks

	Safety Objective	What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
CAT.1	To continuously improve safety by assessing and mitigating the risks relating to Loss of Control – Inflight (LOC-I) involving Irish commercial or declared operators or operators departing from Irish airports.	<p><i>LOC-I may arise from different precursor events that result in an aircraft upset, including weather, technical failures, inflight fire, fuel events, human performance. LOC-I accidents may also arise from inadequate operations at airports, such as aircraft loading, ground handling or wildlife hazard management.</i></p> <p><u>IAA will monitor:</u></p> <ul style="list-style-type: none"> • Tier 1 SPI's: Rate of aircraft accidents and serious incidents involving Irish commercial/declared air operators and/or involving Irish airports. • Tier 2 SPI: Rate of occurrences involving "deviation from intended flight path". • Trend monitoring of incidents categorised as LOC-I 	<ul style="list-style-type: none"> • Develop and monitor their own SPI's in respect of LOC-I, and consider inclusion of the IAA SPI's as appropriate to them. • Use FDM data (air operators as applicable) to support monitoring and analysis of LOC-I occurrences 	<p>No accidents or serious incidents categorised as LOC-I, involving Irish commercial or declared operators and/or caused by inadequate operations at Irish airports.</p> <p>Positive trends in LOC-I related occurrences.</p>

Safety Objective		What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
CAT.2	To continuously improve safety by assessing and mitigating the risks of Controlled Flight into Terrain (CFIT) involving Irish commercial/declared operators or operators flying in Irish controlled airspace.	<p><i>CFIT may arise from different precursor events, including loss of situational awareness by crews, navigation errors, inadequate approach procedures. It is a particular risk for intentional low-level operations (eg inadvertent flight into IMC during inspections, surveys, etc).</i></p> <p><u>What IAA will monitor:</u></p> <ul style="list-style-type: none"> • Tier 1 SPI's: Rate of aircraft accidents and serious incidents involving Irish commercial/declared air operators and/or occurring in Irish controlled airspace. • Tier 2 SPI: Rate of CFIT related occurrences. • Trend monitoring of incidents categorised as CFIT 	<ul style="list-style-type: none"> • Develop and monitor their own SPI's in respect of CFIT, and consider inclusion of the IAA SPI's, as appropriate to them. • Use FDM data (air operators, as applicable) to support monitoring and analysis of CFIT occurrences 	<p>No accidents or serious incidents categorised as CFIT, involving Irish commercial/declared operators and/or by any operator flying in Irish controlled airspace.</p> <p>Positive trends in CFIT related occurrences.</p>
CAT.3	To continuously improve safety by assessing and mitigating the risks of Mid-Air Collision (MAC)	<p><i>MAC occurrences may arise from different precursor events such as loss of separation with other large aircraft, light aircraft or drones, loss of situational awareness by crews,</i></p>	<ul style="list-style-type: none"> • Develop and monitor their own SPI's in respect of MAC, and consider 	<p>No accidents categorised as MAC, involving Irish commercial or declared operators and/or in Irish controlled airspace.</p>

Safety Objective	What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
involving Irish commercial operators or operators flying in Irish controlled airspace.	<p><i>inadequate or ineffective air traffic control, equipment failures.</i></p> <p><u>What IAA will monitor:</u></p> <ul style="list-style-type: none"> • Tier 1 SPI's: Rate of aircraft accidents and serious incidents involving Irish commercial/declared air operators and/or occurring in Irish controlled airspace. • Tier 2 SPI (all airspace): Rate of MAC related occurrences involving Irish commercial or declared organisations. • Tier 2 SPI (Irish airspace): Rate of Deviation from ATC Clearances, Level Bust, Separation Minimum Infringement, Airspace Infringement • Trend monitoring of incidents categorised as MAC • Monitoring of incidents of potential conflict 	<p>inclusion of the IAA SPI's, as appropriate to them.</p> <ul style="list-style-type: none"> • Use FDM data (air operators, as applicable) and radar data (ANSP's) to support monitoring and analysis of MAC occurrences 	Positive trends in MAC, and Drone conflict, related incidents.

Safety Objective		What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
		between aircraft and drones		
CAT.4	To continuously improve safety by assessing and mitigating the risks of Runway Incursion (RI) involving Irish commercial/declared air operators or at Irish certified aerodromes.	<p><i>RI occurrences may arise from different precursor events such as failure to adhere to ATC clearances by Flight Crew or Ground Crew, Aircraft and vehicle ground movement errors in low visibility operations, Non-Adherence to standards in ATC communications</i></p> <p><u>What IAA will monitor:</u></p> <ul style="list-style-type: none"> • Tier 1 SPI's: Rate of aircraft accidents and serious incidents involving Irish commercial/declared air operators and/or occurring in Irish certified aerodromes. • Tier 2 SPI (all airspace): Rate of RI involving Irish commercial/declared air operators. • Tier 2 SPI (Irish certified aerodromes): Rate of RI at Irish airports. 	<ul style="list-style-type: none"> • Develop and monitor their own SPI's in respect of RI, and consider inclusion of the IAA SPI's as appropriate to them. • Use FDM data (air operators, as applicable) and radar data (ANSP's) to support monitoring and analysis of RI occurrences • Monitor the level of implementation of EAPPRI recommendations applicable to their own organisation. 	<p>No accidents categorised as RI, involving Irish commercial or declared operators and/or in Irish certified aerodromes.</p> <p>Positive trends in RI related incidents.</p>

	Safety Objective	What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
		<ul style="list-style-type: none"> Trend monitoring of incidents categorised as RI The level of implementation of EAPPRI recommendations in the State aiming to reduce the risk of runway incursions. 		
CAT.5	To continuously improve safety by assessing and mitigating the risks of Runway Excursion involving Irish commercial/declared air operators or at Irish certified aerodromes.	<p><i>RE occurrences may occur due to unstable approach, inadequate braking performance on runways, technical failures, weather impact, poor execution of the landing phase. These events may also lead to an Abnormal Runway Contact (ARC) event (eg heavy/long landing etc).</i></p> <p><u>What IAA will monitor:</u></p> <ul style="list-style-type: none"> Tier 1 SPI's: Rate of aircraft accidents and serious incidents involving Irish commercial/declared air operators and/or occurring in Irish certified aerodromes. 	<ul style="list-style-type: none"> Air Operators, Aerodrome Operators and ANSP's) should Develop and monitor their own SPI's in respect of RE/ARC, and consider inclusion of the IAA SPI's as applicable to them. Use FDM data (air operators, as applicable) and radar data (ANSP's) to support monitoring and analysis of RE/ARC occurrences 	<p>No accidents categorised as RE/ARC, involving Irish commercial/declared operators and/or in Irish certified aerodromes.</p> <p>Positive trends in RE related incidents.</p>

Safety Objective		What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
		<ul style="list-style-type: none"> Tier 2 SPI: Rate of RI/ARC involving Irish commercial/declared air operators and/or at Irish certified aerodromes. Trend monitoring of incidents categorised as RE/ARC The level of implementation of GAPPRE recommendations in the State aiming to reduce the risk of a runway excursion 	<ul style="list-style-type: none"> Monitor the level of implementation of GAPPRE recommendations as applicable to their own organisation. 	
CAT.6	To continuously improve safety by assessing and mitigating the risks due to Ground Operations by Irish commercial or declared air operators or at Irish certified aerodromes.	<p><i>Ground Operations related occurrences include aircraft collision/damage, ground handling activities (aircraft ground movements, loading passengers/cargo, servicing, fuelling, de-icing), the use, failure and stowage of ground support equipment.</i></p> <p><u>What IAA will monitor:</u></p> <ul style="list-style-type: none"> Tier 1 SPI's: Rate of aircraft accidents and serious incidents 	<ul style="list-style-type: none"> Air Operators, Aerodrome Operators and ANSP's should develop and monitor their own SPI's in respect of ground operations, and consider inclusion of the IAA SPI's as applicable to them. Use FDM data (air operators, as applicable) and ASMGCS data (ANSP's, 	<p>No fatal accidents during ground operations involving Irish commercial/declared operators and/or in Irish certified/licensed aerodromes.</p> <p>Positive trends in ground operations related accidents and incidents.</p>

Safety Objective	What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
	<p>involving Irish commercial/declared air operators and/or occurring in Irish certified/licensed aerodromes.</p> <ul style="list-style-type: none"> • Tier 2 SPI: Rate of Ground Damage involving Irish commercial/declared air operators and/or at Irish certified/licensed aerodromes. • Trend monitoring of occurrences categorised as RAMP • Monitoring of non-compliance findings in oversight of ground operations 	<p>as applicable) to support monitoring and analysis of ground operations related occurrences</p> <ul style="list-style-type: none"> • Monitoring of non-compliance findings during internal audit of ground operations 	<p>Positive trends in non-compliance oversight findings in respect of ground operations.</p>
HELI.1	<p>To continuously improve safety by assessing and mitigating the risks in helicopter operations in the State, involving Irish approved</p>	<p>Aircraft accidents, serious incidents and incidents involving approved or declared helicopter operations.</p>	<p>Develop and monitor their own SPI's in respect of their own helicopter operations, to include the IAA SPI's as appropriate to them.</p> <p>No accidents in approved or declared helicopter operations</p> <p>Positive trends in incidents involving approved or</p>

Safety Objective		What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
	or declared helicopter operators.			declared helicopter operations.
AWS.1	To continuously improve safety by assessing and mitigating the risks relating to aircraft maintenance and maintenance management.	Aircraft accident, serious incident and incident rates and trends, related to aircraft maintenance and maintenance management issues.	Develop and monitor their own SPI's in respect of maintenance and maintenance management, to include the IAA SPI's as appropriate to them.	No aircraft accidents or serious incidents caused by inadequate aircraft maintenance and/or maintenance management. Positive trends in maintenance related incidents.
UAV.1	To continuously improve safety by assessing and mitigating the risks due to Drone operations in Irish airspace.	<i>Drone related occurrences include actual or near collision with aircraft, infringement by drones into controlled or protected airspace, loss of control of the drone leading to serious or fatal injury to persons, loss of control of the drone leading to near miss with persons or damage to property or the drone, failure of drone safety features.</i> Aircraft accident, serious incident and incident rates and trends, related to drone occurrences	Develop and monitor their own SPI's in respect of drone operations, to include the IAA SPI's as appropriate to them.	No fatalities, aircraft accidents or serious incidents, caused by inadequate safety of drone operations. Positive trends in drone related incidents.
GA.1	To share safety information within the general aviation	Number of safety evenings organised	Approved and declared GA organisations: <ul style="list-style-type: none"> Number of safety evenings organised 	At least 2 general aviation safety events per year

Safety Objective		What IAA will monitor (SPIs) – sector level	What IAA expects organisations to do	Safety Performance Targets
	community to help reduce the number of accidents and serious incidents involving general aviation operations in Ireland.	Number of safety occurrences reported by the general aviation community	<ul style="list-style-type: none"> Number of safety occurrences reported to them 	Increasing trend in level of occurrence reporting in general aviation
GA.2	To continuously improve safety by assessing and mitigating the risks due to airspace infringements involving general aviation or drone operations in Ireland.	<p>Tier 1 SPI's: Number of aircraft accidents and serious incidents involving GA aircraft in Irish controlled airspace.</p> <p>Tier 2 SPI: Number of Airspace Infringements by general aviation aircraft</p>	<p>Approved and declared GA organisations:</p> <ul style="list-style-type: none"> Number of aircraft accidents, serious incidents, and incidents due to airspace infringements involving own aircraft 	<p>No accidents or serious incidents due to Airspace Infringement (AI) by GA traffic</p> <p>Positive trends in AI occurrences by GA traffic</p>
GA.3	To continuously improve safety of general aviation by assessing and mitigating the key risks of LOC-I, CFIT, MAC and occurrences during take-off and landing.	Tier 1 SPI's: Number of fatalities, accidents and serious incidents involving GA aircraft.	<p>Approved and declared GA organisations:</p> <ul style="list-style-type: none"> Develop and monitor own SPI's to include their own key risks and to consider key risks for GA identified by IAA, as appropriate to them. 	<p>No fatalities in general aviation.</p> <p>Positive trends in the number of accidents and serious incidents involving GA</p>